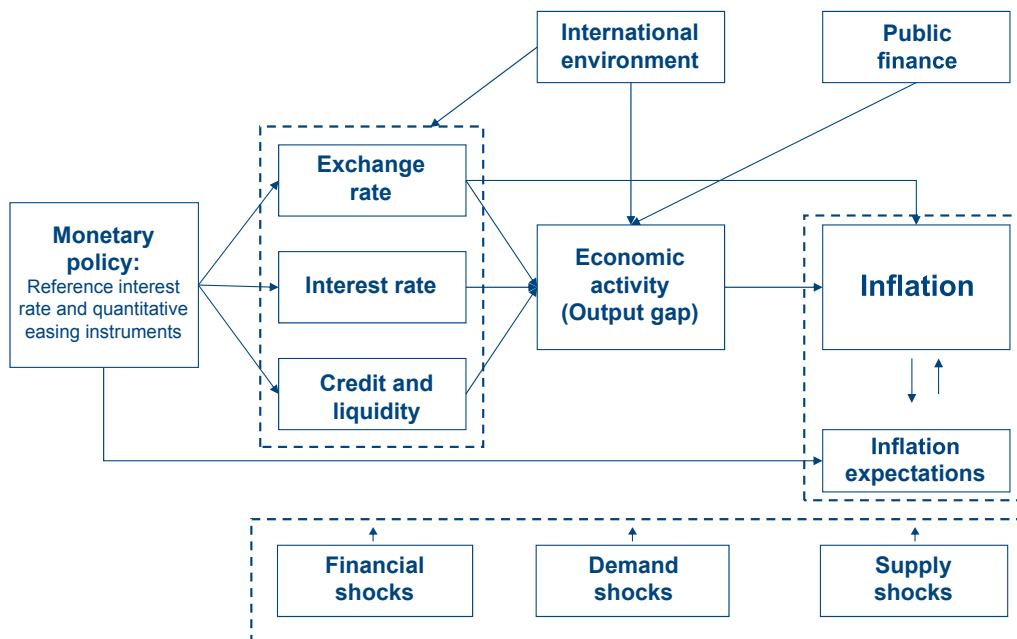


# INFLATION REPORT:

## Recent trends and macroeconomic forecasts 2016-2018

*December 2016*



INFLATION REPORT  
Recent trends and macroeconomic forecasts

CENTRAL RESERVE BANK OF PERU

# INFLATION REPORT:

## Recent trends and macroeconomic forecasts 2016-2018 December 2016

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This **Inflation Report** was prepared using data on the Balance of Payments and the Gross Domestic Product as of the third quarter of 2016, data on Monetary Accounts as of October, and data on the operations of the Non-Financial Public Sector, Inflation, Financial Markets, and the Exchange Rate as of November 2016.



## Foreword

- According to the Constitution of Peru, the Central Reserve Bank of Peru (BCRP) is a public autonomous entity whose role is to preserve monetary stability. The BCRP is responsible for regulating the money supply and credit in the financial system, for managing the country's international reserves, and for reporting on the nation's finances.
- In order to consolidate this goal, the Bank's monetary policy is based on an inflation targeting scheme, with an inflation range between 1.0 and 3.0 percent. The Central Bank's inflation target is aimed at anchoring inflation expectations at a similar level to the inflation rate observed in developed economies and reflects the BCRP's permanent commitment with monetary stability.
- Each month, and according to a previously announced schedule, the Board of BCRP sets a benchmark rate for the interbank lending market. Since this interest rate, which is the monetary operational target, affects the rate of inflation through several channels with time lags, this rate is set on the basis of inflation forecasts and forecasts of inflation determinants.
- Inflation may transitorily deviate from the target range due to shocks that may temporarily affect the supply of goods and services, such as fluctuations in the prices of imported products or domestic climate factors. It should also be pointed out that the effectiveness of monetary policy is also assessed in terms of the success in returning and maintaining inflation expectations within the target range.
- Additionally, the Central Bank implements preventive actions to preserve financial stability and monetary policy transmission mechanisms. Through interventions in the foreign exchange market, the Central Bank reduces excessive volatility in the exchange rate and accumulates international reserves in periods of capital inflows or high export prices, thus developing strengths to face negative events in an economy with still high levels of financial dollarization. The Central Bank also uses other monetary policy tools that affect the volume and composition of credit in a more direct manner, such as reserve requirements in domestic currency and in foreign currency, to avoid excessive credit or credit constraints.
- This Inflation Report includes macroeconomic forecasts that support the monetary policy decisions of BCRP as well as an analysis of the risk factors that can modify such forecasts.
- This Inflation Report was approved by the Board of Directors of BCRP on December 7, 2016.





## Summary

- i. The world economy has continued recovering in the third quarter of 2016. As a result of this, **global growth** would increase from 3.0 percent in 2016 to 3.4 percent in 2017 and to 3.5 percent in 2018.
- ii. Commodity prices have increased recently, in part due to expectations of greater spending in infrastructure in the United States –which would account for the increase in the price of basic metals– and due to an increase in speculative positions. Another factor contributing to this rise has been the recent agreement of the OPEC and other oil-producing countries to cut the production of crude. In line with these developments, the **terms of trade** are estimated to grow 3.9 percent in 2017 –a higher rate than that estimated in the Inflation Report of September (1.0 percent)– and to decline thereafter in 2018 (1.6 percent).
- iii. In the first nine months of 2016, the deficit in the **current account of the balance of payments** fell from 5.3 percent of GDP in the same period of 2015 to 3.6 percent, mainly as a result of lower imports and higher exports of copper. The current account deficit is projected to fall to 2.8 percent of GDP in 2017 and in 2018 due to the increase of mining exports and to the recent recovery of export prices. It is estimated that long term financing from private sources will continue exceeding the current account gap and will continue to be the main component of foreign direct investment.
- iv. The **trade balance** would show a surplus of US\$ 0.6 billion in 2016 after having recorded a deficit of US\$ 3.2 billion in 2015. In the next two years the trade surplus would continue increasing (to more than US\$ 2 billion per year) due to the growth of commodity exports as a result of both higher volumes and higher prices.
- v. The **GDP** has been showing **growth rates** closer to the potential output and recorded a rate of 4.2 percent in January-September, this pace of growth being associated mainly with the dynamism of traditional exports. Private investment, on the other hand, continued to decrease in this period (-6.2 percent), the fall being particularly noteworthy in mining investment (-45.0 percent). Business confidence surveys continue showing positive business expectations in a context of implementation of deregulation measures in the economy.

The growth of the GDP over the year is explained mainly by the growth of metal mining, driven mostly by copper production at Las Bambas and Cerro Verde. As a result of this, GDP would show a faster pace of growth in 2016, rising from 3.3 percent in 2015 to 4.0 percent in 2016, the latter being the same rate forecast in





the Inflation Report of September although with changes in terms of composition (higher exports, and lower investment and lower public expenditure). GDP's projected growth rate in the period 2016-2018 is consistent with a gradual declining trend in the output gap reflecting that activity is reaching its potential level. In 2016, GDP would grow 4.0 percent, while in 2017 and 2018, it would grow 4.3 and 4.2 percent, respectively, this growth trend being sustained by the dynamism of private investment that would start recovering in the next two years with rates of 5 percent.

- vi. The **fiscal deficit** decreased in recent months in the context of the fiscal measures taken by the Government since 2016 to promote a downward trend in the fiscal deficit, as a result of which the accumulated deficit in the last twelve months fell from 3.4 percent of GDP in September to 3.1 percent of GDP in November. Thus, like in September, the deficit is projected at 3.0 percent of GDP. A gradually declining fiscal deficit that would reach 2.5 percent of GDP in 2017 and 2.3 percent of GDP in 2018 is projected for the next two years, which is consistent with the forecasts of the current Revised Multiannual Macroeconomic Framework.
- vii. **Credit to the private sector** grew at a year-on-year rate of 4.9 percent in October, a lower rate than at end 2015 (9.4 percent), this slowdown being explained by the lower dynamism of private investment. In the 2017-2018 forecast horizon, credit to the private sector is expected to resume again growth rates close to the nominal growth rate of GDP, with credit in domestic currency showing greater dynamism.
- viii. In recent months **inflation** has registered rates above the upper band of the inflation target, reflecting the rises observed in the prices of some perishable food products and fuels. Expectations of twelve-month inflation remain within the target range. In this context, the Board of BCRP has maintained its **policy interest rate** at 4.25 percent and has reiterated that it oversees inflation forecasts and inflation determinants to evaluate the convenience of making additional adjustments in the monetary policy rate.
- ix. In this context, **inflation** is forecast to converge to 2 percent in the 2017-2018 horizon, although at a slower pace than that foreseen in the Inflation Report of September. This slower pace in inflation's convergence to the inflation target results mainly from unexpected rises in food and energy prices in the last two months, and would reflect expectations of inflation that have declined more slowly. This convergence of inflation is consistent with a projected scenario of economic growth without inflationary pressures on the side of demand, falling expectations of inflation in the forecast horizon, and with no new supply shocks affecting prices.



- x. The risk factors considered in this report (supply shocks, demand shocks, greater volatility in international financial markets, and lower global growth) have a **neutral balance** on the inflation forecast, so the impact of factors that could increase inflation is equal to the impact of factors that imply a fall in prices.





### SUMMARY OF INFLATION REPORT FORECAST

	2015	2016 <sup>1/</sup>		2017 <sup>1/</sup>		2018 <sup>1/</sup>	
		IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16
<b>Real % change</b>							
1. Gross Domestic Product	3.3	4.0	4.0	4.5	4.3	4.2	4.2
2. Domestic demand	3.0	1.8	1.3	4.0	4.0	4.0	4.0
a. Private consumption	3.4	3.5	3.5	3.8	3.5	4.0	4.0
b. Public consumption	9.5	5.7	3.0	3.0	4.2	3.5	2.2
c. Fixed private investment	-4.5	-4.3	-5.5	5.0	5.0	5.0	5.0
d. Public investment	-7.5	10.3	0.1	4.5	7.4	6.2	4.5
3. Exports (good and services)	3.5	6.9	8.6	5.5	4.7	4.6	4.6
4. Imports (good and services)	2.1	-1.7	-2.1	3.6	3.6	3.7	3.7
5. Economic growth in main trading partners	3.1	2.7	2.8	3.1	3.1	3.2	3.2
<b>Memo:</b>							
Output gap <sup>2/</sup> (%)	-1.5 ; -0.5	-1.5 ; 0.0	-1.5 ; 0.0	-1.0 ; 0.0	-1.0 ; 0.0	-0.5 ; 0.0	-0.5 ; 0.0
<b>% change</b>							
6. Inflation	4.4	2.6 - 3.1	3.0 - 3.3	2.0 - 2.2	2.0 - 2.5	2.0 - 2.2	2.0 - 2.2
7. Expected inflation <sup>3/</sup>	-	2.9	3.1	2.8	2.9	2.7	2.8
8. Expected depreciation <sup>3/</sup>	-	0.4	1.7	2.3	1.6	1.2	1.4
9. Terms of trade <sup>4/</sup>	-6.3	-2.2	-1.5	1.0	3.9	-0.1	-1.6
a. Export prices	-14.9	-4.8	-4.4	3.7	7.3	1.2	-0.1
b. Import prices	-9.2	-2.6	-2.9	2.7	3.2	1.3	1.6
<b>Nominal % change</b>							
10. Currency in circulation	3.8	5.4	4.1	6.0	5.5	6.0	5.9
11. Credit to the private sector <sup>5/</sup>	9.4	6.5	5.5	7.0	6.5	6.5	6.5
<b>% GDP</b>							
12. Gross fixed investment	24.3	23.4	22.7	23.7	23.0	24.1	23.3
13. Current account of the balance of payments	-4.8	-3.8	-3.2	-3.4	-2.8	-3.3	-2.8
14. Trade balance	-1.6	-0.2	0.3	0.2	1.2	0.3	1.0
15. Long-term external financing of the private sector <sup>6/</sup>	5.8	4.5	4.4	4.9	4.6	4.7	4.5
16. Current revenue of the general government	19.9	18.9	18.3	19.2	19.0	19.4	18.7
17. Non-financial expenditure of the general government	21.2	20.8	20.1	20.5	20.3	20.4	19.7
18. Overall balance of the non-financial public sector	-2.1	-3.0	-3.0	-2.5	-2.5	-2.3	-2.3
19. Balance of total public debt	23.3	25.4	24.5	25.9	24.9	27.5	26.2
20. Balance of net public debt	6.5	9.2	9.2	11.7	11.6	13.8	13.6

1/ Forecast.

2/ Differential between GDP and potential GDP (%).

3/ Survey on expectations to the economic agents.

4/ Average.

5/ Includes loans made by banks' branches abroad.

6/ Includes net direct investment, portfolio investment and private sector's long term disbursement.

IR: Inflation Report.

# I. International Environment

1. The **world economy** would grow 3.0 percent in 2016, 3.4 percent in 2017, and 3.5 percent in 2018. These rates are similar to the ones forecast in our IR of September, although some differences are observed in some countries. For example, the growth rate projected in the United States for 2017 has been revised slightly on the upside (from 2.1 to 2.2 percent), while the growth rate projected for Latin American countries (with the exception of Brazil) has been revised down.

Table 1 WORLD GDP GROWTH (Annual % change)									
	% structure <sup>1/</sup>	Trading Peru % <sup>1/</sup>	2015	2016*		2017*		2018*	
				IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16
<b>Advanced economies</b>	<b>42.4</b>	<b>47.4</b>	<b>2.1</b>	<b>1.5</b>	<b>1.6</b>	<b>1.7</b>	<b>1.8</b>	<b>1.9</b>	<b>1.9</b>
<i>Of which</i>									
1. United States of America	15.8	17.5	2.6	1.5	1.6	2.1	2.2	2.0	2.0
2. Eurozone	11.9	11.0	2.0	1.6	1.7	1.4	1.5	1.5	1.5
Germany	3.4	2.8	1.5	1.7	1.7	1.4	1.5	1.4	1.5
France	2.3	0.9	1.3	1.3	1.3	1.2	1.2	1.5	1.5
Italy	1.9	1.7	0.8	0.8	0.8	0.9	0.9	1.0	1.0
Spain	1.4	2.5	3.2	2.9	3.1	1.9	1.9	1.9	1.9
3. Japan	4.3	3.0	0.5	0.5	0.6	0.8	0.8	0.8	0.9
4. United Kingdom	2.4	1.1	2.2	1.7	2.1	1.0	1.1	1.7	1.7
5. Canada	1.4	4.4	1.1	1.4	1.3	2.1	2.0	2.2	2.0
<b>Emerging market and developing economies</b>	<b>57.6</b>	<b>52.6</b>	<b>4.0</b>	<b>4.1</b>	<b>4.1</b>	<b>4.6</b>	<b>4.6</b>	<b>4.8</b>	<b>4.8</b>
<i>Of which</i>									
1. Developing Asia	30.6	26.9	6.7	6.4	6.5	6.3	6.3	6.3	6.3
China	17.1	22.2	6.9	6.5	6.7	6.2	6.2	6.0	6.0
India	7.0	2.2	7.6	7.4	7.5	7.6	7.6	7.6	7.6
2. Commonwealth of Independent States	4.6	0.7	-2.8	-0.1	-0.2	1.4	1.5	1.9	2.0
Russia	3.3	0.5	-3.7	-0.6	-0.6	1.1	1.2	1.4	1.5
3. Latin America and the Caribbean	8.3	23.2	0.0	-0.4	-0.7	1.8	1.8	2.4	2.4
Brazil	2.8	4.1	-3.8	-3.4	-3.4	0.4	0.6	1.2	1.2
Chile	0.4	3.2	2.3	1.7	1.7	2.2	2.2	2.7	2.7
Colombia	0.6	3.0	3.1	2.2	2.1	2.9	2.7	3.7	3.7
Mexico	2.0	3.4	2.5	2.3	2.1	2.5	2.1	2.7	2.7
Peru	0.3	-	3.3	4.0	4.0	4.5	4.3	4.2	4.2
<b>World Economy</b>	<b>100.0</b>	<b>100.0</b>	<b>3.2</b>	<b>3.0</b>	<b>3.0</b>	<b>3.4</b>	<b>3.4</b>	<b>3.5</b>	<b>3.5</b>
Memo:									
Peru's trading partners <sup>1/2/</sup>	65.7		3.1	2.7	2.8	3.1	3.1	3.2	3.2

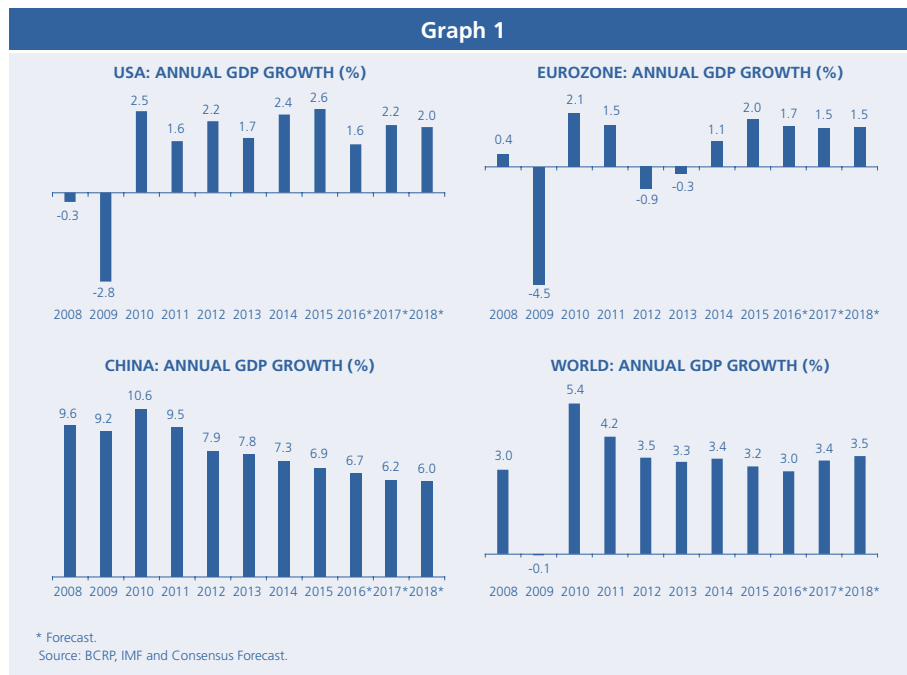
1/ 2015.

2/ Basket of Peru's 20 main trading partners.

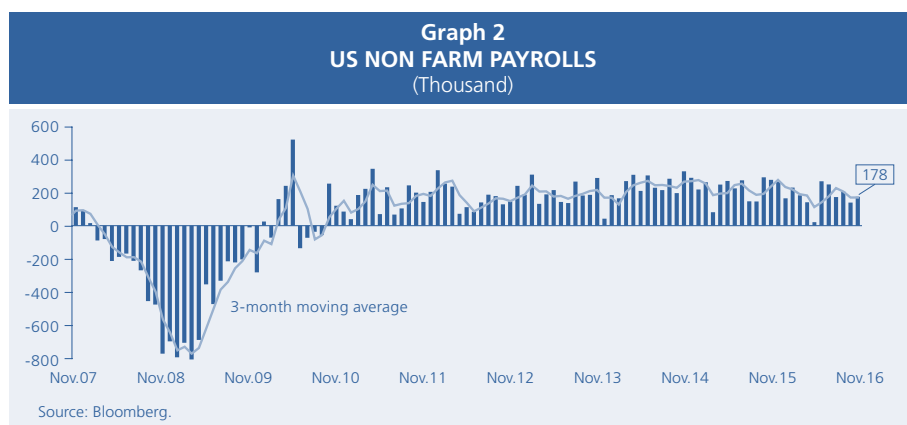
\* Forecast.

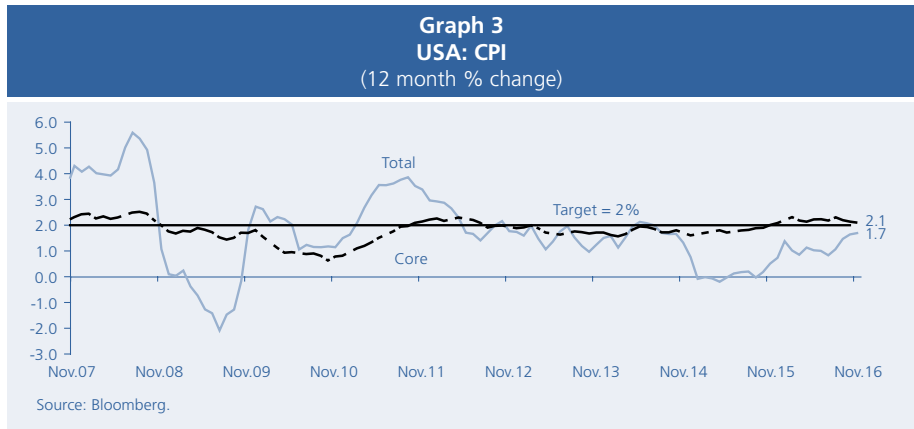
Source: Bloomberg, IMF, and Consensus Forecast.



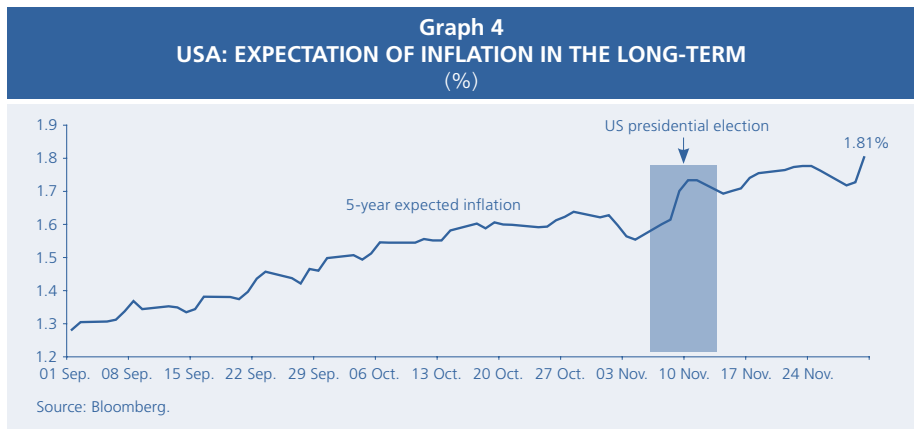


- The growth forecast for the **United States** in 2017 has been revised up from 2.1 to 2.2 percent, in line with the greater fiscal stimulus anticipated in this country in a context in which private consumption continues recovering supported by the dynamism of the labor market (between September and November, the creation of new jobs reached a monthly average of 176 thousand jobs).





The perspectives of fiscal stimulus have increased expectations that inflation will be higher. Expected inflation, measured as the difference between the nominal and the real rate of five year bonds, has increased steadily since November 8 and has reached levels unheard of since September 2014 when the price of crude oil was above US\$ 90 a barrel.



This rising trend in inflation expectations is observed in a context in which executed inflation, as well as indicators of unemployment, already show levels close to those estimated by the Fed as long term equilibrium levels. Therefore, the probability that the Federal Reserve will raise its interest rates at a less gradual pace has increased relative to the probability estimated in the IR of September.



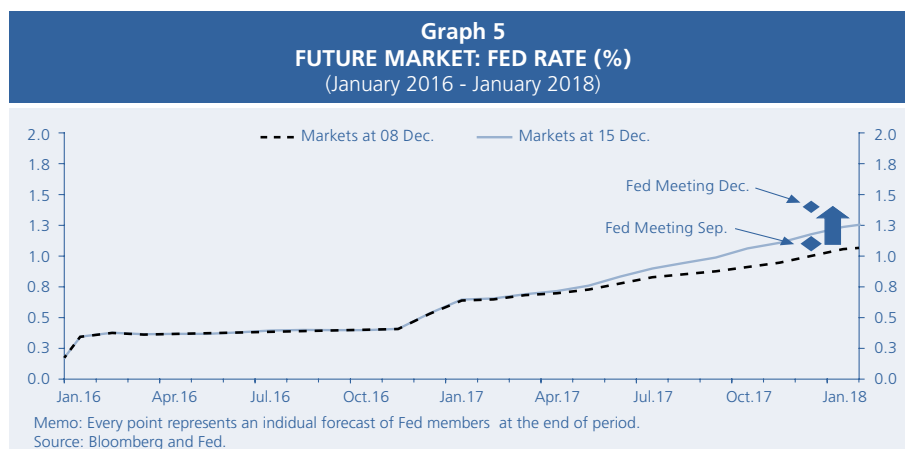


As anticipated by market expectations, in its meeting in December the Fed raised the range of its interest rate by 25 basis points to 0.50 - 0.75 percent. Moreover, the quarterly projections of the Federal Open Market Committee (FOMC) revised up the forecast of growth in 2017 (from 2.0 to 2.1 percent) and corrected the rate of unemployment slightly down.

Table 2 FED FORECAST*								
	2016		2017		2018		Long-term	
	Sep.16	Dec.16	Sep.16	Dec.16	Sep.16	Dec.16	Sep.16	Dec.16
<b>Growth</b>	1.8	1.9	2.0	2.1	2.0	2.0	1.8	1.8
<b>Unemployment rate</b>	4.8	4.7	4.6	4.5	4.5	4.5	4.8	4.8
<b>Inflación (PCE)</b>	1.3	1.5	1.9	1.9	2.0	2.0	2.0	2.0
<b>Core inflation (Core PCE)</b>	1.7	1.7	1.8	1.8	2.0	2.0	-	-
Note: Core PCE excludes food and energy.								
<b>Policy interest rate (5)</b>	0.6	0.6	1.1	1.4	1.9	2.1	2.9	3.0

\* It adds data from 17 individual forecast of the members of the Fed at end-of-period.

Furthermore, the number of rate hikes foreseen for next year was revised and increased from 2 to 3, while 3 rate hikes are still expected in 2018 and 2019. In a press conference, Janet Yellen said that the change responds to the prospects of some members of the FOMC on future fiscal policy. After the decision of December 14, the interest rates of future contracts have shown an upward trend.



After the Fed's decision, the probability of seeing an additional rise in June 2017 increased to 77 percent.

3. In other **developed economies**, the data of GDP in the third quarter and the monthly of October and November of the **Eurozone** lead us to revise slightly up the growth rate estimated for 2016 (from 1.6 to 1.7 percent), particularly due to the better performance recorded by Spain compared to the one foreseen in our previous report. However, the pace of growth is expected to slowdown in 2017 and 2018 (1.5 percent) in a context of greater uncertainty due to political factors (referendum in Italy, parliament elections in the Netherlands, and presidential elections in France and Germany), the development of Brexit negotiations, United States policies, and a weakening of global trade. In this context, the European Central Bank (ECB) is expected to maintain its current expansionary monetary policy.
4. As for the **developing countries**, although similar growth rates to those estimated in September report are projected, different conducts are expected in different regions. In **China**, given the country's economic performance in the third quarter, the projected growth rate for 2016 has been revised from 6.5 to 6.7 percent after the increase observed in public expenditure (infrastructure), investment in fixed assets, and retail sales, which contrasted with a slight slowdown in industrial production. The growth forecasts for 2017 and 2018 remain at 6.2 and 6.0 percent, respectively, taking into account the slowdown of growth seen in the indicators of consumption and investment. Moreover, the pace of growth seen in real estate investment is expected to slow down due to the restrictive measures taken recently by the Government in terms of requirements established to obtain mortgage loans, such as down payments, among other restrictions.

**Table 3**  
**CHINA'S ECONOMIC INDICATORS**

Indicators	2014		2015			2016				
	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	Oct.	Nov.
Annual GDP (%)	7.2	7.0	7.0	6.9	6.8	6.7	6.7	6.7	-	-
Industrial Production (Annual % change)	7.9	5.6	6.8	5.7	5.9	6.8	6.2	6.1	6.1	6.2
Investment in fixed assets (Accum. annual % change)	15.7	13.5	11.4	10.3	10.0	10.7	9.0	8.2	8.3	8.3
Retail sales (12 month % change)	11.9	10.2	10.6	10.9	11.1	10.5	10.6	10.7	10.0	10.8
Imports of copper <sup>1/</sup> (volume 12 month % change)	17.8	14.6	12.7	10.0	12.3	18.0	23.2	28.5	29.9	n.d.
Total new financing (annual %)	14.4	12.8	11.7	12.1	11.7	13.4	12.2	12.5	12.5	12.9
Consumer Price Index (12 month % change)	1.5	1.4	1.4	1.6	1.6	2.3	1.9	1.9	2.1	2.3

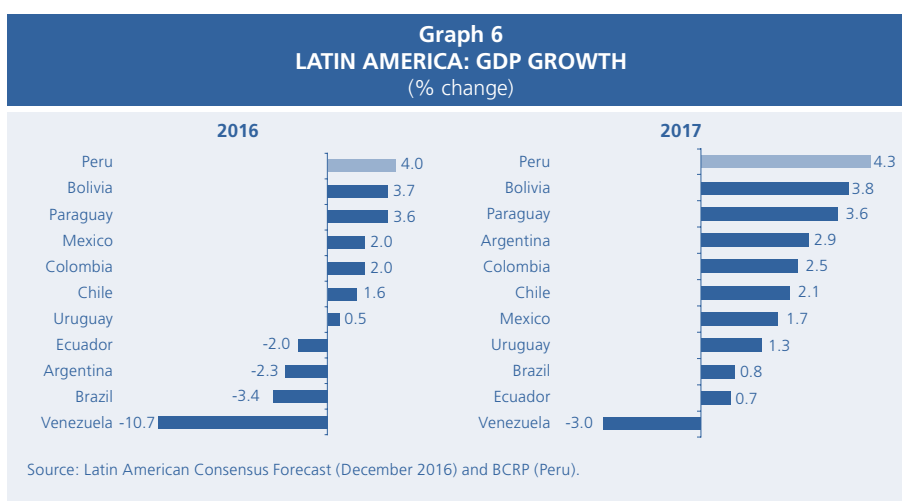
<sup>1/</sup> Ore and concentrate.  
Source: Bloomberg and IMF.

In the third quarter of 2016, the main countries of **Latin America** with inflation targeting schemes registered greater dynamism in economic activity.

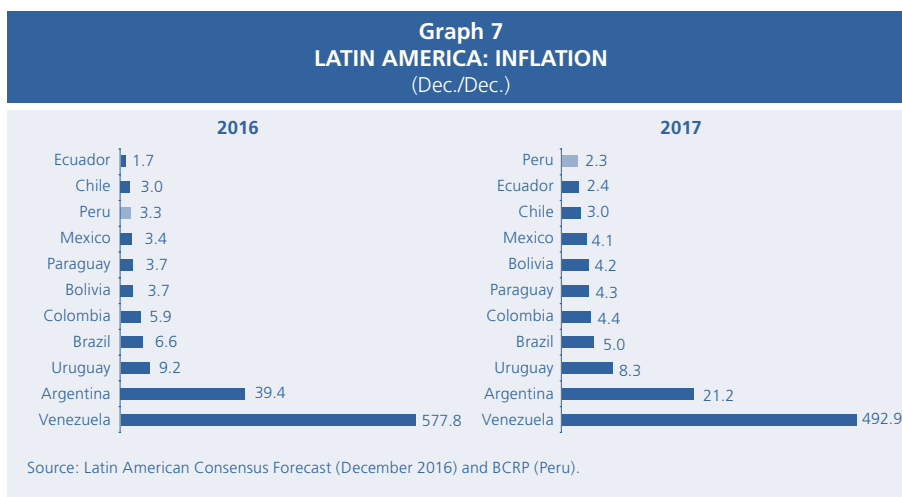




Growth in the region would fall 0.7 percent in 2016, in line with the rate projected in the report of September, while in 2017 it would show a recovery with an estimated rate of 1.8 percent, this scenario considering some recovery in the average prices of commodities.



In recent months, the lower inflationary pressures associated with the fall in food prices has contributed to reduce inflation in Colombia and Brazil, where inflation is expected to converge gradually towards the target range. However, higher depreciation pressures are expected in the region due to increased expectations of a rise in the Fed interest rates and of additional rises next year. On the other hand, in Mexico, the depreciation of the peso has prompted an increase in the level of prices in the last month. This trend is expected to continue the next year.

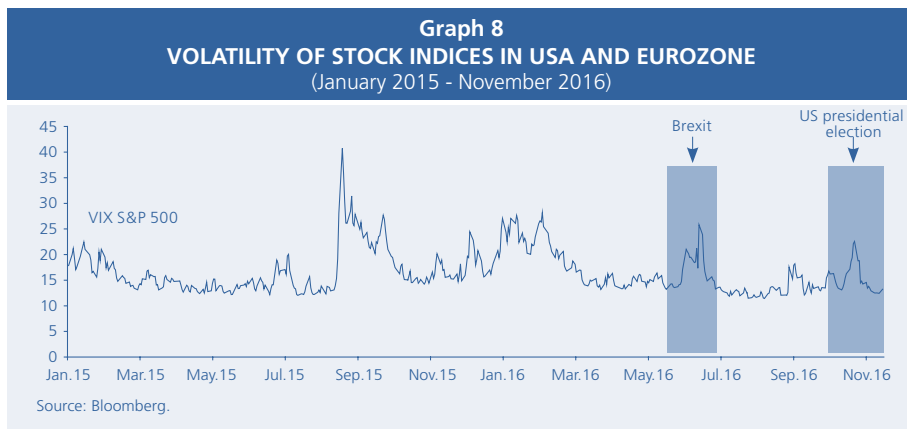




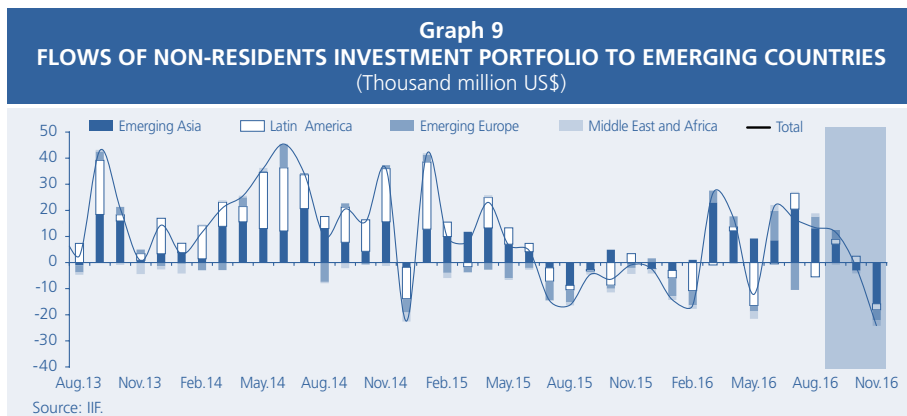
**Financial Markets**

- Between September and December, international financial markets were affected by the results of the elections in the United States, by expectations about the direction that the Fed monetary policy will take, as well as by uncertainty about the United Kingdom strategy regarding Brexit, and by negotiations between oil-producing countries.

The results of the elections in the United States generated high **volatility** and greater risk aversion, which reflected in the increase of the VIX index. However, the initial impact of the elections was reversed by the better perspectives for growth in the American economy due to proposals of greater fiscal spending and to the prospects of less regulation in some specific sectors. This favorable outlook for growth has been accompanied by expectations of higher inflation.

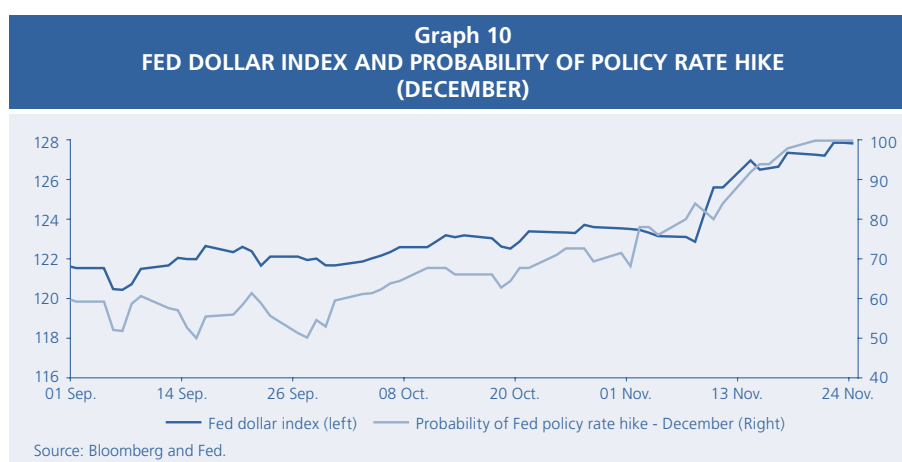


A greater demand for variable-income assets was observed in this context (the different U.S. stock indices reached levels records), together with an increase in yields, and with an appreciation of the dollar.





6. In **foreign exchange markets**, the dollar has appreciated 5.1 percent between September and December according to the dollar-FED index. The evolution of the dollar during this period was determined by expectations regarding the Fed monetary policy decision. Positive data of activity in the United States and the new outlook for growth and inflation in this economy increased the probability that the Fed would raise its rates in its meeting of December –which is what finally happened–as well as expectations that it would increase the number of rate hikes foreseen for the following year.



By currencies, the 4.4 percent depreciation of the sterling pound reflected concerns that the negotiations between the United Kingdom and the European Union would involve unfavorable terms for the UK economy as a result of the priority given to immigration control on the agenda of the Prime Minister. The depreciation of the euro was also associated with uncertainty over the continuity of the monetary stimulus of the European Central Bank (ECB). The President of the ECB has mentioned the harmful effects of keeping negative rates for extended periods, but has suggested that the asset purchase program could be extended given signs of weak inflation in the euro union.

7. The likelihood of a higher fiscal deficit in the United States caused an increase in the yield on the US Treasury bonds and a depreciation in the emerging currencies, particularly in the Mexican peso.

In contrast with securities in stock markets, bonds showed high volatility after the results of the elections in the United States, which was reflected in the increase in the index of bond volatility (TYVIX). The drop of the demand for sovereign debt securities was more pronounced in the emerging countries that would be more strongly affected by the possibility of increased global protectionism, such as Mexico and Southeast Asian economies, where the risk premiums of their bonds rose significantly.

**Table 4**  
**YIELDS ON 10-YEAR SOVEREIGN BONDS**

	Dec.15	Sep.16	Nov.16	Change (Bps.)	
				Nov./Sep.	Nov./Dec.
United States of America	2.27	1.60	2.39	79	12
Germany	0.63	-0.12	0.26	38	-37
France	0.99	0.18	0.74	55	-25
Italy	1.59	1.19	1.99	81	40
Spain	1.77	0.88	1.56	68	-21
Greece	8.07	8.19	6.46	-173	-161
United Kingdom	1.96	0.75	1.41	66	-55
Japan	0.26	-0.09	0.02	11	-24
Brazil	16.51	11.58	11.86	28	-465
Colombia	8.66	7.00	7.29	29	-136
Chile	4.66	4.17	4.57	40	-9
Mexico	6.26	6.05	7.30	125	103
<b>Peru</b>	<b>7.31</b>	<b>5.77</b>	<b>6.27</b>	<b>51</b>	<b>-103</b>
South Africa	9.76	8.66	9.03	37	-74
Israel	2.10	1.73	2.17	45	7
Turkey	10.46	9.52	10.82	131	36
China	2.86	2.74	2.95	22	9
South Korea	2.08	1.42	2.15	73	7
Indonesia	8.69	7.02	8.09	107	-60
Thailand	2.49	2.10	2.69	59	20
Malaysia	4.19	3.55	4.35	80	16
Philippines	4.22	3.65	4.52	87	30

Source: Bloomberg and IMF.

**Graph 11**  
**VOLATILITY INDEX OF US TREASURY BONDS**  
(January - November 2016)



Source: Bloomberg.

8. The increase of stock indices in the United States, favored also by the results of the elections, was noteworthy in **stock exchange markets**. More spending in infrastructure, tax cuts, and less regulation are expected to increase corporate profits. In Europe, on the other hand, these factors had a limited impact due to the decline of bank stocks, the latter being affected by important events such as the fine required by the U.S. Government to the Deutsche Bank, uncertainty about capitalization plans of the Italian bank Monte dei Paschi, and the European Commission proposal of increasing the capital requirement of banks. In the emerging market economies, the increase in the price of oil as a result of the OPEC agreement offset in part the





negative impact that the victory of the Republican Party in the U.S. elections had had on stock exchanges.

**Table 5  
STOCK MARKETS**

		Dec.15	Sep.16	Nov.16	% change	
					Nov./Sep.	Nov./Dec.
VIX*	S&P 500	18.21	17.06	13.00	-4.1	-5.2
USA	Dow Jones	17,425	18,142	19,194	5.8	10.1
Brazil	Bovespa	43,350	64,925	62,089	-4.4	43.2
Argentina	Merval	11,675	17,610	17,441	-1.0	49.4
Mexico	IPC	42,978	48,009	45,285	-5.7	5.4
Chile	IGP	18,152	21,423	20,973	-2.1	15.5
Colombia	IGBC	8,547	10,086	9,507	-5.7	11.2
Peru	General index	9,849	15,171	15,414	1.6	56.5
United Kingdom	FTSE 100	6,242	6,954	6,784	-2.5	8.7
Germany	DAX	10,743	10,665	10,640	-0.2	-1.0
France	CAC 40	4,637	4,509	4,578	1.5	-1.3
Spain	IBEX 35	9,544	9,143	8,692	-4.9	-8.9
Italy	FTSE MIBb	21,418	17,125	16,833	-1.7	-21.4
Greece	ASE	631	591	630	6.6	-0.2
Switzerland	SMI	8,818	7,828	7,887	0.8	-10.6
Russia	RTSI\$	757	989	1,029	4.1	35.9
Turkey	XU100	71,727	78,536	73,995	-5.8	3.2
South Africa	JSE	50,694	50,590	50,329	-0.5	-0.7
Nigeria	NSEAS Index	28,642	27,220	25,242	-7.3	-11.9
Japan	Nikkei 225	19,034	17,425	18,308	5.1	-3.8
Indonesia	JCI	4,593	5,423	5,149	-5.0	12.1
India	CNX Nifty	7,946	8,638	8,225	-4.8	3.5
Hong Kong	HSI	21,914	22,935	22,790	-0.6	4.0
China	Shanghai C.	3,539	3,100	3,250	4.8	-8.2

\* Change is in units.  
Source: Bloomberg.

## Terms of Trade

9. Most commodity prices have risen since September, when our last Inflation Report was published. The rise in the prices of basic metals has been favored by expectations of increased spending on infrastructure in the U.S. and by the increase of speculative positions. Another factor that also contributed to this rise was the rise in the price of oil following the recent agreement of the OPEC to reduce oil production. This increase in the price of oil, together with greater demand, have boosted the prices of some foodstuffs such as maize and soybean oil. Only the price of gold has decreased, in line with the appreciation of the dollar and with expectations of a less gradual adjustment in the Fed interest rates.

In line with these developments, the terms of trade for 2017 would grow 3.9 percent, higher than expected in the September Inflation Report (1.0 percent). The price of exports is estimated to increase 7.3 percent and the price of imports, 3.2 percent. In 2018, the terms of trade are estimated to decline by 1.6 percent, reversing much

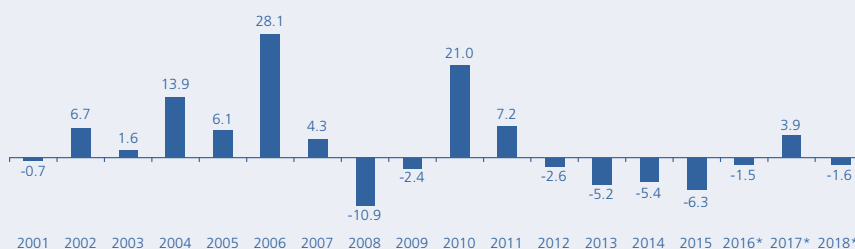
of the recent increase in prices associated with the election results in the United States.

**Table 6**  
**TERMS OF TRADE: 2015 - 2018**  
(Annual average data)

	2014	2015	2016*		2017*		2018*	
			IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16
<b>Terms of Trade</b>	<b>-5.4</b>	<b>-6.3</b>	<b>-2.2</b>	<b>-1.5</b>	<b>1.0</b>	<b>3.9</b>	<b>-0.1</b>	<b>-1.6</b>
<b>Price of exports</b>	<b>-6.9</b>	<b>-14.9</b>	<b>-4.8</b>	<b>-4.4</b>	<b>3.7</b>	<b>7.3</b>	<b>1.2</b>	<b>-0.1</b>
<i>Copper (US\$ cents per pound)</i>	311	250	214	220	215	244	220	235
<i>Zinc (US\$ cents per pound)</i>	98	88	90	95	98	120	100	120
<i>Lead (US\$ cents per pound)</i>	95	81	80	85	80	100	80	100
<i>Gold (US\$ per ounce)</i>	1,266	1,160	1,268	1,251	1,280	1,191	1,280	1,200
<b>Price of imports</b>	<b>-1.5</b>	<b>-9.2</b>	<b>-2.6</b>	<b>-2.9</b>	<b>2.7</b>	<b>3.2</b>	<b>1.3</b>	<b>1.6</b>
<i>Oil (US\$ per barrel)</i>	93	49	42	43	47	49	47	49
<i>Wheat (US\$ per ton)</i>	243	186	155	144	175	151	191	170
<i>Maize (US\$ per ton)</i>	155	141	136	135	141	140	154	145
<i>Soybean oil (US\$ per ton)</i>	812	667	677	696	708	775	755	770
<i>Whole milk (US\$ per ton)</i>	3,471	2,396	2,323	2,462	2,697	3,432	2,587	3,418

\* Forecast.  
Source: BCRP.

**Graph 12**  
**TERMS OF TRADE: 2001 - 2018**  
(% change)



\* Forecast.  
Source: BCRP.

## Copper

- a. Between August and November, the price of copper increased 15 percent –the highest quarterly rate of increase observed since February 2011– and reached an average monthly price of US\$ 2.47 a pound. As a result, the price of copper accumulated a growth rate of 18 percent in the first eleven months of the year.



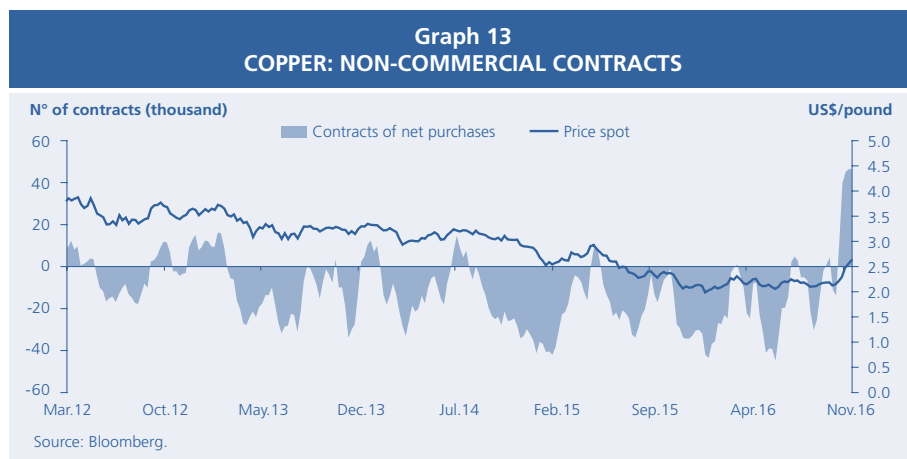


The increase in the price of copper in the past three months is explained by the change in the short term outlook associated with expectations of higher demand as well as by projections of a slower growth of the supply of copper in 2017.

The better prospects for demand are associated both with expectations of increased spending in infrastructure in the USA and with the prospects of a greater demand for copper in China as a result of the stimulus measures implemented by the Chinese Government, which have reflected in the growth of credit, manufacturing, and public investment in this country. In addition to this, non-commercial positions have also increased: in the last month net purchases of copper recorded a level not observed since 2003. On the other hand, the growth of the supply would begin to slow down in 2017 due to the lower grades of mineral ores, especially in Chile.

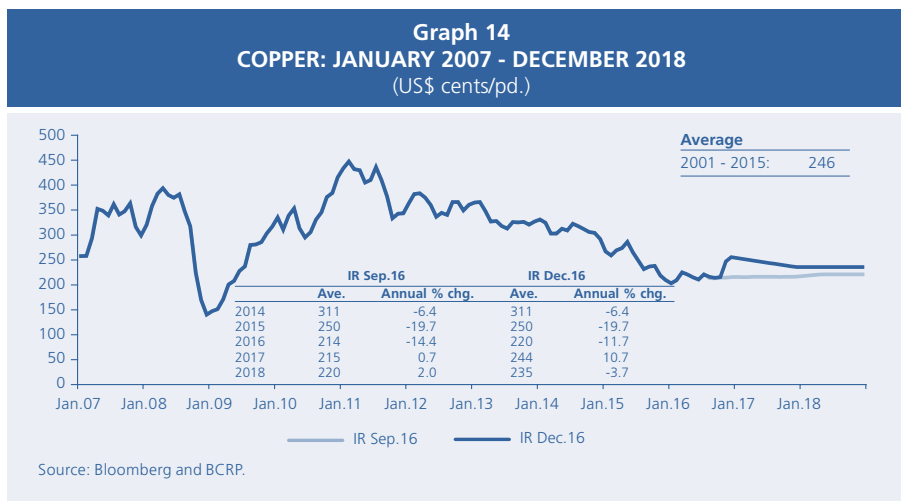
Table 7 WORLD REFINED COPPER USAGE AND SUPPLY (Thousand MT)						
	2015	2016 <sup>1/</sup>	2017 <sup>1/</sup>	Jan.-Aug. 2015	Jan.-Aug. 2016	% change
1. World Mine Production	19,128	19,884	19,878	12,584	13,317	5.8
2. World Refined Production (Secondary+Primary)	22,883	23,383	23,791	15,023	15,491	3.1
3. World Refined Usage	23,035	23,391	23,628	15,013	15,582	3.8
4. Refined Balance (2-3)	-153	-8	163	10	-91	

<sup>1/</sup> Estimates on October 2016.  
Source: ICSG.



In the forecast horizon, the estimated average prices of copper in 2017 and 2018 have been revised slightly upwards. It is estimated that the prices will show a partial correction of the recent rise, but will be above the level estimate in the September report.

This revision on the upside assumes that China’s demand will continue to be favored by the public sector’s high investment in infrastructure and by the lag of the impact of the real estate investment on the demand for copper in China. On the other hand, it is estimated that the increase of demand due to greater spending in infrastructure in the USA would not be very significant: some initial estimates show that the impact on the world demand for copper would be between 0.4 percent (estimate of Goldman Sachs) and 0.6 percent (JP Morgan).



## Zinc

- b. The average price of **zinc** rose 13 percent between August and November 2016, reaching a monthly average price of US\$ 1.17 per pound in November. With this rise, the price of zinc accumulates a growth rate of 69 percent in the first eleven months of the year, supported by continued signals of a shortage of this metal associated with a greater supply deficit.

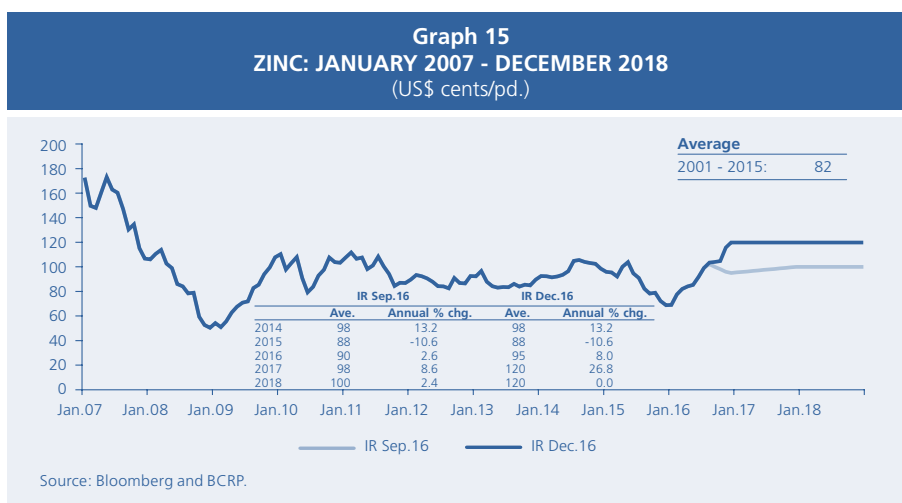
The price increase was supported by expectations that the supply of zinc concentrates will decrease in 2017, which could affect refining operations (closing of some smelters) and postpone projects of new refineries. The lower supply is associated with the final closing of some mines (Vedanta’s Lisheen and MMG’s Century mine) and to the production cuts announced by several producers that face negative margins. Another factor contributing to a lower supply is the environmental inspections that the Government of China has initiated at end October in the foundries of zinc and lead.

On the side of demand, China has continued with government spending in infrastructure, the increase in the demand for galvanized steel, which uses zinc as coating, being noteworthy. Additionally, the election of the new president of United States has generated expectations of higher expenditure in infrastructure in this country.





In such a context, the price of zinc estimated for the forecast horizon has been revised up due to the higher-than-expected growth of the demand in both China and the United States. A change is also observed in the outlook for global supply, which shows signals of a tighter market.



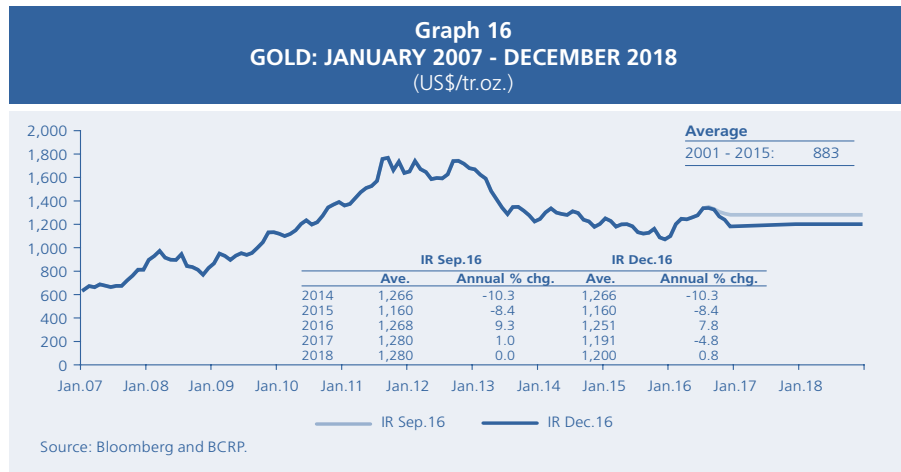
### Gold

- c. The price of gold dropped 8 percent between August and November of 2016, and reached an average monthly price of US\$ 1,236 per troy ounce in November. Despite the recent fall, the price of gold still registers an accumulated increase of 16 percent in the first 11 months of the year.

The price of gold dropped after the election results in the United States, affected by the higher probability that the Fed would raise its interest rate and by the appreciation of the dollar. Another factor that contributed to this price drop was the decline of the global demand for gold in the third quarter of the year due to lower physical demand –especially lower demand from the manufacturers of jewelry–, to central banks’ lower purchases of gold, and, more recently, to the restrictions on gold imports established by the Chinese Government to reduce capital outflows. However, despite its recent correction, the price of gold continues showing a strong increase so far this year as result of the high demand for investment.

In line with these developments, the price of gold in the forecast horizon has been revised down due to expectations that the Fed cycle of rate hikes will be faster than estimated in our previous report (in response to greater expectations of inflation), which could lead to a greater strengthening of the dollar in financial markets.





## Crude Oil

- d. The price of **WTI oil** rose 2 percent in the last three months, closing with a monthly average price of US\$ 46 per barrel in November. As a result, the price of oil accumulates an increase of 23 percent in the first eleven months of 2016.

The price of oil increased slightly in the last three months, supported mainly by expectations that the OPEC would cut its production of crude after the pre-agreement reached in September. After these expectations were confirmed on November 30 with the OPEC announcement of the production cut, the price of oil registered an additional increase of 9 percent in the first days of December.

It is worth mentioning that low oil prices have reduced capital spending in industry by 40 percent, especially in producing countries with higher costs, such as China. In addition, the recovery of global demand is estimated to show a faster pace driven by greater fiscal spending in the United States. These factors would contribute to reach a balance in the global market next year.

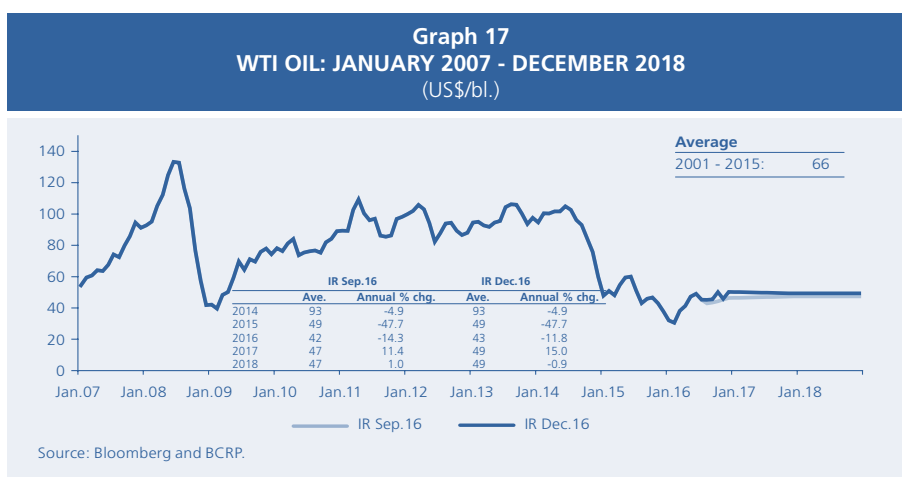
The estimate of the price of WTI oil in the forecast horizon is revised slightly on the upside, especially after the OPEC agreed to cut production by 1.2 million barrels per day (of a global supply of 96 million barrels). However, only a moderate price increase is projected because it is assumed that this agreement, which in principle would last six months, will be carried out only partially. It is possible that OPEC member countries will continue to increase their production of crude oil (especially countries with lower costs, such as Iran, Iraq, and Kuwait) and it is also expected that Libya and Nigeria's production of crude will return to the market. If the latter countries solve their internal conflicts, they could potentially add about 1 million barrels per day until





the end of 2017. Moreover, there is also the risk that the production cut of non-OPEC member countries (estimated at 600 million barrels) may not be completely carried out.

This projection shows a high degree of uncertainty. On the side of supply, prices could be subject to an upward pressure if the agreement of the OPEC and of other countries (such as Russia) is strictly followed. There is also uncertainty about the evolution of the production of shale oil, which represents approximately 50 percent of the U.S. production. The fall of production of 700 thousand barrels estimated initially by the U.S. Energy Information Administration (EIA) –from 4.9 million barrels in 2015 to 4.2 million in 2017– could be lower given the recent improvement of prices. On the side of demand, some changes could be seen depending on the stimulus programs based on public investment (China) and on the evolution of spending in infrastructure (USA).



### Maize

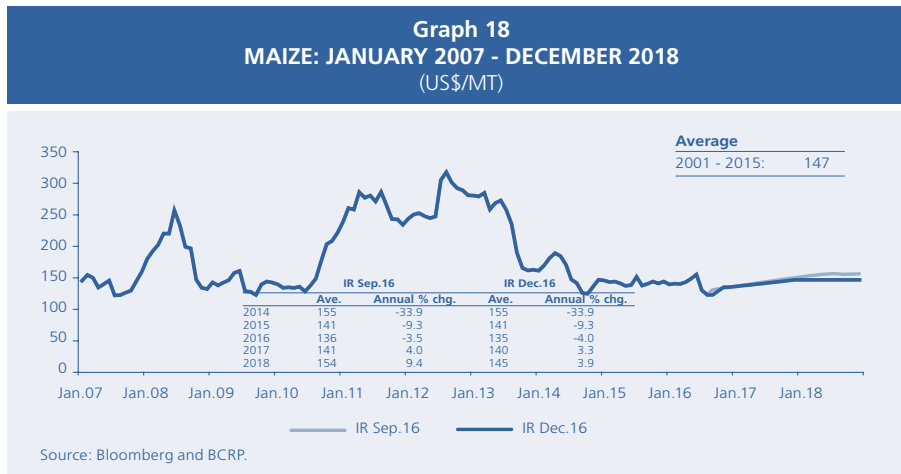
- e. In November, the average international price of **maize** rose 6 percent to US\$ 128 per metric ton compared to August 2016. Despite this recovery, however, the average price of maize shows a reduction of 9 percent in the year.

The prices of maize increased in the last three months, influenced by estimates indicating that global consumption will reach a historical record level in the current 2016-17 crop year. Thus, even though global inventories will record a historical maximum of 218 million tons<sup>1</sup>, the ratio of inventories to consumption would decrease compared to the 2015-16 cycle.

<sup>1</sup> According to the report “World Agricultural Supply and Demand Estimates” (WASDE) published in November by the U.S. Department of Agriculture.

This downward trend in inventories is observed despite the favorable path seen in the supply. During the year, the U.S. Department of Agriculture (USDA) revised up the estimates of the global production of this crop due to the unexpected positive impact of climate on corn crops in the United States, estimating a historical record production in USA in 2016/17 due to the positive impact of El Niño.

In line with these recent developments, the average price of maize is estimated to increase 9 percent in 2017. This increase is lower than that estimated in our previous report due to the better outlook for the supply.



## Wheat

- f. In November, the international price of wheat registered a drop of 4 percent compared to August 2016 and closed at an average price of US\$ 123 per ton. Thus, the average monthly price of wheat accumulates a decline of 25 percent compared to December 2015.

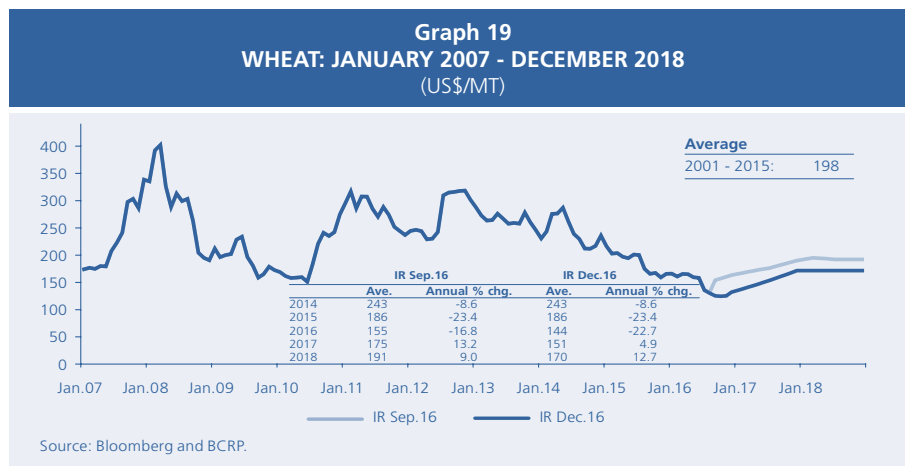
The price of wheat dropped due to the path registered by the supply. Wheat yields reached record levels in this 2016/17 crop year, which resulted in a record global production of 745 million tons<sup>2</sup>, even though the areas dedicated to the cultivation of wheat were lower this year. The persistent appreciation of the dollar, which affected the competitiveness of U.S. exports, added onto abundant supply. However, the fall in the price of wheat slowed down in comparison to the first half of the year due to the adverse climate that affected crops in the main producing countries (reducing considerably the quality of the crops in the European Union, Australia, and Canada).

2 According to the report "World Agricultural Supply and Demand Estimates" (WASDE) published in November by the U.S. Department of Agriculture.



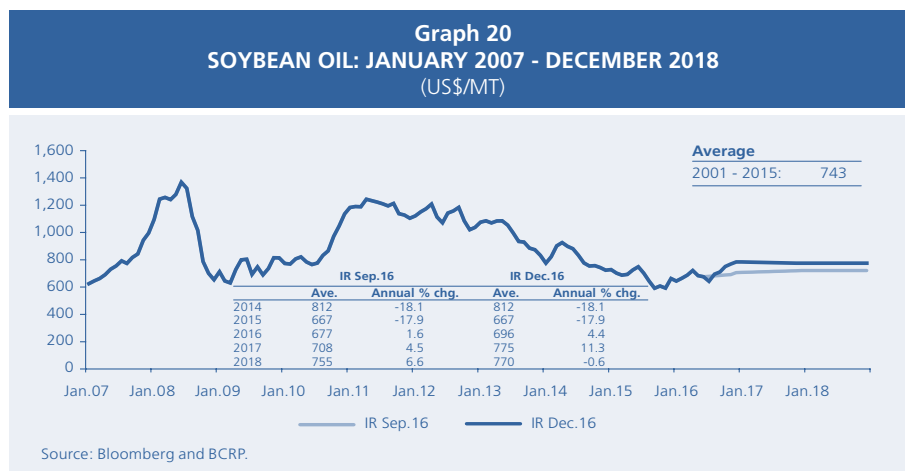


In the forecast horizon, the price of wheat is estimated to be lower than the levels considered in our previous report. Global inventories would reach their maximum levels in this 2016-17 season and would only start declining in the 2017-18 crop year. Like in the case of maize, this forecast could be affected by unforeseen changes in global supply (due to climate factors) and in the price of oil.



### Soybean Oil

- g. The average price of soybean oil in November was US\$ 764 a ton, 11 percent higher than the average price level in August 2016. As a result, the average price of soybean oil has accentuated its rising trend and shows an increase of 17 percent in the first eleven months of the year.



This trend is explained by the higher growth of consumption, a greater demand for this oil having been observed as a substitute of palm oil (whose production in Asia

was affected by El Niño). The price has also been influenced by a greater demand for soybean grains due to a greater consumption of animal proteins, mainly in China. On the side of supply, the National Oilseed Processors Association reported that the supply of soybean oil in the United States continues to be tight.

Based on the reasons discussed above, the price of soybean in the forecast horizon is expected to be higher than that estimated in IR of September.

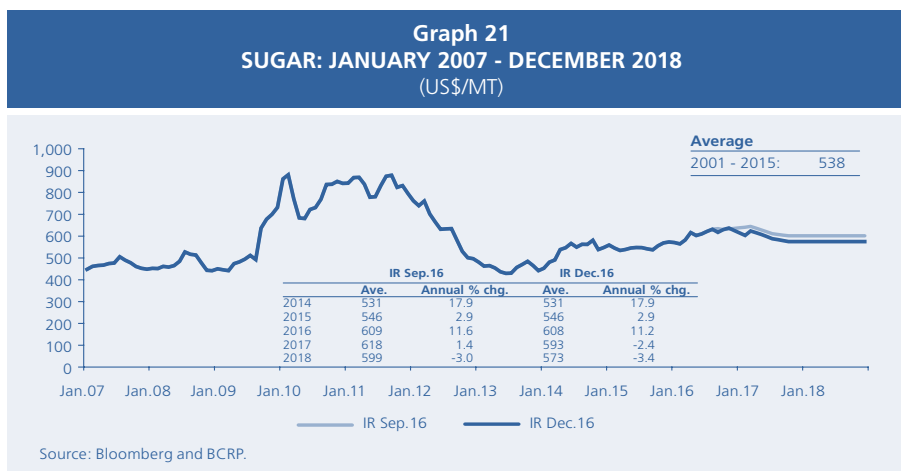
### Sugar

- h. The price of sugar, which rose 2.8 percent between August and November, accumulates an increase of 34 percent in the year. This rising trend reflects the deficit between supply and demand in the global market, which has been observed during two consecutive crop years (a deficit of 5.7 million tons in 2015-16 and a deficit of 7.1 million tons in 2016-17, according to the International Sugar Organization).

Supply constraints are explained mostly by droughts associated with El Niño in Asia (mainly in India and Thailand), although this trend has reversed during the last weeks due to increased rainfall in India.

More rain would determine a greater production of sugar and probably a small surplus in the 2017/18 crop year (which starts in October 2017), although this would be in part offset by a stagnation in the production of Brazil – the world’s first exporter of sugar– due to problems in over-indebted companies resulting from investing in the repopulation of their plantations.

In line with this, the price of sugar in 2017 and 2018 is expected to decrease by 2.4 and 3.4 percent, respectively.





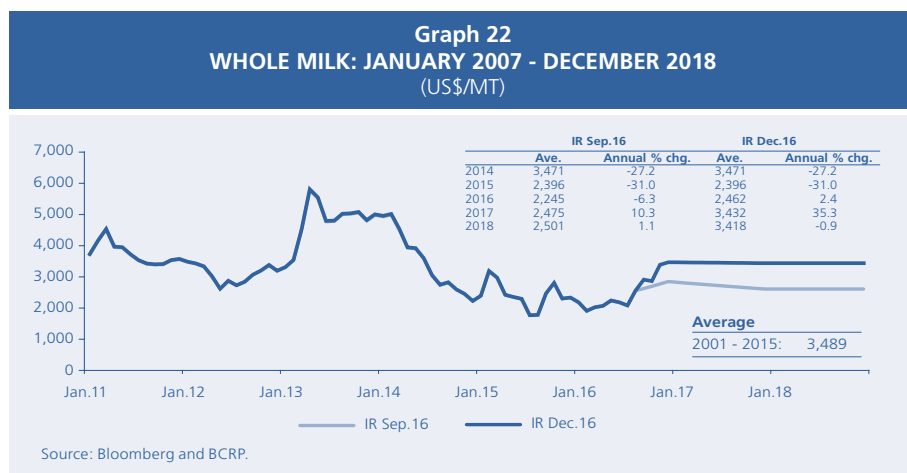
### Whole Milk Powder

- i. Between August and November, the price of whole milk powder (WMP) produced in New Zealand increased 24.1 percent in a context of a lower collection of milk in that country compared to the previous year, according to the reports of Fonterra, the world's main exporter of WMP.

The daily prices of WMP in the markets of future contracts use the prices obtained in the biweekly auctions of Global Dairy Trade, Fonterra's subsidiary, as reference. In contrast with the previous year, in 2016 the price of WMP has shown a rising trend that was stronger since the middle of the year, reaching a level of US\$ 3,525 per metric ton in the last auction carried out on December 2 (versus US\$ 1,990 per metric ton in mid-July).

The main fundamentals of the international price of WMP are, on the one hand, excess demand in China, and on the other hand, the capacity of the rest of the world to meet such gap, New Zealand and the European Union standing out as the main suppliers. It is worth mentioning that the current price levels are quite below the historic record of US\$ 6,000 per ton reached in April 2013, in a context in which China and New Zealand were affected by droughts.

Because of uncertainty about a recovery of production in New Zealand, the price of WMP is not expected to return in the near future to the price levels observed in the first half of 2016. Markets expect upward pressures during 2017.

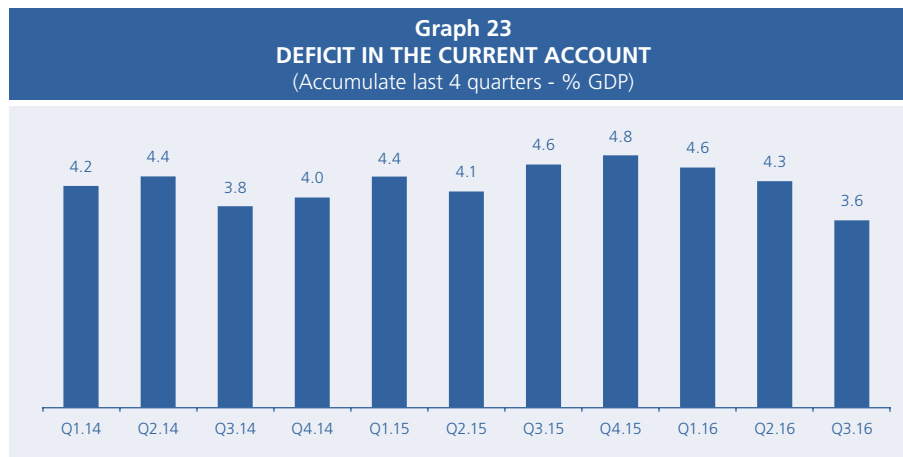


## II. Balance of Payments

### Current Account

10. The deficit in the current account of the balance of payments has continued decreasing over the year reflecting, on the one hand, the impact of lower private investment in a context marked by the completion of the implementation of very large mining projects that initiated their production stages, and, on the other hand, a slight recovery of private savings, reflected in increased corporate earnings.

In the last four quarters, as a percentage of GDP, the current account deficit has decreased from 4.8 percent in December 2015 to 3.6 percent in September 2016 (its lowest level since the first quarter of 2013).



11. This reduction in the current account deficit of the balance of payments is reflected mainly in the components of the trade balance. On the one hand, imports fell 7.7 percent in January-September 2016 –especially imports of inputs and capital goods– and, on the other hand, exports grew 2.9 percent. It is worth pointing out that the volume of exports grew 11.0 percent, driven by the higher sales of traditional exports, especially fishmeal, coffee, copper, and gold.



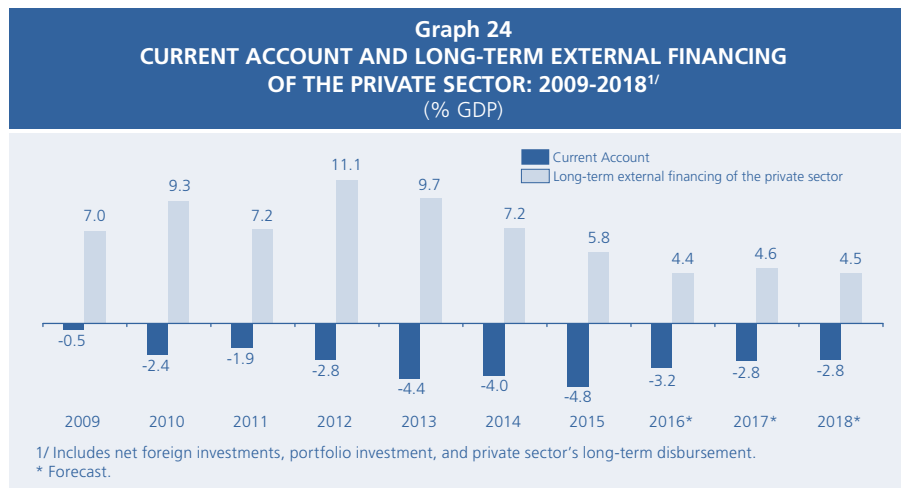


This decreasing trend observed in the current account deficit is projected to continue and that the deficit will decline from 3.2 percent of GDP in 2016 to 2.8 percent in 2017 and in 2018, which takes into account the expected increase in mining exports and the recovery of export prices. It is also expected that the main source of financing of the balance of payments in 2017 and 2018 will continue to be long-term financing from private sources (4.6 and 4.5 percent of GDP, respectively). This level of funding is lower than that observed in recent years, which is explained by the end of a cycle of large mining investment. However, this funding will continue to exceed the current account gap, the main component being foreign direct investment.

**Table 8**  
**BALANCE OF PAYMENTS**  
(Million US\$)

	2015		2016*			2017*		2018*	
	Jan.-Sep.	Year	Jan.-Sep.	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16
<b>I. CURRENT ACCOUNT BALANCE</b>	<b>-7,582</b>	<b>-9,210</b>	<b>-5,230</b>	<b>-7,476</b>	<b>-6,186</b>	<b>-6,964</b>	<b>-5,850</b>	<b>-7,124</b>	<b>-6,185</b>
% GDP	-5.3	-4.8	-3.6	-3.8	-3.2	-3.4	-2.8	-3.3	-2.8
1. Trade Balance	-3,017	-3,150	-148	-442	667	367	2,454	649	2,252
a. Exports	25,029	34,236	25,749	35,299	36,062	38,524	40,252	40,675	41,986
b. Imports	-28,045	-37,385	-25,897	-35,741	-35,395	-38,156	-37,798	-40,025	-39,734
2. Services	-1,312	-1,732	-1,106	-1,507	-1,475	-1,257	-1,320	-1,423	-1,376
3. Investment income	-5,735	-7,659	-6,777	-9,145	-9,055	-9,670	-10,623	-9,994	-10,758
4. Current transfers	2,483	3,331	2,801	3,619	3,678	3,595	3,639	3,644	3,697
Of which: Remittances	2,009	2,725	2,132	2,818	2,931	2,921	3,022	2,936	3,048
<b>II. FINANCIAL ACCOUNT</b>	<b>7,443</b>	<b>9,282</b>	<b>4,964</b>	<b>8,089</b>	<b>5,831</b>	<b>8,464</b>	<b>7,350</b>	<b>8,624</b>	<b>7,685</b>
Of which:									
1. Private Sector	5,074	5,326	3,099	5,506	4,658	6,134	5,086	6,515	5,576
a. Long-term	6,222	8,043	2,114	4,428	4,016	6,134	5,086	6,515	5,576
b. Short-term <sup>1/</sup>	-1,148	-2,717	985	1,078	642	0	0	0	0
2. Public Sector <sup>2/</sup>	2,369	3,956	1,865	2,583	1,172	2,331	2,264	2,109	2,109
<b>III. BALANCE OF PAYMENTS (=I+II)</b>	<b>-138</b>	<b>73</b>	<b>-266</b>	<b>613</b>	<b>-356</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>	<b>1,500</b>
<b>Memo:</b>									
Long-term external financing of the private sector (% GDP) <sup>3/</sup>	5.7	5.8	4.2	4.5	4.4	4.9	4.6	4.7	4.5
<sup>1/</sup> Includes net errors and omissions.									
<sup>2/</sup> Includes exceptional financing.									
<sup>3/</sup> Includes net foreign investments, portfolio investment and private sector's long-term disbursement.									
IR: Inflation Report.									
* Forecast.									





## Trade Balance

12. After registering an accumulated deficit of almost US\$ 3 billion in the first nine months of 2015, the trade balance showed a deficit of US\$ 148 million in the same period of 2016. This reduction of the deficit is explained mostly by lower imports, and to a lesser extent, by high exports.

The positive evolution of the trade balance in these three quarters and the lower price pressures observed in comparison to those considered for all the forecast horizon in the previous report has led us to revise up the projected growth of the trade balance. Thus, in 2017, the trade balance is expected to show an improvement of about US\$ 2.1 billion, while in 2018 it is estimated to show a surplus higher by nearly US\$ 1.6 billion than the one considered in the report of September.

**Table 9**  
**TRADE BALANCE**  
(Million US\$)

	2015		2016*			2017*		2018*	
	Jan.-Sep.	Year	Jan.-Sep.	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16
<b>Exports</b>	<b>25,029</b>	<b>34,236</b>	<b>25,749</b>	<b>35,299</b>	<b>36,062</b>	<b>38,524</b>	<b>40,252</b>	<b>40,675</b>	<b>41,986</b>
<i>Of which:</i>									
Traditional products	17,124	23,291	18,109	24,871	25,371	27,628	29,265	29,091	30,200
Non-traditional products	7,840	10,857	7,572	10,328	10,598	10,793	10,902	11,476	11,695
<b>Imports</b>	<b>28,045</b>	<b>37,385</b>	<b>25,897</b>	<b>35,741</b>	<b>35,395</b>	<b>38,156</b>	<b>37,798</b>	<b>40,025</b>	<b>39,734</b>
<i>Of which:</i>									
Consumer goods	6,488	8,791	6,326	8,786	8,595	9,112	8,897	9,393	9,233
Inputs	12,151	15,923	11,127	15,157	15,225	16,405	16,738	17,252	17,585
Capital goods	8,975	12,007	8,230	11,426	11,297	12,580	12,269	13,297	13,061
<b>Trade Balance</b>	<b>-3,017</b>	<b>-3,150</b>	<b>-148</b>	<b>-442</b>	<b>667</b>	<b>367</b>	<b>2,454</b>	<b>649</b>	<b>2,252</b>

IR: Inflation Report.  
\* Forecast.





The new projection assumes that, in the case of exports, the sales of mining exports would be favored in the forecast horizon by the transitory rise registered in the international prices of some minerals since the end of 2016 and that this rise would reverse gradually in 2017 and 2018. This price effect would offset by far the slowdown recorded in the volumes of traditional exports, associated with the lower growth expected in the primary sectors.

In the case of imports, based on the evolution of imports until September, the projection for 2016 has been revised down. In 2017 and 2018, imports would show a recovery consistent with the estimated growth of domestic demand, although with lower levels than those estimated in the previous report (base effect).

Table 10 TRADE BALANCE (% change)									
	2015		2016*			2017*		2018*	
	Jan.-Sep.	Year	Jan.-Sep.	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16
<b>1. Value:</b>									
Exports	-15.5	-13.4	2.9	3.1	5.3	9.1	11.6	5.6	4.3
Traditional products	-18.5	-15.9	5.8	6.8	8.9	11.1	15.3	5.3	3.2
Non-traditional products	-7.6	-7.0	-3.4	-4.9	-2.4	4.5	2.9	6.3	7.3
Imports	-9.3	-8.9	-7.7	-4.4	-5.3	6.8	6.8	4.9	5.1
<b>2. Volume:</b>									
Exports	-0.8	1.8	11.0	8.1	10.2	5.0	4.0	4.4	4.4
Traditional products	2.1	5.7	16.1	13.7	14.9	5.5	4.1	4.6	4.8
Non-traditional products	-5.6	-5.3	-0.2	-3.4	0.3	2.9	2.9	4.3	4.3
Imports	-0.3	0.3	-3.5	-2.2	-2.5	3.4	3.3	3.6	3.5
<b>3. Price:</b>									
Exports	-14.8	-14.9	-7.7	-4.8	-4.4	3.7	7.3	1.2	-0.1
Traditional products	-19.9	-20.4	-9.7	-6.1	-5.2	5.3	10.8	0.7	-1.5
Non-traditional products	-2.1	-1.8	-3.2	-1.5	-2.7	1.6	-0.1	2.0	2.9
Imports	-9.6	-9.2	-4.3	-2.6	-2.9	2.7	3.2	1.3	1.6

IR: Inflation Report.  
\* Forecast.

## External Financing

13. In January-September 2016, the net flow of private capital amounted to US\$ 3.10 billion, a sum US\$ 1.98 billion lower than that recorded in the same period of 2015, which reflected the lower financing obtained through long term loans and through foreign direct investment (after the completion of mining projects, such as Cerro Verde and Las Bambas).

The flow of foreign direct investment decreased from US\$ 7.08 billion in the first nine months of 2015 to US\$ 4.66 billion in the same period of this year. According

to information of the Ministry of Energy and Mines, mining investments in the period January to August 2016 amounted to US\$ 2.73 billion, which represents a decline of 44.5 percent compared to the same period of the previous year. The main reason explaining this lower rate of investment was the culmination of some mining megaprojects, specifically Cerro Verde (-91.6 percent), Las Bambas (-68 percent), and Toromocho (-59.5 percent).

However, based on the data registered in the third quarter, the projected flow of foreign direct investment has been revised up from US\$ 5.10 billion in the September report to US\$ 5.96 billion. This new projection includes in part the funding to Entel Peru from its Chilean parent company for the payment of the concession of 698-806 MHz band block.

**Table 11**  
**FINANCIAL ACCOUNT OF THE PRIVATE SECTOR**  
(Million US\$)

	2015		2016*		2017*		2018*		
	Jan.-Sep.	Year	Jan.-Sep.	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16
<b>PRIVATE SECTOR (A + B)</b>	<b>5,074</b>	<b>5,326</b>	<b>3,099</b>	<b>5,506</b>	<b>4,658</b>	<b>6,134</b>	<b>5,086</b>	<b>6,515</b>	<b>5,576</b>
% GDP	3.5	2.8	2.2	2.8	2.4	3.0	2.5	3.0	2.6
<b>A. LONG-TERM</b>	<b>6,222</b>	<b>8,043</b>	<b>2,114</b>	<b>4,428</b>	<b>4,016</b>	<b>6,134</b>	<b>5,086</b>	<b>6,515</b>	<b>5,576</b>
<b>1. ASSETS</b>	<b>-1,449</b>	<b>-433</b>	<b>-907</b>	<b>-1,184</b>	<b>-869</b>	<b>-1,500</b>	<b>-1,760</b>	<b>-1,471</b>	<b>-1,783</b>
<b>2. LIABILITIES</b>	<b>7,671</b>	<b>8,476</b>	<b>3,021</b>	<b>5,613</b>	<b>4,885</b>	<b>7,634</b>	<b>6,846</b>	<b>7,987</b>	<b>7,359</b>
Foreign direct investment in the country	7,075	7,817	4,655	5,098	5,961	5,593	5,593	5,723	5,723
Non-financial sector	1,372	1,828	-383	1,477	114	2,275	1,488	2,461	1,824
Long-term loans	1,661	2,410	2	1,126	232	1,036	467	1,018	648
Portfolio investment	-289	-582	-385	351	-118	1,239	1,021	1,443	1,176
Financial sector	-776	-1,169	-1,251	-963	-1,189	-235	-235	-198	-188
Long-term loans	-771	-1,155	-1,139	-956	-1,077	-296	-296	-248	-238
Portfolio investment	-5	-14	-112	-7	-112	61	61	50	50
<b>B. SHORT-TERM <sup>1/</sup></b>	<b>-1,148</b>	<b>-2,717</b>	<b>985</b>	<b>1,078</b>	<b>642</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<sup>1/</sup> Includes net errors and omissions.

IR: Inflation Report.

\* Forecast.

Long term loans to the private sector would be used to finance the investment projects of companies in different economic sectors. In 2017 these flows would recover in comparison to 2016, in line with the projected evolution of private investment in a context of higher terms of trade, optimism in business confidence, and Government efforts to “unlock” and expedite projects. Based on the information of announcements of private investment projects, private investment would be concentrated in the sectors of mining (29 percent of the sample), hydrocarbons (14 percent), and infrastructure (17 percent), all of which have an important component of external funding. Most of the funding would come from foreign direct investment and would be supplemented with flows of loans and issuances of bonds in international markets.





**Table 12  
MAIN INVESTMENTS PROJECTS: 2016-2018**

SECTOR	COMPANIES	PROJECT
<b>MINING</b>	Southern Perú Copper Corp.	Expansion of Toquepala
	Chinalco	Expansion of Toromocho
	Shougang Corporation	Expansion of Marcona
	Grupo Breca	Mine Justa
	Jinzhao Mining	Pampa del Pongo
<b>HYDROCARBONS</b>	Enagas, Odebrecht	Enhance energy security country and development of pipeline in the south
	China National Petroleum Corporation, Repsol YPF S.A.	Lot 57: Kinteroni
	China National Petroleum Corporation	Exploration: Lot 58
	Calidda Gas Natural del Perú Karoon Gas Natural	Massive use of gas Exploration: Lot Z - 38
<b>ELECTRICITY</b>	Isolux	Transmission line: Moyobamba-Iquitos
	Corsán-Corvian	Hydroelectric Power Plant of Molloco
	Luz del Sur	Thermal power plant of South Pacific
	Generación Eléctrica Las Salinas	Eolic Park Samaca
	Termochilca	Thermal power plant of Domingo Ollerós - Combined cycle
<b>INDUSTRY</b>	Corporación Lindley	Storages and infrastructures
	Repsol YPF	Expansion of La Pampilla plant
	Técnicas Reunidas	Modernization of Talara refinery
	CMPC Tissue	Plant of Tissue
	Plástico Rival	Tube factory
	Precor	Plant in Chilca
	Medrock	Production factory of medicine
<b>INFRASTRUCTURE</b>	Consorcio Nuevo Metro de Lima	Line 2 Network Metro Lima (Electric Train)
	Consorcio Rutas de Lima	New highways in Lima
	Consorcio Consierra II	Longitudinal de la Sierra road project, Section 2
	Lima Airport Partners	Expansion of international airport (Jorge Chávez)
	Covisol	Trujillo-Sullana: Sol Highway
	Kuntur Wasi	International airport (Chincheró)
	Covi Perú Grupo Volcan	Road network No 6 Pucusana-Ica Port Terminal Project: Chancay
<b>OTHER SECTORS</b>	Grupo Telefónica	Expansion and facilities of net LTE-4G
	Entel	Development of services 4G
	America Movil	Expansion of net 4G
	Grupo Falabella	Expansion and New shopping centers
	Besalco S. A.	Real Estate projects
	Graña y Montero Vivienda (GMV)	Projects of houses
	Grupo Interbank Grupo Breca	Expansion and New shopping centers Expansion and new hotels, medical centers and shopping malls.

Source: Information of companies and media press.

In the **mining sector**, ongoing projects include the expansion of Toquepala (with a total investment of US\$ 1.2 billion), and Marcona (with an estimated investment of US\$ 1.5 billion). Southern's investment in the former at September 2016, which amounts to US\$ 477 million, includes the implementation of an advanced technology new concentrator that will allow to increase the annual capacity of copper production

from 100 thousand tons to 235 thousand tons. Shougang's investment in the expansion of Marcona is oriented to expand the mine, replace equipment in the plant, optimize production processes and enhance existing infrastructure with the aim of increasing the annual production of iron by 10 million tons.

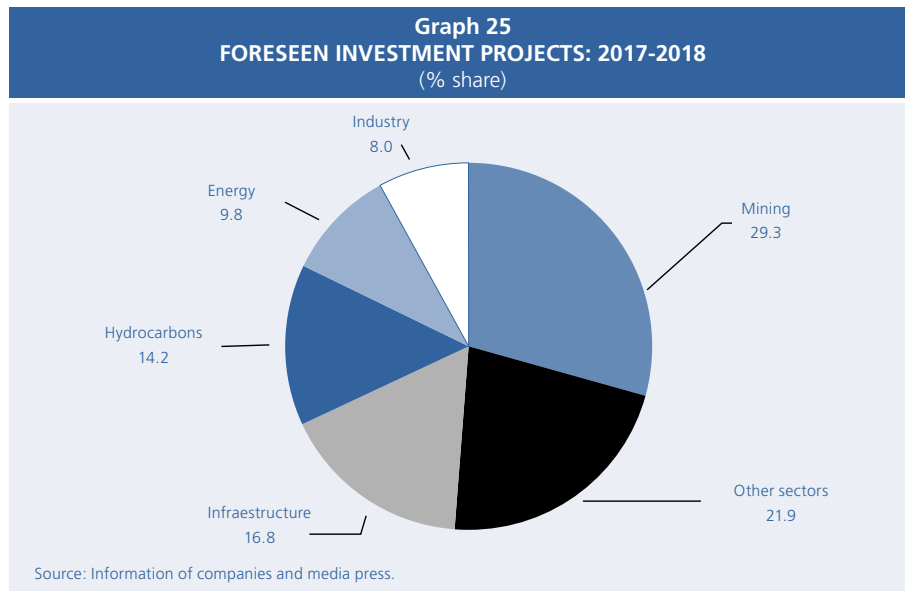
In the **hydrocarbons sector**, a major project aimed at improving energy security in the country and the development of a gas pipeline –*Mejoras a la Seguridad Energética del País y Desarrollo del Gasoducto Sur Peruano*– has been stalled since April because it must complete requirements for financial closure. The project is expected to continue next year.

Ongoing projects in the **energy sector** include the implementation of the 200 Kv. Moyobamba-Iquitos transmission line and the implementation of the power plant of Santo Domingo de Olleros (steam turbine – combined cycle), which at October, already had an advance of 44 and 32 percent, respectively, and with an overall investment of about US\$ 420 million being foreseen for the period 2017-2018. It should be pointed out that projects that started operations in 2016 include projects Cerro del Águila, Nodo Energético del Sur, and Central Eólica Tres Hermanas, which together accounted for a total investment of US\$ 1.8 billion.

In the **infrastructure sector**, progress in the implementation of the Lima Metro's Line 2 project, which involves private investment amounting to US\$ 2 billion, includes having received the land for the construction of stations 21 to 24 which will allow restarting the works. Civil engineering works for the construction of Station 23, Hermilio Valdizán, and Station 24, Mercado Santa Anita, have also started. This is also the case of the works to eliminate the interference of the water and sewer grids in stations 3, 4, 18, and 19. On the other hand, an agreement was reached in the terms for signing the addenda of the bankability conditions for the concession contract with Consorcio Paracas in charge of developing the project Terminal Portuario General San Martín (US\$ 129 million). As for the project of highway El Sol connecting the cities of Trujillo and Sullana (with an investment of US\$ 329 million), priority has been given to eliminating interferences and to the construction of a second lane in different sections, while the works carried out in the project being developed at Jorge Chavez airport included moving the gas pipeline, the relocation of Sedapal drive line, and the signing of an agreement with the municipality of Callao to meet obligations for the expansion of the airport and the section of Gambetta of the Lima Metro's Line 4. The works of tunnel Gambetta are expected to be completed this year. This project involves a total investment total of US\$ 1.1 billion, of which US\$ 337 million has been invested as of October.

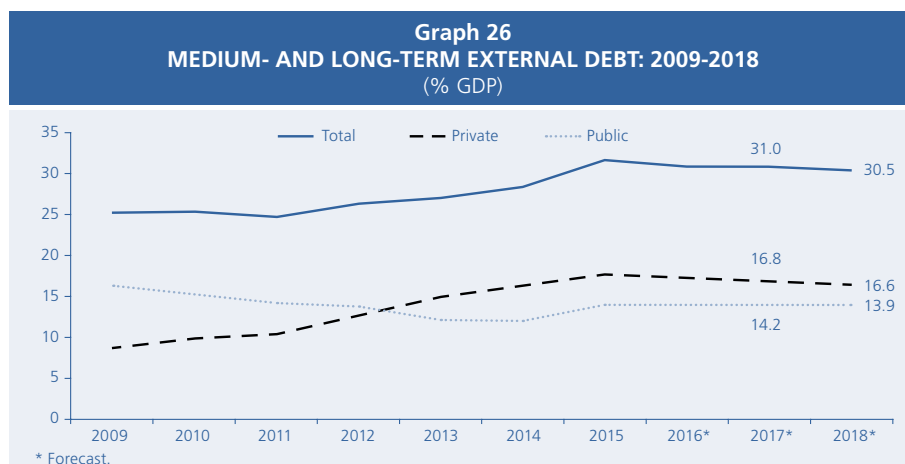
The sectors linked to **construction**, such as the sectors of real estate, hotels, education, and health, continue announcing expansion and remodeling projects as well as new projects, both in Lima and in the provinces, in line with the greater dynamism expected in domestic demand in the next years.





14. The positive flow expected in the **financial account of the public sector** in the following 2 years reflects significant disbursements oriented to finance several investment projects (such as the expansion of the refinery of Talara and the development of Lima Metro’s Line 2), as well as the Treasury’s financing requirements.
15. Total borrowing from external sources has recently been reflecting the evolution of the private component that rose to 17.9 percent of GDP at end 2015, while the public component was equivalent to 13.9 percent of GDP.

The private debt is expected to remain stable at over 16.5 percent of GDP in the forecast horizon. This would be associated to greater investment in infrastructure, which would offset lower investment in mining.



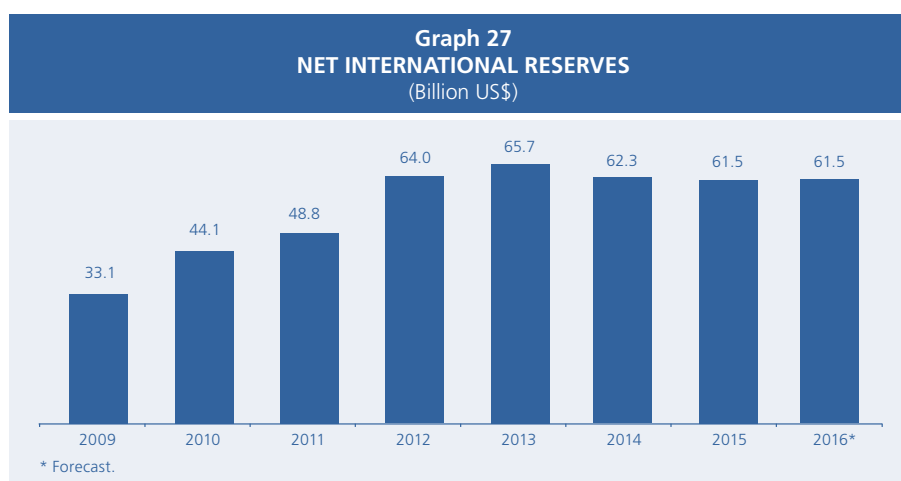
16. The soundness of the balance of payments to face negative events in the global economy is reflected in the position of Peru's international reserves relative to the balance of its short term external liabilities or comparing the total of these liabilities with the country's current account deficit. The high-levels the Peruvian economy registers in these indicators in the region was pre-emptively achieved during the period of time characterized by capital inflows and high commodity prices.

**Table 13**  
**NIR INDICATORS**

	2006	2011	2016*
<b>NIR as a % of:</b>			
a. GDP	19.6	28.6	31.5
b. Short-term external debt <sup>1/</sup>	166	471	541
c. Short-term external debt plus Current account deficit	230	360	350
<b>Medium- and long-term external debt (as a % GDP)</b>	<b>28.7</b>	<b>24.4</b>	<b>31.0</b>
a. Private	4.1	10.2	17.1
b. Public	24.6	14.2	13.8

1/ Includes short-term debt balance plus redemption (1-year) of private and public sector.  
\* Forecast

**Graph 27**  
**NET INTERNATIONAL RESERVES**  
(Billion US\$)





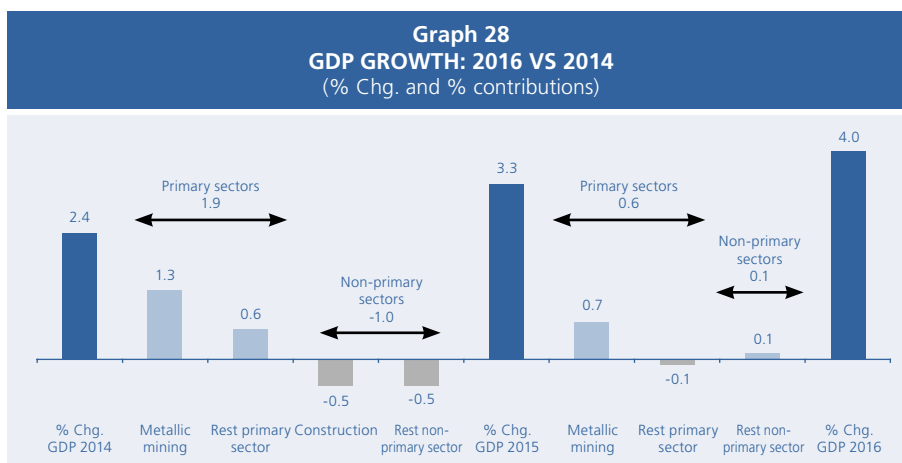
### III. Economic Activity

#### Sector GDP

17. Showing a higher rate than that recorded in 2015 (3.3 percent), GDP grew 4.2 percent in the first three quarters of 2016, which is explained mostly by growth in the primary sectors (9.7 percent vs. 6.9 percent in the previous year). Moreover, the growth of the sub-sector of metal mining (23.5 percent), driven mainly by the production of copper of Las Bambas and Cerro Verde, stands out within the primary sectors.

Lower growth is expected in terms of sector GDP in the fourth quarter of 2016 since the sector of metal mining is estimated to show in this quarter its lower rate of growth in the year. Moreover, the pace of growth of the non-primary sectors would slow down in the fourth quarter due mainly to the contraction of the construction sector.

18. The projection of GDP growth shows an acceleration between 2015 and 2016, the growth rate rising from 3.3 to 4.0 percent. Like in 2015, metal mining is the sector that contributes more to this acceleration.



The projection of GDP growth for this year remains at 4.0 percent, but the growth rates of the different production sectors have been corrected. Downward revisions on the side of the primary sectors include the growth rates of primary manufacturing and fishing, and on the side of the non-primary sectors, the rates of non-primary manufacturing



and construction, in line with the lower dynamism projected in investment this year. However, lower growth in these sectors is offset by a higher growth rate estimated for the output in metal mining as a result of greater production at Las Bambas.

The projected growth of GDP in 2017 has been revised down, from 4.5 to 4.3 percent, basically due to the lower growth expected in the production of copper that year as well as to lower agricultural and commercial activity. On the other hand, the growth rate expected for 2018 remains at 4.2 percent.

Table 14 GDP BY PRODUCTION SECTOR (Real % change)									
	2015		2016*			2017*		2018*	
	Jan.-Sep.	Year	Jan.-Sep.	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16
<b>Agriculture and livestock</b>	<b>3.6</b>	<b>3.4</b>	<b>1.1</b>	<b>1.4</b>	<b>1.3</b>	<b>3.8</b>	<b>2.8</b>	<b>5.0</b>	<b>5.0</b>
Agriculture	2.3	2.1	-0.4	0.1	-0.3	3.9	2.3	5.5	5.5
Livestock	5.8	5.5	3.6	3.3	3.7	3.8	3.6	4.2	4.2
<b>Fishing</b>	<b>9.1</b>	<b>15.9</b>	<b>-22.2</b>	<b>-2.4</b>	<b>-12.8</b>	<b>24.8</b>	<b>34.7</b>	<b>4.1</b>	<b>5.7</b>
<b>Mining and hydrocarbons</b>	<b>7.5</b>	<b>9.5</b>	<b>18.4</b>	<b>14.7</b>	<b>16.6</b>	<b>8.2</b>	<b>7.4</b>	<b>4.8</b>	<b>5.1</b>
Metallic mining	13.3	15.5	23.5	19.0	21.7	8.7	7.5	4.6	5.0
Hydrocarbons	-12.3	-11.5	-3.8	-4.6	-5.5	5.9	7.1	6.8	6.6
<b>Manufacturing</b>	<b>-2.4</b>	<b>-1.5</b>	<b>-3.0</b>	<b>-1.6</b>	<b>-2.2</b>	<b>3.2</b>	<b>3.5</b>	<b>4.0</b>	<b>4.0</b>
Based on raw materials	-2.1	1.8	-4.8	-0.1	-2.2	7.7	10.0	4.0	4.1
Non-primary industries	-2.6	-2.6	-2.3	-2.0	-2.1	2.0	1.7	4.0	4.0
<b>Electricity and water</b>	<b>5.2</b>	<b>5.9</b>	<b>8.1</b>	<b>7.9</b>	<b>7.6</b>	<b>5.5</b>	<b>5.5</b>	<b>5.0</b>	<b>5.0</b>
<b>Construction</b>	<b>-7.4</b>	<b>-5.8</b>	<b>-0.4</b>	<b>-0.8</b>	<b>-2.7</b>	<b>4.0</b>	<b>3.6</b>	<b>6.0</b>	<b>5.5</b>
<b>Commerce</b>	<b>3.9</b>	<b>3.9</b>	<b>2.1</b>	<b>2.4</b>	<b>2.0</b>	<b>3.8</b>	<b>3.3</b>	<b>3.8</b>	<b>3.8</b>
<b>Services</b>	<b>4.2</b>	<b>4.2</b>	<b>4.2</b>	<b>3.9</b>	<b>4.0</b>	<b>3.9</b>	<b>3.9</b>	<b>3.9</b>	<b>3.8</b>
<b>GDP</b>	<b>2.8</b>	<b>3.3</b>	<b>4.2</b>	<b>4.0</b>	<b>4.0</b>	<b>4.5</b>	<b>4.3</b>	<b>4.2</b>	<b>4.2</b>
Memo:									
<b>Primary GDP</b>	<b>5.0</b>	<b>6.9</b>	<b>9.7</b>	<b>8.9</b>	<b>9.6</b>	<b>7.4</b>	<b>7.1</b>	<b>4.8</b>	<b>5.0</b>
<b>Non-Primary GDP</b>	<b>2.3</b>	<b>2.4</b>	<b>2.7</b>	<b>2.6</b>	<b>2.5</b>	<b>3.7</b>	<b>3.5</b>	<b>4.0</b>	<b>4.0</b>

IR: Inflation Report.  
\* Forecast.

- a) Growth in the **sector of agriculture** slowed down from a rate of 3.6 percent in the first 9 months of 2015 to 1.1 percent in the same period of 2016, due mainly to the contraction of farming activity as a result of the absence of rain, which has affected the production of rice, potatoes, and other Andean crops such as amilaceous maize, wheat, peas, beans, quinoa, and barley.

Agricultural activity is being carried out in conditions of a water deficit. Water conditions for agriculture depend on ocean and atmospheric conditions. While the former are currently neutral, the latter show some irregularities that are





expected to be offset with the arrival of the summer season. In December, the level of rainfall has improved, although without reaching the level of sufficiency required. Because of this, the projection of growth in agriculture in 2017 has been revised down, while the projected rate of growth of the sector in 2018 remains at 5.0 percent since these adverse conditions are expected to dissipate next year.

- b) In the first three quarters of 2016, the **fishing sector** shrank 22.2 percent due to the lower catch of anchovy for industrial consumption. The lower extraction of this species was due to the premature closure of the first fishing season given that anchovy spawning started earlier. However, this was in part offset by a greater catch of mackerel for direct consumption human given the greater availability of this species that was favored by ocean anomalies.

The growth rate projected for the sector in 2016 has been revised down because a lower extraction of anchovy for industrial consumption is expected in the second fishing season given that the fishing quota is lower than that considered in the previous report. The presence of young fish observed so far in the second fishing season would ensure an appropriate biomass in 2017 which, together with the delay in fish catch this year and with normal ocean conditions, would allow the sector to resume a normal pace of growth in 2017 and 2018.

- c) The growth projection of the **metal mining sector** in 2016 is revised up due to the higher production of copper at Las Bambas in the third quarter of the year, which is assumed to exceed the annual production estimated in the previous report.

The momentum of the growth of copper is expected to moderate in the following years. However, the expansion of mine Toquepala, which belongs to Southern Peru, is expected to start operations in 2018 and would allow the company to increase its production levels.

**Table 15**  
**COPPER PRODUCTION**  
(Thousand MTF)

	2015	2016*	2017*	2018*
Antamina	412	448	430	440
Southern	298	288	312	366
Cerro Verde	208	477	525	538
Antapaccay	203	223	230	230
Toromocho	182	159	200	220
Constancia	106	137	130	130
Las Bambas	7	344	460	500
Rest	212	220	235	242
<b>TOTAL</b>	<b>1,628</b>	<b>2,296</b>	<b>2,521</b>	<b>2,667</b>

\* Forecast.

Between January and September, the **production of gold** grew 4.7 percent compared to 2015 due mainly to the production of mine Inmaculada and to artisanal gold production in Madre de Dios, Puno, Arequipa, and Piura. It should be pointed out that the production figures of these last three departments have been available only since February 2016, so the increase in this production is associated with a base effect. In 2017, the production of this mineral would increase due to the contribution of the new gold mining projects, especially Invicta and Tambomayo. Moreover, Buenaventura's project San Gabriel is expected to start its production phase in the second semester of 2018.

**Table 16**  
**GOLD PRODUCTION**  
(Thousand troy ounce)

	2015	2016*	2017*	2018*
Yanacocha	890	658	500	500
Barrick Misquichilca	614	526	463	463
Madre de Dios <sup>1/</sup>	391	549	540	540
Buenaventura	218	195	208	208
Inmaculada	59	163	147	147
Anama	74	91	89	89
Shahuindo	0	44	85	85
Invicta	0	0	96	118
Tambomayo	0	2	120	130
Rest	2,434	2,637	2,701	2,747
<b>TOTAL</b>	<b>4,680</b>	<b>4,863</b>	<b>4,949</b>	<b>5,026</b>

\* Forecast.  
1/ Corresponds informal production estimated by MINEM.

The **production of zinc** dropped by 9.1 percent during the first nine months of 2016 due to the lower production of Los Quenuales, associated with the closing of mining unit Iscaycruz, and to the lower production of Antamina resulting from the lower grades of mineral ores. However, Antamina would recover in 2017 with a higher production of zinc.

**Table 17**  
**MINING PRODUCTION**  
(% change)

	2015	2016*	2017*	2018*
Copper	25.8	41.1	9.8	5.8
Gold	3.8	4.0	1.8	1.6
Zinc	8.1	-7.0	7.0	2.6

\* Forecast.

- d) The output in the **subsector of hydrocarbons** fell 3.8 percent between January and September of 2016 due to the lower production of oil. The reasons





explaining this fall would be the null exploitation of lot 192 by Pacific Stratus due to ruptures in the pipeline and the little exploitation of lot 8 by Pluspetrol due to the protests of the communities living in the area.

The lower production of oil in the period was offset in part by a greater production of gas and natural gas liquids, which is explained by a base effect base since maintenance works were carried out in the pipeline in the third quarter of 2015.

Finally, the total repair of the pipeline, which is estimated to take place at end 2017, would re-activate the production of the lots affected and allow higher rates of production of crude in 2018.

- e) The production of the **manufacturing sector** in the three first quarters shrank by 3.0 percent due mainly to lower output in the processing of fishmeal and fish oil, reflecting the lower extraction of anchovy in the period. Since a lower catch of this species is anticipated in 2016, the projected contraction of primary manufacturing has been revised from 0.1 to 2.2 percent. In 2017, the sector of manufacturing would grow at a higher rate than previously projected given that the growth of the fishing sector has been revised on the upside.

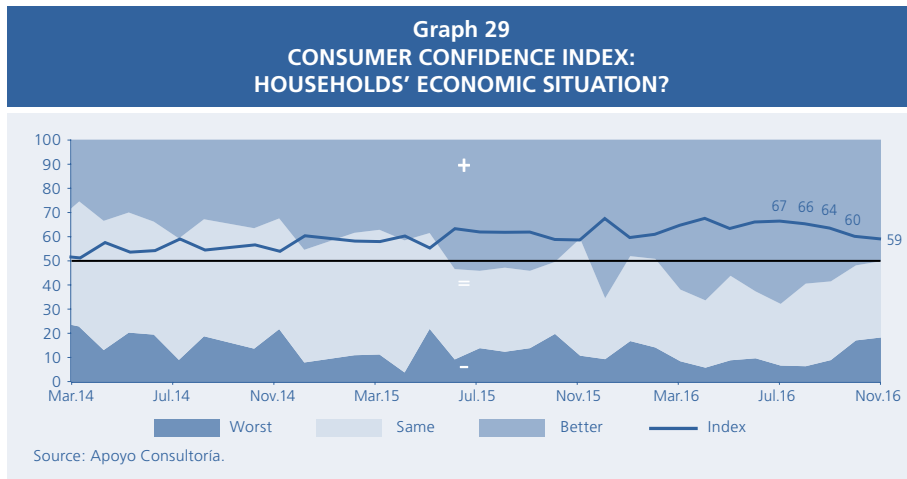
Moreover, output in non-primary manufacturing would also fall more than projected in the previous report due mainly to the greater decline expected in the branches oriented to investment, in line with the revision of public and private investment on the down side.

### **Expenditure-side GDP**

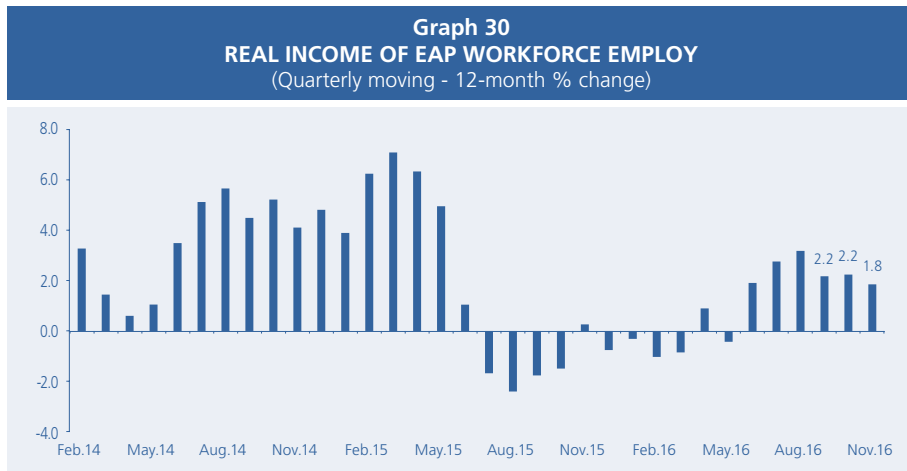
- 19. GDP growth during the first three quarters of the year (4.2 percent) was driven by the favorable evolution of exports (9.6 percent), in line with the high rates of growth recorded in mining production in this period. In contrast, domestic demand grew only 1.1 percent in a context in which private investment maintained its negative trend with a fall of 6.2 percent associated with the contraction of mining investment. Moreover, public spending showed a faster pace of growth during this period and recorded a growth rate of 7.0 percent, while private consumption maintained its dynamism with a growth rate of 3.6 percent.

Domestic demand indicators show mixed trends. On the one hand, the determinants of consumer spending (income and credit) show favorable indicators, while consumer confidence, on the other hand, shows some level of decline, and contemporary indicators of private investment continue showing a declining trend.

- a) The consumer confidence index continued declining and recorded 59 points in November, after having reached 67 points in July.

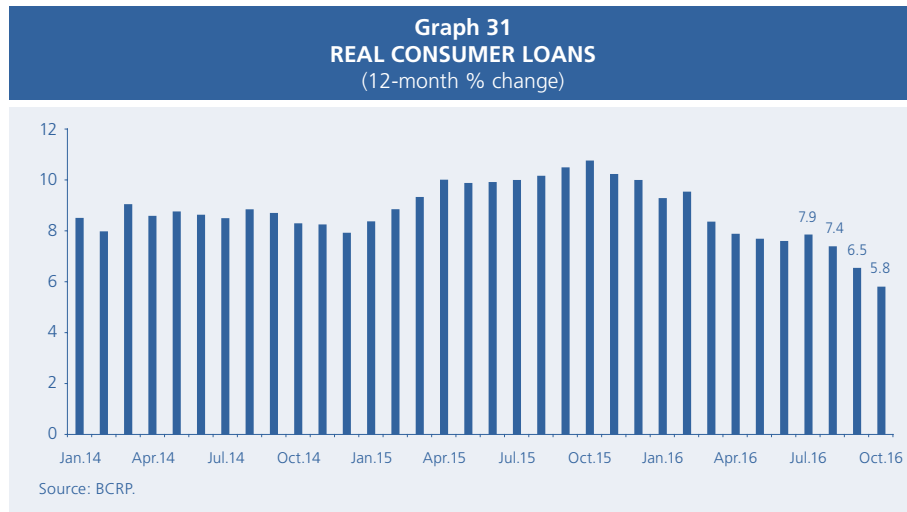


- b) The real income of the workforce employed grew 1.8 percent in November, recording a positive rate for the sixth consecutive month.

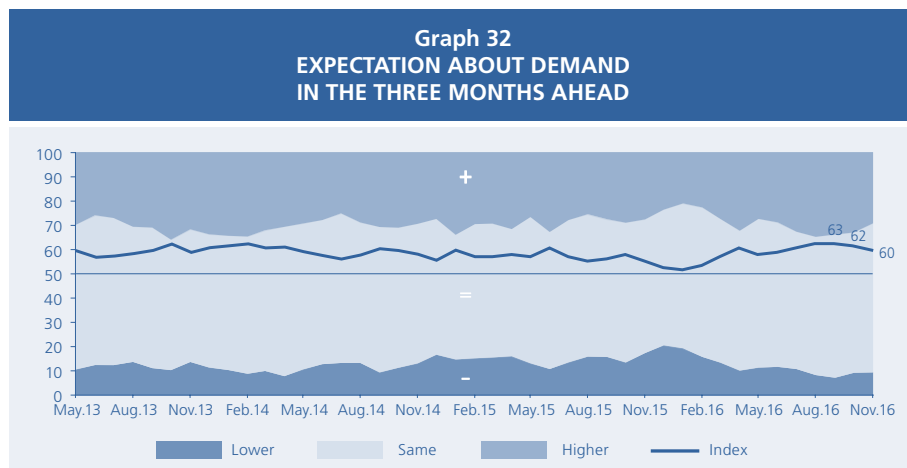


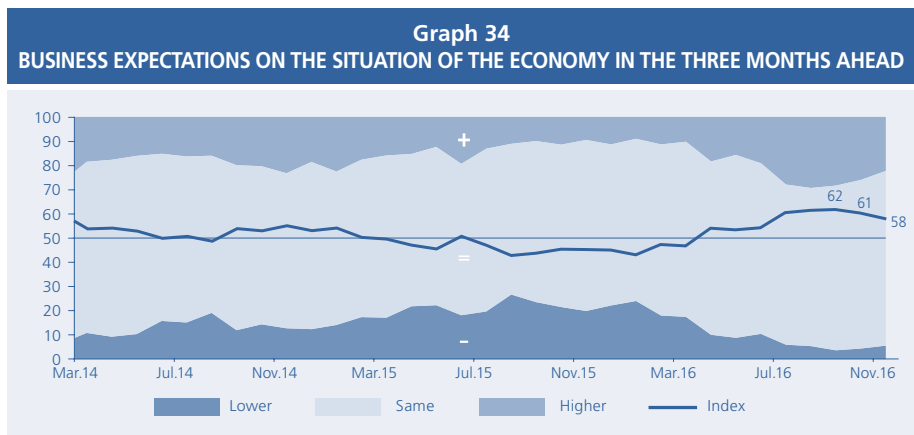
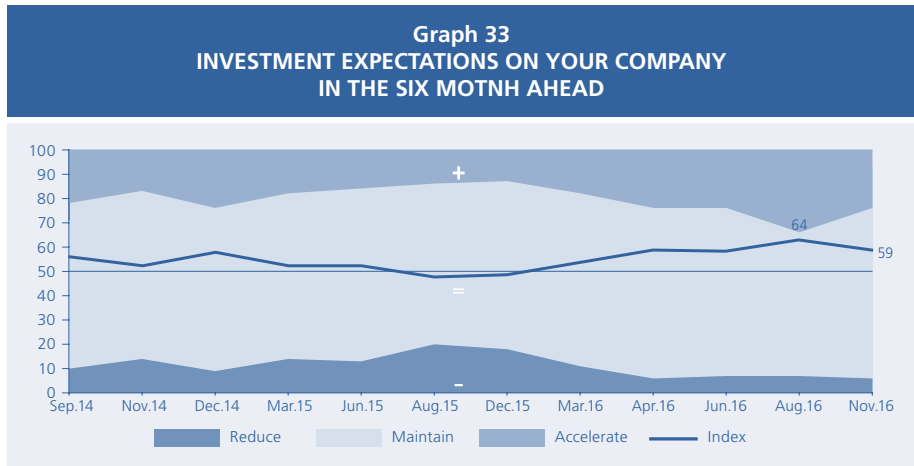


- c) Consumer loans continued showing higher growth rates in real terms than incomes, although recording lower rates than in the month of July. In October 2016, consumer loans grew 5.8 percent.

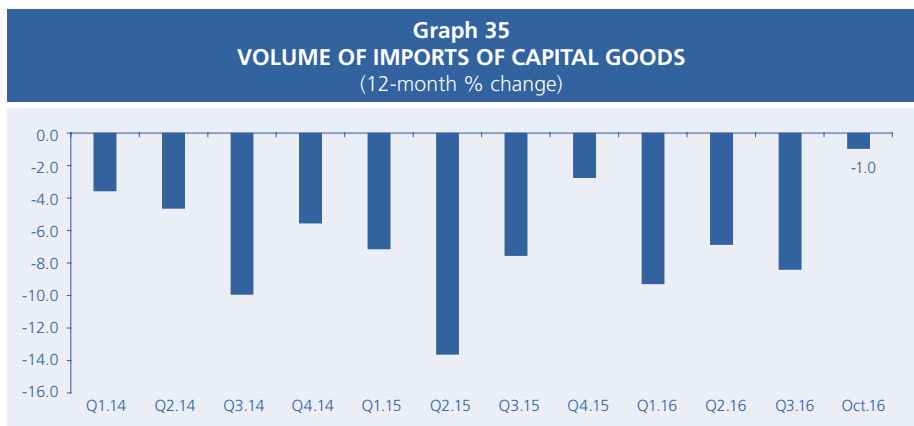


- d) Firms' expectations of demand in three months' time remain on the optimistic side and recorded 60 points in November, but showed a decline for the third consecutive month. Likewise, the expectations of businessmen regarding the status of the economy in three months have declined since July 2016 and recorded 58 points (versus 61 points in July 2016). Moreover, the indicator of expected investment in six months' time shows a negative trend and has declined to a level of 59 points in November (versus 64 points in August 2016).





- e) The volume of imports of capital goods, indicator of the demand for investment, declined 1.0 percent in October 2016 and accumulated a fall of 2.1 percent between August and October of 2016.





**Table 18**  
**GDP AND DOMESTIC DEMAND**  
(Real % change)

	2015		2016*			2017*		2018*	
	Jan.-Sep.	Year	Jan.-Sep.	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16
<b>I. Domestic demand</b>	<b>3.0</b>	<b>3.0</b>	<b>1.1</b>	<b>1.8</b>	<b>1.3</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>
<b>1. Private expenditure</b>	<b>3.1</b>	<b>2.7</b>	<b>0.0</b>	<b>0.7</b>	<b>1.1</b>	<b>4.1</b>	<b>3.8</b>	<b>3.9</b>	<b>4.2</b>
Consumption	3.3	3.4	3.6	3.5	3.5	3.8	3.5	4.0	4.0
Private fixed investment	-5.3	-4.5	-6.2	-4.3	-5.5	5.0	5.0	5.0	5.0
Change on inventories (contribution)	1.7	1.1	-1.1	-0.7	-0.2	0.1	0.0	-0.2	0.0
<b>2. Public expenditure</b>	<b>2.3</b>	<b>4.2</b>	<b>7.0</b>	<b>7.0</b>	<b>2.2</b>	<b>3.4</b>	<b>5.1</b>	<b>4.3</b>	<b>2.8</b>
Consumption	8.1	9.5	5.9	5.7	3.0	3.0	4.2	3.5	2.2
Investment	-12.2	-7.5	10.1	10.3	0.1	4.5	7.4	6.2	4.5
<b>II. Net external demand</b>									
1. Exports	0.9	3.5	9.6	6.9	8.6	5.5	4.7	4.6	4.6
2. Imports	1.6	2.1	-2.9	-1.7	-2.1	3.6	3.6	3.7	3.7
<b>III. GDP</b>	<b>2.8</b>	<b>3.3</b>	<b>4.2</b>	<b>4.0</b>	<b>4.0</b>	<b>4.5</b>	<b>4.3</b>	<b>4.2</b>	<b>4.2</b>

IR: Inflation Report.  
\* Forecast.

20. The GDP growth rate projected for 2016 in this report remains at 4.0 percent, but with a different composition. Increased exports would be offset by a greater contraction of private investment and lower public spending.

In 2017 and 2018 domestic demand is expected to grow 4.0 percent in each year, considering that private investment would gradually resume a higher pace of growth supported by the implementation of the main projects given in concession and the future investment projects that have been announced. The reversal of the contraction of spending in public investment as a result of the implementation of infrastructure projects (Lima Metro's Line 2, the infrastructure projects for the Pan American Games, the refinery in Talara, among others) is another important factor expected to generate greater dynamism in domestic demand. On the side of exports, a moderation is anticipated as a result of a slower growth of mining production than that considered in the September report, whereas imports, on the other hand, would grow in 2017 and 2018 at rates consistent with the expected performance of domestic demand and the recovery of private investment. Based on these projections, GDP is expected to grow 4.3 percent in 2017 and 4.2 percent in 2018.

The survey of expectations of GDP growth reveals that expectations for 2016 have been adjusted on the upside: between August and November 2016, financial entities have revised their estimates up from 3.7 to 3.9 percent and economic analysts have

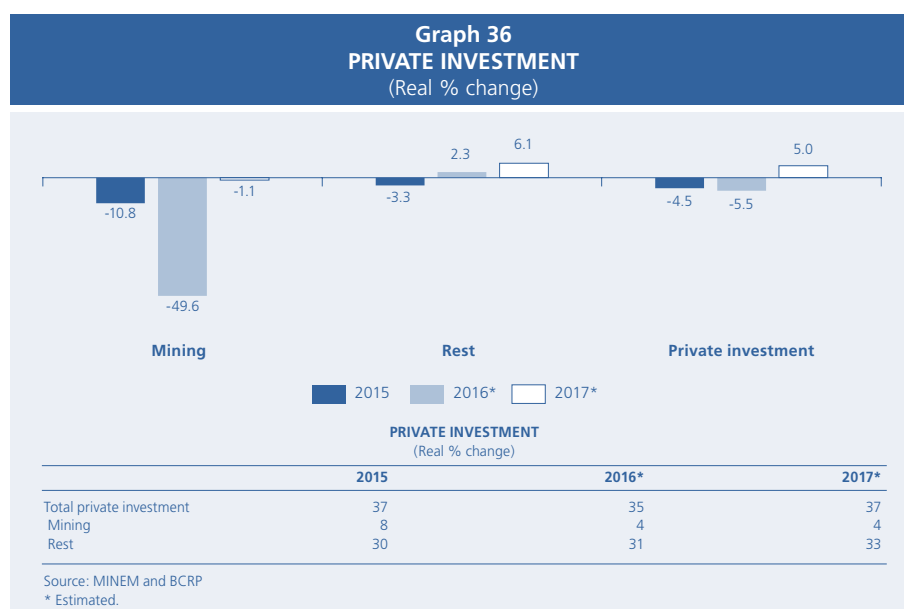


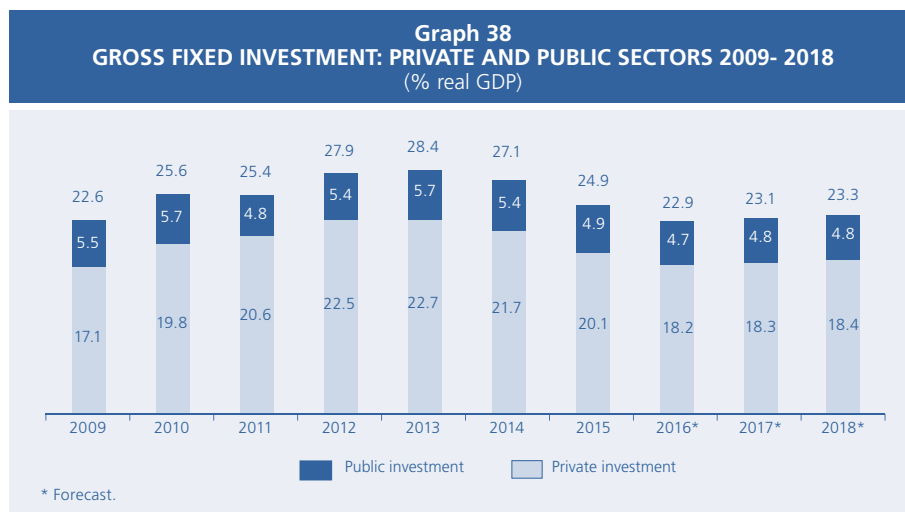
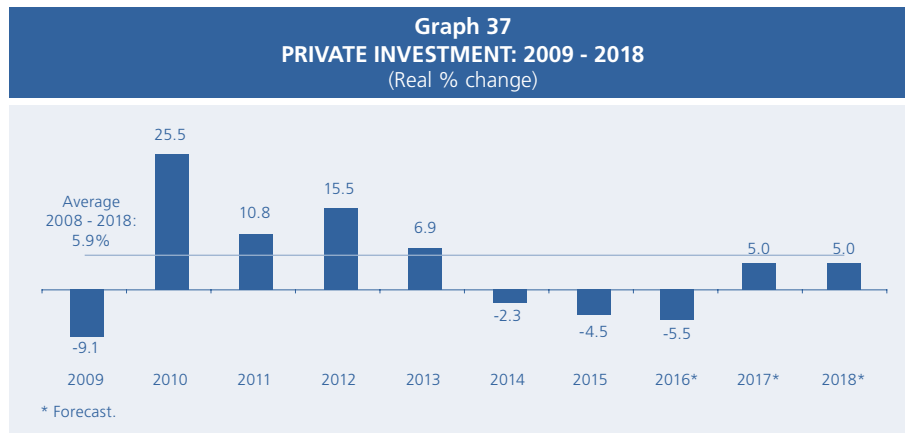
adjusted them from 3.8 to 3.9 percent. Non-financial companies also expect higher GDP growth rates than in August 2016. Moreover, economic agents also expect higher GDP growth rates for 2017 and 2018.

**Table 19**  
**SURVEY ON MACROECONOMIC EXPECTATIONS: GDP GROWTH**  
(% change)

		Expectations about:		
		IR Jun.16	IR Sep.16	IR Dec.16
<b>Financial entities</b>	2016	3.5	3.7	3.9
	2017	4.0	4.2	4.2
	2018	4.4	4.3	4.0
<b>Economic analysts</b>	2016	3.7	3.8	3.9
	2017	4.2	4.2	4.2
	2018	4.2	4.2	4.2
<b>Non-financial firms</b>	2016	3.5	3.8	3.9
	2017	4.0	4.1	4.2
	2018	4.5	4.5	4.5

21. In 2016, private investment would show a greater decline, falling from -4.3 percent to -5.5 percent, due mainly to the contraction of mining investment, while between 2017 and 2018 investment is expected to recover and show rates of 5.0 percent considering the execution of the projects that will be carried out under concession contracts and the future investment projects announced. As a result, total fixed gross investment, which includes private and public investment, would continue to be around 23 percent of GDP between 2016 and 2018.





Private investment projects whose implementation has been announced for the period of 2017-2018 amount to US\$ 20.5 billion.

**Table 20**  
**PRIVATE INVESTMENT PROJECTS ANNOUNCED: 2017-2018**  
(Million US\$)

	Total investment	Number of projects
Mining	6,003	27
Hydrocarbons	2,898	15
Energy	2,001	24
Industry	1,640	11
Infraestructure	3,438	23
Other sectors	4,477	77
<b>TOTAL</b>	<b>20,457</b>	<b>177</b>

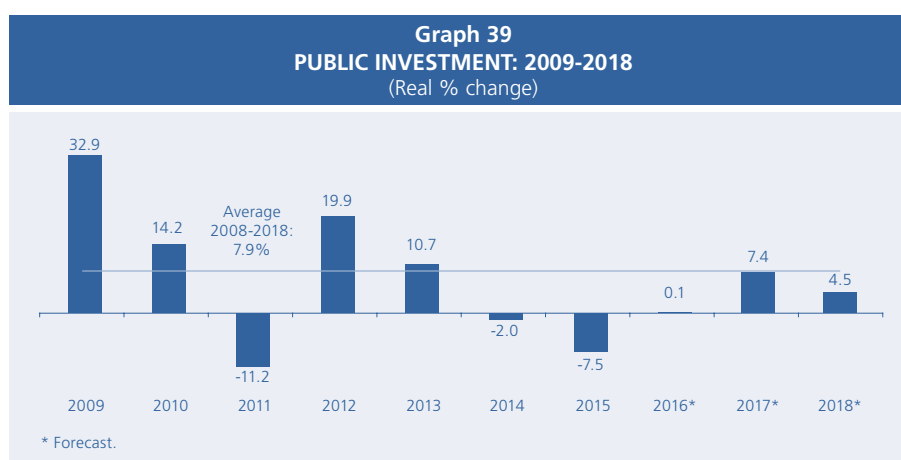
Source: Media and Information of companies.

Moreover, as pointed out in the Inflation Report of September, estimated investment in projects awarded in concession between 2015 and 2016 would reach US\$ 2.6 billion.

<b>Table 21</b>	
<b>MAIN PROJECTS TO BE IMPLEMENTED THROUGH CONCESSION ARRANGEMENTS IN 2015-2017</b>	
(Million US\$)	
	<b>Estimated investment</b>
<b>A. Awarded</b>	<b>2,589</b>
Nationwide 698-806 MHz band	1,680
Hydroelectric Power Plant San Gabán III	371
Broadband Installation for Integral Connectivity and Social Development of Tumbes-Piura-Cajamarca-Cusco Regions	250
Broadband Installation for Integral Connectivity and Social Development of Ayacucho Region	55
Broadband Installation for Integral Connectivity and Social Development of Huancavelica Region	49
First Stage of the Carapongo Substation and Conexión Links to Associated Lines	43
Broadband Installation for Integral Connectivity and Social Development of Apurímac Region	42
220 Kv Azangaro - Juliaca -Puno Transmission Line	37
Comprehensive Broadband Connectivity for the Social Development of the Northern Zone of the Country- Lambayeque Region	32
220 Kv Montalvo - Los Héroes Transmission Line and associated substations	20
Electronic surveillance services through the use of electronic devices	9
<b>B. Called</b>	<b>1,340</b>
Headworks and Conduction for the Drinking Water Supply in Lima	600
Longitudinal of the Sierra road project, Section 4: Huancayo-Izcuchaca-Mayoc-Chayhuasi/Ayacucho-Andahuaylas-Puerto Sahuintó/Dv. Pisco - Huaytará - Ayacucho	446
Huancayo - Huancavelica Railway	204
The Amazon Waterway	70
138 Kv Aguaytia-Pucallpa Transmission Line (second circuit)	20

Source: Proinversión (Update November 28, 2016).

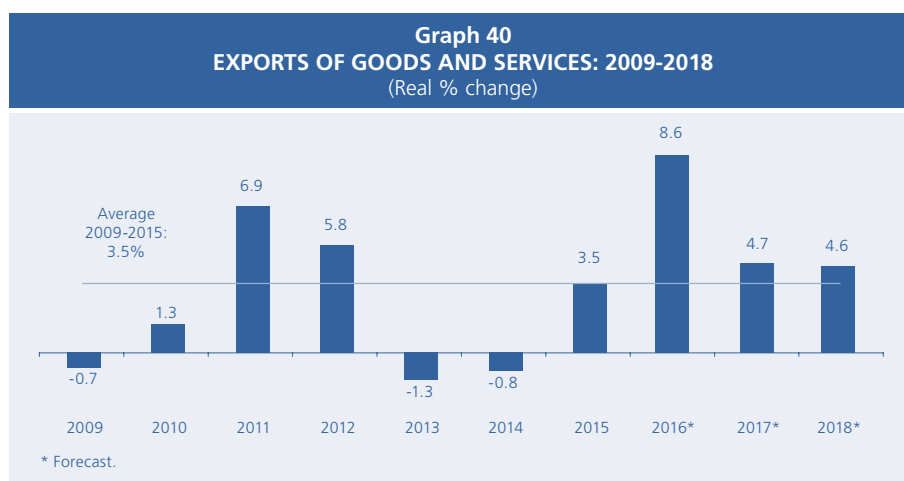
22. The growth rate of public investment in 2016 is revised down from 10.3 percent to 0.1 percent in this report. During the first eleven months of the year, public investment has slowed down, mainly due to the reduction of the National Government’s investment spending, in line with the process of fiscal consolidation. The scenario foreseen for 2017 and 2018 considers that the pace of expenditure in the executing units recovers compared to 2016, and therefore public investment is projected to show growth rates of 7.4 and 4.5 percent in 2017 and 2018, respectively.





23. Between January and September of 2016, the volume of exports of goods and services recorded an increase of 9.6 percent, due mainly to the strong dynamism of traditional exports (copper, coffee, and gold). On the other hand, non-traditional exports registered a lower-than-expected decline due to the greater dynamism observed in agricultural and fishing exports since the third quarter. Although traditional exports are expected to show a more moderate pace of growth in the following months and non-traditional exports are expected to show a lower decline, the growth rate projected for exports in 2016 has been revised up from 6.9 percent to 8.6 percent.

Between 2017 and 2018, the pace of growth of exports would slow down, in line with the lower growth foreseen in copper production.



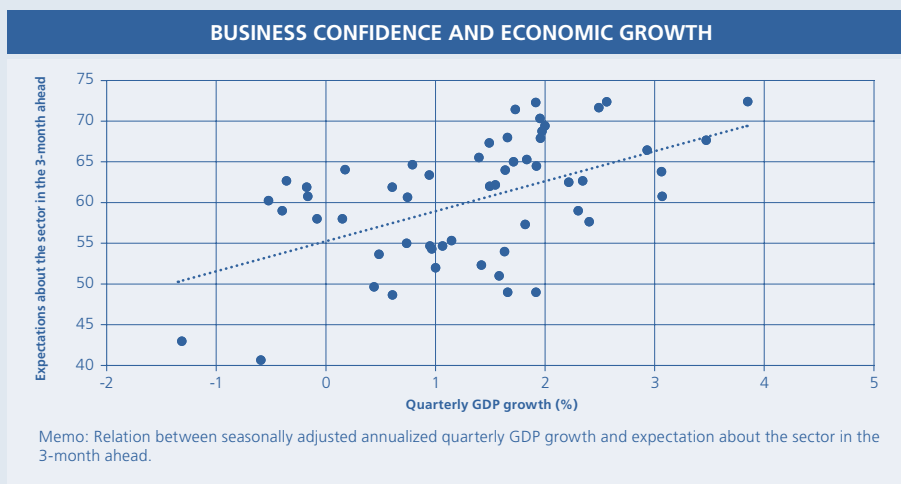
24. A negative growth is foreseen in **imports of goods and services** in this report, which is associated with the moderate growth projected for domestic demand given the contraction of private investment. In 2017 and 2018 imports are expected to show a gradual recovery, in line with the private investment projects announced and the higher growth of the output expected in these years.

**Box 1**  
**BUSINESS CONFIDENCE AND PRIVATE INVESTMENT IN PERU**

Confidence indices are economic indicators that measure businessmen’s perception on the current status of the economy and their expectations about its future evolution. Therefore, these indicators would reveal the level of confidence that businessmen have to consider expanding their lines of business and thus, their propensity to invest.

The development of behavioral economics has led us to understand that agents’ confidence, whether they are consumers or investors, has significant effects on financial markets and on asset prices, which is what John Maynard Keynes described as “animal spirits” and what Akerlof and Shiller (2009)<sup>3</sup> emphasize in their explanation of the Great Financial Crisis. Moreover, macroeconomic theory has turned its interest and focused in understanding the close relationship that exists between economic cycles and business confidence. Through models of imperfect information and learning, Angeletos and La’O (2013)<sup>4</sup> are studying this variable as a mechanism of coordination between agents, while Fajgelbaum, Schaal, and Taschereau-Dumouchel (2014)<sup>5</sup> link confidence with learning and with the socialization of information among investors about projects’ profitability in the economy.

The relationship between the business confidence indicator –obtained from continuous surveys conducted by the Central Bank to a sample of companies<sup>6</sup>– and private investment is examined in this box. As we can see in the next graph, there is evidence of a positive correlation between confidence indicators and the rate of growth of the output indicating that the confidence indicator increases in times of high growth rates and that it decreases when growth rates are low.

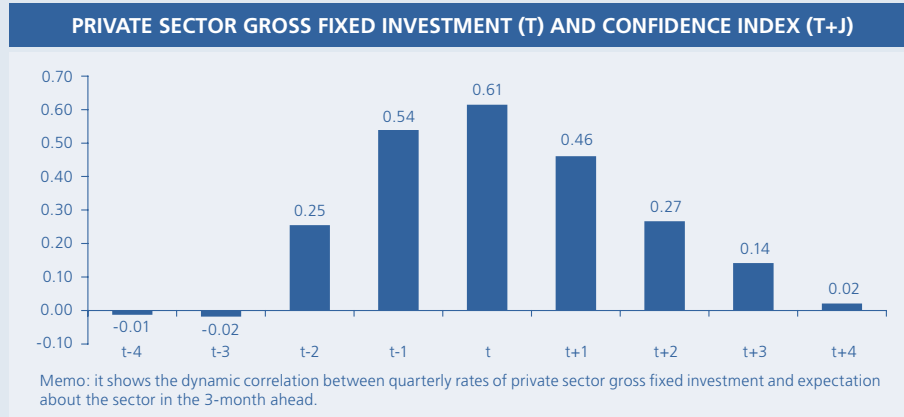


3 Akerlof, G and Shiller, R (2009). Animal Spirits: How Human Psychology Drives the Economy, and Why It Matters for Global Capitalism.  
 4 Angeletos, G y La’O, J (2013). Sentiments. *Econometrica* 81 (2): 739-779.  
 5 Fajgelbaum, P, Schaal, E y Taschereau-Dumouchel, M (2014). Uncertainty Traps. NBER Working paper 19973.  
 6 The survey is applied to 350 companies on a monthly basis since 2002.





Moreover, the analysis of dynamic correlations indicates that there is a high correlation between private sector gross fixed investment and the confidence index.



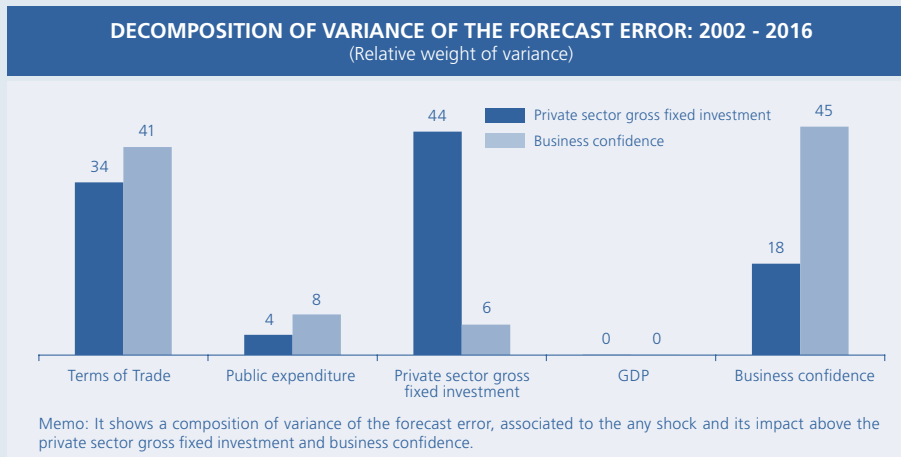
A favorable economic environment and expectations of higher growth improve economic agents' confidence and encourage consumption and investment. To assess the effects of changes in business confidence on investment, we estimate a System of Structural Vector Autoregressions (SVAR), including an external block that contains the cyclical component of the terms of trade, and an internal block including the cyclical component of the general government expenditure, private investment, GDP, and the business expectations index<sup>7</sup>. The estimation was carried out using quarterly data for the period 2002-2016<sup>8</sup>.

The decomposition of variance of the forecast error of private investment shows that the terms of trade account for 34 percent of the fluctuation in this variable. Among the internal factors, it is estimated that 44 percent of the variability of investment is explained by idiosyncratic shocks on investment and would be associated with longer term investment decisions, while 18 percent would be explained by shocks affecting business confidence, such as an improvement in the perception of the business climate, and 4 percent would be explained by exogenous shocks in public spending. It should be pointed out that given that economic agents make their investment decisions taking into account the prospects for the economic environment, GDP's recent and past evolution would not affect this variable when the business confidence indicator is included in the estimation.

7 Exclusion restrictions in the coefficients of lag matrices have been validated statistically in the estimation of the reduced form of SVAR following the method proposed by Brüggemann and Lutkepohl (2000), Lag Selection in Subset VAR Models with an Application to U.S. Monetary System.

For the structural decomposition we used the algorithm of estimation of maximum likelihood proposed by Amisano and Giannini (1992), Topics in Structural VAR Econometrics, to verify the restrictions of exclusion in the coefficients of contemporary relations. The estimation was initiated with a recursive exogeneity structure following the order of variables mentioned before.

8 The Tramo/Seats method was used for the seasonal adjustment of the series.



The confidence indicator would be affected also by the terms of trade which would explain 41 percent of its variability, while public expenditure and gross fixed investment would explain 8 and 6 percent, respectively. It is worth mentioning that because this indicator is an advanced indicator on the evolution of economic activity, it would not be affected by lagged shocks on the output, the remaining 45 percent being accounted for by idiosyncratic shocks in business confidence. The effect of public spending on the confidence indicator is consistent with the approach according to which fiscal policy also has indirect effects on aggregate demand through the expectations channel. As has been documented by Bachmann and Sims (2011) and Guimarães et al. (2014)<sup>9</sup>, this channel would have an impact on private consumption and private investment.

If an idiosyncratic shock is considered in expectations of business confidence (i.e. an increase in the confidence index that is independent of the effect of the other variables included in the estimate), it is projected that every increase of 1 percent in the cyclical component of the business confidence index would increase private investment by around 0.57 percent in the first year, converging thereafter to 0.76 percent by the end of the second year.

**PASSTROUGH ELASTICITY OF BUSINESS CONFIDENCE**  
(Increase of 1 percentage point)

Period	Private sector gross fixed investment (% change)	
	Marginal	Accumulate
Impact	0.00	0.00
1-year	0.57	0.57
2-year	0.19	0.76

Note: VAR estimation results, including an external item (terms of trade) and domestic items (public expenditure, private sector gross fixed investment, GDP, and the business confidence index).

9 Bachmann, R and Sims, E (2011). Confidence and the transmission of government spending shocks, NBER Working paper 17063.  
Guimaraes, B., Machado, C. and Ribeiro, M. (2016). A model of the confidence channel of fiscal policy, Journal of Money, Credit and Banking 48(7): 1317-1564.





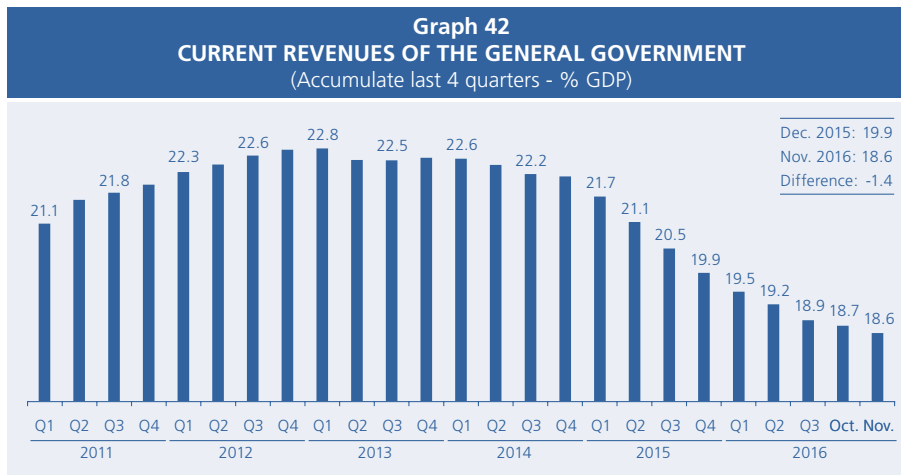
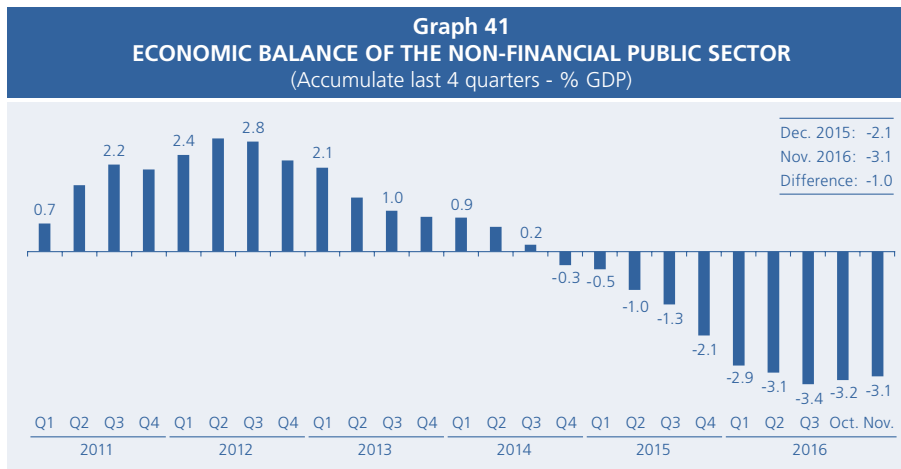
While the business confidence index is strongly influenced by conditions in the external environment and by other domestic fundamentals, it also captures characteristics of the status of the economy that, for the most part, are not directly observable. Thus, confidence indicators not only summarize the information available but also contain information about expectations regarding the future evolution of the economy that cannot be measured directly. Hence, their importance in scenario forecasting and simulation.

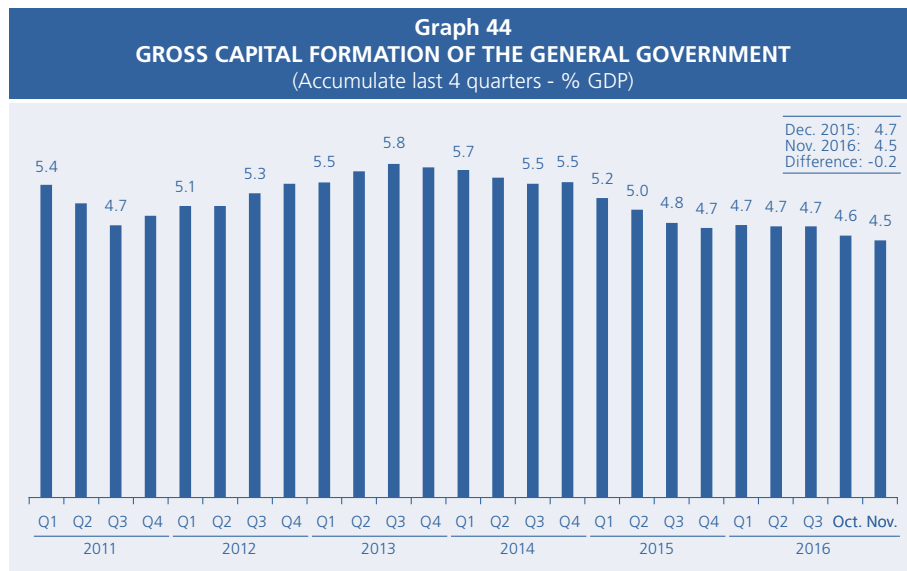
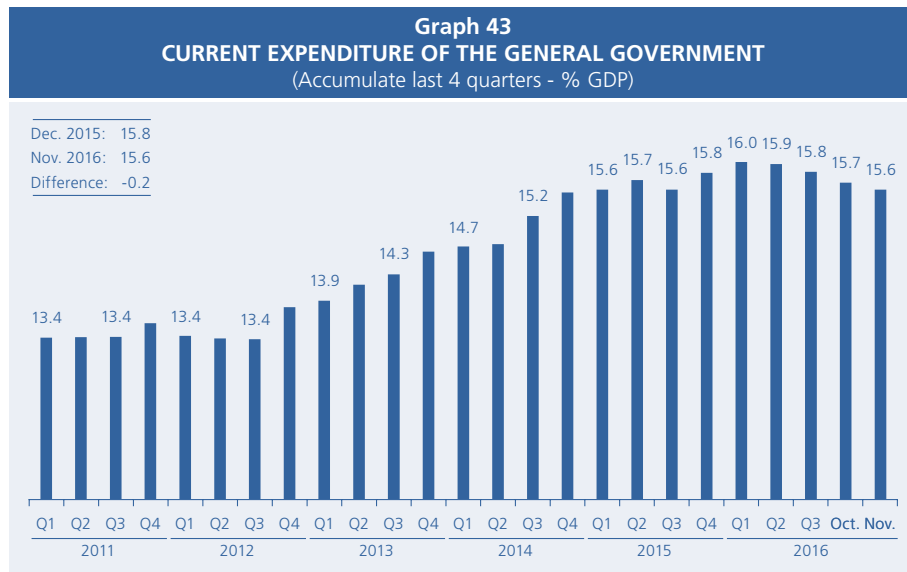
These empirical estimates confirm the positive impacts that policy actions that transmit greater security on the future economic scenario and a climate of macroeconomic stability have on investment. For example, an increase in public spending can have positive effects on investment through the direct expansion of aggregate demand and the increase in business confidence (indirect effect - expectations channel).



## IV. Public Finances

25. In the context of the fiscal measures taken by the Government to reduce the fiscal deficit to 3.0 percent of GDP in 2016, the fiscal deficit decreased in recent months. As a result, the fiscal deficit accumulated in the last twelve months declined from 3.4 percent of GDP in September to 3.1 percent of GDP in November.



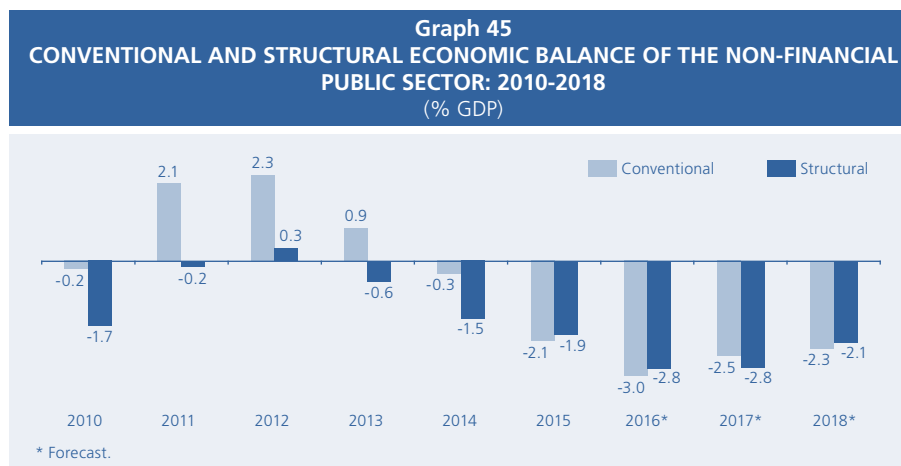


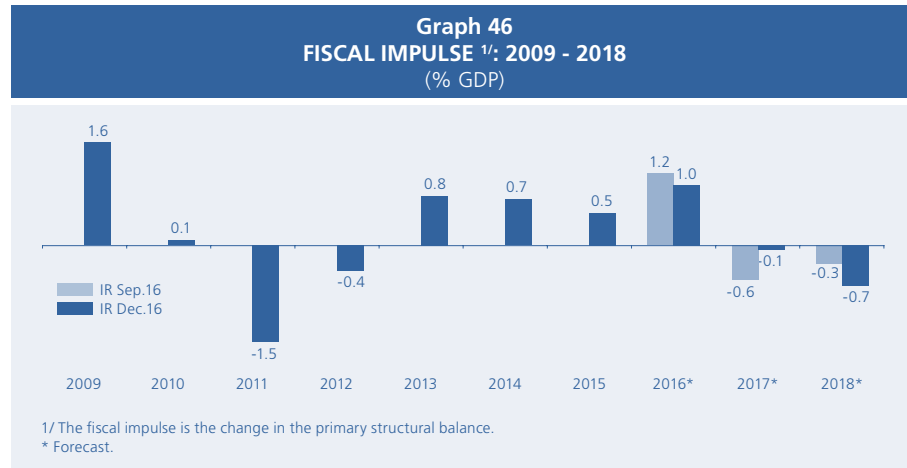
26. The fiscal deficit projected for the next two years is expected to decrease similarly in accordance to the deficit considered in the Revised Multiannual Macroeconomic Framework so as to reach 2.3 percent of GDP in 2018. These projections consider a more moderate trend in both spending and tax revenues.

Table 22 NON-FINANCIAL PUBLIC SECTOR (% GDP)									
	2015		2016*			2017*		2018*	
	Jan.-Sep.	Year	Jan.-Sep.	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16
<b>1. General government</b>									
<b>current revenues<sup>1/</sup></b>	20.3	19.9	18.8	18.9	18.3	19.2	19.0	19.4	18.7
<i>Real % change</i>	-7.7%	-7.5%	-3.9%	-2.2%	-4.6%	6.6%	8.8%	5.0%	2.0%
<b>2. General government</b>									
<b>non-financial expenditure</b>	18.6	21.2	18.6	20.8	20.1	20.5	20.3	20.4	19.7
<i>Real % change</i>	-0.7%	1.4%	3.5%	1.4%	-1.6%	3.4%	5.8%	3.8%	1.0%
Of which:									
Current expenditure	14.4	15.8	14.5	15.6	15.4	15.3	15.2	15.1	14.7
<i>Real % change</i>	3.3%	4.5%	4.7%	2.2%	1.3%	2.6%	3.8%	2.9%	0.0%
Gross capital formation	3.6	4.7	3.7	4.9	4.4	4.9	4.7	5.1	4.7
<i>Real % change</i>	-18.2%	-12.5%	7.4%	7.8%	-2.7%	6.0%	11.9%	6.7%	4.4%
<b>3. Others</b>	0.3	0.2	-0.1	0.0	-0.1	0.0	0.0	0.1	0.0
<b>4. Primary balance (1-2+3)</b>	2.0	-1.1	0.2	-1.9	-1.9	-1.3	-1.2	-1.0	-1.0
<b>5. Interests</b>	1.2	1.0	1.3	1.1	1.1	1.3	1.3	1.3	1.3
<b>6. Overall Balance</b>	0.8	-2.1	-1.0	-3.0	-3.0	-2.5	-2.5	-2.3	-2.3
Memo:									
Structural overall balance		-1.9		-2.9	-2.8	-2.4	-2.8	-2.2	-2.1

1/ The central government includes the ministries, national universities, public agencies and regional governments. The general government has a wider coverage that includes the central government, social security, regulators and supervisors, government charity organizations and local governments.  
IR: Inflation Report.  
\* Forecast.

27. These fiscal accounts projections are consistent with a reduction in the structural fiscal deficit in the forecast horizon, the deficit declining from 2.8 percent of GDP in 2016 to 2.1 percent of GDP in 2018.





In order to calculate more precisely the effect of changes in revenues and expenditures on the economic cycle, we adjust them taking into account the multiplier effect these changes have. In this way, we obtain the weighted fiscal impulse, which is expected to be contractionary in 2016, in contrast with the expansionary fiscal impulse considered in the September report. In 2017, on the other hand, it would be slightly expansionary due to the greater multiplier effect of public investment.

**Table 23**  
**FISCAL IMPULSE**

	2015	2016*	2017*	2018*
<b>Fiscal impulse</b>	<b>0.5</b>	<b>1.0</b>	<b>-0.1</b>	<b>-0.7</b>
By revenues	1.0	1.6	-0.7	0.3
By expenditures <sup>1/</sup>	-0.5	-0.6	0.1	-0.5
Current (Includes EEPP)	0.1	0.1	-0.3	-0.5
Capital	-0.6	-0.7	0.3	0.0
<b>Weighted fiscal impulse<sup>2/</sup></b>	<b>-0.5</b>	<b>-0.5</b>	<b>0.1</b>	<b>-0.4</b>
Weighted fiscal impulse (IR Sep.16)	-0.5	0.2	-0.2	-0.1

\* Forecast  
1/ Includes public enterprises.  
2/ According to estimate of fiscal multiplier. If GDP gap is positive: Revenues 0; current expenditure 0.28; capital expenditure 0.73; and if GDP gap is negative: Revenues 0.25; current expenditure 0.93; capital expenditure 1.42.

## Tax Revenues

28. The projection of tax revenues at end-2016 has been revised down from 18.9 to 18.3 percent of GDP due mainly to the evolution of the collection of revenues from the income tax and to tax rebates. Collection from the former has declined mainly

because of lower revenue from the income tax of legal entities associated with sectors such as services, oil, and mining, while the latter, on the other hand, have increased due to companies' increased requests of tax rebates, especially in the mining sector.

Tax revenues in 2017 and 2018 are projected to be equivalent to 19.0 and 18.7 percent of GDP, respectively, considering the evolution of tax revenue observed this year and the measures approved recently, particularly the measures affecting the income tax and the measures aimed at encouraging the declaration/repatriation of assets held abroad.

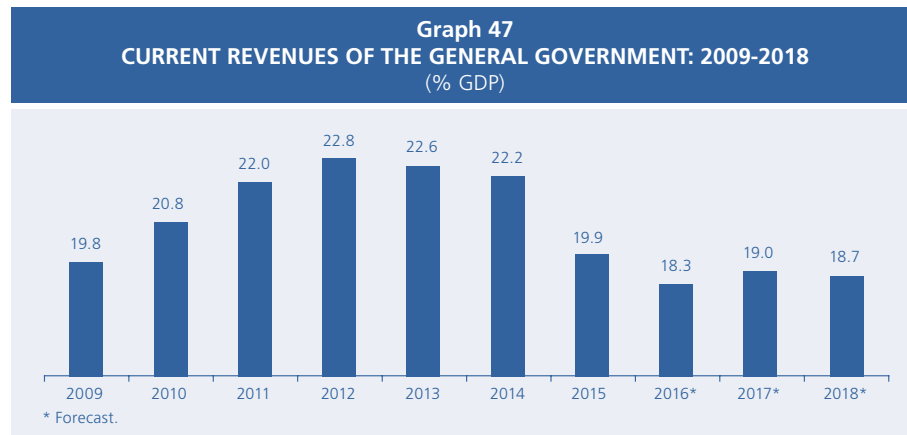
As for the recently adopted measures that will affect the income tax, as from 2017 the rate of the income tax to large companies will be raised to 29.5 percent (from the current 28 percent, in force in the previous report), which would raise the revenue from this tax. On the other hand, from 2018 the increase in the deduction of up to 3 tax units (in addition to the current 7 tax units) will be effective for natural persons, which would reduce revenue from this tax. Moreover, the VAT paid by small companies will be reduced as from 2017, which would reduce collection from this tax temporarily. Other tax measures include, for example, measures to encourage taxpayers' declaration of assets abroad. Effective as from 2017, a rate of 7 percent will be applied to the repatriation of assets and a rate of 10 percent to asset declaration only. A tax amnesty and the possibility of breaking down tax payments have also been announced for 2017, which would raise revenues that year.

**Table 24**  
**CURRENT REVENUES OF THE GENERAL GOVERNMENT**  
(% GDP)

	2015		2016*			2017*		2018*	
	Jan.-Sep.	Year	Jan.-Sep.	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16
<b>TAX REVENUES</b>	<b>15.3</b>	<b>15.1</b>	<b>14.3</b>	<b>14.4</b>	<b>13.9</b>	<b>14.7</b>	<b>14.6</b>	<b>14.8</b>	<b>14.2</b>
Income tax	6.0	5.7	5.9	5.7	5.5	5.7	5.5	5.7	5.3
Value added tax	8.5	8.4	8.1	8.1	8.0	8.1	7.8	8.1	7.9
Excise tax	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Import duties	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2
Other tax revenues	1.7	1.8	1.7	1.8	1.7	1.8	2.3	1.8	1.8
Tax returns	-2.1	-1.9	-2.6	-2.4	-2.5	-2.1	-2.2	-2.0	-2.0
<b>NON-TAX REVENUES</b>	<b>5.0</b>	<b>4.8</b>	<b>4.6</b>	<b>4.5</b>	<b>4.4</b>	<b>4.5</b>	<b>4.5</b>	<b>4.5</b>	<b>4.5</b>
<b>TOTAL</b>	<b>20.3</b>	<b>19.9</b>	<b>18.8</b>	<b>18.9</b>	<b>18.3</b>	<b>19.2</b>	<b>19.0</b>	<b>19.4</b>	<b>18.7</b>

IR: Inflation Report.  
\* Forecast.

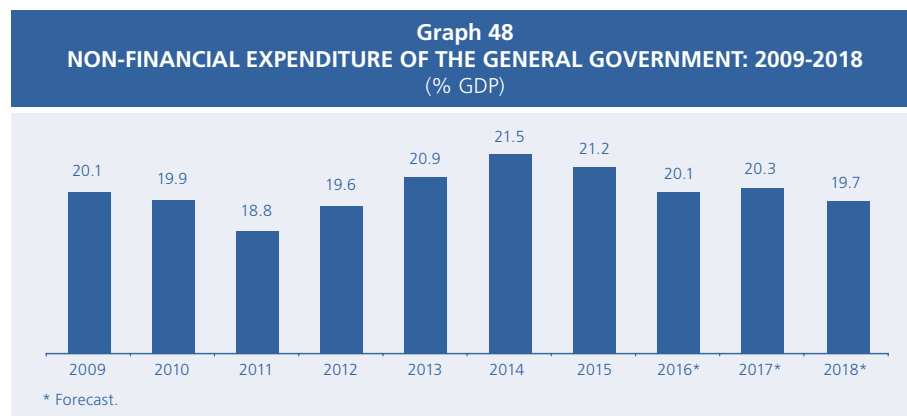


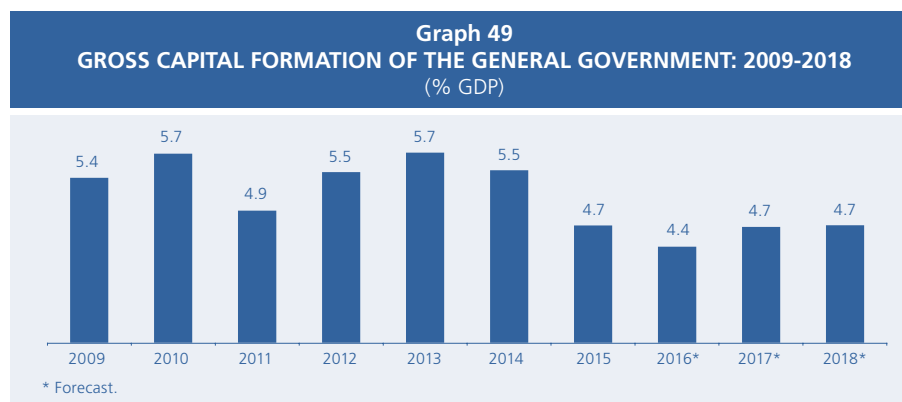


### Evolution of Public Expenditure

29. The general government's non-financial expenditure in 2016 has been revised down by 0.7 percentage points of GDP (from 20.8 percent in the September report to 20.1 percentage points of GDP in this report) considering the recent evolution of expenditure. In addition to this, the projection is also consistent with the provisions established in S.D. 272-2016-EF (published on October 5), which approves measures to prioritize public spending and to ensure the achievement of the fiscal deficit target set for 2016 (3.0 percent of GDP).

Moreover, expenditure in 2017 and 2018 is lowered from 20.5 percent and 20.4 percent of GDP (Inflation Report of September) to 20.3 percent and 19.7 percent of GDP, respectively. A declining path is foreseen in current expenditure, which would decrease from 15.4 to 14.7 percent of GDP in 2018, while at the same time the general government spending in public investment would show a rising trend increasing from 4.4 percent to 4.7 percent of GDP towards the end of the forecast horizon.





**Table 25**  
**NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT**  
(% GDP)

	2015		2016*			2017*		2018*	
	Jan.-Sep.	Year	Jan.-Sep.	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16
<b>Current expenditure</b>	<b>14.4</b>	<b>15.8</b>	<b>14.5</b>	<b>15.6</b>	<b>15.4</b>	<b>15.3</b>	<b>15.2</b>	<b>15.1</b>	<b>14.7</b>
National Government	10.0	11.1	9.9	10.8	10.6	10.5	10.6	10.3	10.1
Regional Governments	2.8	3.0	2.9	3.1	3.1	3.1	3.0	3.1	3.0
Local Governments	1.6	1.7	1.6	1.7	1.7	1.7	1.6	1.7	1.6
<b>Capital expenditure</b>	<b>4.3</b>	<b>5.4</b>	<b>4.1</b>	<b>5.2</b>	<b>4.7</b>	<b>5.2</b>	<b>5.0</b>	<b>5.3</b>	<b>5.0</b>
<b>Gross capital formation</b>	<b>3.6</b>	<b>4.7</b>	<b>3.7</b>	<b>4.9</b>	<b>4.4</b>	<b>4.9</b>	<b>4.7</b>	<b>5.1</b>	<b>4.7</b>
National Government	1.5	2.0	1.5	2.1	1.7	2.1	1.9	2.2	1.9
Regional Governments	0.7	0.9	0.7	0.9	0.8	1.0	0.9	1.0	0.9
Local Governments	1.3	1.8	1.5	1.9	1.8	1.9	1.9	1.9	1.9
<b>Others</b>	<b>0.7</b>	<b>0.7</b>	<b>0.4</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>
<b>Total</b>	<b>18.6</b>	<b>21.2</b>	<b>18.6</b>	<b>20.8</b>	<b>20.1</b>	<b>20.5</b>	<b>20.3</b>	<b>20.4</b>	<b>19.7</b>
National Government	12.2	13.8	11.8	13.1	12.6	12.9	12.8	12.8	12.2
Regional Governments	3.5	3.9	3.7	4.1	3.9	4.0	3.9	4.1	3.9
Local Governments	2.9	3.5	3.1	3.6	3.5	3.6	3.5	3.6	3.5

IR: Inflation Report.  
\* Forecast.

As regards the operations of government-owned enterprises, the forecast scenario considers mainly Petroperu's investment in the modernization of the refinery of Talara, which at the month of October registers an accumulated budget advance of 66 percent.

## Public Debt

30. The funding required to cover the fiscal deficit and the amortization of the public debt rises from S/ 21 billion in 2015 to S/ 35 billion in 2016, to S/ 22 billion in 2017, and to S/ 24 billion in 2018. In GDP terms, this means that this financial requirement rises from 3.4 percent of GDP in 2015 to 5.2 percent of GDP in 2016, and to 3.1 percent of GDP in 2017 and 2018.



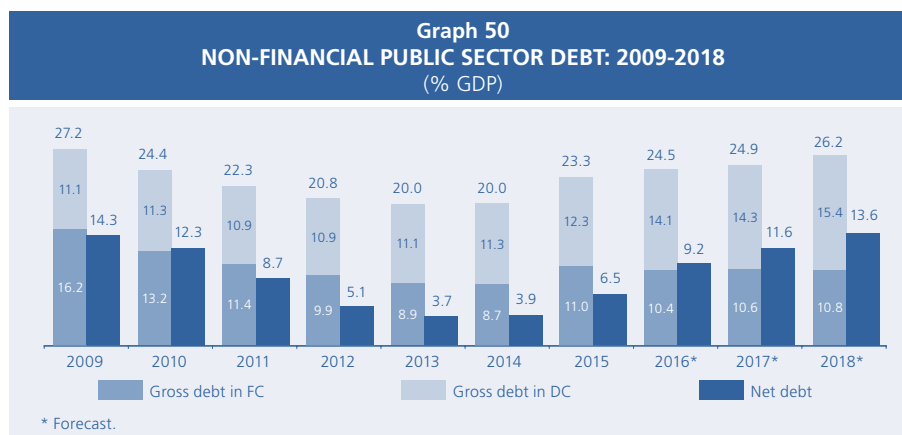


The gross debt of the non-financial public sector would be equivalent to 26.2 percent of GDP at the end of the forecast horizon, while the net debt would increase to 13.6 percent of the output by 2018.

Table 26 FINANCIAL REQUIREMENTS OF THE NON-FINANCIAL PUBLIC SECTOR AND ITS FUNDING (Million S/)									
	2015		2016*			2017*		2018*	
	Jan.-Sep.	Year	Jan.-Set	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16	IR Sep.16	IR Dec.16
<b>I. USES</b>	<b>3,152</b>	<b>20,961</b>	<b>9,726</b>	<b>27,669</b>	<b>34,485</b>	<b>22,184</b>	<b>22,339</b>	<b>23,926</b>	<b>23,533</b>
1. Amortization	6,761	7,963	4,656	7,796	15,011	4,295	4,937	6,503	6,478
a. External	3,340	3,859	2,762	3,562	5,697	3,081	3,106	4,301	4,276
b. Domestic	3,421	4,103	1,894	4,234	9,314	1,214	1,832	2,202	2,202
<i>Of which: Recognition bonds</i>	<i>486</i>	<i>666</i>	<i>425</i>	<i>703</i>	<i>628</i>	<i>792</i>	<i>792</i>	<i>814</i>	<i>814</i>
2. Overall Balance (Negative sign indicates surplus)	-3,609	12,998	5,070	19,873	19,474	17,889	17,402	17,423	17,055
<b>II. SOURCES</b>	<b>3,152</b>	<b>20,961</b>	<b>9,726</b>	<b>27,669</b>	<b>34,485</b>	<b>22,184</b>	<b>22,339</b>	<b>23,926</b>	<b>23,533</b>
1. Change on debt stocks	15,809	21,178	12,787	27,460	28,180	14,085	14,661	25,843	23,422
2. Change on deposits and others <sup>1/</sup>	-12,658	-217	-3,061	209	6,305	8,099	7,679	-1,917	112
Memo:									
% GDP									
Gross debt balance	21.1	23.3	22.7	25.4	24.5	25.9	24.9	27.5	26.2
Net debt balance <sup>2/</sup>	3.8	6.5	6.9	9.2	9.2	11.7	11.6	13.8	13.6

1/ A positive sign indicates a reduction of deposits.  
2/ Defined as the difference between gross public debt and NFPS deposits.  
IR: Inflation Report.  
\* Forecast.

It is worth pointing out that on September 28, 2016, the Ministry of Economy and Finance (MEF) carried out a debt swap, which included sovereign and global bonds, through the issuance of 12-year sovereign bonds (maturing in 2028). Of this total, global bonds amounted to US\$ 611 million. As a result of this operation, the ratio of debt in foreign currency decreased from 47.7 to 45.9 percent and the mean life of the debt portfolio which includes all the sovereign and global bonds was increased from 13.8 to 14.6 years.



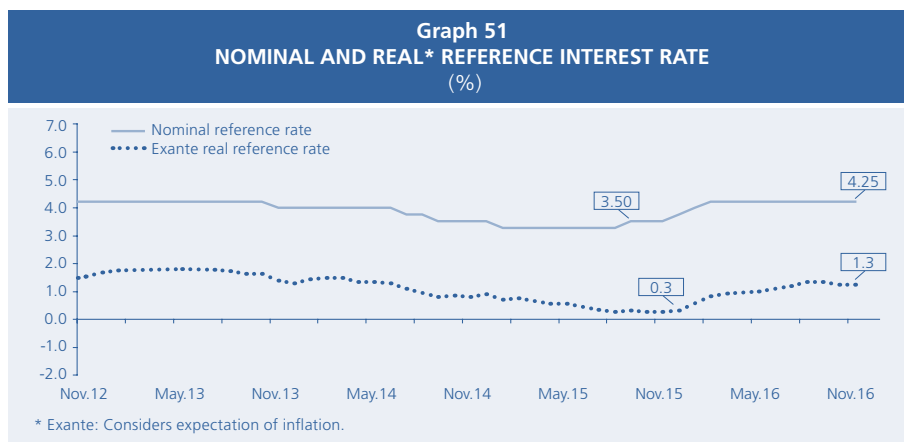


## V. Monetary Policy and Financial Markets

### Monetary Policy Actions

31. In the last months, the rate of inflation has been slightly above the upper band of the inflation target range, reflecting the rises recorded in the prices of some perishable foodstuffs and fuels, whose effects on inflation are expected to reverse in the short term. Twelve-month inflation expectations remain within the target range and are expected to continue declining in the forecast horizon.

In this context, the Board of the Central Bank has maintained the benchmark interest rate at 4.25 percent since March (after adjusting it in December, January, and February) and has reiterated that the Central Bank oversees the inflation forecasts and inflation determinants to evaluate the possibility of adjusting its monetary policy rate.



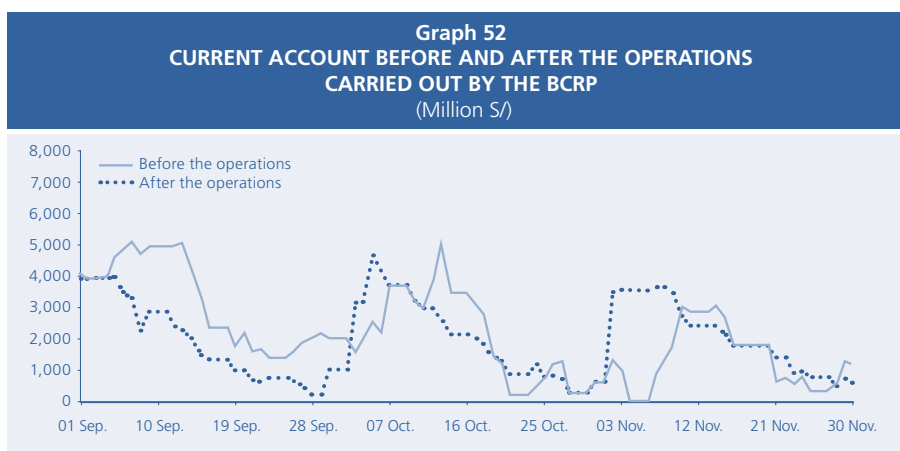
Between September and November, the monetary operations of the Central Bank were oriented to maintaining appropriate levels of liquidity in domestic currency so that the interbank interest rate would remain close to the benchmark rate. The recent context has been characterized by a greater availability of funds associated mainly with CDBCRP maturities (S/ 5.06 billion), term deposits (S/ 2.76 billion), and CDRBCRP (S/ 1.18 billion). This injection of funds has been in part offset by an increase of public sector deposits at the Central Bank (S/ 1.06 billion), the maturity of repos of securities (S/ 200 million), the maturity of currency repos (S/ 1.10 billion) and the maturity of Treasury funds auctioned (S/ 300 million). The moderate reduction observed in the





balance of currency repos and Treasury funds that were auctioned is explained by the increased placements of deposits in soles in banks during the last months.

In this period, banks' average daily amount of liquidity before the operations carried out by the Bank Central was S/ 2.40 billion and the daily average amount at the closing of operations was S/ 2.20 billion.



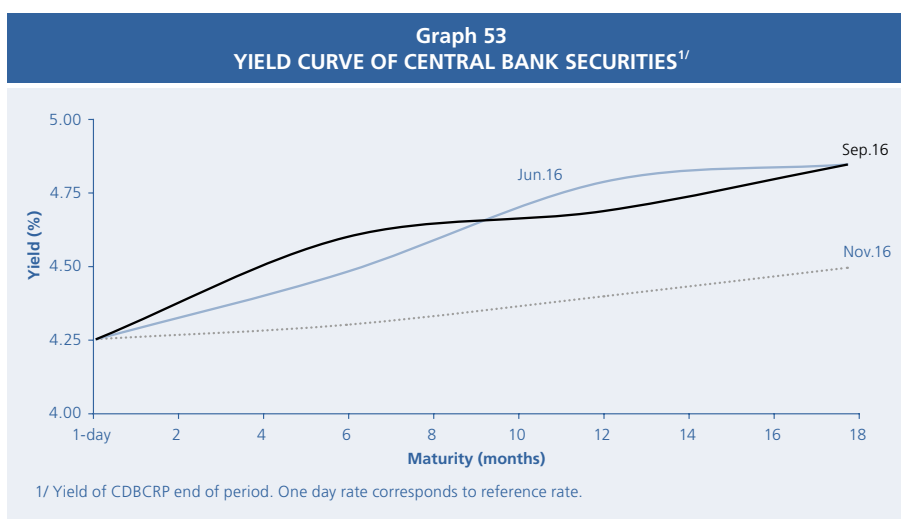
As a result, the balance of BCRP-CDs declined from representing 10.8 percent of the BCRP net assets to representing 10.7 percent of these assets, while the balance of repos declined from representing 12.1 percent to representing 11.9 percent. Public sector deposits remained as the most important liability of BCRP as the ratio of these deposits to the BCRP net assets increased from 33.8 percent to 34.0 percent.

**Table 27**  
**SIMPLIFIED BALANCE SHEET OF THE BCRP**  
(As % of Net Assets)

	Dec.14	Dec.15	Aug.16	Nov.16
<b>I. Net assets</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Net International Reserves</b>	<b>94.9%</b>	<b>87.4%</b>	<b>87.9%</b>	<b>88.1%</b>
	(US\$ 62,307 mills.)	(US\$ 61,485 mills.)	(US\$ 61,728 mills.)	(US\$ 61,364 mills.)
<b>Repos</b>	<b>5.1%</b>	<b>12.6%</b>	<b>12.1%</b>	<b>11.9%</b>
<b>II. Net liabilities</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>1. Total public sector deposits</b>	<b>36.9%</b>	<b>32.7%</b>	<b>33.8%</b>	<b>34.0%</b>
In domestic currency	18.7%	13.0%	12.3%	12.5%
In foreign currency	18.2%	19.7%	21.5%	21.4%
<b>2. Total financial system deposits</b>	<b>27.0%</b>	<b>37.1%</b>	<b>32.8%</b>	<b>33.2%</b>
In domestic currency	7.7%	4.5%	3.8%	4.1%
In foreign currency	19.4%	32.6%	29.0%	29.1%
<b>3. BCRP instruments</b>	<b>9.8%</b>	<b>10.0%</b>	<b>12.8%</b>	<b>11.9%</b>
CD BCRP	8.0%	6.5%	10.8%	10.7%
CDR BCRP	1.3%	3.0%	0.3%	0.6%
Term deposits	0.0%	0.4%	1.5%	0.2%
Overnight deposits	0.5%	0.1%	0.2%	0.3%
<b>4. Currency and others</b>	<b>19.7%</b>	<b>15.7%</b>	<b>15.0%</b>	<b>15.9%</b>
<b>5. Others</b>	<b>6.5%</b>	<b>4.5%</b>	<b>5.7%</b>	<b>5.0%</b>

Furthermore, the BCRP also continued with its auctions of 6-month, 12-month, and 18-month BCRP-CDs three times a week with the aim of increasing the volume of trading of these certificates and providing more liquidity to its secondary market, which contributes to develop the short-term yield curve in soles. The balance of CDBCRP declined from S/ 25.24 billion on August 31 to S/ 25.16 billion at end November.

Between September and November, the yield curve of BCRP-CDs declined 31 basis points on average, reflecting lower expectations of future hikes in the BCRP policy rate.



## Interest Rates

32. In November, the interest rates on lending and on deposits in domestic currency decreased compared to their levels in the third quarter of 2016, in line with the evolution of the interest rates in the money market which reflected lower expectations of rises in the benchmark interest rate in the following months. The exception to this trend was the interest rates for loans to small business and for consumer loans, which increased in this period reflecting the higher credit risk observed in these market segments.

A similar trend was observed in interest rates for operations in dollars, which decreased in the segments of lower credit risk, such as the corporate segment, but increased in the segment of consumer loans by 122 basis points.





**Table 28**  
**INTEREST RATE IN DOMESTIC CURRENCY**  
(%)

		Sep.15	Dec.15	Sep.16	Nov.16
<b>Passive</b>	Deposits up to 30-day	4.12	4.01	4.03	4.22
	On 31 to 180-day term deposits	4.41	4.67	4.98	4.79
	On 181 to 360-day term deposits	4.41	4.74	5.20	5.08
<b>Active</b>	Corporate	5.87	6.18	6.07	5.64
	Large companies	7.16	7.12	7.23	7.21
	Medium-sized enterprises	10.19	10.23	10.74	10.30
	Small businesses	20.36	20.45	21.59	21.99
	Consumption	42.4	44.03	44.01	45.64
	Mortgage	8.59	8.95	8.82	8.57

Source: BCRP and SBS.

**Table 29**  
**INTEREST RATE IN FOREIGN CURRENCY**  
(%)

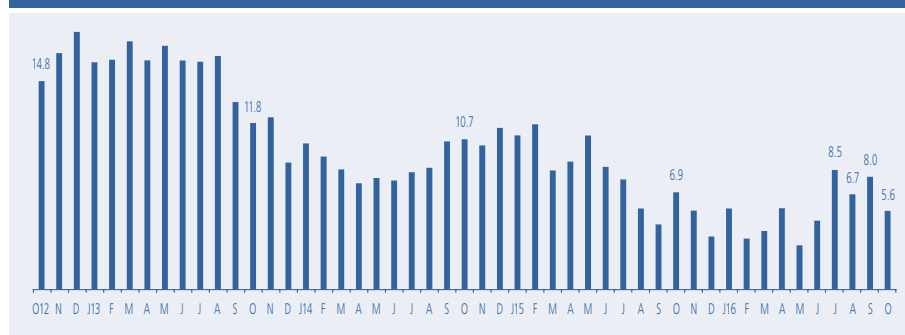
		Sep.15	Dec.15	Sep.16	Nov.16
<b>Passive</b>	Deposits up to 30-day	0.15	0.23	0.28	0.30
	On 31 to 180-day term deposits	0.31	0.45	0.56	0.56
	On 181 to 360-day term deposits	0.60	0.57	0.55	0.55
<b>Active</b>	Corporate	1.94	2.33	3.00	2.58
	Large companies	5.55	5.54	5.18	5.04
	Medium-sized enterprises	8.48	8.06	7.37	7.90
	Small businesses	12.82	11.26	10.00	10.85
	Consumption	32.4	32.07	32.38	33.60
	Mortgage	6.81	6.71	6.46	6.21

Source: BCRP and SBS.

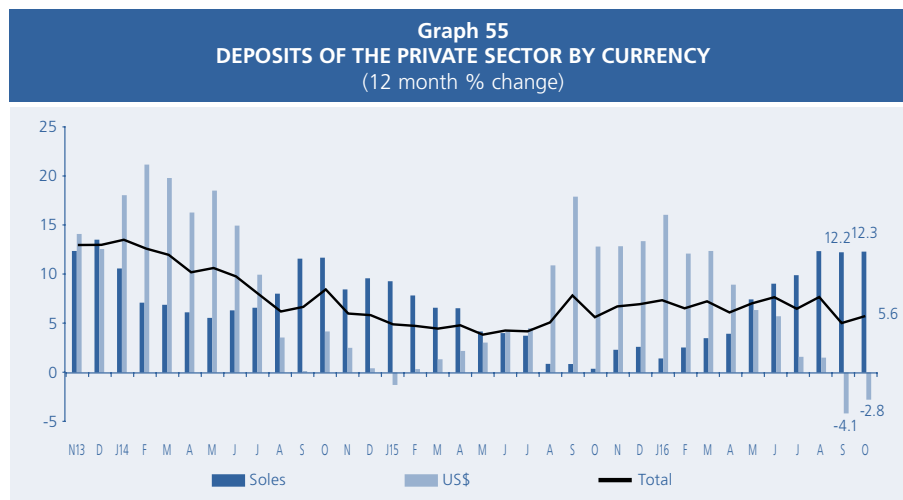
## Liquidity

33. Showing a slower pace of growth than in the previous months, in line with the lower level of economic activity, currency in circulation grew at an annual rate of 5.6 percent in October 2016.

**Graph 54**  
**CURRENCY**  
(12 month % change)



The annual growth rate of private sector deposits declined from 7.6 percent in June to 5.6 percent in October 2016, which was consistent in part with the moderation observed in the pace of growth of credit to the private sector. By currencies, the growth of deposits in domestic currency recovered, their growth rate rising from 9.0 percent in June to 12.3 percent in October, while the growth rate of deposits in dollars dropped from 5.7 to -2.8 percent in the same period. This outcome was consistent with a greater preference for saving in soles in a context of lower expectations of depreciation of this currency, which makes saving in domestic currency more attractive. Another factor contributing to the growth of deposits in dollars was the increased deposits of the administrators of private pension funds (AFPs) –approximately S/ 3.5 billion– anticipating a greater demand for liquidity in soles to meet retired pensioners’ withdrawal of up to 95.5 percent of their pension funds.



**Table 30**  
**MONETARY AND CREDIT ACCOUNTS OF THE DEPOSITORY CORPORATIONS**  
(12-month % change - End of period)

	Dec.14	Mar.15	Jun.15	Sep.15	Dec.15	Mar.16	Jun.16	Sep.16	Oct.16
1 Currency in circulation	11.5	8.4	8.7	4.6	3.8	4.1	4.9	8.0	5.6
2 Deposits in domestic currency	9.6	6.6	4.0	0.9	2.6	3.5	9.0	12.2	12.3
3 Total deposits 1/	5.7	4.3	4.1	7.8	6.9	7.2	7.6	4.9	5.6
4 Broad money in domestic currency	10.6	7.2	5.8	2.3	3.0	4.1	8.4	10.9	10.2
5 Total broad money 1/	7.3	5.4	5.5	7.7	6.3	6.9	7.6	5.3	5.4
6 Credit to the private sector in domestic currency	17.7	18.9	24.2	29.5	28.0	23.1	17.0	9.4	8.4
7 Credit to the private sector 1/	10.1	9.2	8.2	10.6	9.4	8.8	7.9	5.3	4.9

1/ Balances in foreign currency are valued at constant exchange rate on December 2014.





As a result of this, the ratio of dollarization of private sector deposits declined from 51.8 percent in June to 50.3 percent in October. By type of deposits, dollarization has decreased in personal deposits (mainly in sight deposits and term deposits) and in the deposits of pension funds. On the other hand, the dollarization of corporate deposits increased between June and October, especially in term deposits.

**Table 31**  
**DOLLARIZATION RATIO OF DEPOSITS**  
(%)

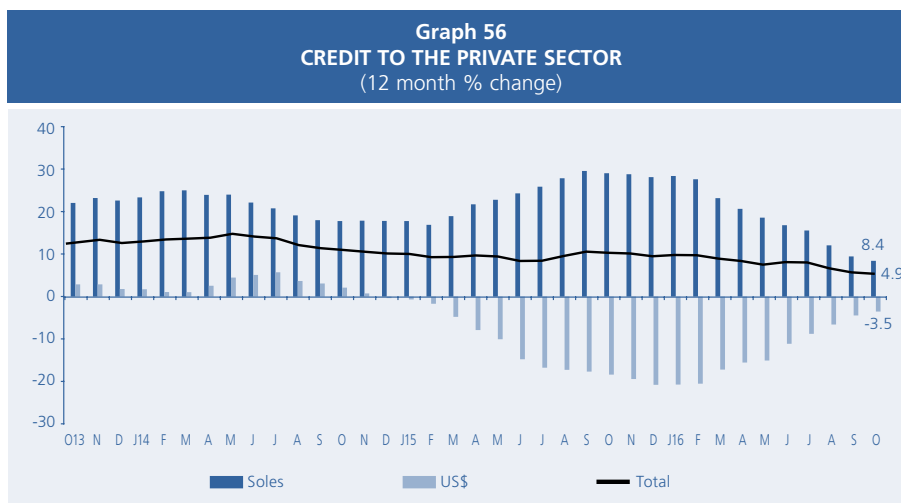
	Dec.14	Dec.15	Sep.16	Oct.16
<b>Business</b>	<b>50.7</b>	<b>55.5</b>	<b>56.2</b>	<b>55.7</b>
Demand deposits	47.1	50.6	53.5	53.5
Savings deposits	63.6	68.9	62.1	45.8
Term deposits	61.8	71.7	65.0	64.9
<b>Individuals</b>	<b>33.7</b>	<b>40.3</b>	<b>37.6</b>	<b>37.2</b>
Demand deposits	48.0	50.6	53.5	53.5
Savings deposits	35.2	40.7	41.4	41.4
Term deposits	30.8	38.5	31.9	31.1
CTS	33.9	33.6	32.4	32.2
Others Term deposits	29.5	40.3	31.7	30.8
<b>Pension funds</b>	<b>62.0</b>	<b>68.3</b>	<b>58.9</b>	<b>58.1</b>
<b>Mutual funds</b>	<b>60.5</b>	<b>67.4</b>	<b>62.5</b>	<b>62.5</b>
<b>TOTAL</b>	<b>49.2</b>	<b>54.9</b>	<b>50.8</b>	<b>50.3</b>

The process of de-dollarization of liquidity is expected to show a faster pace in 2017-2018 since lower expectations of depreciation of the sol together with higher interest rates in soles than rates in dollars would make saving in domestic currency more appealing. In line with this, deposits in domestic currency are foreseen to show a greater dynamism with rates of over 10.0 percent in the next two years.

## Credit

34. Credit to the private sector grew 4.9 percent in annual terms in October, showing a lower growth rate than that recorded in June (7.9 percent) and at end-2015 (9.4 percent). The slowdown of credit would be associated with the lower dynamism of domestic demand and private investment, which have affected mainly credit to

the corporate sector and to large enterprises and, to a lesser extent, the growth of personal loans.



The growth of credit in domestic currency continued slowing down, although maintaining a higher rate than the growth rate of nominal GDP. Thus, in October, this aggregate recorded an annual growth rate of 8.4 percent (17.0 percent in June), while credit in foreign currency continued declining (from -11.1 percent in June to -3.5 percent in October) although at a slower pace due to a recovery of credit to the private sector in dollars in the third quarter. At end-2016, total credit to the private sector is expected to show growth rates around 5.5 percent, which is consistent with the evolution of economic activity.

Credit to business slowed down more than personal loans. Thus, the annual growth of credit in the segment of corporate loans and loans to large enterprises declined from 7.9 percent to 1.3 percent between June and October, while credit in the segment of small- and micro businesses recovered in the third quarter rising from 6.2 percent to 7.3 percent in the same period. Personal loans continued growing at a moderate rate, the more dynamic segment being consumer loans, which grew at an annual rate of 9.4 percent in October (11.2 percent in June), while mortgage loans grew 6.2 percent (8.7 percent in June).





**Table 32**  
**CREDIT TO THE PRIVATE SECTOR**  
(12 month % change)

	<b>Dec.14</b>	<b>Dec.15</b>	<b>Sep.16</b>	<b>Oct.16</b>
<b>Business</b>	<b>9.2</b>	<b>7.9</b>	<b>3.3</b>	<b>3.1</b>
Corporate and large companies	10.5	15.0	1.8	1.3
Medium-sized enterprises	13.7	-0.8	3.5	3.3
Small business and Microbusinesses	1.6	3.2	6.9	7.3
<b>Individuals</b>	<b>11.8</b>	<b>12.2</b>	<b>8.8</b>	<b>8.1</b>
Consumer	11.4	14.8	9.9	9.4
Car loans	6.7	-5.0	-5.4	-6.4
Credit cards	15.0	23.9	12.5	11.3
Rest	10.0	11.7	9.6	9.5
Mortgage	12.4	8.6	7.2	6.2
<b>TOTAL</b>	<b>10.1</b>	<b>9.4</b>	<b>5.3</b>	<b>4.9</b>

35. The slowdown of depository entities' credit to the private sector is in line with the lower dynamism of domestic demand. The correlation of indicators of economic activity, such as GDP, domestic demand, and private investment, with credit to the private sector is significant and close to 0.5. Moreover, statistical evidence suggests that credit to the private sector responds with a lag to changes in domestic demand, investment, and GDP.

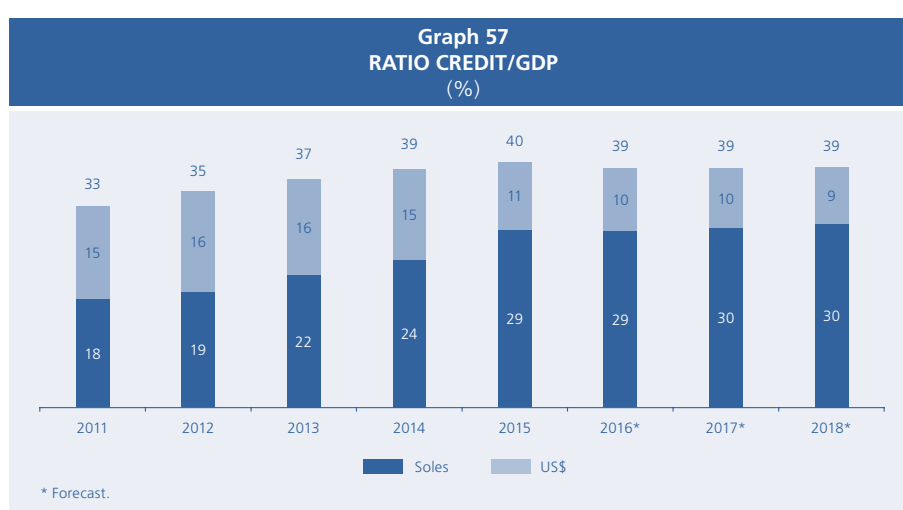
**Table 33**  
**MAXIMUM DYNAMIC CORRELATION**

	<b>Credit to the private sector</b>	<b>Loans to business</b>	<b>Loans to individuals</b>
GDP	0.44	0.32	0.52
Domestic demand	0.50	0.52	0.47
Private investment	0.54	0.50	0.64

In 2016, credit would grow 5.5 percent. This projection considers a rate of expansion of 7.6 percent in credit in soles associated mainly with a lower dynamism of investment and with a lower consumption of durable goods, as well as the repayment of loans by economic agents who chose to have their pension funds released from AFPs. On the other hand, credit in dollars is expected to grow 0.1 percent this year, this projection being in line with the information available at October. Thus, the ratio of credit-to-GDP ratio in 2016 is estimated to remain at 40 percent.



The growth rates of credit to the private sector and liquidity in the 2017-2018 forecast horizon are expected to be in line and close to the rate of growth of nominal GDP, with credit and deposits in domestic currency showing greater dynamism. Total credit would grow 6.5 percent, with credit in soles showing a growth rate of 8.0 percent and credit in dollars showing a growth rate of 2.1 percent due mainly to the evolution of credit for foreign trade operations.



## Expanded Financing

36. Expanded financing includes all the sources of funding for the private sector –i.e. credit from depository institutions, credit from the capital market, and the credit that companies obtain directly in the international market– and therefore represents a useful source of information to quantify the credit cycle.

In October, expanded financing recorded an annual growth rate of 4.3 percent, a slightly lower rate than the growth rate of the credit to the private sector provided by depository institutions (4.9 percent). The slowdown observed in credit was also reflected in their funding sources, which means that not only financing of depository institutions reduced their pace of growth, but also that direct foreign funding declined as well, its growth rate dropping from 9.5 to 1.0 percent. This evolution of expanded financing is consistent with the evolution of domestic demand which shows lower dynamism, especially during the fourth quarter.





Table 34  
EXTENDED FINANCING TO THE PRIVATE SECTOR

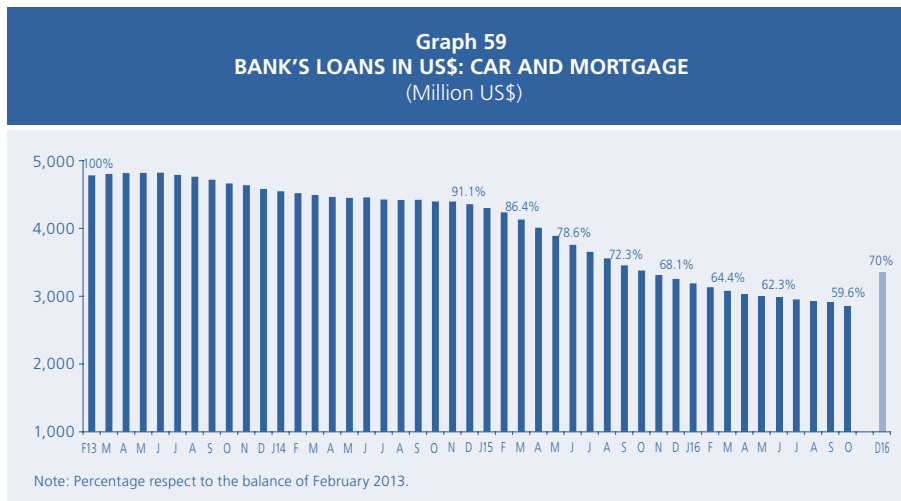
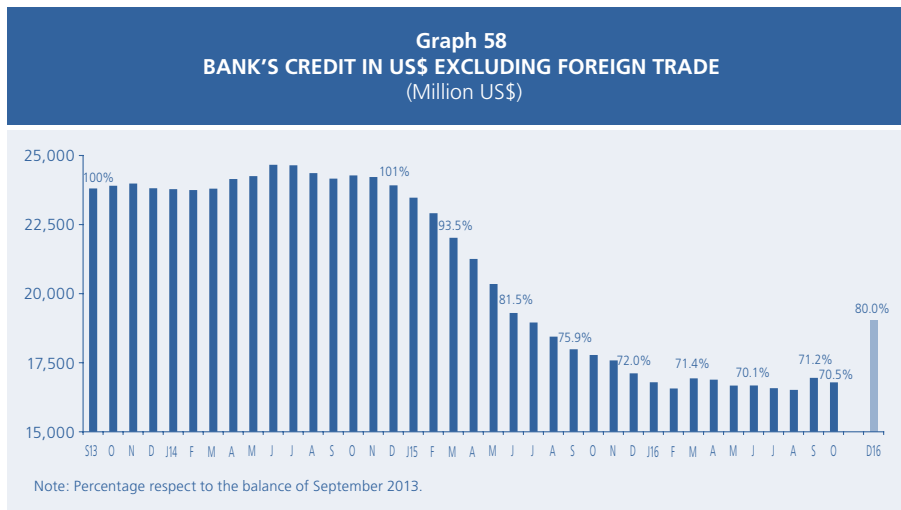
	Balance in million Soles			Annual % change		
	Dec.14	Dec.15	Oct.16	Dec.14/ Dec.13	Dec.15/ Dec.14	Oct.16/ Oct.15
<b>Credit of Depository corporations</b>	<b>225,000</b>	<b>246,167</b>	<b>256,029</b>	<b>10.1</b>	<b>9.4</b>	<b>4.9</b>
D.C. (Mill. S/)	139,013	177,988	187,281	17.7	28.0	8.4
F.C. (Mill. US\$)	28,855	22,879	23,070	-0.4	-20.7	-3.5
<b>Credit of other financial corporations</b>	<b>28,561</b>	<b>33,069</b>	<b>33,771</b>	<b>17.6</b>	<b>15.8</b>	<b>4.2</b>
D.C. (Mill. S/)	14,416	17,031	18,325	22.1	18.1	9.1
F.C. (Mill. US\$)	4,746	5,382	5,183	13.3	13.4	-1.0
<b>Private external indebtedness</b>	<b>71,674</b>	<b>76,947</b>	<b>77,188</b>	<b>15.9</b>	<b>7.4</b>	<b>2.3</b>
(Million US\$)	24,052	25,821	25,902	15.9	7.4	2.3
Short-term (Mill. US\$)	3,947	3,816	4,167	3.5	-3.3	9.7
Medium- and long-term (Mill. US\$)	20,105	22,005	21,735	18.7	9.5	1.0
<b>TOTAL</b>	<b>325,234</b>	<b>356,184</b>	<b>366,989</b>	<b>12.0</b>	<b>9.5</b>	<b>4.3</b>
D.C. (Mill. S/)	153,429	195,019	205,606	18.1	27.1	8.4
F.C. (Mill. US\$)	57,653	54,082	54,155	7.0	-6.2	-0.6
Dollarization (%)	52.8	48.6	46.9			

### Advances in the De-dollarization of Credit

37. At end 2014, BCRP established the Credit De-dollarization Program with the aim of reducing economic agents' risks associated with the high levels of dollarization of credit existing in the country. The program establishes additional reserve requirements in foreign currency with the aim of increasing the cost of funding in this currency. Particularly, the program sought to reduce banks' balances of loans in dollars: (i) in the case of total loans, banks were required to show in December 2015 a balance of loans in dollars equal to 90 percent of such balance at September 2013, while the requirement for end-2016 was 80 percent of the balance of September 2013; and (ii) in the case of car loans and mortgage loans, banks were required to show in December 2015 a balance equal to 85 percent of the balance of these loans in February 2013, while the required balance at the end of 2016 was 70 percent of the balance recorded in February 2013.

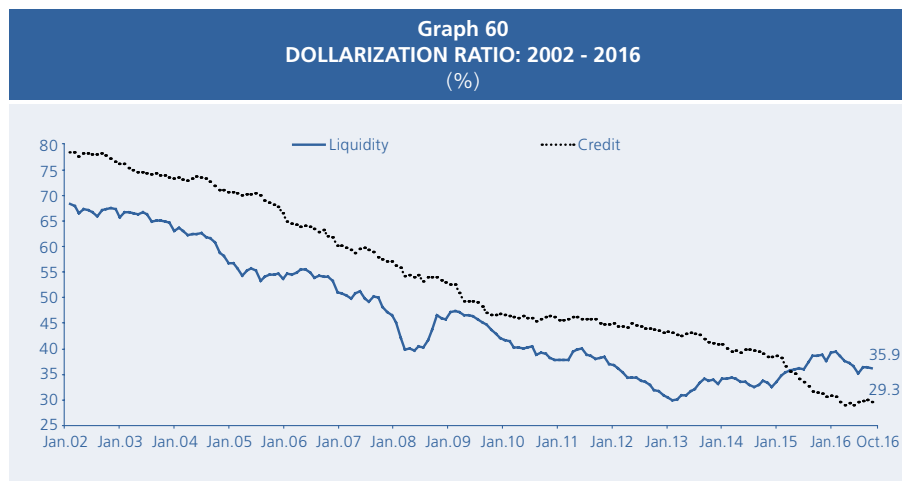
As a result of these measures and of the depreciation registered, the balance of credit in dollars declined and these loans were replaced by loans in soles. The balance of total loans fell from a balance of US\$ 23.90 billion in December 2014 to US\$ 16.79 billion in October 2016 (a contraction of US\$ 7.12 billion). Such balance is equivalent to 70.5 percent of the credit balance that banks had in September 2013 (which reflects that the requirements set for both December 2015 and 2016 have been met). It should be pointed out that since banks have already met the de-dollarization requirement set for end-2016 and that given the lower pace of depreciation of the sol registered since March,

the total balance of total loans in dollars has been maintained around 70 percent of such balance in September 2013 while the balance of car loans and mortgage loans has been maintained at between 60 and 62 percent of the balance of these loans in February 2013.



These measures have led the ratio of dollarization of credit to decrease from 38.2 percent in December 2014 to 29.3 percent in October 2016. Furthermore, the dollarization of credit is expected to continue declining in the following years, particularly and with greater intensity in the case of car loans and mortgage loans given that the credit levels that trigger additional reserve requirements will continue decreasing until the amount of these loans in dollars reaches 5 percent of banks' net worth.





By type of credit, lower ratios of dollarization are now observed in all the segments of credit. In mortgage loans, the ratio of dollarization declined from 33.9 in December 2014 to 22.9 percent in October 2016, while in car loans it declined from 68.9 to 29.1 percent (approximately 40 percentage points) in the same period. As for business loans, the dollarization ratio of loans to corporate enterprises and large companies has dropped by 11 percentage points since December 2014, and the ratio of dollarization of loans to medium-sized companies has declined by 15.5 percentage points in the same period.

It is worth mentioning that lower levels of dollarization of credit increase the financial system's robustness face external shocks that generate high volatility in the exchange rate and also reduce the negative effects of foreign exchange volatility on the balance sheets of companies and households.

**Table 35**  
**DOLLARIZATION RATIO OF CREDIT TO THE PRIVATE SECTOR**  
(%)

	Dec.14	Dec.15	Sep.16	Oct.16
<b>Business</b>	<b>48.4</b>	<b>38.7</b>	<b>39.0</b>	<b>38.4</b>
Corporate and large companies	59.8	46.5	49.4	48.7
Medium-sized enterprises	59.3	47.6	44.1	43.8
Small business and Microbusinesses	11.5	8.8	7.2	7.0
<b>Individuals</b>	<b>20.0</b>	<b>15.9</b>	<b>13.9</b>	<b>13.6</b>
Consumer	9.5	7.9	7.1	7.0
Car loans	68.9	44.6	30.3	29.1
Credit cards	6.6	6.4	6.6	6.8
Rest	5.9	6.0	5.7	5.6
Mortgage	33.9	26.8	23.4	22.9
<b>TOTAL</b>	<b>38.2</b>	<b>30.5</b>	<b>29.8</b>	<b>29.3</b>
<i>At constant exchange rate</i>	38.2	27.7	27.1	26.9

## Non-Performing Loans

38. The rate of non-performing loans in October was 3.29 percent, a slight rising trend being observed in comparison with September. The delinquency rate in credit to business was 5.28 percent, a higher rate than in September (5.16 percent) and in December 2015 (4.65 percent), while the delinquency rate in personal loans was 3.11 percent, also higher than in September (3.05 percent) and in December 2015 (2.65 percent). The increase observed in the rate of delinquency rates in loans to medium-sized companies (up by 43 basis points) and in car loans (up by 40 basis points) stands out.

Table 36 RATE OF NON-PERFORMING LOANS				
	%			
	Dec. 14	Dec. 15	Sep. 16	Oct. 16
<b>Business</b>	<b>3.14</b>	<b>4.65</b>	<b>5.16</b>	<b>5.28</b>
Corporate and large companies	0.37	0.47	0.44	0.56
Medium-sized enterprises	4.79	5.28	6.34	6.48
Small business and microbusinesses	7.82	7.46	7.81	7.78
<b>Individuals</b>	<b>2.46</b>	<b>2.65</b>	<b>3.05</b>	<b>3.11</b>
Consumer	3.34	3.32	3.69	3.77
Credit cards	4.23	4.10	4.78	4.94
Car loans	4.25	4.41	5.48	5.58
Mortgage	1.44	1.84	2.28	2.30
<b>Average</b>	<b>2.91</b>	<b>2.87</b>	<b>3.20</b>	<b>3.29</b>

By currencies, a higher level of delinquency is observed in credit in dollars in the segments with less capacity to generate income in this currency; that is, in credit to small and micro businesses and in personal loans. Thus, for example, the level of delinquency in the latter increased from 4.07 in September to 4.16 percent in October, mainly due to non-performing loans in the segments of car loans and mortgage loans, which increased by 64 and 12 basis points, respectively. This greater delinquency rate in the segment of personal loans is explained by the greater foreign exchange risk to which people are exposed in comparison with the business segments, because the latter have greater access to hedging instruments against foreign exchange risk.





Table 37  
RATE OF NON-PERFORMING LOANS:  
DOMESTIC CURRENCY

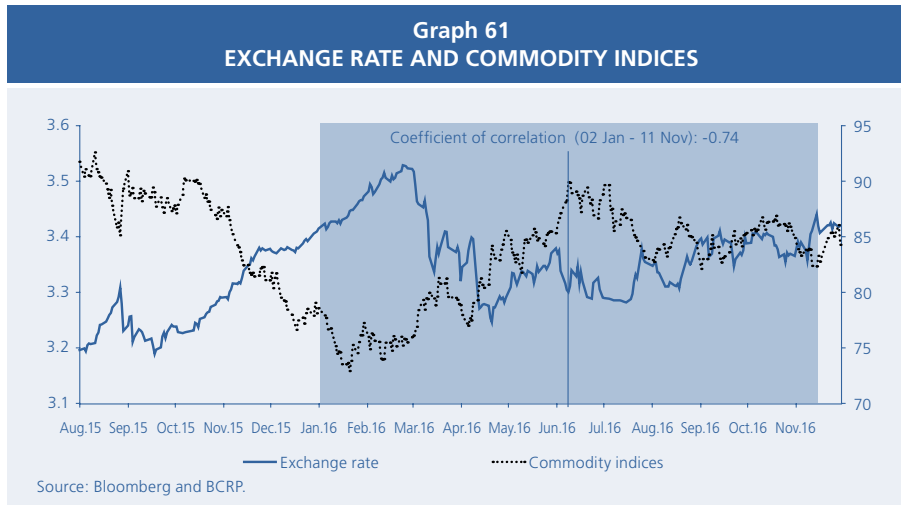
	%			
	Dec.14	Dec.15	Sep.16	Oct.16
<b>Business</b>	<b>4.03</b>	<b>5.11</b>	<b>5.86</b>	<b>5.95</b>
Corporate and large companies	0.24	0.22	0.23	0.32
Medium-sized enterprises	5.63	5.04	6.02	6.20
Small business and microbusinesses	7.65	6.90	7.21	7.21
<b>Individuals</b>	<b>2.57</b>	<b>2.53</b>	<b>2.89</b>	<b>2.95</b>
Consumer	3.33	3.23	3.58	3.67
Credit cards	4.31	4.20	4.94	5.12
Car loans	4.61	1.91	2.27	2.31
Mortgage	1.33	1.46	1.85	1.86
<b>Average</b>	<b>3.40</b>	<b>2.87</b>	<b>3.25</b>	<b>3.33</b>

Table 38  
RATE OF NON-PERFORMING LOANS:  
FOREIGN CURRENCY

	%			
	Dec.14	Dec.15	Sep.16	Oct.16
<b>Business</b>	<b>2.14</b>	<b>3.89</b>	<b>4.00</b>	<b>4.15</b>
Corporate and large companies	0.45	0.78	0.66	0.83
Medium-sized enterprises	4.22	5.55	6.74	6.83
Small business and microbusinesses	9.39	15.70	20.24	20.12
<b>Individuals</b>	<b>2.06</b>	<b>3.28</b>	<b>4.07</b>	<b>4.16</b>
Consumer	3.42	4.58	5.39	5.37
Credit cards	3.07	2.62	2.60	2.52
Car loans	4.09	7.52	12.88	13.52
Mortgage	1.64	2.88	3.66	3.78
<b>Average</b>	<b>2.13</b>	<b>2.87</b>	<b>3.06</b>	<b>3.18</b>

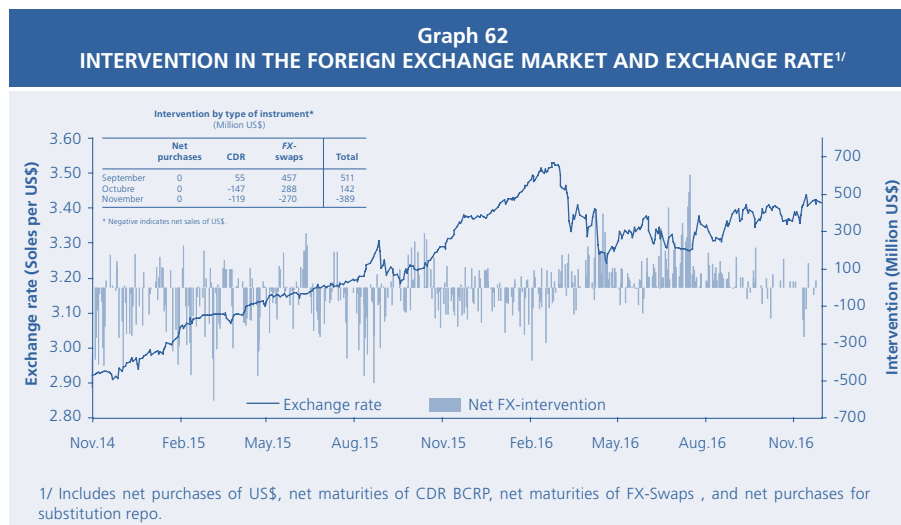
### Exchange Rate and BCRP Intervention in the Forex Market

39. At end November, the dollar/PEN exchange rate registered S/ 3.414 per dollar, a similar level to that observed at end of 2015. In the first half of the year, the PEN showed an appreciation, in line with expectations of an accommodative monetary policy in developed economies and with the rise of commodity prices. Later on, the dollar showed a slight upward trend associated with the negative evolution of commodity prices and with expectations of a more rapid reversal of the Fed monetary stimulus position after the results of the elections in the United States.



Between September and November 2016, the exchange rate depreciated 0.6 percent, from S/ 3.393 to S/ 3.414 per dollar, but showing a differentiated evolution in this period.

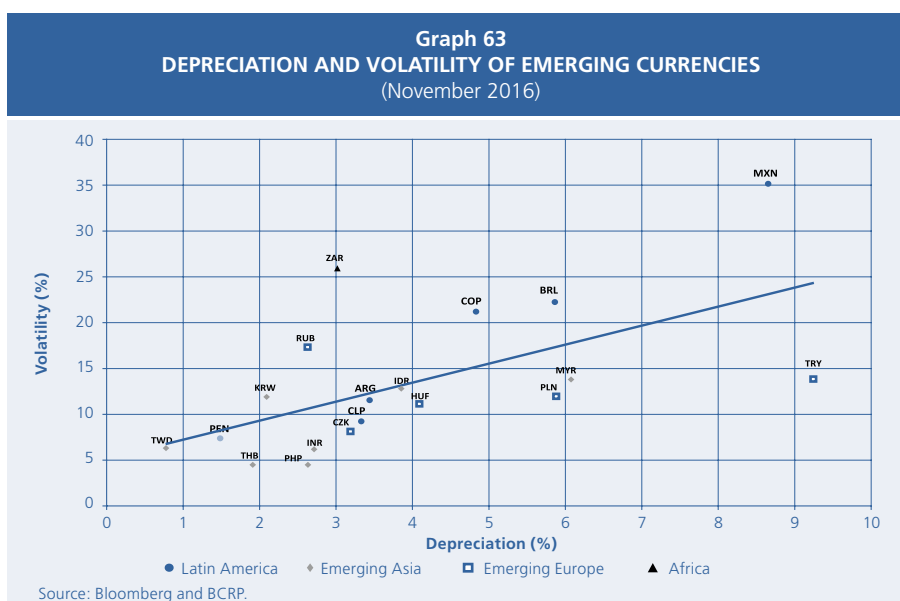
Thus, between September and October the sol appreciated 0.9 percent amid a rising trend in commodity prices, as a result of which the net balance of BCRP foreign exchange instruments continued declining. Then, in November, the sol depreciated 1.5 percent despite the rise in the prices of commodities –as shown in the graph above– due to a significant increase of risk aversion in international markets that affected the emerging markets after the results of the presidential elections in the USA and increased expectations that the Fed would raise its interest rates. In response to this, BCRP auctioned FX Swaps and CDRBCRP (*Certificados de Depósitos Reajustables* BCRP).





In November, the currencies of the emerging market countries experienced significant depreciation pressures in a context of capital outflows due to uncertainty about the evolution of their economies in view of the possibility that the new President of the United States would implement protectionist policies and the increase of interest rates in dollars which would make investments in this currency more appealing.

In such a context, supported by the fundamentals of the Peruvian economy and by the BCRP actions to mitigate exchange rate volatility, the PEN registered one of the lowest levels of volatility and depreciation observed among the major currencies of the emerging economies.



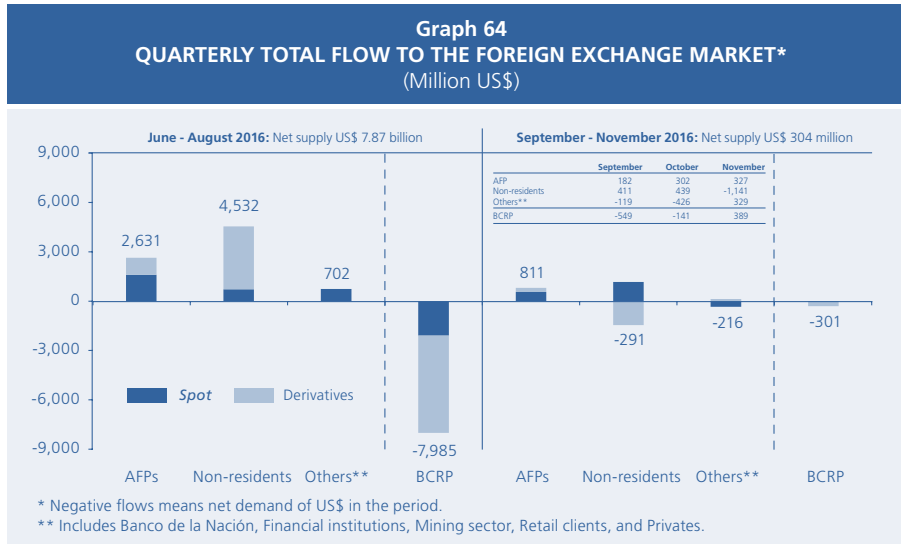
As for dollar flows in the local market, a net supply of dollars of US\$ 304 million was recorded between September and November (on the other hand, between June and August, the net supply of dollars amounted to US\$ 7.87 billion).

First, between September and October, amid the appreciation of the sol, there was a net supply of dollars of US\$ 474 million in September and US\$ 315 million in October that came mainly from the AFPs and non-residents. Then, in November, there was a net demand for dollars of US\$ 485 million, mainly due to the demand of non-residents (US\$ 1.14 billion) in the context of international uncertainty mentioned above.

The Central Bank had a net-demand-for-dollars position of US\$ 301 million in the period. Between September and October, BCRP demanded dollars through the net maturities of its foreign exchange instruments (US\$ 549 and US\$ 101 million, respectively) and in November, it offered dollars through net auctions of FX Swaps and

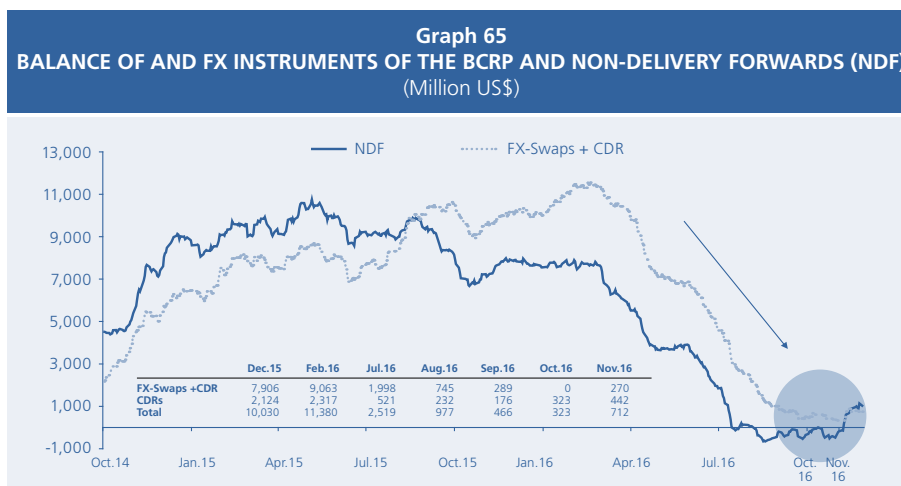


CDRs. It should be pointed out that BCRP did not intervene in the foreign exchange market in this period.



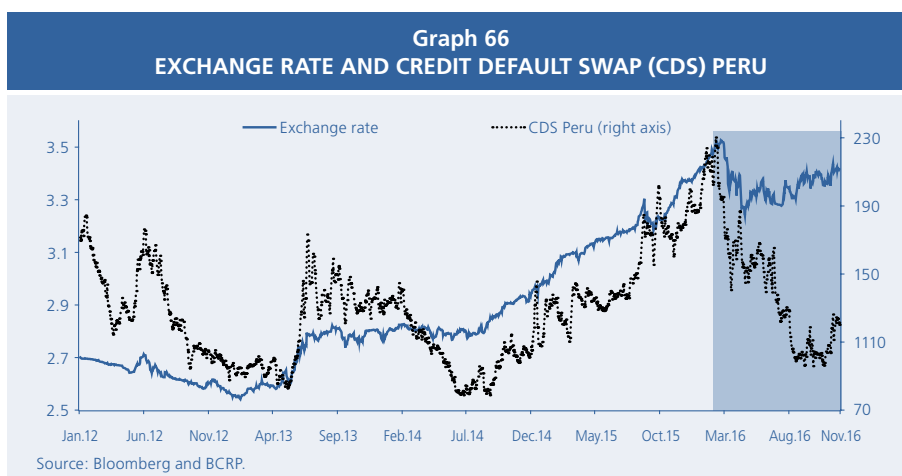
It is also worth highlighting that the balances of BCRP foreign exchange instruments – FX Swaps and CDR-BCRP– have been decreasing significantly in previous periods due to lower expectations of depreciation, as reflected in the decline of banks’ position of net forward sales with their customers.

Thus, at end October the balance of FX Swaps decreased completely while CDR-BCRP showed a balance of US\$ 323 million. At end November the total balance of foreign exchange instruments was US\$ 712 million, of which US\$ 270 million was FX swaps after the actions taken by BCRP to mitigate foreign exchange volatility in that month.

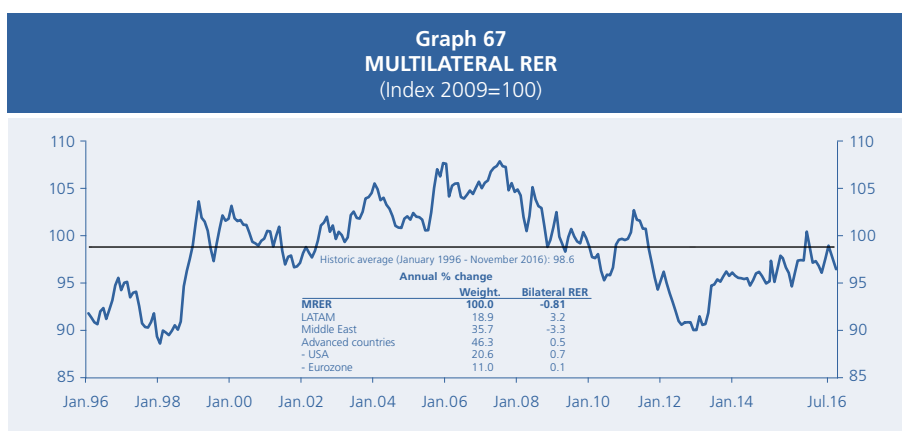




Low risk perception in international markets (measured through Credit Default Swaps<sup>10</sup>) due to the positive outlook of the Peruvian economy, the reduction of the balance of Forex instruments, and the country's significant amount of international reserves have positioned the sol as one of the emerging currencies that is best prepared to face an eventual period of international uncertainty such as the one observed in November. Furthermore, the rise in commodity prices, and especially the rise in the price of copper, is an important positive factor for the local economy, and, therefore for the PEN.



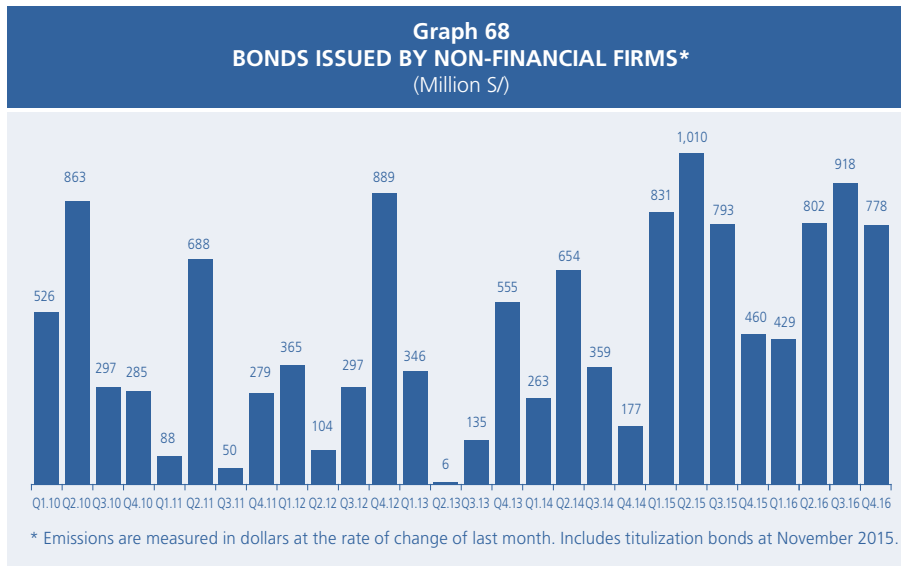
The multilateral real exchange rate index (RER) registered a level of 96.5 in November (2009 base period), which is a level 0.8 percent lower than in November 2015. The RER index has declined in the last 12 months mainly relative to the currencies of East Asian countries (-3.3 percent), although this decline has been in part offset by an increase relative to Latin American currencies (3.2 percent).



10 Credit Default Swaps (CDS) are financial instruments that allow securing a bond against the risk of non-compliance. Thus, the lower the premium to be paid (the cost of the insurance), the lower risk perceived by the market.

**Capital Market**

40. Securities issued in the local capital market by non-financial companies so far in the fourth quarter of 2016 amount to S/ 778 million. The higher cost of borrowing dollars in a context of foreign exchange volatility accounts for the absence of bonds issued in dollars. Moreover, financial entities also obtained funding in the local market selling bonds for a total of S/ 214 million (81 percent in soles and 19 percent in dollars). At end November 2016, as part of its First Subordinated Bond Program, Banco de la Nación issued 15-year bonds for a total of S / 250 million, with a coupon rate of 8 percent.



In October 2016, Banco de Crédito del Perú issued 3 year-bonds in the international market for a total of US\$ 300 million below the par, with a coupon rate of 2.25 percent. The yield rate was 2.36 percent (138 basis points higher than the yield on a US Treasury bond with the same maturity). At November 2016, the balance of bonds issued by Peruvian companies in the international market was US\$ 20.17 billion. In the next two years, total maturities of the bonds issued in the international market amount to US\$ 858 million, of which US\$ 730 million correspond to bonds issued by the financial sector and US\$ 128 million correspond to bonds issued by the tradable sector.





**Table 39**  
**BONDS ISSUED IN THE INTERNATIONAL MARKET**

Business	Emission date	Amount (Million US\$)	Maturity (Years)	Rate
<b>Year 2014</b>		<b>5,510</b>		
<b>Non-financial sector</b>		<b>3,306</b>		
Compañía Minera Ares	15-Jan	350	7	7.75%
Minsur	31-Jan	450	10	6.25%
Abengoa Transmisión Sur	8-Apr	432	29	6.88%
Camposol	24-Apr	75	3	9.88%
Rutas de Lima**	27-Jun	370	22	8.38%
Rutas de Lima***	27-Jun	150	25	5.25%
InRetail Shopping Mall	1-Jul	350	7	6.50%
InRetail Consumer	7-Oct	300	7	5.25%
Unión Andina de Cementos	28-Oct	625	7	5.88%
Energía Eólica	15-Dec	204	20	6.00%
<b>Financial sector</b>		<b>2,204</b>		
<u>Private financial sector</u>		<u>1,025</u>		
Banco de Credit	15-Jan	200	13	6.13%
Interbank	11-Mar	300	15	6.63%
Banco de Credit	1-Jul	225	4	2.75%
BBVA Banco Continental	15-Sep	300	15	5.25%
<u>Public financial sector</u>		<u>1,179</u>		
Fondo MiVivienda	26-Mar	300	5	3.38%
Fondo MiVivienda*	15-May	279	4	1.25%
COFIDE	8-Jul	300	5	3.25%
COFIDE	8-Jul	300	15	5.25%
<b>Year 2015</b>		<b>4,510</b>		
<b>Non-financial sector</b>		<b>3,361</b>		
GyM Ferrovias***	3-Feb	206	25	4.75%
Southern Copper Corporation	17-Apr	500	10	3.88%
Southern Copper Corporation	17-Apr	1,500	30	5.88%
Consorcio Nuevo Metro de Lima	10-Jun	1,155	19	5.88%
<b>Financial sector</b>		<b>1,149</b>		
<u>Private financial sector</u>		<u>349</u>		
Intercorp	3-Feb	250	10	5.88%
Interbank**	3-Feb	99	15	7.66%
<u>Public financial sector</u>		<u>800</u>		
COFIDE	7-Jul	200	4	3.25%
COFIDE	7-Jul	600	10	4.75%
<b>Year 2016</b>		<b>797</b>		
<b>Non-financial sector</b>		<b>497</b>		
Kallpa Generación	19-May	350	10	4.88%
Camposol	20-May	147	5	10.50%
<b>Financial sector</b>		<b>300</b>		
<u>Private financial sector</u>		<u>300</u>		
Banco de Credit del Peru	20-Oct	300	3	2.25%

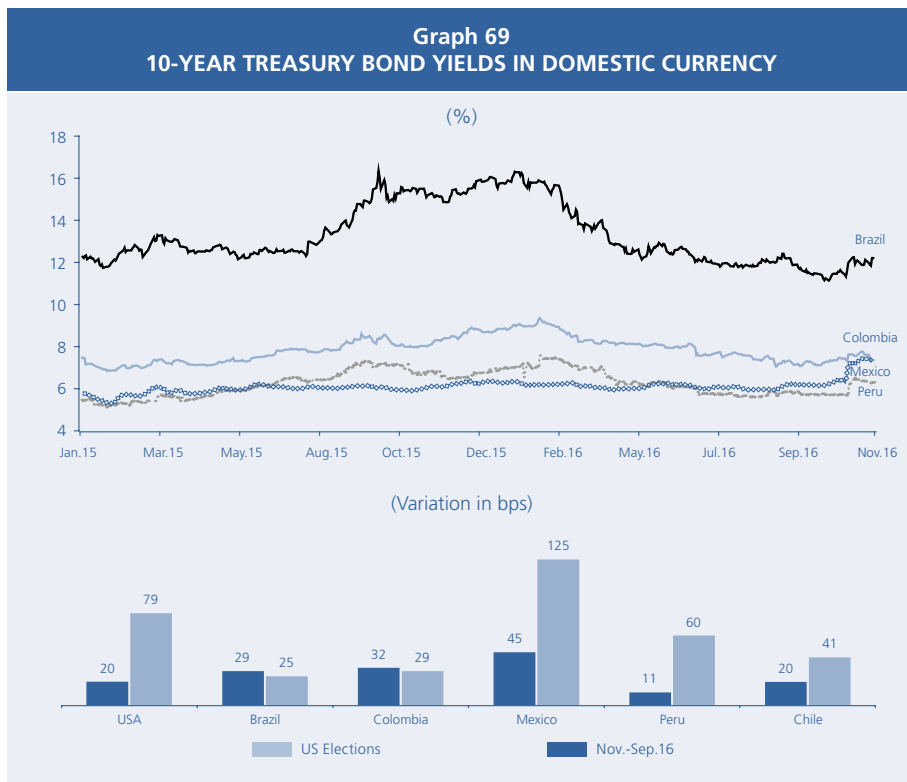
\* Emission in Swiss Franc.

\*\* Emission in Soles.

\*\*\* Emission in Soles VAC.

41. The interest rates on sovereign bonds issued in the region showed an upward trend between September and November 2016, the interest rates on the 10-year sovereign bonds of Brazil, Chile, Colombia, Mexico, and Peru increasing by 56 basis points on average. The interest rate on the Peruvian bond in soles rose from 5.72 to 6.32

percent. A factor that explains the recent steepening in the yield curves of Latin American government bonds is global investors' greater risk aversion after the result of the presidential elections in the United States. Thus, between November 8 and November 9, the interest rates of the Peruvian 10-year bonds increased 11 basis points –the lower increase observed in the region– while the Mexican bond, on the other hand, recorded the greater devaluation (45 basis points).

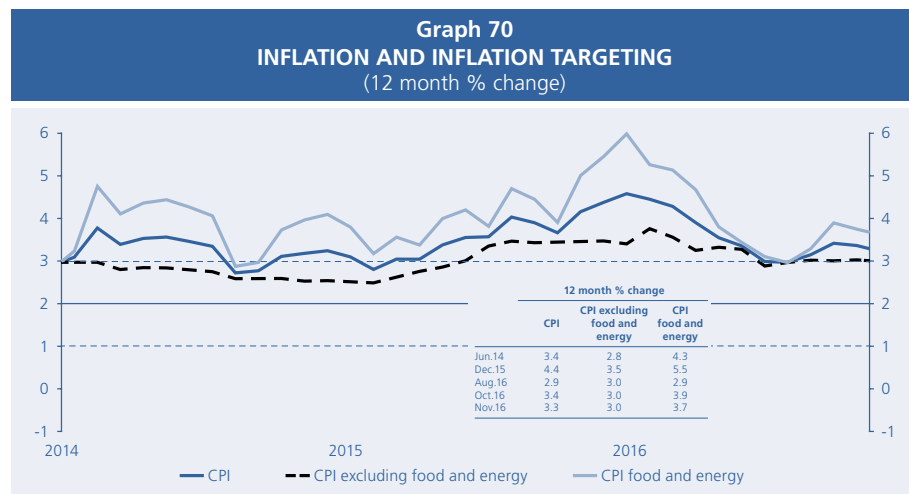




## VI. Inflation Forecast and Balance of Risks

### Forecast

42. After the reversal of the domestic shocks associated with El Niño –annual inflation dropped from 4.61 to 2.96 percent between January and August–, inflation increased from September and reached a rate of 3.35 percent in November. Factors influencing this rise included the increase in the dollar/PEN exchange rate (2.1 percent) and rises in fuel prices (6.0 percent), electricity rates (4.4 percent), and in the prices of some foodstuffs such as chicken (6.7 percent) and milk (7.2 percent).



43. In the period of January-November, the items with the higher positive contribution to inflation were meals outside the home and education costs (tuition and fees). On the other hand, the items with the higher negative contribution to inflation were gasoline and national transport.

**Table 40**  
**ITEM WITH THE HIGHEST WEIGHTED CONTRIBUTION TO INFLATION: JANUARY - NOVEMBER 2016**

Positive	Weight	% chg.	Contribution	Negative	Weight	% chg.	Contribution
Meals outside the home	11.7	4.4	0.58	Fresh legumes	0.2	-23.5	-0.08
Education costs (tuition and fees)	8.8	5.1	0.48	National transportation	0.3	-17.1	-0.07
Electricity rates	2.9	7.1	0.23	Gasoline and lubricants	1.3	-3.2	-0.04
Toiletries	4.9	3.7	0.17	Corn	0.1	-17.8	-0.03
Canned milk	1.6	6.7	0.11	Airplane fare	0.4	-8.0	-0.03
Medicinal products	2.1	5.0	0.10	Olluco and alike	0.1	-26.9	-0.03
Poultry meat	3.0	2.9	0.09	Papaya	0.2	-13.5	-0.03
Cigarettes	0.1	45.1	0.08	Onion	0.4	-5.4	-0.02
Fresh and frozen fish	0.7	9.3	0.07	Citrus fruits	0.5	-1.5	-0.01
Urban fare	8.5	0.8	0.06	Celery	0.0	-17.6	-0.01
<b>Total</b>			<b>1.97</b>	<b>Total</b>			<b>-0.35</b>

**Table 41**  
**INFLATION**  
(% change)

	Weight	2014	2015	2016	
				January - November	12-month
<b>CPI</b>	<b>100.0</b>	<b>3.22</b>	<b>4.40</b>	<b>2.89</b>	<b>3.35</b>
<b>1. CPI excluding food and energy</b>	<b>56.4</b>	<b>2.51</b>	<b>3.49</b>	<b>2.48</b>	<b>3.02</b>
a. Goods	21.7	2.43	3.57	3.28	3.58
b. Services	34.8	2.55	3.44	1.99	2.68
<b>2. Food and energy</b>	<b>43.6</b>	<b>4.08</b>	<b>5.47</b>	<b>3.37</b>	<b>3.73</b>
a. Food and beverages	37.8	4.83	5.37	3.30	3.70
b. Fuel and electricity	5.7	-0.85	6.20	3.82	3.92
Fuel	2.8	-5.59	-6.33	-0.35	-1.16
Electricity	2.9	4.37	18.71	7.11	7.99

a) **Meals Outside the Home**

Year-to-date, prices in the category “**meals outside the home**” have increased 4.4 percent, showing a higher increase than that recorded in the prices of food consumed in the household (2.8 percent) and higher than that observed in the general price index (2.89 percent), which would be reflecting consumers’ greater demand for this service. Moreover, the increase registered in the last twelve months is 4.79 percent, which is higher than the increase registered in food consumed in the household (3.17 percent).





b) **Education**

Prices in the category “**Education: tuition and fees**” increased 5.1 percent, the highest rises being observed in the months of February (1.4 percent) and March (3.1 percent) due to the increase in the tuition and fees in private schools and universities as well as in the education fees in public schools. Education fees in universities and higher education institutes were raised in subsequent months and tuition registered a new increase in private and state universities in August (0.2 percent). As a result of these rises, the variation in the prices of this category in the last twelve months is 4.96 percent.

c) **Electricity rates**

**Electricity rates** increased 7.1 percent in January-November and 8.0 percent in the last twelve months, in accordance with the adjustments approved by the regulatory body Osinergmin which incorporated the variations in the dollar/PEN exchange rate and the higher costs resulting from the onset of operations of new power stations (3.7 percentage points).

The transmission component was increased due to the onset of operations of the power plant of Puerto Bravo, while the generation component was increased due to the onset of operations of the power station of Cerro del Águila and due to the higher costs for the onset of commercial operations in Ilo’s power station N° 2. In November, the price was increased again due to the new generation price level that is set every three months to offset the differences between the contracts established with the generation companies and the distribution companies.

d) **Gasoline and Lubricants**

The prices in the category gasoline and lubricants, on the other hand, decreased on average 3.2 percent in January-November and 4.8 percent in the last 12 months, in line with the evolution of the *ex plant* prices set by local refineries. Another factor that influences fuel prices is the benchmark prices set by Osinergmin based on the international price of crude oil and the evolution of fuel prices in the U.S. market.

As for other fuel prices, the price of gasohol fuels have decreased 4.5 percent year-to-date while the benchmark prices in dollars and in soles have increased 8.5 and 9.2 percent. On the other hand, the average refinery prices of gasohol fuels have fallen 6.2 percent.



## **Food Items**

### e) **Evaporated milk**

The price of **evaporated milk** increased in the last two months (3.7 percent in October and a lag of 2.5 in November), reflecting a recovery of the operating margins of the industry. In 2015 the price of evaporated milk increased 1.87 percent below the variation of the general price index (4.4 percent) and the exchange rate (14.2 percent). At November of this year, the last twelve month variation in this category was 6.7 percent.

In September, the prices of the imported inputs used to produce evaporated milk increased due to the rises recorded in the international prices of these inputs. It is worth mentioning that imported dairy inputs are subject to the price band system and that as from May 2015 the limit of the specific import right is 20 percent of the CIF import value.

The participation of national inputs (fresh milk) in the elaboration of evaporated milk and in the dairy industry in general has increased in recent years, the participation of local inputs being estimated at approximately 70 percent of total inputs.

### f) **Chicken meat**

Between January and November, the price of **poultry** increased 2.9 percent and accumulated a rise of 4.5 percent in the last twelve months. As in previous periods the price of chicken meat showed a fluctuating trend associated with problems in the availability of substitute products and supply in a context of lower prices of hard yellow maize, the main food of chicken (the price of maize fell from US\$ 142.4 dollars per ton in December 2015 to US\$ 133.4 in November 2016). In addition, the duty on imports of hard yellow maize in soles fell from S/ 924.2 per ton in December 2015 to S/ 850.2 per ton in November 2016.

In the first months of the year, the rise in poultry prices was associated with the increase in the price of highly consumed fish species, such as bonito, mackerel, and parrot fish, and with the lower availability of chickens after the December campaign. In addition to this, apparently the poultry feed was affected by the higher temperatures registered which resulted in a lower weight of farm live chicken. The price of chicken fell in the months of April to July, supported by better farm breeding conditions (milder temperatures) that allowed a greater weight of live poultry in farms and also by the lower price of some fish species. This situation reversed in August (3.7 percent) due mainly to the higher price of fish.





In October and November, poultry recorded new price increases (3.5 and 2.5 percent) associated with a lower availability of chicken in wholesale distribution centers and with an irregular supply of fish.

g) **Fish**

The price of **fish** showed an accumulated variation of 9.3 percent in January-November and a variation of 6.1 percent in the last twelve months, associated with the lower availability of fish species due to abnormal weather and sea temperature conditions.

Early in the year, the rise in fish prices was associated with an irregular supply resulting from alterations in the marine ecosystem due to El Niño (April 2015 - June 2016). In the middle of the year, anomalous waves and lower temperatures contributed to the price increase recorded by some species, while in November, on the other hand, the prices in the fish category decreased 3.7 percent due to a greater supply of fish in response to better conditions in the marine habitat (mild warming and increased salinity in the central coast area).

### Forecast for 2016

44. Decreasing in comparison to its level in year 2015, inflation would show a total rate of about 3.3 percent at end-2016, with inflation without food and energy prices recording a rate of 3.0 percent. Prices in the energy group would increase 4.2 percent due mainly to the rise in electricity rates (7.1 percent in the year), while food prices would record an increase of 3.5 percent.

In 2017, inflation is expected to return to the target range with a rate of about 2.3 percent at the end of the year, with a reduction in inflation expectations and the partial reversal of the supply shocks observed in perishable agricultural products in the last months of the year accounting for this correction.

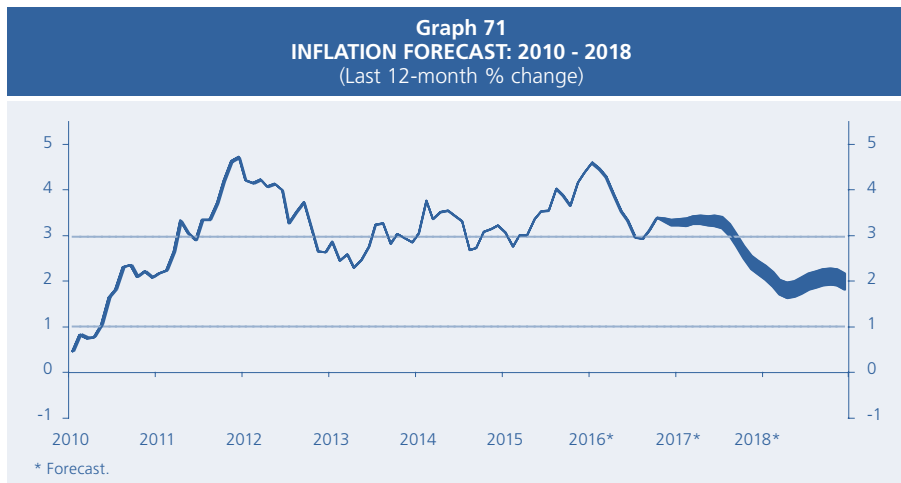
**Table 42**  
**INFLATION: 2009-2017**  
(12 month % change)

	Weight	2009	2010	2011	2012	2013	2014	2015	2016*	2017*
<b>CPI</b>	<b>100.0</b>	<b>0.2</b>	<b>2.1</b>	<b>4.7</b>	<b>2.6</b>	<b>2.9</b>	<b>3.2</b>	<b>4.4</b>	<b>3.3</b>	<b>2.3</b>
<b>Food and energy</b>	<b>43.6</b>	<b>-0.9</b>	<b>3.0</b>	<b>7.7</b>	<b>3.6</b>	<b>2.7</b>	<b>4.1</b>	<b>5.5</b>	<b>3.6</b>	<b>1.8</b>
a. Food	37.8	0.6	2.4	8.0	4.1	2.2	4.8	5.4	3.5	1.6
b. Energy	5.7	-10.4	6.8	6.0	0.2	6.1	-0.9	6.2	4.2	3.2
<b>CPI excluding food and energy</b>	<b>56.4</b>	<b>1.7</b>	<b>1.4</b>	<b>2.4</b>	<b>1.9</b>	<b>3.0</b>	<b>2.5</b>	<b>3.5</b>	<b>3.0</b>	<b>2.8</b>

\* Forecast.

**Forecast for 2017-2018**

45. BCRP monetary policy actions are taken anticipating the most likely scenarios on the basis of inflation forecasts and projections of inflation determinants elaborated based on the information available at the time of decision making. Indicators standing out as key indicators for monetary policy actions include inflation expectations, imported inflation, and demand inflationary pressures, all of which are quantified through the concept of the output gap (the difference between GDP and its potential level).
46. **Inflation** is forecast to converge towards 2 percent in the 2017-2018 forecast horizon, although at a slower pace than estimated in the Inflation Report of September. This change in the pace of inflation’s convergence to the target would be reflecting unexpected price rises in food products in the last two months, the anticipated pressure on food prices in early 2017 due to the water deficit recorded at the end of 2016, and inflation expectations that have showed a more moderate pace of convergence to the target range. The decline of inflation is consistent with a sustained fall of inflation expectations during the forecast horizon as well as with the absence of supply shocks on prices and with economic growth without inflationary pressures on the side of demand.

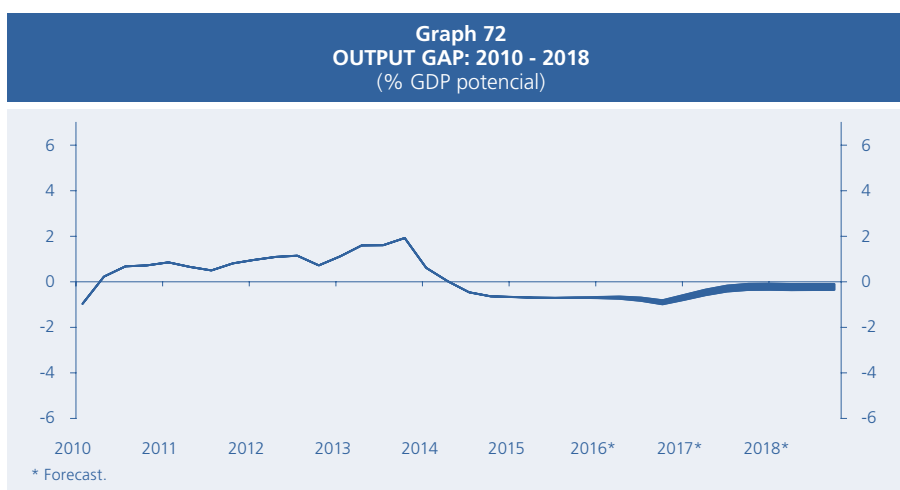


47. The **determinants of the inflation forecast** are discussed below:
- a) The Peruvian economy would grow in line with the pace of growth of the potential output during 2016, while in 2017 and in 2018 it would grow above the rate of the potential output, which is consistent with a recovery trend of the **output gap** towards its neutral level. External conditions would continue to be adverse, but they are expected to improve during 2017 and 2018 as the prices





of raw materials stabilize and the growth rate of the country's trading partners accelerates. Moreover, still expansionary monetary conditions in domestic currency are expected, although their effect would be in part offset by a lower fiscal stimulus during the forecast horizon, in line with the objective of reducing the fiscal deficit in the next few years.

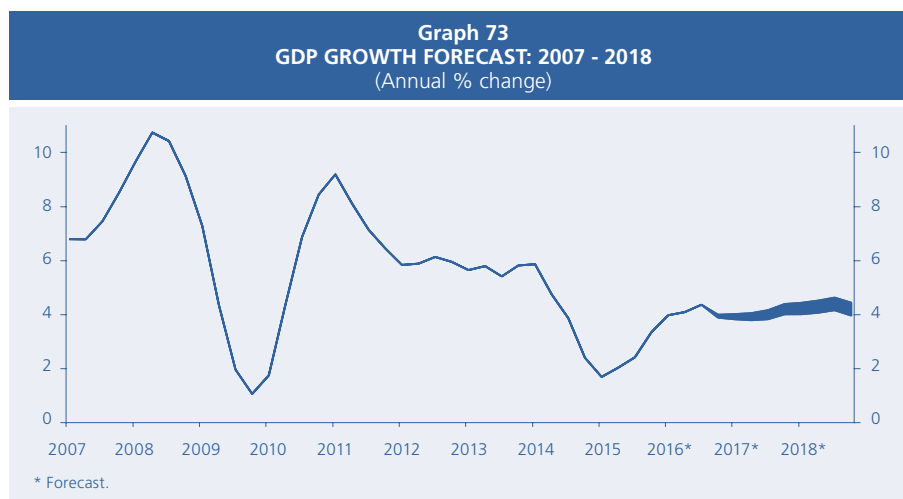


Based on the information available to date, it is estimated that the economy will head towards a neutral economic cycle in the forecast horizon. The main determinants of the forecast of the **output gap** include the following:

- **Business confidence:** Business confidence is expected to remain within the optimistic side in 2017, reflecting the recent evolution of the domestic economy and uncertainty in the international environment.
- **External conditions:** More favorable external conditions than those considered in the Inflation Report of September are foreseen. The growth rates projected in the world economy and in Peru's trading partners are similar to those estimated in the report of September, while Peru's terms of trade are projected to be higher.
- **Fiscal impulse:** The weighed fiscal impulse estimated for 2016 would be negative, in line with the adjustment observed in public expenditure in the last months of the year. A slightly negative fiscal impulse is expected in the forecast horizon.
- **Monetary conditions:** Monetary conditions in soles continue to be one of the factors that contribute to the recovery of the output gap. On the other

hand, conditions in dollars are expected to be similar to those foreseen in our previous report in a context with gradual rises in the interest rate in dollars and a decline in depreciation expectations.

It is worth pointing out that the growth forecast for the 2016-2018 forecast horizon is consistent with a growth rate of the potential output of around 4.0 percent.



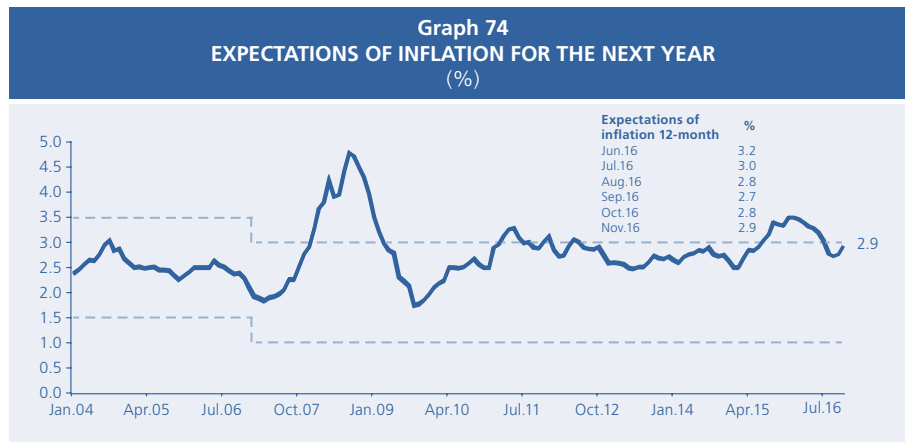
- b) **Expectations of inflation in 12 months** are foreseen to remain within the inflation target range at the end of this year and to continue showing a declining trend in the following quarters.

**Table 43**  
**SURVEY ON MACROECONOMIC EXPECTATIONS: INFLATION**  
(% change)

		Expectation about:		
		IR Jun.16	IR Sep.16	IR Dec.16*
<b>Financial entities</b>	2016	3.4	2.8	3.0
	2017	2.9	2.6	2.8
	2018	2.5	2.5	2.5
<b>Economic analysts</b>	2016	3.5	3.0	3.0
	2017	3.0	2.8	3.0
	2018	2.9	2.6	2.8
<b>Non-financial firms</b>	2016	2.5	3.0	3.2
	2017	3.2	3.0	3.0
	2018	3.0	3.0	3.0

\* Survey conducted during November 29, 2016.





- c) **Imported inflation** reflects the evolution of import prices and the evolution of the exchange rate. At end-2016, imported inflation is foreseen to be higher than estimated in the Inflation Report of September since the international prices of commodities have been revised on the upside and market expectations consider a higher exchange rate in nominal terms.

The latest survey on expectations about the dollar-PEN exchange rate shows that economic agents expect higher levels during the forecast horizon. The change observed in terms of expectations of a more expansionary fiscal policy in the United States and the corresponding possible reaction of the Fed have strengthened the dollar in the international market, which is reflected in expectations of a higher exchange rate in the forecast horizon.

**Table 44**  
**SURVEY ON MACROECONOMIC EXPECTATIONS: EXCHANGE RATE**  
(S/ per US\$)

		Expectation about:		
		IR Jun.16	IR Sep.16	IR Dec.16*
<b>Financial entities</b>	2016	3.50	3.40	3.43
	2017	3.60	3.48	3.50
	2018	3.65	3.53	3.60
<b>Economic analysts</b>	2016	3.45	3.40	3.45
	2017	3.53	3.45	3.50
	2018	3.58	3.53	3.50
<b>Non-financial firms</b>	2016	3.50	3.40	3.45
	2017	3.52	3.50	3.50
	2018	3.60	3.50	3.55

\* Survey conducted during November 29, 2016.

- d) The **supply shocks** that affected inflation in 2015 and in early 2016 have dissipated, although some adverse shocks that affected some perishable food prices have been observed in recent months. In addition to this, the water deficit recorded in the last months of this year would cause pressures during early 2017, although these pressures are expected to reverse during the second half of the year.

### **Balance of Risks in the 2017 – 2018 Horizon**

48. Every forecast is subject to the occurrence of unanticipated events that may divert the forecast from the central scenario. In a context of uncertainty, the materialization of some risks may imply a different rate of inflation than the one forecast originally. The main factors that could divert the inflation forecast from the baseline scenario include the following:

a. **Negative domestic supply shocks**

The risk that food production may be negatively affected by the water deficit and by unforeseen adverse climate factors has increased and could generate inflationary pressures, particularly in the food component. Should these pressures be persistent, they could slow down inflation's convergence to the inflation target range.

b. **Negative domestic demand shocks**

Economic recovery could be more gradual if public and private investment grew at lower rates than expected, which would imply a more negative output gap and for a longer period of time. As a result of this, inflation would tend to show rates below the baseline scenario.

c. **Volatility in international financial markets**

Although markets had already considered the rise of 25 basis points in the FED rate this month, a faster pace of rate hikes than the estimate one could generate abrupt adjustments in the interest rates of long-term bonds and increased capital flows to the United States, which would push the exchange rate upwards. This risk has decreased in comparison to that estimated in the September inflation report given that the discrepancy between the interest rate path projected by the Fed and market expectations has declined.

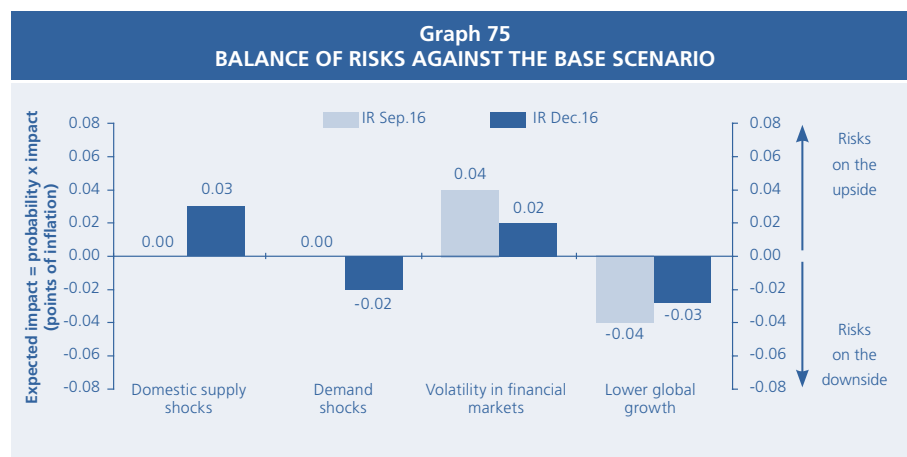




d. **Lower global growth**

Although the baseline scenario considers a gradual recovery in global growth, lower-than-expected growth rates in China and in the developed countries would result in a lower external impulse that would translate into a lower output gap and lower inflation. This risk is lower than the one estimated in our Inflation Report of September due mainly to lower expectations of an abrupt slowdown in China as well as due to the increased dynamism observed in the economy of the United States.

- 49. The risk factors considered in this report have a neutral balance on the inflation forecast, so the impact of factors that could increase inflation is equal to the impact of factors that imply a fall in prices.



**Conclusions**

- 50. Inflation is still forecast to converge to the inflation target range in the 2016-2018 forecast horizon, which is consistent with economic growth without demand inflationary pressures and with a declining trend in inflation expectations during this period.

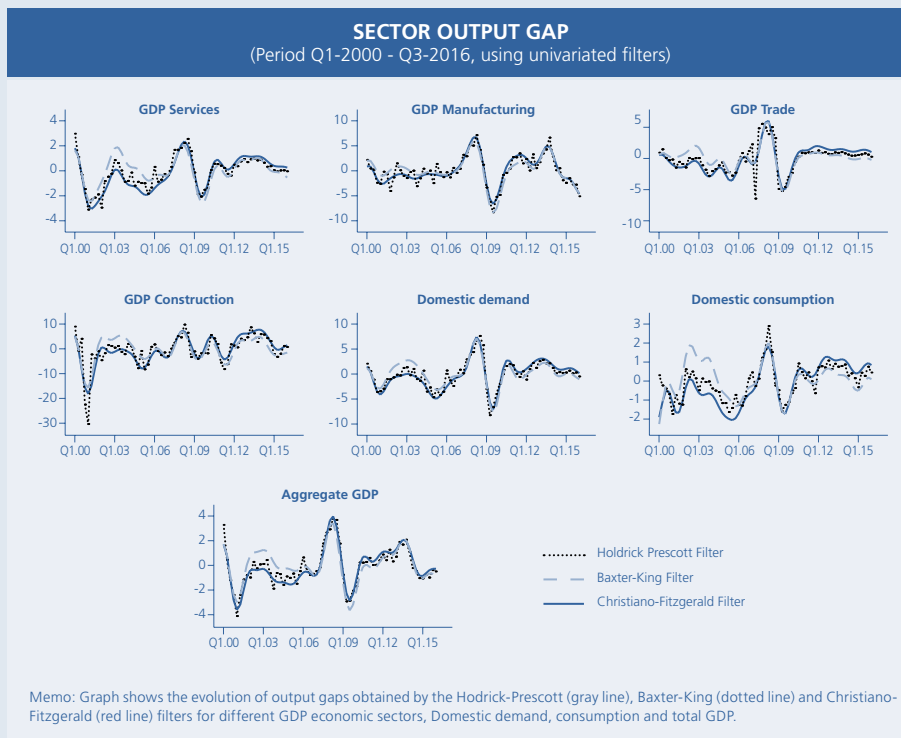
The Central Bank will continue to pay careful attention to the evolution of inflation expectations and other inflation determinants. The BCRP stands ready to adjust its monetary stance, should it be necessary, to ensure that inflation converges to the inflation target range and remains within this range.



**Box 2**  
**INFORMATION OF SECTOR OUTPUT GAPS ON FUTURE INFLATION**

The output gap, defined as the difference between the output observed and its natural level –the one consistent with the inflation target of the Central Bank–, is an indicator that provides information on the future evolution of inflation. This box discusses the information content of the sector output gap as an advanced indicator of future demand inflationary pressures, which is particularly important in periods in which the economy faces changes in key relative prices that imply different paces of sector expansion.

Statistical filters, such as the filters of Hodrick Prescott, Baxter-King, and Christiano-Fitzgerald are used with this aim to estimate the cyclical component of four economic sectors: services, manufacturing, trade, and construction. In addition to this, the aggregate output gap and the gap of domestic demand and aggregate consumption are used for comparison purposes. Quarterly data for the period between Q1-1994 and Q3-2016 are used.



The graph shows the quarterly evolution of the different output gaps estimated. We can see that the series obtained using the Hodrick-Prescott filter show greater volatility especially in the agriculture sector, but, on the other hand, there is no evidence of significant differences in the evolution of the estimates obtained using the different filters.

The next table contains data of the annual sector gap since year 2010, which was calculated as the quarterly average of the values obtained using the different filters. In 2015, the service sector –whose share in overall GDP was 41 percent in 2015– registered a gap of 0.1 percent, while the manufacturing and the construction sectors showed negative gaps of 2.3 and 1.3 percent, respectively. Moreover, positive gaps were estimated for the sectors of mining and trade during the first 3 quarters of 2016.





**ANNUAL AVERAGE GAP BY SECTORS**  
(Period 2010 - 2015, using univariate filters)

	2010	2011	2012	2013	2014	2015	2016*
Services	-0.1	0.0	0.7	1.0	0.6	0.1	-0.2
Manufacturing	-1.3	2.4	1.4	4.0	0.6	-2.3	-4.5
Trade	-0.3	1.1	1.1	0.9	0.6	0.7	0.1
Agriculture and livestock	-0.8	-0.3	1.7	0.5	-0.3	0.2	-1.2
Construction	2.4	-4.2	3.1	5.4	4.2	-1.3	-0.8
Domestic demand	0.5	0.2	1.1	2.4	0.5	0.4	-0.7
Aggregate consumption	0.1	0.1	0.8	0.8	0.4	0.3	0.1

Memo: The annual GDP sector gap is obtained as the simple average of the quarterly gaps obtained by the univariate filters Hodrick Prescott, Baxter and King, and Christiano Fitzgerald.

\*Average of the first three quarters.

How much information do these output gap indicators provide on future inflation? To answer this question we calculated the correlations between these gap indicators in the periods  $t$ ,  $t-1$  and  $t-2$  and contemporary inflation. The first interesting outcome observed is that the maximum correlation between inflation and the output gap indicators occurs one quarter in advance, which validates the use of the output gap as an indicator that anticipates inflationary pressures.

The second outcome worth highlighting is that there is a high heterogeneity in the information content of indicators of sector output gaps. For example, while the output gaps of the sectors of mining and agriculture (primary sectors) contain no relevant information on future inflation, the sectors of services and trade show a quite high correlation with inflation a quarter ahead. In the output gap of the services sector, the correlation with inflation a period ahead reaches 74 percent, the highest value obtained among all the indicators of output gap considered. This outcome is consistent with the economic theory that proposes that inflation, particularly the one associated with demand shocks, is more directly connected to the evolution of prices in the sectors that present greater price rigidity, which usually are the sectors associated with services.

A third outcome observed in the next table is that the indicators of output gap on the side of aggregate expenditure offer no benefits in terms of additional information to anticipate the future evolution of inflation, because the correlation of the consumption and domestic demand gaps show no correlation with the higher inflation observed in the case of the aggregate output gap, while this correlation reaches levels of 74 percent in the case of the sector output gaps, value above the correlation of 62 percent observed in the aggregate output gap.

**DYNAMIC CORRELATIONS**

	Contemporary			t-1			t-2		
	Total inflation	CPI goods	CPI Services	Total inflation	CPI goods	CPI Services	Total inflation	CPI goods	CPI Services
Services	0.64	0.28	0.40	0.74	0.32	0.46	0.46	0.23	0.33
Manufacturing	0.32	-0.08	0.05	0.46	-0.02	0.10	0.11	-0.14	-0.01
Trade	0.50	0.10	0.17	0.62	0.15	0.23	0.29	0.05	0.10
Agriculture and livestock	0.37	0.26	0.21	0.45	0.28	0.29	0.28	0.26	0.19
Domestic demand	0.49	0.12	0.16	0.62	0.17	0.24	0.29	0.09	0.11
Domestic demand	0.48	0.12	0.24	0.58	0.21	0.27	0.34	-0.01	0.12

Memo: Partial correlation coefficients between CPI components (columns) and GDP sectors were estimated for the sample between Q1-1997 and Q3-2016. The correlations are contemporary, lagging (first and second lag).

These findings show the usefulness of incorporating information on the sector output gaps to anticipate the future evolution of inflation, particularly in the case of the sectors of services, trade, and construction.