INFLATION REPORT

December 2018

Recent trends and macroeconomic forecasts 2018-2020

CENTRAL RESERVE BANK OF PERU

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Recent Trends and Macroeconomic Forecasts 2018 - 2020

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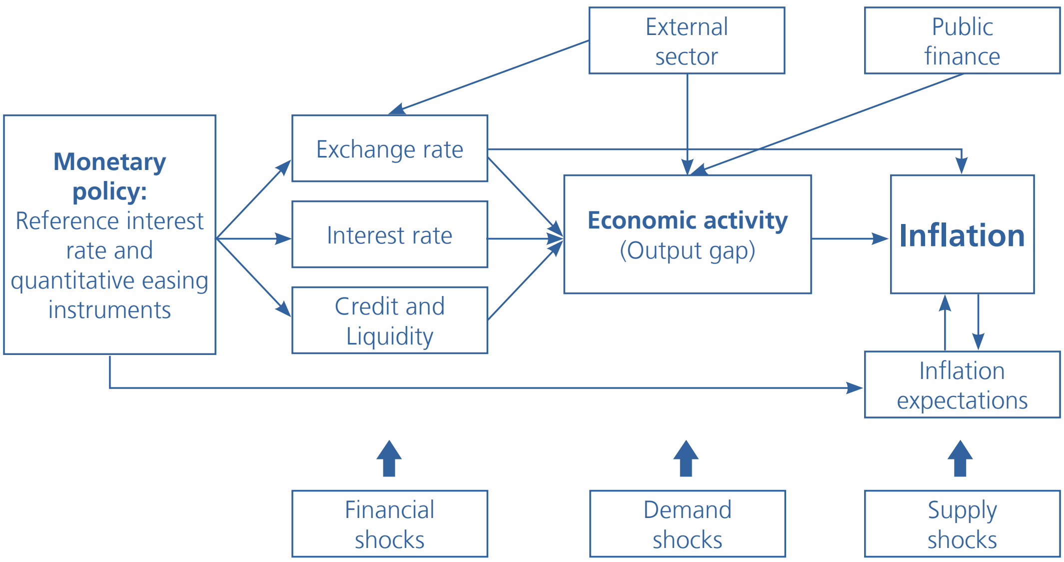

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CONTENT

Page

BOXES

This ***Inflation Report*** was prepared using data on the balance of payments and the gross domestic product as of the third quarter of 2018 and data on monetary accounts, the operations of the non-financial public sector, inflation, financial markets, and the exchange rate as of November 2018.

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 target of 2.0 percent, plus or minus one percentage point (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, 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 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 13, 2018.

Summary

i. In the next two years, **global economic activity** would show a more moderate pace of growth, slowing down from a rate of 3.8 percent in 2018 to rates of 3.6 percent in 2019 and 2020 as a result of tighter international financial conditions. This slowdown in growth, which has been observed since the middle of this year –although not in a homogeneous manner in the different economies–, has been accentuated by an increase in trade tensions and by their impacts on world trade, agents' confidence, and volatility in financial and commodity markets.

ii. The **terms of trade** would remain relatively stable this year, with the prices of exports and imports showing growth rates of around 6 percent. In the next two years, the **terms of trade** are expected to fall slightly (less than 1 percent). Export prices would decline in 2019 due to the impact of commercial tensions and lower global growth, although this would be offset in part by the fall foreseen in the price of oil due to a higher-than-expected growth in supply.

iii. The **deficit in the current account** of the balance of payments, which showed an extraordinarily low level in 2017 (1.1 percent of GDP) due to an increase in the terms of trade and the low growth of domestic demand, will rise to 1.9 percent of GDP in 2018, rate below the average level observed since 2006 (2.1 percent of GDP).

In the forecast horizon, the downward correction of the export prices of metals will imply a lower surplus in the trade balance and a greater current account deficit than that projected in the Inflation Report of September. The current account deficits of 1.6 and 1.7 percent of GDP projected for 2019 and 2020, respectively, are sustainable and historically low levels. **Long-term external capital flows for the private sector** will continue to be the main source of financing the balance of payments, exceeding by far the requirements of the current account.

iv. The BCRP Board has maintained the **benchmark interest rate** at 2.75 percent since March, which is compatible with an expansionary monetary policy stance (real rate of 0.3 percent) in a context of inflation of around 2.0 percent and a negative output gap.

v. In line with the expansionary monetary stance of BCRP, **credit to the private sector** grew at a year-on-year rate of 8.1 percent in November, this rate being observed in both the segments of business loans and personal loans. In the forecast horizon, the ratio of credit to the private sector-to GDP would increase from 42

percent in 2018 to 44 percent in 2020. This projection takes into account flexible monetary conditions and the recovery of domestic demand's growth rate.

vi. The fiscal scenario considers an expansionary weighted fiscal impulse in 2018 and a contractionary fiscal impulse in the following years, in line with the current fiscal consolidation process. In annual terms, the **fiscal deficit** fell from 3.1 percent of GDP in 2017 to 2.3 percent of GDP in November 2018, the increase in the current revenues of the general government accounting for the improvement observed in the fiscal result.

Thus, the projection of the fiscal deficit in 2018 has been revised down by 0.1 percentage points of GDP to 2.7 percent, mainly due to higher tax revenues. This projection considers the execution of works of Lima Metro's Line 2, the Pan American Games, and the reconstruction works carried out as part of the Reconstruction with Changes Integral Plan. The projection of the fiscal deficit in 2019 remains at 2.6 percent of GDP and a deficit of 2.1 percent is expected for 2020 as part of the fiscal consolidation process.

vii. After showing high levels of **economic activity** in the first semester of 2018 (4.4 percent), the Peruvian economy recorded a temporary slowdown in the third quarter (2.3 percent) due to a lower pace of investment in a context of falling commodity prices, to lower mining and hydrocarbon production associated with supply factors, and to domestic uncertainty. Economic indicators show a clear recovery in the fourth quarter, which will be reflected in an annual growth rate of 4.0 percent in 2018 and a negative output gap of around half a percentage point.

The product gap would be completely closed in the forecast horizon. A slight moderation is expected in domestic demand in 2019 as a result of lower public spending after the start of the fiscal consolidation process and the change of subnational authorities, although this is foreseen to be offset in part by the normalization of mining production and by higher private expenditure. By 2020, domestic demand would show higher growth, in line with the advance of private spending on mining megaprojects and infrastructure works.

Year-on-year **inflation** rose from 1.1 percent in August to 2.2 percent in November, around the midpoint of the target range. This trend would culminate the reversal of the supply shocks observed in the previous year as the increase in food and energy prices has risen from 0 to 2.2 percent, while inflation excluding food and energy has remained at around 2 percent. Inflation expectations, which have remained within the target range since March 2017, showed a rate of 2.5 percent in November and are estimated to decrease gradually towards 2 percent in the forecast horizon.

viii. The balance of **risk factors** considered in this Report –external demand shocks (lower growth of global activity due to intensified trade tensions), greater volatility in international financial markets, and domestic demand shocks– translates into a slight positive bias in the inflation forecast.

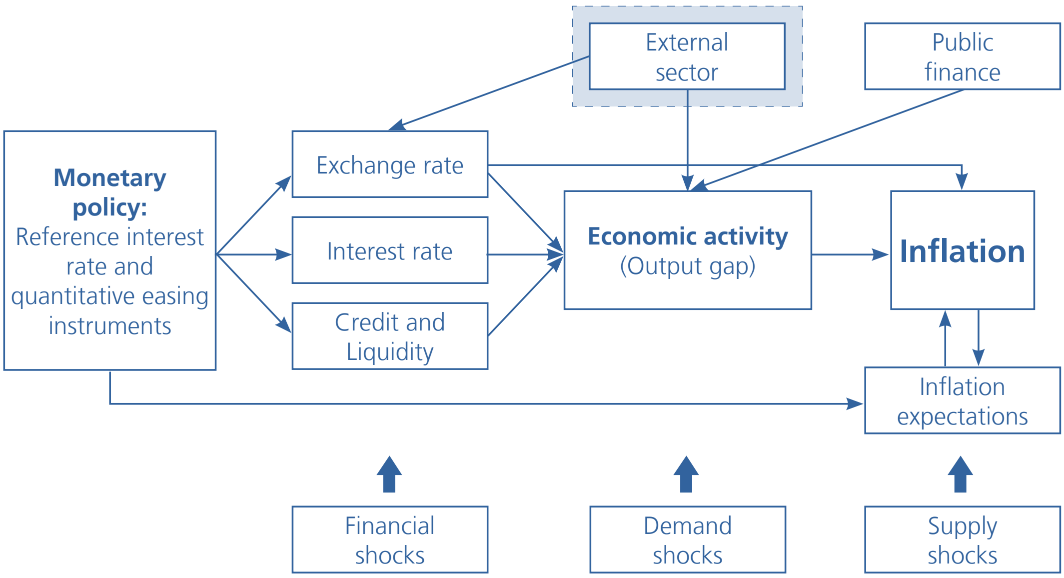
SUMMARY OF INFLATION REPORT FORECAST

	2016	2017	2018 1/		2019 1/		2020 1/
			IR Sep.18	IR Dec.18	IR Sep.18	IR Dec.18	
Real % chg.							
1. Gross Domestic Product	4.0	2.5	4.0	4.0	4.0	4.0	4.0
2. Domestic demand	1.1	1.4	4.4	4.4	4.0	3.9	4.0
a. Private consumption	3.3	2.5	3.8	3.7	3.6	3.7	3.9
b. Public consumption	-0.3	-0.2	3.4	1.8	3.2	2.9	1.8
c. Private fixed investment	-5.4	0.2	5.5	4.7	6.5	6.5	6.0
d. Public investment	-0.2	-2.3	9.9	9.9	2.8	2.8	3.4
3. Exports (good and services)	9.4	7.8	3.5	2.1	4.6	4.7	4.8
4. Imports (good and services)	-2.2	4.1	5.0	3.6	4.7	4.3	5.1
5. Economic growth in main trading partners	2.9	3.5	3.8	3.8	3.6	3.5	3.4
Memo:							
Output gap 2/ (%)	-0.3; 0.2	-1.4; -0.8	-0.9; -0.2	-0.9; -0.2	-0.6; 0.2	-0.6; 0.2	-0.5; 0.5
% change							
6. Inflation	3.2	1.4	2.2	2.1	2.0	2.1	2.0
7. Expected inflation 3/	-	-	2.2	2.2	2.5	2.5	2.5
8. Expected depreciation 3/	-	-	1.9	4.1	0.8	0.3	0.4
9. Terms of trade 4/	-0.4	7.2	1.0	-0.2	-2.9	-0.7	-0.5
a. Export prices	-3.4	13.0	7.4	6.3	-2.2	-2.1	1.2
b. Import prices	-3.0	5.4	6.3	6.5	0.7	-1.4	1.7
Nominal % change							
10. Currency in circulation	6.5	6.7	8.1	8.6	8.5	8.5	8.5
11. Credit to the private sector 5/	5.6	,6.6	9.0	8.5	9.0	9.0	9.0
% GDP							
12. Gross fixed investment	22.9	21.8	22.3	22.5	22.9	23.0	23.4
13. Current account of the balance of payments	-2.7	-1.1	-1.6	-1.9	-1.5	-1.6	-1.7
14. Trade balance	1.0	3.1	3.1	2.8	2.4	2.7	2.6
15. Long-term external financing of the private sector 6/	4.6	5.7	5.0	5.0	4.0	4.1	3.8
16. Current revenue of the general government	18.6	18.1	19.1	19.3	19.3	19.3	19.4
17. Non-financial expenditure of the general government	20.0	20.1	20.5	20.6	20.4	20.4	20.0
18. Overall balance of the non-financial public sector	-2.5	-3.1	-2.8	-2.7	-2.6	-2.6	-2.1
19. Balance of total public debt	23.8	24.9	25.7	25.9	26.9	26.7	26.9
20. Balance of net public debt	6.8	9.5	11.4	11.1	13.5	13.0	14.0

1/ Forecast.
2/ Differential between GDP and potential GDP (as a percentage of potential GDP).
3/ Survey on expectations to the analysts and financial entities.
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.

Chapter 1

EXTERNAL SECTOR



I. External Sector

Global Economy

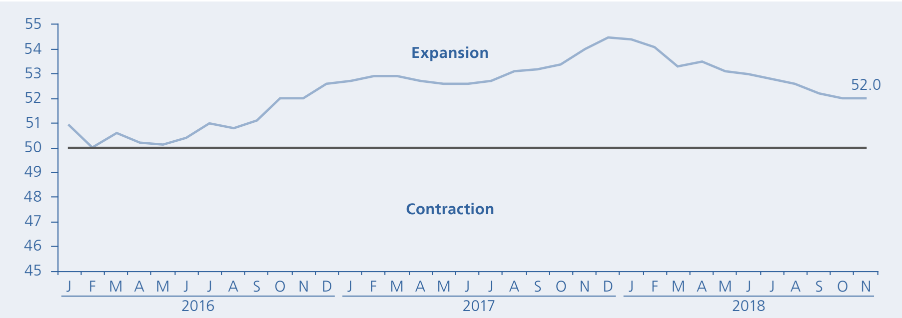
Recent developments and prospects of the world economy

1. In 2018, the world economy has shown signs of dissociation in the dynamics of economic growth in the major economies. A first disturbing factor has been the US rhetoric and protectionist actions regarding trade with China, which has increased investors' uncertainty at the global level and, at a particular level, has affected the dynamism of China's economy more. The indirect effect of China's economic slowdown on the economic growth of the rest of the emerging economies in 2018 has translated into greater risk aversion in terms of commodities, the currencies of the emerging economies, stock markets and emerging bonds.

   A second factor to be taken into account is that international financial markets have been adapting to the gradual rise in the policy interest rates of the Federal Reserve (Fed), which began in December 2015 and represent 225 basis points of rises until December 2018 (from 0.25 percent to 2.50 percent). With this gradual withdrawal of monetary policy impulse, the Fed has been responding to the recovery of economic activity and employment, anticipating a wage increase that will push inflation above the 2 percent target.

2. In this context, the indicators of the world economy show signs of a moderate slowdown. The global manufacturing index (PMI) has recorded six consecutive declines (although it still remains in the expansion zone) and world trade volumes show lower growth rates.

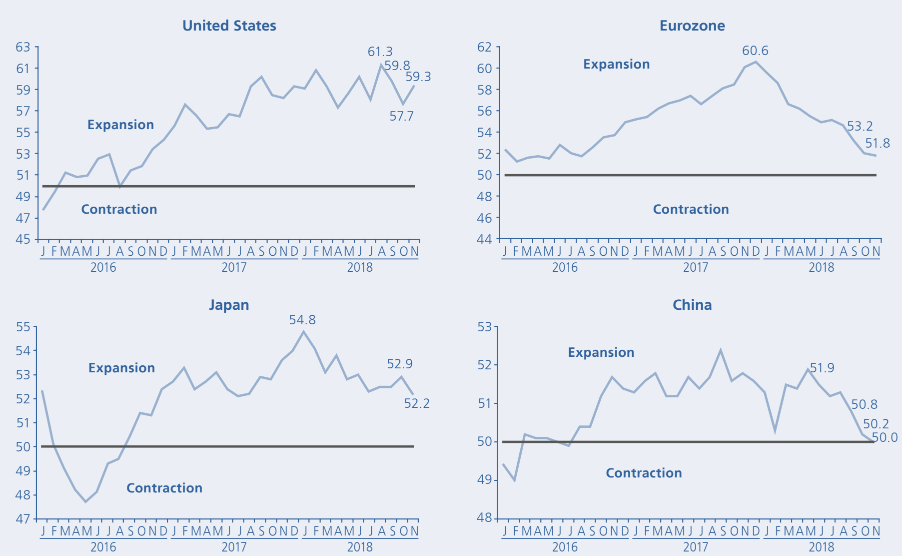
Graph 1
PMI GLOBAL MANUFACTURING
(JP Morgan)



Source: Bloomberg and JPMorgan.

This downward trend in the indicators of manufacturing activity is observed in different degrees in the United States, the Eurozone, Japan, and China. In the United States, the manufacturing index reached its highest level in August and has fallen slightly thereafter since then, while in the Eurozone, Japan, and China the slowdown in manufacturing has been more evident and pronounced. The indices still remain in the expansion zone in Japan and the Eurozone, whereas in China the index has fallen to the neutral zone.

Graph 2
PMI GLOBAL MANUFACTURING



Source: Bloomberg.

3. The **US economy** grew 3.4 percent in the third quarter of 2018. As in previous quarters, consumption was the most dynamic component due to the favorable conditions of the labor market: unemployment dropped to its minimum level in 49

years (3.7 percent) and 196 thousand new jobs were created, on average, in the months of October and November.

Table 1
USA: GDP
(Annual % change)

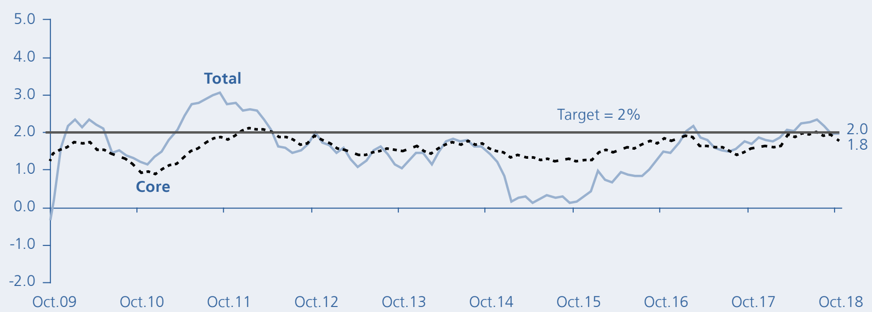
	2016	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2017 Year	2018 Q1	2018 Q2	2018 Q3
Personal consumption	2.7	1.8	2.9	2.2	3.9	2.5	0.5	3.8	3.5
Gross private investment	-1.3	4.9	5.7	8.8	0.8	4.8	9.6	-0.5	15.2
Non-residential investment	0.5	9.6	7.3	3.4	4.8	5.3	11.5	8.7	2.5
Residential investment	6.5	11.1	-5.5	-0.5	11.1	3.3	-3.4	-1.3	-3.6
Change on inventories*	-0.4	-0.8	0.2	1.0	-0.9	0.0	0.3	-1.2	2.4
Exports	-0.1	5.0	3.6	3.5	6.6	3.0	3.6	9.3	-4.9
Imports	1.9	4.8	2.5	2.8	11.8	4.6	3.0	-0.6	9.3
Government expenditure	1.4	-0.8	0.0	-1.0	2.4	-0.1	1.5	2.5	2.6
GDP	1.6	1.8	3.0	2.8	2.3	2.2	2.2	4.2	3.4

* Contribution to growth.
Source: BEA.

However, the favorable evolution of consumption has been partially offset by the low dynamism of investment. If one discounts the effect of the accumulation of inventories, investment registers a growth rate of 1.1 percent, below the growth rates of previous quarters. Moreover, non-residential investment grew at lower rates as a result of a reduction in corporate profits and the impact of trade measures on some activities.

Developments in economic activity have been accompanied by a moderate upward trend in inflation. In October, the PCE inflation rate –or Personal Consumption Expenditures Price Index (PCE)– showed an annual rate of 2.0 percent (which is the Fed's target), while core PCE inflation remains close to the target with an annual rate of 1.8 percent.

Graph 3
USA: PCE PRICE INDEX
(Annual % change)



Source: Bloomberg.

4. Continuing to show the downward trend it registered during the year (6.8 and 6.7 percent in Q1 and Q2, respectively), **China's GDP** grew 6.5 percent in the third quarter of 2018.

   A more moderate pace of growth was observed in investment during the year, particularly in investment in infrastructure, which went from showing a growth rate of 13.0 percent in March to 3.3 percent in September. However, a slight recovery was observed in industrial production and investment in October in a context in which the government announced a series of measures aimed to provide financial relief for small businesses and to generate a recovery of investment in local governments,

Table 2
CHINA'S SELECTED INDICATORS

Indicators	2017	2018			
		Mar.	Jun.	Sep.	Oct.
Annual GDP (%)	6.9	6.8	6.7	6.5	--
Industrial production	6.2	6.0	6.0	5.8	5.9
Investment in fixed assets	7.2	7.5	6.0	5.4	5.7
Investment in infrastructure	19.0	13.0	7.3	3.3	3.7
Retail sales	9.4	10.1	9.0	9.2	8.6
Exports	10.9	-2.7	11.2	14.5	15.6
Imports	4.5	14.4	14.1	14.3	21.4
Copper imports	-0.8	-1.6	25.1	31.0	14.9
Total new financing	12.3	10.5	9.8	10.6	10.2
Consumer Price Index	1.8	2.1	1.9	2.5	2.5

Source: Bloomberg and IMF.

5. In the **Eurozone**, the economy has been showing a less dynamic expansion, with GDP growing 0.2 percent in the third quarter after having grown at a rate of 0.4 percent in the first two quarters of 2018.

   Despite this slowdown, the output is expected to grow 2.0 percent in 2018, above its potential rate, but slightly less than projected in the Inflation Report of September (2.1 percent). Supporting domestic demand, factors accounting for this growth rate included the positive performance of employment, favorable financial conditions, and high corporate profitability, although the impact of these factors was in part offset by the deterioration of confidence and economic agents' expectations amid global trade tensions and idiosyncratic factors. Uncertainty about Italy's fiscal policy and Brexit negotiations stand out among the latter.

Projections of global economic growth

6. The world economy is expected to go from a growth rate of 3.8 percent in 2018 to 3.6 percent in 2019. The forecast for 2019 has been revised slightly downward from the September projection due to the evolution of economic growth in the Eurozone, China, and Latin America. In 2020, the world economy is estimated to grow 3.6 percent.

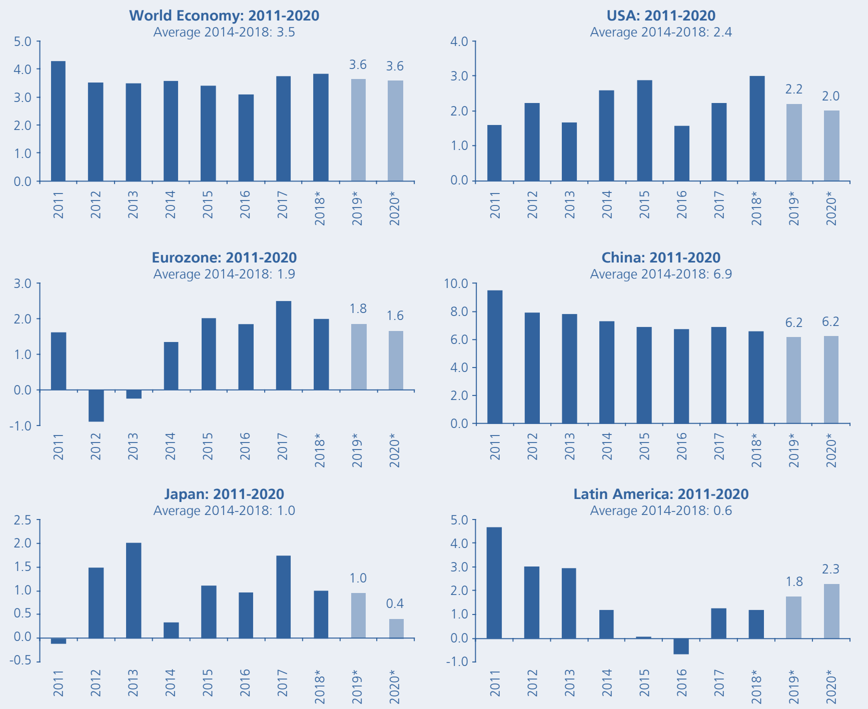
As regards trade tensions –the main risk to this scenario–, the United States and China announced recently a 90-day commercial truce. If an agreement cannot be reached, commercial tensions could rise from March onwards if the US increased the tariffs applied to US$ 200 billion of imports of Chinese goods from 10 to 25 percent, in which case China would take retaliatory measures. Other measures, such as the US increase of tariffs to imported cars, could add onto these bilateral tensions. Even though the universe affected by these trade tensions does not represent a very significant part of world growth, their indirect effects on the real sector and the effects on the financial channel (outlined in the previous inflation report) could imply a significant impact on global growth. The IMF estimates that, in a scenario such as the one described, the impact on global growth could be equivalent to approximately one percentage point in world growth.

Table 3
GLOBAL GDP GROWTH
(Annual % change)

	PPP%1/	Trading Peru %1/	2017	2018*		2019*		2020*
				IR Sep.18	IR Dec.18	IR Sep.18	IR Dec.18	IR Dec.18
Developed economies	**41.3**	**42.9**	**2.3**	**2.3**	**2.3**	**2.0**	**2.0**	**1.8**
Of which								
1. United States	15.3	20.2	2.2	2.9	3.0	2.2	2.2	2.0
2. Eurozone	11.6	12.8	2.5	2.1	2.0	1.9	1.8	1.6
Germany	3.3	2.7	2.5	2.0	1.8	1.9	1.7	1.6
France	2.2	0.8	2.3	1.7	1.6	1.6	1.6	1.6
Italy	1.8	1.8	1.5	1.2	1.0	1.1	1.0	1.0
Spain	1.4	4.0	3.0	2.7	2.6	2.2	2.2	2.0
3. Japan	4.3	4.0	1.7	1.1	1.0	1.0	1.0	0.4
4. United Kingdom	2.3	1.3	1.7	1.4	1.3	1.4	1.4	1.5
5. Canada	1.4	2.6	3.0	2.0	2.0	1.9	1.9	1.8
Developing economies	**58.7**	**57.1**	**4.7**	**4.9**	**4.8**	**4.9**	**4.7**	**4.8**
Of which								
1. Emerging and developing Asia	32.4	34.9	6.5	6.6	6.6	6.4	6.3	6.4
China	18.2	27.9	6.9	6.6	6.6	6.3	6.2	6.2
India	7.4	3.8	6.7	7.4	7.4	7.5	7.5	7.6
2. Commonwealth of Independent States	4.5	0.5	2.1	2.2	2.2	2.2	2.1	2.1
Russia	3.2	0.5	1.5	1.7	1.7	1.7	1.5	1.5
3. Latin America and the Caribbean	7.7	21.6	1.3	1.3	1.2	2.1	1.8	2.3
Brazil	2.5	5.4	1.0	1.4	1.4	2.5	2.4	2.3
Chile	0.4	3.3	1.5	4.0	4.0	3.6	3.5	3.3
Colombia	0.6	2.9	1.8	2.7	2.7	3.2	3.2	3.3
Mexico	1.9	3.0	2.0	2.2	2.1	2.1	1.9	2.1
Argentina	0.7	1.5	2.9	-2.2	-2.4	-0.1	-1.0	1.3
Peru	0.3	-	2.5	4.0	4.0	4.0	4.0	4.0
World Economy	**100.0**	**100.0**	**3.7**	**3.8**	**3.8**	**3.7**	**3.6**	**3.6**
Memo:								
Peru's trading partners 1/ 2/	65.9		3.5	3.8	3.8	3.6	3.5	3.4

* Forecast.
1/ 2017.
2/ Basket of Peru's 20 main trading partners.
Source: Bloomberg, IMF, and Consensus Forecast.

Graph 4
GDP GROWTH
(Real % change)



* Forecast.
Source: Bloomberg, IMF, Consensus Forecasts.

7. At its policy meeting in December of this year, the Fed revised down its inflation and GDP growth forecasts in the **United States**. The Fed reduced its projection of interest rate rises from three to two rises in 2019 and maintained its projection of one rate rise in 2020, no rate rises being considered for 2021. In line with this, the long-term rate is reduced from 3.0 to 2.8 percent.

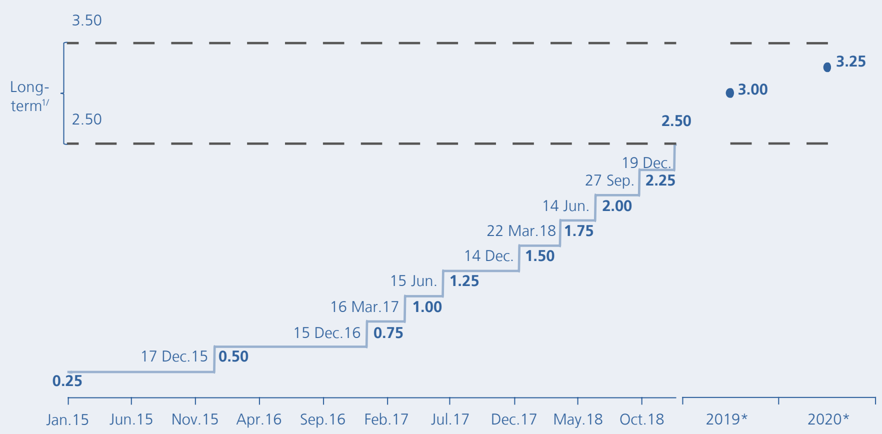
Table 4
PROJECTIONS OF THE FED*

	2018		2019		2020		2021		Long-term	
	Sep.18	Dec.18	Sep.18	Dec.18	Sep.18	Dec.18	Sep.18	Dec.18	Sep.18	Dec.18
GDP growth	3.1	3.0	2.5	2.3	2.0	2.0	1.8	1.8	1.8	1.9
Unemployment rate	3.7	3.7	3.5	3.5	3.5	3.6	3.7	3.8	4.5	4.4
PCE price index	2.1	1.9	2.0	1.9	2.1	2.1	2.1	2.1	2.0	2.0
Core Inflation (Core PCE)	2.0	1.9	2.1	2.0	2.1	2.0	2.1	2.0	-	-
Memo: Core PCE excluding food and energy.										
Interest rate (%) 1/	2.4	2.4	3.1	2.9	3.4	3.1	3.4	3.1	3.0	2.8

* It adds data from 16 individual projections of theCommittee members at the end of period.
1/ Corresponds to the midpoint of the range of interest rates.

Given the convergence of the output growth towards its potential rates and the moderate pressures of inflation observed, the Fed has continued implementing a gradual adjustment of rates. In December, it raised its rate by 25 bps. Moreover, it has revised down its projected number of rate hikes in 2019 from three to two.

Graph 5
INTEREST RATE OF THE FED
(% change)



1/ Corresponds to the midpoint of the range of interest rates. Projection based on the medians of the individual projections of the members of the Open Market Committee of the Fed.
* Forecast.
Source: Fed.

In the following years, it is expected that the factors that drove growth in recent years will moderate and that the economy will converge towards its potential growth rates. The **Eurozone** is projected to grow 1.8 and 1.6 percent in 2019 and 2020, respectively, as a result of the lower impulse it would receive from international trade due to weaker global economic activity, growing commercial tensions, the slowdown in job creation, and uncertainty in the political sphere.

The pace of growth in the Eurozone poses some risks that introduce a downward bias in the forecast. In addition to the global factors mentioned above, the most important risk lies in the potential increase in the yields of the sovereign bonds of some economies with high levels of debt and strong financial requirements for 2019 (particularly Italy). It is worth pointing out that this increase in yields would have an impact on the banking sector given its high exposure to sovereign bonds (sovereign bond holdings in the case of Italy represent 10 percent of its total assets).

Table 5
PUBLIC FINANCES IN DEVELOPED ECONOMIES
(%)

	Overall Balance			Gross public debt		
	2017	2018*	2019*	2017	2018*	2019*
United States	-3.8	-4.7	-5.0	105	106	108
Germany	1.0	1.5	1.5	64	60	56
Italy	-2.3	-1.7	-1.7	132	130	129
France	-2.6	-2.6	-2.8	97	97	96
United Kingdom	-1.8	-2.0	-1.7	88	87	87
Spain	-3.1	-2.7	-2.3	98	97	96
Portugal	-3.0	-0.7	-0.3	126	121	117
Belgium	-1.0	-1.2	-1.7	103	101	100
Japan	-4.3	-3.7	-2.8	238	238	237

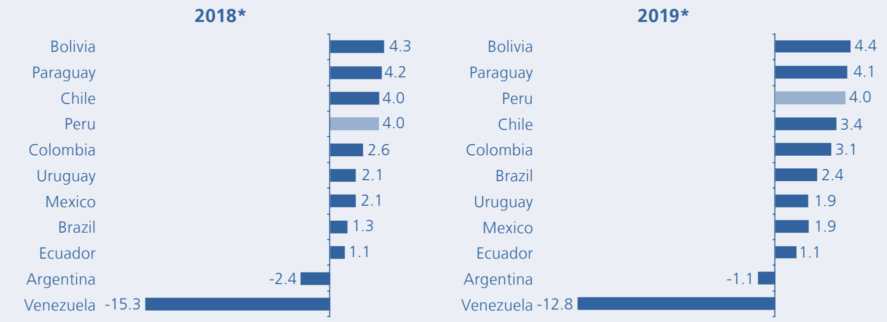
* Forecast.
Source: IMF, World Economic Outlook. October 2018.

8. The forecast of **China**'s GDP growth in 2018 remains at 6.6 percent, but the growth forecast for 2019 has been revised down from 6.3 to 6.2 percent taking into account the impact of the trade tensions between China and the US. It should be pointed out, however, that the effect of commercial tensions is expected to be partially offset by the impact of the measures announced by the authorities, especially tax relief measures (individuals) and financial relief measures (companies).

9. **Latin America** is estimated to grow 1.2 percent in 2018 and 1.8 percent in 2019 (lower rates than those estimated in the previous Inflation Report). The region has been affected by volatility in international markets associated with commercial tensions and expectations of a normalization of monetary policy in the developed economies. These factors have implied a fall in the price of most commodities (particularly basic metals and oil) and lower capital inflows to the region in comparison with previous years. A recovery in growth rates (to 2.3 percent) is estimated by 2020.

   The growth rates projected for Chile, Brazil, Mexico, and Argentina for 2019 have been revised down. In Mexico, investor confidence was affected after the cancellation of the new airport in Texcoco (this project has an estimated cost of US$ 13 billion, 50 percent of its financing and 30 percent of the construction project having been implemented). In the case of Argentina, strong external imbalances and rising inflation have led to high interest rates. This, together with the authorities' commitment to reach a fiscal balance, explains the growth contraction estimated for that year.

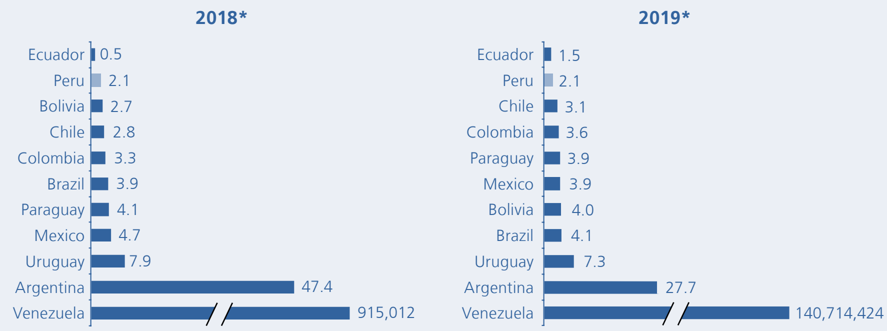
Graph 6
GDP GROWTH
(% change)



* Forecast.
Source: Latin American Consensus Forecast (December 2018) and BCRP (Peru).

In Brazil, there is uncertainty about the implementation of the reforms (privatization and pensions), while in Chile the deterioration of the international context and the normalization of monetary policy by the Central Bank of Chile account for the downward revision of the growth forecast for the next year.

Graph 7
INFLATION
(Dec./Dec.)



* Forecast.
Source: Latin American Consensus Forecast (December 2018) and BCRP (Peru).

Balance of payments

10. The external scenario in this report is still somewhat less favorable than that considered in the September Inflation Report. Growth in our trading partners is foreseen to slow down in the next two years after it showed a faster pace

in 2018, while the terms of trade would remain relatively stable in 2018-2020. External financing conditions are expected to continue to be tighter as a result of the rises in the Fed rates and the lower inflow of capital to the emerging markets.

11. The **current account deficit** has been revised up from 1.6 percent of GDP (in the September Report) to 1.9 percent of GDP in 2018 considering the evolution of indicators in the third quarter as well as the lower terms of trade and the lower volumes of mining exports recorded in the year. In 2019, the normalization of mining production and the slower pace of growth of domestic demand, associated mainly with the lower fiscal impulse, will imply a reduction of the current account deficit to 1.6 percent of GDP.

    In 2020, domestic demand is expected to resume a faster pace of growth due to greater private consumption and private investment, which would imply a slightly higher current account deficit (1.7 percent of GDP).

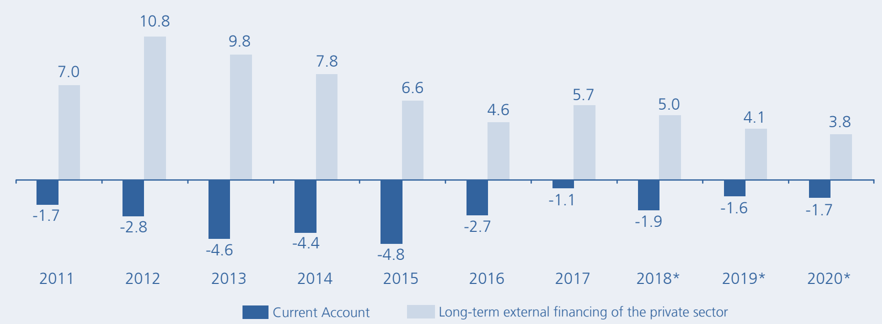
    Moreover, long-term external capital flows to the private sector would largely exceed the requirements of the current account throughout the forecast horizon.

Table 6
BALANCE OF PAYMENTS
(Million US$)

	2017	2018*		2019*		2020*
		IR Sep.18	IR Dec.18	IR Sep.18	IR Dec.18	IR Dec.18
I. CURRENT ACCOUNT BALANCE	**-2,414**	**-3,579**	**-4,205**	**-3,468**	**-3,770**	**-4,103**
% GDP	*-1.1*	*-1.6*	*-1.9*	*-1.5*	*-1.6*	*-1.7*
1. Trade Balance	6,571	6,944	6,337	5,794	6,331	6,318
a. Exports	45,275	49,887	48,561	51,095	49,959	52,988
Of which:						
I. Traditional	33,446	35,981	35,026	35,738	34,824	36,232
II. Non Traditional	11,699	13,743	13,365	15,182	14,976	16,597
b. Imports	-38,704	-42,943	-42,223	-45,301	-43,628	-46,670
2. Services	-1,434	-2,308	-2,273	-2,411	-2,256	-2,427
3. Investment income	-11,263	-11,746	-11,842	-10,520	-11,515	-11,834
4. Current transfers	3,712	3,532	3,572	3,669	3,669	3,840
Of which: Remittances	3,051	3,204	3,239	3,364	3,364	3,532
II. FINANCIAL ACCOUNT	**4,350**	**1,098**	**905**	**4,244**	**4,533**	**6,686**
1. Private Sector	1,100	-364	-927	2,813	3,759	4,614
a. Long-term	1,653	2,018	2,117	3,208	4,645	4,634
b. Short-term [1/]	-553	-2,381	-3,044	-396	-886	-20
2. Public Sector [2/]	3,249	1,462	1,832	1,432	775	2,072
III. CHANGE ON NIRs	**1,936**	**-2,480**	**-3,300**	**777**	**763**	**2,583**
Memo: Long-term external financing of the private sector [3/] (% GDP)	5.7	5.0	5.0	4.0	4.1	3.8

1 / Includes errors and net omissions, and effect valuation of RIN.
2 / Includes exceptional financing.
3 / Includes net foreign direct investment, foreign portfolio investment in the country and long-term disbursements from the private sector.
* Forecast.
IR: Inflation Report.

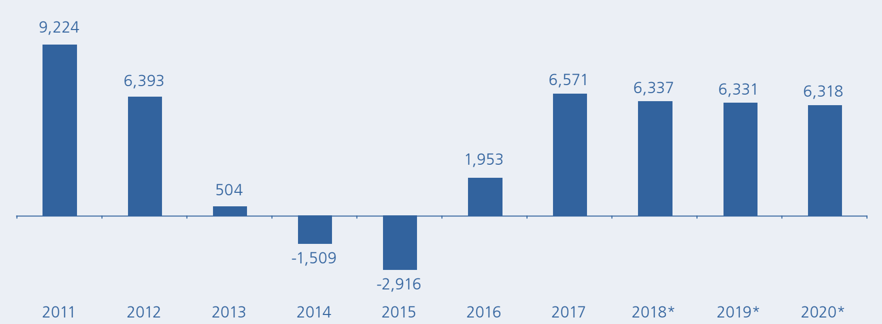
Graph 8
CURRENT ACCOUNT AND LONG-TERM EXTERNAL FINANCING OF THE PRIVATE SECTOR: 2011-2020 1/
(% GDP)



1/ Includes net foreign investments, portfolio investment, and private sector's long-term disbursement.
* Forecast.

12. The **trade balance** showed a surplus of US$ 4.9 billion in the first ten months of 2018 and is estimated to remain around US$ 6 billion in the forecast horizon. Exports would increase from US$ 49 billion in 2018 to US$ 53 billion in 2020, while imports would increase from US$ 42 billion to US$ 47 billion in the same period.

Graph 9
TRADE BALANCE: 2011-2020
(Million US$)



* Forecast.

Exports in 2018 reflect the high prices of our main minerals and the higher volumes of exports of non-traditional goods, as observed in the first ten months of the year. The volume of non-traditional agricultural and fishing products has been favored by the normalization of weather conditions, while increased external demand account for the increase observed in exports of chemical and non-metal mining products. On the other hand, the decline in the volume of traditional exports is explained by the lower mining production resulting mostly from the lower grades of minerals obtained. In the next two years, exports are expected to grow mainly due to higher volumes. A positive impact is anticipated on the volume of traditional exports in 2019 from the normalization of mining production and the expansion of Southern's Toquepala mine, together with a more moderate positive impact of global growth on the demand for our non-traditional products.

Imports, on the other hand, are expected to grow in line with the expected evolution of domestic demand and oil prices. A gradual faster pace of growth is foreseen in the volume of imports, especially in those linked to investment.

Table 7
TRADE BALANCE
(Annual % change)

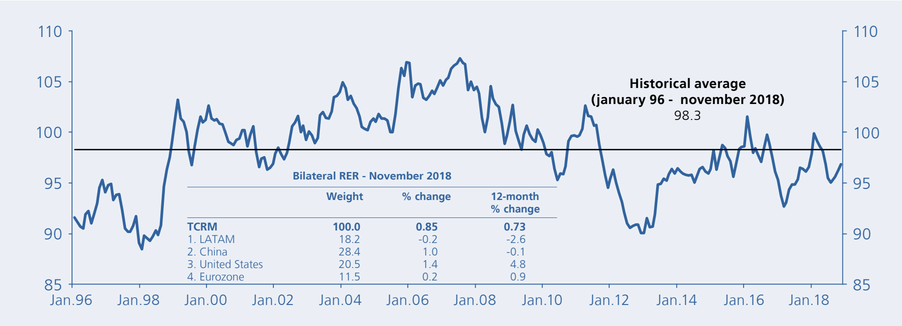
	2017	2018*	2019*	2020*
1. Value:				
Exports	22.1	7.3	2.9	6.1
Traditional products	27.7	4.7	-0.6	4.0
Non-traditional products	8.3	14.2	12.1	10.8
Imports	10.2	9.1	3.3	7.0
2. Volume:				
Exports	8.1	0.9	5.1	4.8
Traditional products	8.4	-3.0	4.0	3.3
Non-traditional products	7.2	12.6	6.7	7.9
Imports	4.5	2.5	4.8	5.2
3. Price:				
Exports	13.0	6.3	-2.1	1.2
Traditional products	17.8	7.9	-4.4	0.7
Non-traditional products	1.1	1.4	5.0	2.7
Imports	5.4	6.5	-1.4	1.7

* Forecast.

Real exchange rate

13. The **multilateral real exchange rate index** (RER) showed a level of 96.8 in November, 0.7 percent higher than the level recorded in the same period of 2017. This slight increase in the RER index in the last 12 months has been mainly associated with the real bilateral depreciation against the U.S. currency (4.8 percent), offset by the improvement in the real exchange rate against other Latin American currencies (2.6 percent). It is worth highlighting that the level of the RER is currently close to its historical average level, estimated at 98 using 2009 as the base year (the same base year used for the CPI index).

Graph 10
MULTILATERAL RER
(Index 2009=100)



Terms of trade

14. In 2018, the **terms of trade** are estimated to show a slight decline of 0.2 percent. The (average annual) price of exports would increase 6.3 percent compared to 2017 while the prices of imports would increase 6.5 percent compared to 2017.

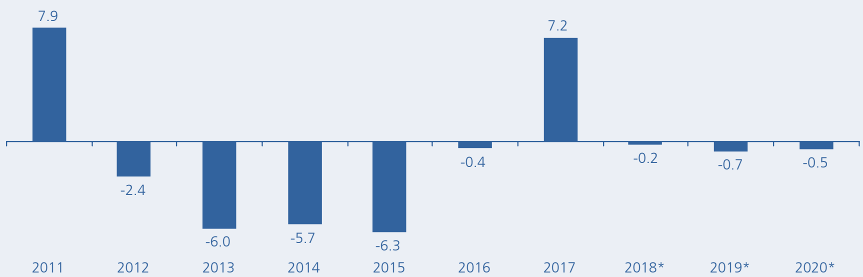
    Moreover, in 2019 the terms of trade would decline 0.7 percent due to a reduction of 2.1 percent in the prices of exports as a result of the impact of trade tensions and lower global growth.

Table 8
TERMS OF TRADE: 2017-2020

	2017	2018*		2019*		2020*
		IR Sep.	IR Dec.	IR Sep.	IR Dec.	IR Dec.
Terms of Trade (Annual Q1)	**7.2**	**1.0**	**-0.2**	**-2.9**	**-0.7**	**-0.5**
Price of exports (Annual Q1)	**13.0**	**7.4**	**6.3**	**-2.2**	**-2.1**	**1.2**
Copper (US$ cents per pound)	280	295	298	275	280	281
Zinc (US$ cents per pound)	131	131	133	111	115	111
Lead (US$ cents per pound)	105	103	102	94	90	91
Gold (US$ per troy ounce)	1,257	1,264	1,267	1,225	1,244	1,281
Price of imports (Annual Q1)	**5.4**	**6.3**	**6.5**	**0.7**	**-1.4**	**1.7**
Oil (US$ per barrel)	51	67	65	66	60	60
Wheat (US$ per ton)	145	192	185	207	185	209
Maize (US$ per ton)	131	135	133	151	152	157
Soybean oil (US$ per ton)	707	640	636	653	627	642
Soybean grain (US$ per ton)	348	381	379	354	349	355

* Forecast.
IR: Inflation Report.
Source: BCRP.

Graph 11
TERMS OF TRADE: 2011-2020
(Annual average % change)



* Forecast.
Source: BCRP.

a. Copper

The price of copper registered a monthly average of US$ 2.81 a pound in November, a price 3 percent higher than that recorded in September. Despite this, the price of copper shows an accumulated decline of 9 percent year-to-date. In recent months, the price of copper has recovered, supported by the perception of a tighter market: copper inventories in exchange markets have dropped to their lowest level in a year due to the stoppage of operations in several smelters in Asia and Chile and to China's sound demand for copper (despite signals of economic slowdown in this country).

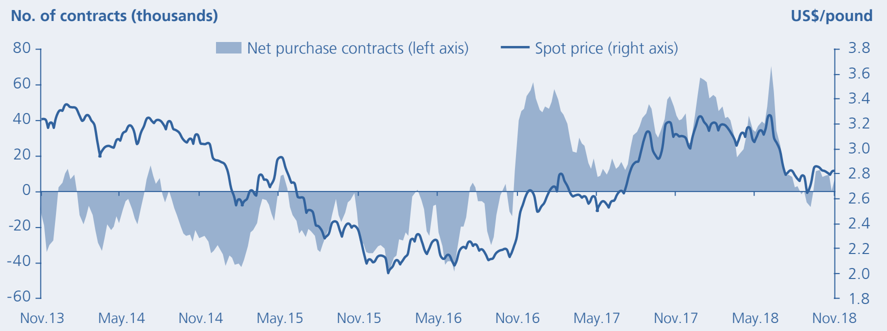
Table 9
SUPPLY AND DEMAND FOR REFINED COPPER
(Thousands of metric tons of copper)

	2016	2017 1/	2018 1/	2019 1/	Jan.-Aug. 2017	Jan.-Aug. 2018	Q1
Global Mining Production	20,357	20,038	20,429	20,677	12,991	13,399	3.1%
Global Refining Production							
(Primary + Secondary)	23,338	23,523	24,161	24,825	15,463	15,615	1.0%
Global Use of Refined Copper	23,605	23,789	24,253	24,890	15,562	15,874	2.0%
Refined Balance 2/	-267	-266	-92	-65	-99	-259	

1/ Estimated November 2018.
2/ Balance calculated using the total production of refined products minus the use of refining.
Source: The International Copper Study Group (ICSG).

However, despite the partial recovery of this price, it remains depressed compared to the levels it reached in January 2018 due to the decrease in speculative demand (affected by commercial tensions and increased global risk aversion), among other factors. In addition to this, a significant increase is expected in supply in 2019 and 2020 (Peru, Panama, Mexico, and the Democratic Republic of the Congo).

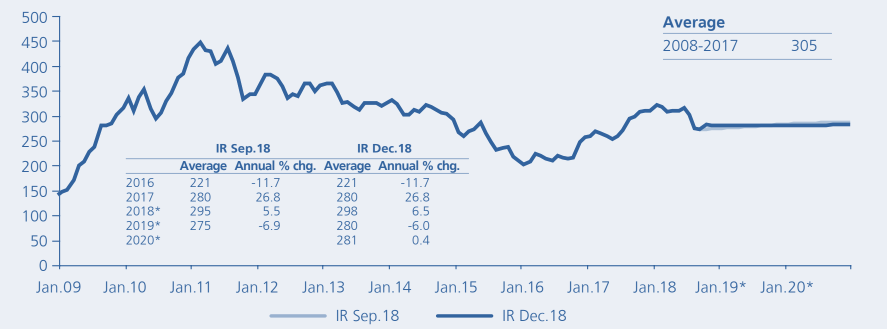
Graph 12
COPPER: NON-COMMERCIAL CONTRACTS



Note: The Copper Speculative Net Positions of the Commodity Futures Trading Commission reported weekly and reflect the difference between the total volume of the long copper positions (or of purchase) and short (or of sales) existing in the market and opened by non-commercial (speculative) operators. Only includes the futures markets of the United States (Chicago and New York Stock Exchanges).
Source: Bloomberg.

In line with the recent increase in the price of this metal, the projections for the period 2018-2020 have been revised slightly up compared to the levels estimated in the Inflation Report of September. The main risks in the projection are associated with unanticipated changes in China's growth rates (since this country consumes approximately 50 percent of refined copper) and with the intensification of the trade war.

Graph 13
COPPER: JANUARY 2009 - DECEMBER 2020
(US$ cents/pd.)



* Forecast.
Source: Bloomberg and BCRP.

b. Zinc

The international price of **zinc** increased 7 percent between September and November 2018. Despite this, the zinc price accumulates a fall of 19 percent in the first eleven months of the year.

The recovery in the price of zinc in the last two months was associated with signals of tighter global market. The International Zinc and Lead Group estimated a deficit of 322 thousand tons in 2018 and inventories fell to their lowest level in 10 years. In this context of low inventories, the fall observed in China's production of refined copper (due to environmental measures) had an impact on the price. Notwithstanding, the rise in the price of zinc is still constrained by commercial tensions and by fears of lower growth in China.

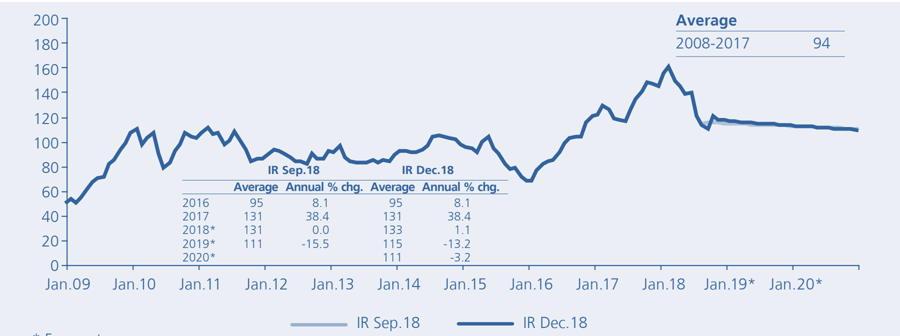
Table 10
SUPPLY AND DEMAND FOR REFINED ZINC
(Thousands of metric tons of Zinc)

	2016	2017	2018	2019	Jan.-Sep. 2017	Jan.-Sep. 2018	% change
Global Mining Production	12.69	12.78	13.03	13.87	9.30	9.42	1.2%
Global Refining Production (Primary + Secondary)	13.55	13.23	13.42	13.81	9.73	9.79	0.6%
Global Use of Refined Zinc	13.68	13.69	13.74	13.88	10.13	10.10	-0.3%
Refined Balance (in thousands)	-128	-452	-322	-72	-398	-305	

Source: International Lead and Zinc Study Group (ILZSG).

In line with expectations of a lower supply, the price projection of zinc has been revised up compared to our previous report. It is estimated that the zinc market would continue to show a deficit in 2019, although the shortage of this metal should decline considerably due to the expansion of supply resulting from the onset of new projects. A worsening of commercial tensions, particularly in the sector of car trade, is a downward risk factor in this projection.

Graph 14
ZINC: JANUARY 2009 - DECEMBER 2020
(US$ cents/pd.)



	IR Sep.18 Average	IR Sep.18 Annual % chg.	IR Dec.18 Average	IR Dec.18 Annual % chg.
2016	95	8.1	95	8.1
2017	131	38.4	131	38.4
2018*	131	0.0	133	1.1
2019*	111	-15.5	115	-13.2
2020*			111	-3.2

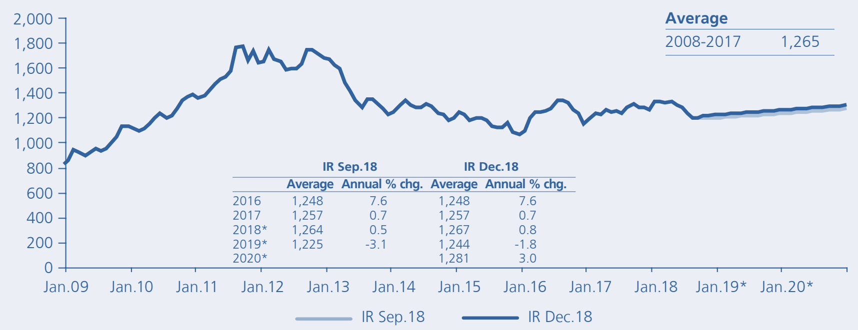
* Forecast.
Source: Bloomberg and BCRP.

c. **Gold**

Between September and November, the price of **gold** increased 2 percent, reaching an average price of US$ 1,220 a troy ounce in November. This reverses in part the trend observed in previous months and reduces to 3 percent the drop accumulated this year.

The price of gold increased in the last two months, favored by greater risk aversion associated particularly with the escalation of trade tensions between the United States and China and with foreign exchange turbulence in the emerging economies, especially in Turkey and Argentina. However, the price rise was offset by the strength of the dollar, which reflects expectations that the Fed will continue its rate hike cycle. Instability in the emerging economies –associated with the increasing interest rates of the Fed and trade tensions between the United States and China– is likely to persist and would give support to the price of gold (despite the cycle of interest rate rises of the Fed). In line with this, the projection of the price of gold is revised slightly up compared to the September Report.

Graph 15
GOLD: JANUARY 2009 - DECEMBER 2020
(US$/tr. ounce)



	IR Sep.18		IR Dec.18	
	Average	Annual % chg.	Average	Annual % chg.
2016	1,248	7.6	1,248	7.6
2017	1,257	0.7	1,257	0.7
2018*	1,264	0.5	1,267	0.8
2019*	1,225	-3.1	1,244	-1.8
2020*			1,281	3.0

* Forecast.
Source: Bloomberg and BCRP.

d. Crude Oil

In November 2018, the average price of **WTI oil** fell 19 percent compared to September. Despite this, the price of crude still shows an increase of 2 percent during the first eleven months of the year.

A strong drop in the price of oil associated with investors' sales in response to fears of global oversupply was observed especially in the month of November. Oil production reached record levels in November in the United States, Russia, and Saudi Arabia, while other OPEC countries also recorded higher oil production due to the increase registered in Libyan production, the unexpected stabilization of production in Venezuela, and the agreement of the Iraqi government with the Kurdistan regional government that will allow to restart oil exports (200 thousand barrels per day). Moreover, the United States also eased sanctions on Iran by excluding 8 of the main importers of Iranian crude. All of this took place amid greater concerns about global growth and strong volatility in financial markets.

In the forecast horizon, the projection of the price of oil has been revised down in line with the price trend observed in the last months and with expectations of a slacker market (due to a greater US supply). The price fall would be offset by the OPEC's recent decision of reducing its production in a coordinated way with Russia.

Graph 16
WTI OIL: JANUARY 2009 - DECEMBER 2020
(US$/bl.)

	IR Sep.18		IR Dec.18	
	Average	Annual % chg.	Average	Annual % chg.
2016	43	-11.4	43	-11.4
2017	51	18.0	51	18.0
2018*	67	31.3	65	28.0
2019*	66	-1.2	60	-7.9
2020*			60	0.3

* Forecast.
Source: Bloomberg and BCRP.

e. Imported Food

The price of **maize** rose 7 percent compared to September 2018 and registered an average price of US$ 131 per ton in November. With this rise, the average international price of maize has accumulated an increase of 5 percent in the first eleven months of the year. In line with this, the average price of maize projected for 2019 has been revised up slightly.

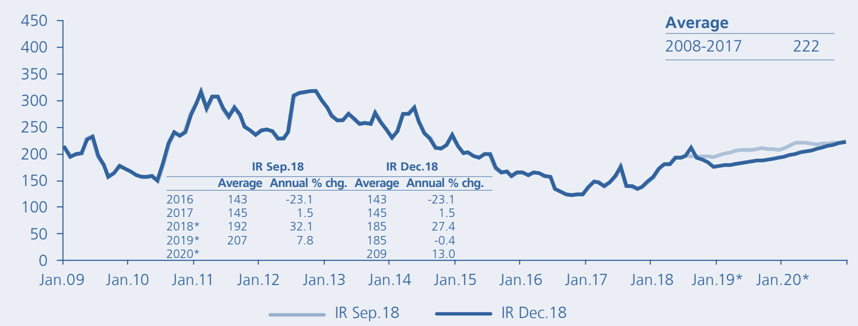
Graph 17
MAIZE: JANUARY 2009 - DECEMBER 2020
(US$/ton)

	IR Sep.18		IR Dec.18	
	Average	Annual % chg.	Average	Annual % chg.
2016	135	-4.4	135	-4.4
2017	131	-2.3	131	-2.3
2018*	135	2.5	133	1.1
2019*	151	12.1	152	14.2
2020*			157	3.2

* Forecast.
Source: Bloomberg and BCRP.

Since our last Inflation Report was published in September, the price of **wheat** has fallen 5 percent, recording an average price of US$ 182 per ton in November. Despite this, it accumulates an increase of 23 percent in the year and continues to show the upward trend observed in 2017 (when the price increased 20 percent).

Graph 18
WHEAT: JANUARY 2009 - DECEMBER 2020
(US$/ton)



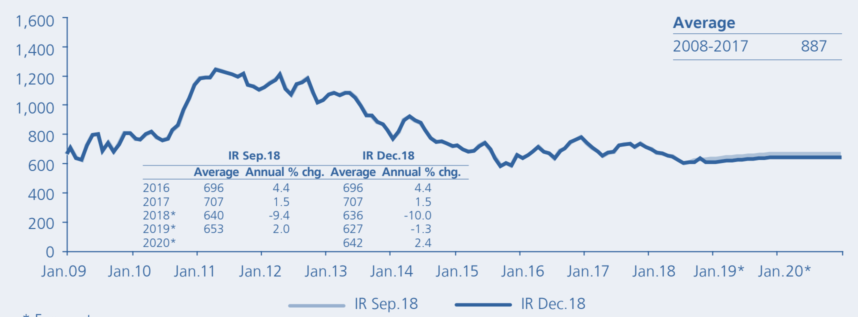
	IR Sep.18		IR Dec.18	
	Average	Annual % chg.	Average	Annual % chg.
2016	143	-23.1	143	-23.1
2017	145	1.5	145	1.5
2018*	192	32.1	185	27.4
2019*	207	7.8	185	-0.4
2020*			209	13.0

* Forecast.
Source: Bloomberg and BCRP.

As of November, the average price of **soybean oil** was US$ 606 percent per ton, a similar level to the average price observed in September and 15 percent lower than in December 2017. Thus, the average price of soybean oil continued showing the downward trend observed in the previous year.

Taking into account prospects of higher production in the 2018-19 farming season, prices are estimated to be slightly lower than those estimated in our previous Inflation Report. Production is expected to recover in Argentina and Brazil and, in addition to this, a greater supply of palm oil is also foreseen. Because of this, the main risks for this projection are a variation in the price of oil and a lower soybean production in South America.

Graph 19
SOYBEAN OIL: JANUARY 2009 - DECEMBER 2020
(US$/ton)



	IR Sep.18		IR Dec.18	
	Average	Annual % chg.	Average	Annual % chg.
2016	696	4.4	696	4.4
2017	707	1.5	707	1.5
2018*	640	-9.4	636	-10.0
2019*	653	2.0	627	-1.3
2020*			642	2.4

* Forecast.
Source: Bloomberg and BCRP.

External financing

15. **Private long-term capital** is expected to continue to be the main source of financing the balance of payments in the forecast horizon, exceeding by far the current account requirements for that period. **Foreign direct investment** will continue to be the main source of financing due to profit reinvestment, in line with the recovery of activity and with the evolution of the prices of our minerals in the forecast horizon. The main investment projects expected to be implemented in the forecast horizon are mining projects, which would amount to nearly US$ 10 billion in 2019-2020. Projects expected to be completed in 2019 include the expansion of Southern's Toquepala mine, Yanacocha's Quecher Main, Minsur's Relaves B2 San Rafael, and other projects whose construction started in 2018. Projects worth highlighting among the latter include the mega projects of Quellaveco (Anglo American), the expansion of Toromocho and Mina Justa, which together represent total investments of around US$ 8.2 billion.

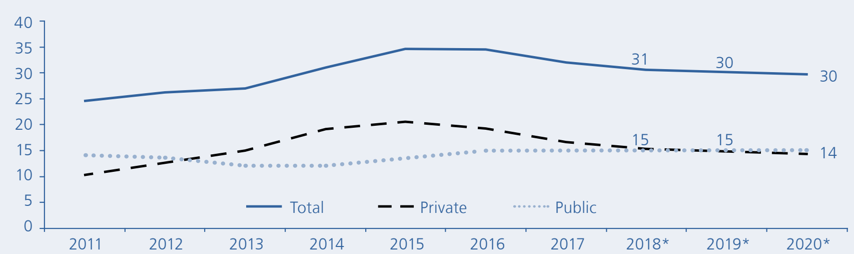
Table 11
FINANCIAL ACCOUNT OF THE PRIVATE SECTOR
(Million US$)

	2017	2018*	2019*	2020*
PRIVATE SECTOR (A + B)	**1,100**	**-927**	**3,759**	**4,614**
% GDP	*0.5*	*-0.4*	*1.6*	*1.9*
A. Long-term	**1,653**	**2,117**	**4,645**	**4,634**
1. ASSETS	**-2,929**	**-4,041**	**-2,269**	**-2,398**
2. LIABILITIES	**4,582**	**6,158**	**6,914**	**7,031**
Foreign direct investment in the country	6,769	7,756	6,666	6,581
Long-term loans	-3,906	-1,639	-462	-133
Portfolio loans	1,719	41	710	584
B. SHORT-TERM [1/]	**-553**	**-3,044**	**-886**	**-20**

1/ Includes net errors and omission, and FX revaluation effect.
* Forecast.

16. Private external indebtedness would show a declining trend during the forecast horizon and represent 14.0 percent of GDP in 2020. This projection is consistent with a greater use of local financing and with rising international interest rates.

Graph 20
MEDIUM- AND LONG-TERM EXTERNAL DEBT BALANCE: 2011 - 2020
(% GDP)



* Forecast.

17. The soundness of the balance of payments to face negative external events 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 shows in these indicators in the region was pre-emptively achieved during a period of years characterized by positive capital inflows and the high prices of raw materials.

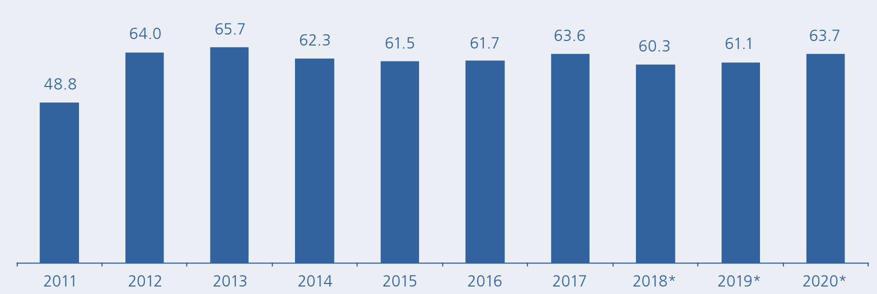
Table 12
NIR INDICATORS

	2017	2018*	2019*	2020*
NIR as a percentage of:				
a. GDP	29.6	26.7	26.2	25.9
b. Short-term external debt [1/]	441	414	479	500
c. Short-term external debt plus current account deficit	378	321	370	378
Medium and long-term external debt (% GDP):	32.1	30.6	30.2	29.7
a. Private	16.7	15.3	14.9	14.4
b. Public	15.3	15.3	15.2	15.4

1 / Includes the balance of short-term debt plus one-year amortizations of the private and public sector.
* Forecast.

18. Between January and December, the level of net international reserves (NIRs) decreased by US$ 4.23 billion due to the withdrawal of banks' deposits in foreign currency (US$ 3.94 billion) and the withdrawal of public sector deposits (US$ 1.50 billion) in a context of maturity of currency repos and banks' increased use of local funds as well as the use of the Fiscal Stabilization Fund and lower use of disbursements to pay the debt service. These fund withdrawals were offset in part by the increase in the BCRP foreign exchange position (US$ 1.15 billion). As a result, at end 2018 the level of NIRs would be lower than that recorded at the end of 2017, although this trend would reverse in 2019. Moreover, a higher accumulation of reserves is foreseen for 2020.

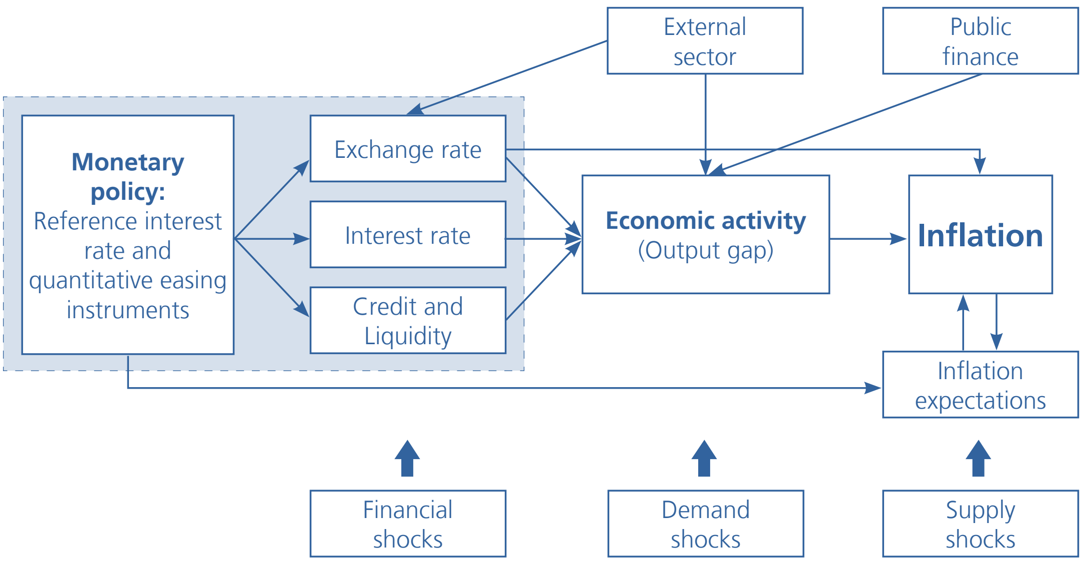
Graph 21
NET INTERNATIONAL RESERVES: 2011 - 2020
(Billions of US$)



* Forecast.

Chapter 2

MONETARY POLICY AND FINANCIAL MARKETS



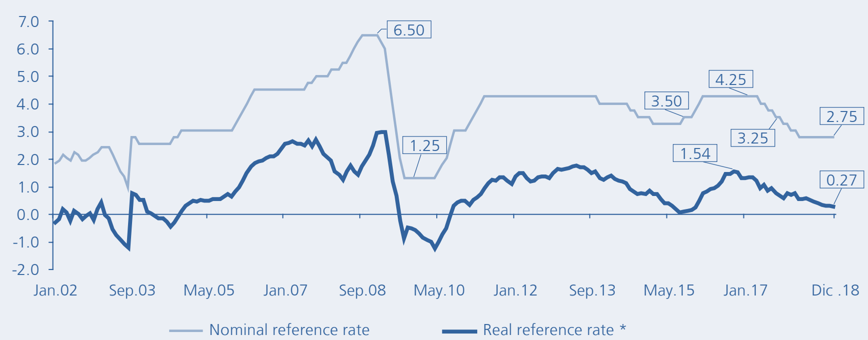
II. Monetary Policy and Financial Markets

Monetary policy actions

19. Between September and December of 2018, the BCRP monetary policy actions continued to maintain an expansionary monetary stance to ensure that inflation and inflation expectations remained within the target range in a context in which the level of economic activity is still below its potential level.

Thus, the Board of BCRP maintained the **benchmark interest rate** at 2.75 percent between September and December. These decisions were in line with the monetary policy communiqués in which the Board reiterated that it considered "*appropriate to maintain an expansionary policy stance while inflation expectations are anchored in a context in which the level of economic activity is below its potential level of growth*". As a result of these monetary policy actions, the real interest rate stood around 0.3 percent in this period, below its neutral level which is estimated at 1.75 percent. This expansionary monetary policy stance is consistent with a level of inflation of around 2.0 percent, in a context of a negative output gap.

Graph 22
NOMINAL AND REAL* REFERENCE INTEREST RATE
(%)



* Considers expectation of inflation.

20. The Board decided to maintain an expansionary monetary policy stance taking into account the following factors

    i. **Year-on-year inflation** as well as indicators of trend inflation were within the target range and inflation excluding food and energy showed levels around 2.0 percent.

    ii. **Inflation expectations** were within the target range.

    iii. **Indicators of economic activity** showed temporary signals of lower dynamism in the third quarter and the level of economic activity remained below its potential level. In this context, the output gap estimated for the third and fourth quarters continued to be negative, indicating that there are no inflationary pressures on the demand side.

    iv. Higher risk in terms of **global economic activity** and increased financial volatility, associated with recent trade tensions and uncertainty, are observed in international financial markets.

Monetary Operations

21. Through its **monetary operations,** the Central Bank maintained the interbank interest rate at the level of the monetary policy benchmark interest rate. In addition to this, BCRP has recently injected liquidity to the financial system through security repos and currency repos with up to 2 year maturity terms with the aim of preventing upward pressures on the interest rates on 90-day and 180-day loans in the credit market.

Table 13
BALANCE OF BCRP MONETARY OPERATIONS

	Balance			Average interest rate		
	Dec.17	**Sep.18**	**Nov.18**	**Dec.17**	**Sep.18**	**Nov.18**
1. CDBCRP	30,747	25,961	27,231	3.96	2.73	2.67
2. Overnight deposits	1,592	2,478	1,879	2.00	1.50	1.50
3. Currency repos	16,680	6,858	7,158	4.88	3.72	3.73
a. Regular	8,900	4,908	5,208	5.27	3.69	3.71
b. Expansion	4,050	150	150	5.07	5.80	5.80
c. Substitution	3,730	1,800	1,800	3.75	3.60	3.60
5. Auctions of Treasury funds	1,200	3,300	3,200	4.49	3.42	3.96

Thus, at the end of November, the monetary base grew 7.3 percent (S/ 3.87 billion) compared to the same month of 2017 as a result of the net maturity of

CDBCRP (S/ 8.08 billion) and the net placement of security repos (S/ 3.64 billion), offset in part by the net maturity of currency repos (S/ 10.32 billion). Moreover, the government converted public sector deposits in foreign currency (US$ 4.41 billion) to domestic currency to cover its 2018 financing needs.

Table 14
MONETARY ACCOUNTS OF THE CENTRAL RESERVE BANK OF PERU
(Million S/)

	Balance				Flows	
	Nov.17	Dec.17	Sep.18	Nov.18	Nov.18/ Sep.18	Nov.18/ Nov.17
I. NET INTERNATIONAL RESERVES	**203,435**	**206,132**	**191,204**	**200,728**	**4,883**	**-12,139**
(Million US$)	**62,983**	**63,621**	**57,941**	**59,387**	**1,447**	**-3,596**
II. NET DOMESTIC ASSETS	**-150,283**	**-148,925**	**-135,101**	**-143,710**	**-3,968**	**16,005**
1. Credit to the financial sector in soles	**-14,747**	**-9,727**	**-12,999**	**-13,396**	**-397**	**1,352**
a. Security repos	2,460	5,420	6,115	6,100	-15	3,640
b. Currency repos	17,480	16,680	6,858	7,158	300	-10,322
c. Securities issued	-32,858	-30,235	-23,493	-24,775	-1,282	8,083
i. CDBCRP	-32,858	-29,400	-23,493	-24,775	-1,282	8,083
ii. CDRBCRP	0	-835	0	0	0	0
d. Other deposits in soles	-1,830	-1,592	-2,478	-1,879	599	-49
2. Net assets public sector in soles	**-31,011**	**-43,271**	**-44,245**	**-43,011**	**1,234**	**-12,000**
3. Credit to the financial sector in dolars	**-54,332**	**-56,599**	**-38,335**	**-45,226**	**-5,954**	**10,940**
(Million US$)	**-16,621**	**-17,331**	**-11,617**	**-13,380**	**-1,764**	**3,241**
a. Deposits in foreign currency	-16,251	-17,207	-11,617	-13,380	-1,764	2,870
b. Securities issued	-371	-124	0	0	0	371
i. CDLDBCRP	-371	-124	0	0	0	371
4. Net assets public sector in dollars	**-41,142**	**-28,855**	**-25,753**	**-24,750**	**1,625**	**18,279**
(Million US$)	**-12,737**	**-8,906**	**-7,804**	**-7,322**	**482**	**5,415**
5. Other Net Accounts	**-9,051**	**-10,473**	**-13,769**	**-17,328**	**-477**	**-2,566**
III. MONETARY BASE (I+II)[1/]	**53,152**	**57,207**	**56,103**	**57,018**	**915**	**3,866**
(% change 12 months)	*6.5%*	*8.3%*	*8.9%*	*7.3%*		

1/ Currency plus reserve requirement in domestic currency.

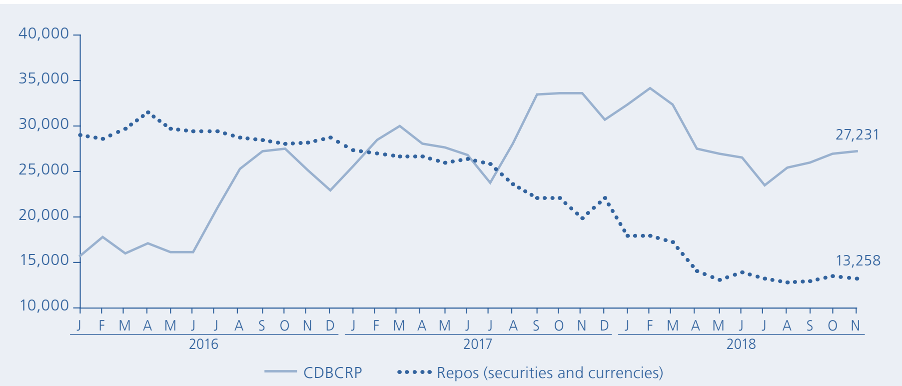
22. As a result of these operations, at the end of November 2018 the balance of repos operations represented 6.2 percent of the net assets of BCRP. As for the composition of BCRP liabilities, the reduction of public sector deposits at the BCRP decreased its ratio in terms of the net liabilities of BCRP to 31.7 percent (but are still the most important liability of BCRP). On the other hand, the net maturity of BCRP sterilization instruments represent 13.6 of BCRP total liabilities, reflecting in this way the expansionary monetary policy stance.

Table 15
SIMPLIFIED BALANCE SHEET OF THE BCRP*
(As % of Net Assets)

	Dec.16	Dec.17	Jun.18	Sep.18	Nov.18
I. Net assets	**100**	**100**	**100**	**100**	**100**
Net International Reserves	**87.8**	**90.3**	**93.2**	**93.6**	**93.8**
(In millions US$)	*61,686*	*63,621*	*59,079*	*57,941*	*59,387*
Repos	**12.2**	**9.7**	**6.8**	**6.4**	**6.2**
II. Net liabilities	**100**	**100**	**100**	**100**	**100**
1. Total public sector deposits	**33.5**	**31.7**	**34.0**	**34.1**	**31.7**
In domestic currency	12.1	18.5	20.6	20.8	19.3
In foreign currency	21.4	13.3	13.4	13.3	12.4
2. Total financial system deposits	**32.9**	**29.6**	**25.7**	**23.8**	**26.2**
In domestic currency	4.5	5.0	5.2	4.8	5.0
In foreign currency	28.4	24.6	20.5	19.0	21.2
3. BCRP instruments	**11.0**	**14.7**	**13.9**	**13.9**	**13.6**
CD BCRP	9.7	13.5	12.8	12.7	12.7
CDLD BCRP	0.0	0.2	0.0	0.0	0.0
CDR BCRP	0.3	0.4	0.2	0.0	0.0
Overnight and Term deposits	0.9	0.7	0.8	1.2	0.9
4. Currency	**18.1**	**20.1**	**21.7**	**22.7**	**21.7**
5. Others*	**4.5**	**3.9**	**4.7**	**5.5**	**6.9**

* Includes interests, discounts and net profits.

Graph 23
REPO OPERATIONS AND PLACEMENT OF CDBCRP
(Balance in mill. S/)



Interest Rates

23. **Interest rates** continue to show levels below their historical average values, in line with the expansionary monetary policy stance adopted by BCRP. It is worth pointing out that interest rates in the money market showed some upward pressures due to the increase in the demand for loans in soles and due to expectations of future rises in the benchmark interest rate. In this context, BCRP has been renewing its currency and security repos with terms of up to 2 years.

Table 16
INTEREST RATE IN DOMESTIC CURRENCY
(%)

		Dec.17	Mar.18	Jun.18	Sep.18	Nov.18
Pasive	Deposits up to 30-day	3.0	2.7	2.9	2.7	2.9
	On 31 to 180-day term deposits	3.3	3.0	2.8	3.4	3.5
	On 181 to 360-day term deposits	3.6	3.2	3.3	3.6	3.6
Active	90-day corporate prime	3.6	3.1	3.6	3.9	4.2
	Corporates	4.0	3.8	4.3	4.3	4.8
	Large companies	6.2	6.4	6.3	6.2	6.5
	Medium-sized enterprises	9.7	9.8	9.3	10.3	9.6
	Small businesses	19.8	19.8	19.1	19.1	18.9
	Consumer	48.6	43.9	41.7	41.1	43.6
	Mortgage	7.7	7.4	7.3	7.5	7.5

Source: SBS.

Graph 24
INTEREST RATE IN S/: 90-DAY CORPORATE PRIME AND REFERENCE RATE
(%)

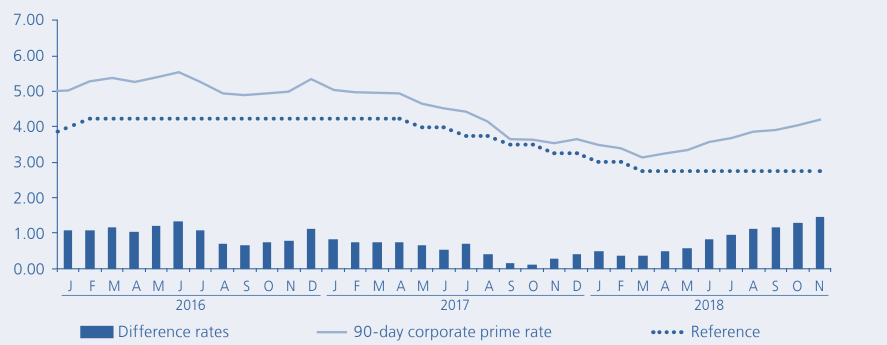


Table 17
SURVEY ON MACROECONOMIC EXPECTATIONS: REFERENCE RATE
(%)

	29 Sep.	28 Oct.	29 Nov.
Financial entities			
2018	2.75	2.75	2.75
2019	3.25	3.25	3.25
2020	3.38	3.50	3.50
Economic analysts			
2018	2.75	2.75	2.75
2019	3.25	3.25	3.25
2020	3.50	3.50	3.50

The survey was conducted on the dates indicated in the titles.
Source: BCRP.

24. Interest rates in dollars have increased, in line with the upward trend observed in international money markets. The interbank rate rose from 2.0 to 2.25 between September and November, while the 3-month and the 6-month Libor rose by 31 and 29 basis points, respectively.

    Moreover, the 90-day corporate prime rates on lending operations and on deposits rose by 31 and 40 basis points, respectively. Likewise, the rates in most segments showed higher levels than those observed in previous months. The measures adopted in terms of reserve requirements in recent months have contributed to offset the impact of the rise in international interest rates on the interest rates in dollars in the local market.

Graph 25
RESERVE REQUIEREMENTS RATE IN DOMESTIC AND FOREIGN CURRENCY
(As % of total liabilities)

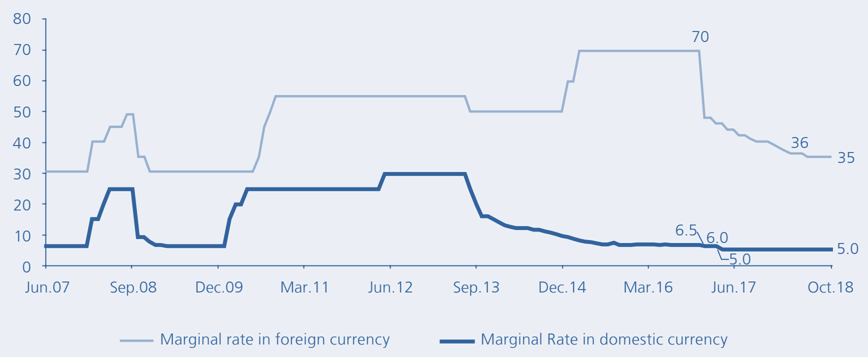
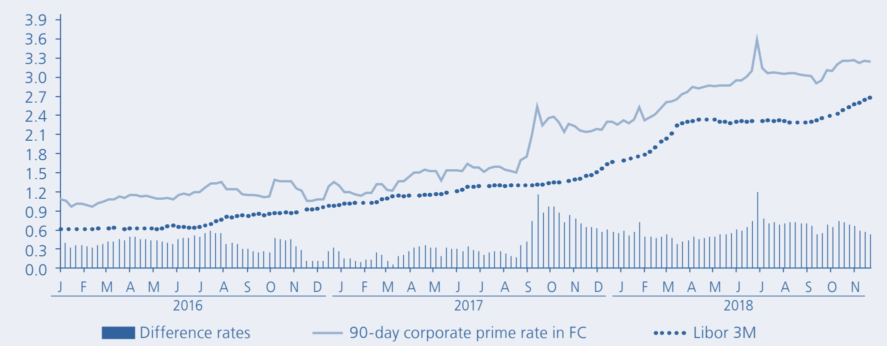


Table 18
INTEREST RATE IN FOREIGN CURRENCY
(%)

		Dec.17	Mar.18	Jun.18	Sep.18	Nov.18
	Deposits up to 30-day	1.1	1.2	1.3	1.4	1.7
Pasive	On 31 to 180-day term deposits	1.3	1.4	1.6	1.7	2.0
	On 181 to 360-day term deposits	1.1	1.1	1.5	1.3	1.7
	90-day corporate prime	2.3	2.8	3.1	3.0	3.3
	Corporates	3.2	3.0	3.4	3.7	4.0
	Large companies	5.3	5.1	5.1	5.4	5.4
Active	Medium-sized enterprises	6.4	6.7	7.1	7.3	7.1
	Small businesses	7.3	10.1	10.2	9.9	10.8
	Consumer	32.9	34.1	33.9	34.8	36.1
	Mortgage	5.9	5.9	5.8	6.1	6.0

Source: SBS.

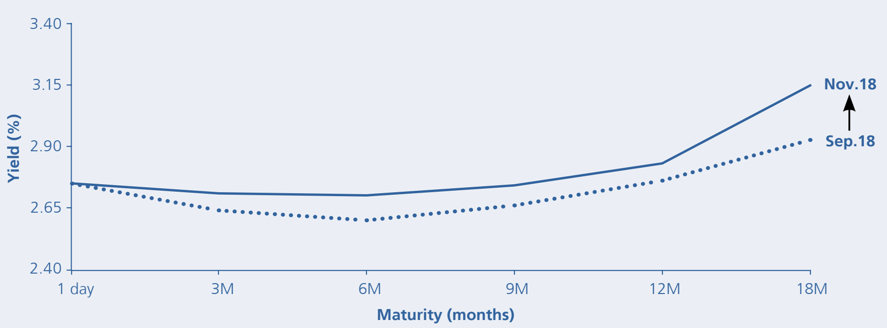
Graph 26
INTEREST RATE IN US$: 90-DAY CORPORATE PRIME AND LIBOR 3-MONTH
(%)



Source: BCRP and Bloomberg.

25. The **yield curve** of the primary and secondary markets of **CDBCRP** for terms between 3 and 12 months increased by an average of 8 basis points between September and November, influenced by expectations of future rises in the BCRP benchmark interest rate.

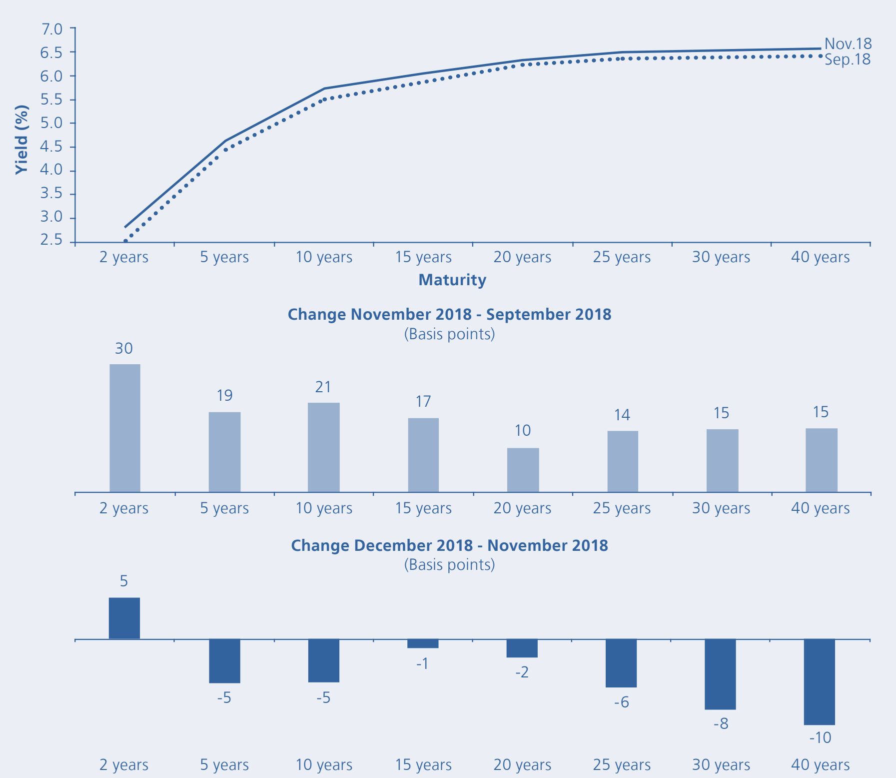
Graph 27
YIELD CURVE OF CENTRAL BANK SECURITIES 1/



1/ Yield rate in the primary and secondary market.

In November, the average interest rates on **sovereign bonds** increased 18 basis points compared to the third quarter of 2018. On the other hand, in the first days of December, interest rates fell by 4 basis points on average, which was associated with the moderation in trade tensions between the United States and China. It should be pointed out that the demand for sovereign bonds remains stable, as is reflected in the fact that non-resident investors have purchased sovereign bonds for S/ 1.12 billion between September and November.

Graph 28
YIELD CURVE OF PERUVIAN SOVEREIGN BONDS
(%)



Memo: Data update on December 5.
Source: MEF and Bloomberg. The historical average corresponds to the monthly average rate since 2005.

Credit to the Private Sector

26. **Credit to the private sector** grew at a YoY rate of 8.1 percent in November. By segments, credit to businesses grew 6.3 percent, while loans to households grew 11.1 percent. In the case of personal loans, consumer loans and mortgage loans continue to show the higher growth rates (13.1 and 8.3 percent, respectively), while in the case of loans to businesses, the segments with the higher growth rates were loans to corporations and to large companies, as well as loans to small and micro businesses (8.0 and 6.2 percent, respectively).

Table 19
CREDIT TO THE PRIVATE SECTOR
(12-month % change)

	Dec.17	Mar.18	Jun.18	Sep.18	Nov.18
Businesses	**5.4**	**6.6**	**7.9**	**7.3**	**6.3**
Corporate and large companies	6.0	7.9	10.5	9.9	8.0
Medium-sized enterprises	0.7	1.9	2.5	2.8	2.6
Small business and Microbusinesses	9.5	8.8	8.1	6.3	6.2
Individuals	**8.7**	**9.7**	**10.8**	**11.2**	**11.1**
Consumer	8.8	10.4	11.7	12.4	13.1
Car loans	-4.2	-0.6	-2.7	-1.6	-4.5
Credit cards	3.0	3.8	5.9	8.4	11.2
Rest	13.0	14.8	15.7	15.2	15.2
Mortgage	8.6	8.7	9.5	9.5	8.3
TOTAL	**6.6**	**7.8**	**9.0**	**8.8**	**8.1**

27. Credit in soles has accelerated its pace of growth, while credit in dollars has slowed down its pace of growth, which is consistent with the higher cost expected in credit in dollars and with interest rates in soles that remained below their historical levels. Thus, the pace of growth of credit in soles went from 9.9 percent in September to 10.6 percent in November, whereas the pace of growth of the pace of growth of credit in dollars showed the opposite trend declining from a rate of 5.8 percent in September to 2.1 percent in November.

Graph 29
TOTAL CREDIT TO THE PRIVATE SECTOR AND IN DOMESTIC CURRENCY
(12-month % change)

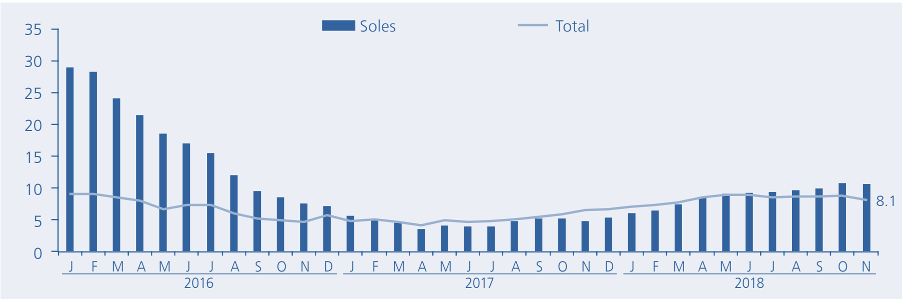


Table 20
CREDIT TO THE PRIVATE SECTOR
(Annual % change)

	Dec.17	Mar.18	Jun.18	Sep.18	Nov.18
Domestic currency	5.3	7.4	9.2	9.9	10.6
Foreign currency	9.9	8.6	8.5	5.8	2.1
Total	**6.6**	**7.8**	**9.0**	**8.8**	**8.1**

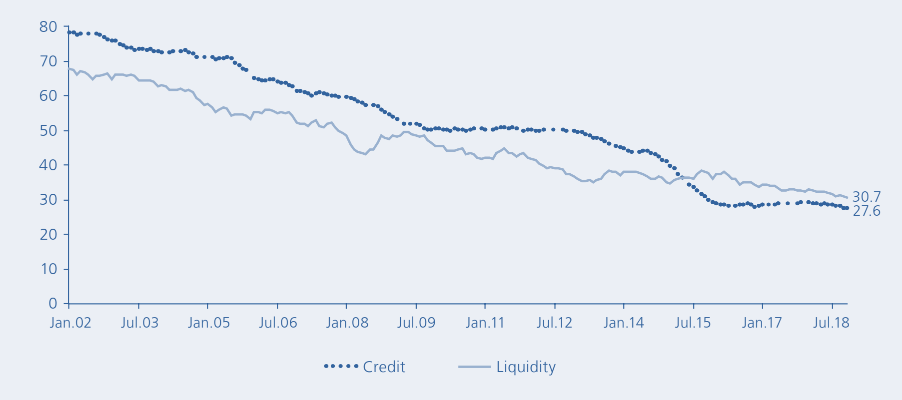
As of November 2018, banks' lending to the private sector in domestic currency increased by S/ 15.89 billion, this increase being financed mainly by increased private sector deposits (S/ 8.82 billion), the maturity of BCRP securities (S/ 5.29 billion), the increase in banks' capital excluding provisioning (S/ 4.70 billion), and funds in foreign currency used to buy domestic currency (S/ 4.28 billion). This was offset by the reduction of obligations with BCRP due to the expiration of repo operations (S/ 8.44 billion). On the other hand, credit in foreign currency increased by US$ 430 million in the year. This positive flow was financed by the reduction of banks' deposits at BCRP (US$ 3.67 billion), offset by the decrease in private sector deposits (US$ 1.38 billion), funds in foreign currency used to buy domestic currency (US$ 1.30 billion), and the reduction of net foreign assets (US$ 231 million).

28. The ratio of dollarization of credit, measured at a constant exchange rate, registered 27.6 percent in November (vs. 28.1 percent in September). This decline reflects not only the lower level of dollarization of lending to businesses –which fell from 39.1 in September to 38.4 percent in November– but also the lower level of dollarization observed in personal loans (down from 10.6 to 10.4 percent). Furthermore, dollarization also continued to decline in the segments of mortgage loans and car loans, whose ratios recorded 16.4 and 13.9 percent, respectively.

Table 21
RATIO OF DOLLARIZATION OF CREDIT TO THE PRIVATE SECTOR
(%)

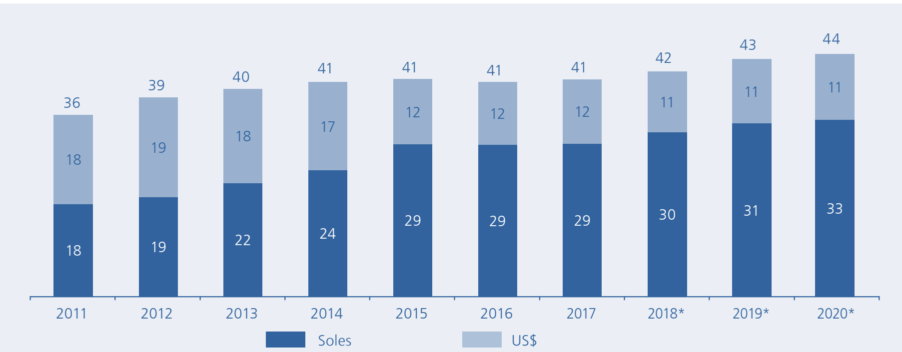
	Dec.17	Mar.18	Jun.18	Sep.18	Nov.18
Businesses	**39.7**	**39.6**	**39.5**	**39.1**	**38.4**
Corporate and large companies	53.9	53.5	53.4	52.8	51.7
Medium-sized enterprises	40.5	40.2	40.5	39.6	39.9
Small business and Microbusinesses	6.7	6.4	6.2	6.1	6.2
Individuals	**11.9**	**11.4**	**11.0**	**10.6**	**10.4**
Consumer	6.8	6.6	6.4	6.3	6.3
Car loans	20.2	17.5	15.9	14.6	13.9
Credit cards	6.9	7.1	7.2	7.2	7.5
Rest	6.0	5.8	5.6	5.5	5.4
Mortgage	19.3	18.5	17.7	16.9	16.4
TOTAL	**29.3**	**28.9**	**28.6**	**28.1**	**27.6**
At current exchange rate	*29.3*	*28.8*	*28.8*	*28.5*	*28.4*

Graph 30
RATIO OF DOLLARIZATION OF CREDIT AND LIQUIDITY: 2002 - 2018
(%)



29. In the 2018-2020 forecast horizon, **credit to the private sector** is expected to grow at higher rates than the nominal GDP and therefore the ratio of credit-to-GDP would increase from 42 percent to 44 percent in this period. This forecast take into account loose monetary conditions and the recovery in the pace of growth of domestic demand foreseen for these years.

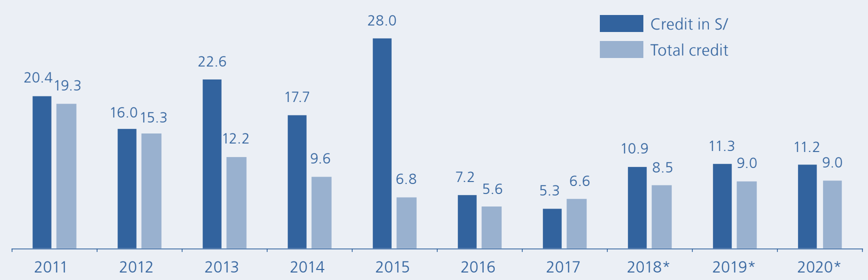
Graph 31
RATIO CREDIT/ GDP
(%)



* Forecast.

30. In 2019 and 2020, credit to the private sector in domestic currency is projected to grow around 11 percent, while the total growth rate would be around 9 percent. With this, the dollarization ratio of credit would continue to decrease until it reaches a level of 25 percent at the end of 2020.

Graph 32
CREDIT TO THE PRIVATE SECTOR
(% change)



* Forecast.

31. In November the ratio of **non-performing loans** remained at 3.5 percent (relative to the previous month, but was 0.15 percentage points higher than at the end of 2017. The ratio of non-performing loans in credit to businesses has increased by 0.3 percentage points in the year, which is explained mainly by the delinquency rates of loans to medium-sized businesses which increased from 7.0 percent in December 2017 to 7.9 percent in November 2018.

Table 22
NON-PERFORMING LOANS INDEX ON THE DEPOSITORY CORPORATIONS
(%)

	Dec.15	Dec.16	Dec.17	Oct.18	Nov.18
Businesses	**3.12**	**3.28**	**3.33**	**3.63**	**3.61**
Corporate and large companies	0.47	0.41	0.47	0.57	0.57
Medium-sized enterprises	5.28	6.10	7.02	7.91	7.85
Small business and Microbusinesses	7.46	7.16	7.12	7.83	7.68
Individuals	**2.65**	**3.05**	**3.29**	**3.21**	**3.19**
Consumer	3.32	3.66	3.70	3.34	3.33
Car loans	4.41	5.60	6.10	4.81	4.73
Credit cards	4.10	4.86	5.13	4.04	4.04
Mortgage	1.84	2.28	2.78	3.04	3.01
TOTAL	**2.87**	**3.09**	**3.31**	**3.48**	**3.46**

Moreover, the delinquency rate for credit in soles was 3.8 percent, the delinquency rate in the segment of medium-sized companies standing out (8.5 percent), whereas the delinquency rate for credit in dollars was 2.6 percent, with delinquency in the segment of car loans standing out (11.2 percent).

On the other hand, the delinquency rates of loans in both currencies decreased in the segments of loans to small and micro enterprises: the level of delinquency in soles fell from 7.5 percent in October to 7.4 percent in November, while the level of delinquency in foreign currency fell from 18.8 percent to 17.2 percent in the same period.

Table 23
NON-PERFORMING LOANS INDEX IN DOMESTIC CURRENCY
(%)

	Dec.15	Dec.16	Dec.17	Oct.18	Nov.18
Businesses	**3.30**	**3.63**	**3.96**	**4.38**	**4.38**
Corporate and large companies	0.22	0.20	0.47	0.50	0.53
Medium-sized enterprises	5.04	6.07	7.11	8.47	8.50
Small business and Microbusinesses	6.90	6.63	6.76	7.51	7.38
Individuals	**2.53**	**2.90**	**3.14**	**3.07**	**3.06**
Consumer	3.23	3.57	3.64	3.33	3.32
Car loans	1.91	2.58	3.90	3.62	3.64
Credit cards	4.20	5.03	5.32	4.19	4.19
Mortgage	1.46	1.87	2.41	2.69	2.66
TOTAL	**2.87**	**3.18**	**3.61**	**3.80**	**3.79**

Table 24
NON-PERFORMING LOANS INDEX IN FOREIGN CURRENCY
(%)

	Dec.15	Dec.16	Dec.17	Oct.18	Nov.18
Businesses	**2.84**	**2.72**	**2.33**	**2.44**	**2.37**
Corporate and large companies	0.78	0.64	0.48	0.63	0.61
Medium-sized enterprises	5.55	6.15	6.90	7.09	6.93
Small business and Microbusinesses	15.70	19.58	17.22	18.75	17.15
Individuals	**3.28**	**4.08**	**4.42**	**4.44**	**4.40**
Consumer	4.58	5.29	4.75	3.62	3.52
Car loans	7.52	13.86	14.79	11.75	11.19
Credit cards	2.62	2.59	2.59	2.24	2.30
Mortgage	2.88	3.70	4.30	4.75	4.74
TOTAL	**2.87**	**2.84**	**2.61**	**2.69**	**2.62**

Liquidity

32. In November, **currency in circulation** grew at a year-on-year rate of 8.0 percent, a similar rate to the one observed in recent months and lower than the rate recorded in the second quarter of the year, in line with the evolution of economic activity.

Graph 33
CURRENCY IN CIRCULATION
(Annual % change)

Private sector deposits registered a YoY growth rate of 8.3 percent in November. By currencies, deposits in soles grew at a YoY rate of 13.4 percent in November, while deposits in dollars grew 0.5 percent, which reflected the greater preference for saving in soles. This was particularly noteworthy in the case of personal savings.

Graph 34
DEPOSITS OF THE PRIVATE SECTOR BY CURRENCY
(Annual % change)

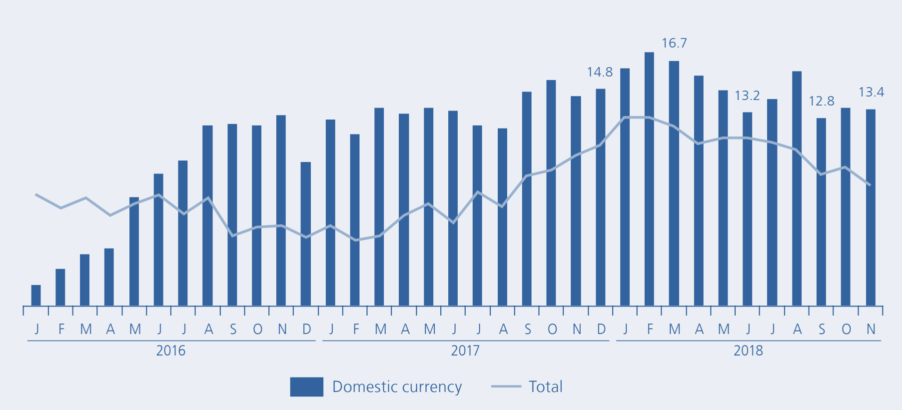


Table 25
MONETARY AND CREDIT ACCOUNTS OF THE DEPOSITORY CORPORATIONS (END-OF-PERIOD)
(12-month % change)

	Dec.16	Mar.17	Jun.17	Sep.17	Dec.17	Mar.18	Jun.18	Sep.18	Nov.18
Currency in circulation (endo-of-period)	6.5	5.8	6.2	5.9	6.7	10.8	10.3	8.6	8.0
Deposits in domestic currency	9.8	13.6	13.3	14.6	14.8	16.7	13.2	12.8	13.4
Total deposits 1/	4.7	4.8	5.7	8.9	11.0	12.3	11.4	8.9	8.3
Broad money in domestic currency	9.0	11.5	10.7	11.8	12.5	14.9	12.4	11.7	11.9
Total broad money 1/	5.1	4.9	5.2	8.0	10.1	12.3	11.4	9.1	8.3
Credit to the private sector in domestic currency	7.2	4.4	3.9	5.2	5.3	7.4	9.2	9.9	10.6
Credit to the private sector 1/	5.6	4.5	4.5	5.3	6.6	7.8	9.0	8.8	8.1

1/ Balances in foreign currency are valuated at constant exchange rate on December 2017.
Source: BCRP.

The faster pace of growth of deposits in soles has continued to contribute to reduce the dollarization ratio of total deposits, which registered 36.9 percent in November. The decrease of almost one basis point in the ratio of dollarization of corporate deposits to 45.9 percent observed between October and November is worth highlighting.

Table 26
DOLLARIZATION RATIO OF DEPOSITS
(%)

	Dec.16	Dec.17	Mar.18	Jun.18	Sep.18	Oct.18	Nov.18
Individuals	**35.5**	**34.6**	**34.0**	**33.4**	**32.7**	**32.5**	**32.3**
At current exchange rate	*36.3*	*34.6*	*33.9*	*33.6*	*33.1*	*33.4*	*33.2*
Demand deposits	51.3	47.1	45.6	47.3	44.9	44.7	43.0
Savings deposits	39.1	38.7	37.5	37.4	36.1	35.8	35.9
Term deposits	30.2	30.3	29.6	28.7	28.7	29.0	29.1
CTS	29.4	26.7	26.9	25.3	25.3	25.2	23.9
Business	**53.4**	**49.5**	**48.6**	**49.3**	**47.7**	**46.7**	**45.9**
At current exchange rate	*54.3*	*49.5*	*48.5*	*49.6*	*48.1*	*47.7*	*47.0*
Demand deposits	51.3	47.1	45.6	47.3	44.9	44.7	43.0
Savings deposits	56.7	52.6	60.0	54.5	72.5	39.0	42.5
Term deposits	61.8	58.9	56.9	56.6	54.9	57.4	59.9
TOTAL	**41.5**	**39.5**	**38.9**	**38.6**	**37.7**	**37.3**	**36.9**
At current exchange rate	*42.4*	*39.5*	*38.8*	*38.9*	*38.1*	*38.3*	*37.9*

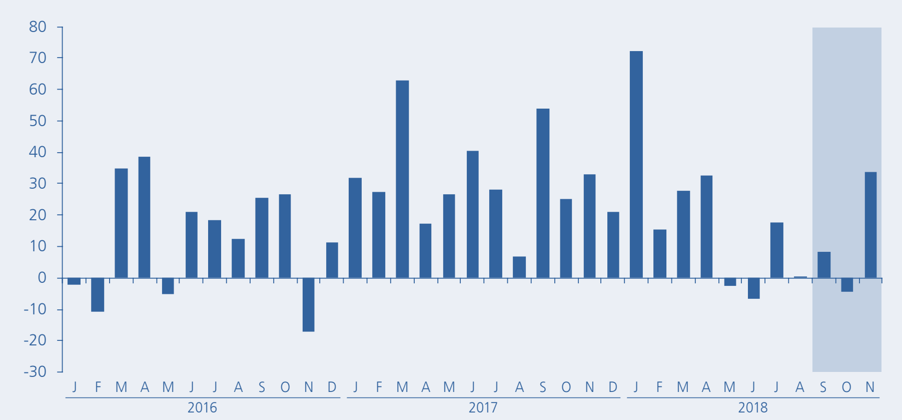
International Financial Markets

33. Between October and November, financial markets were affected by a marked increase in **risk aversion**, the latter being explained by the escalation of trade tensions between the United States and China, by some political events (especially in Europe), and by geopolitical events (in Iran and Saudi Arabia mainly). Likewise, as in previous months, markets were affected by changes in expectations about the Fed's cycle of adjustment of its interest rates.

    In general terms, these factors led to an appreciation of the dollar, the fall of stock markets, the reduction of the yields of the sovereign bonds of the main developed economies, and to corrections in the prices of commodities. The emerging economies, on the other hand, continued registering lower capital inflows than the levels observed at the beginning of this year[1], which reflected in their main markets of assets (stock exchange and bond markets).

1 Capital inflows to China and Indonesia's markets of both equities and fixed income assets stand out, while Taiwan, Korea, and India, on the other hand, registered capital outflows.

Graph 35
FLOW OF FIXED AND VARIABLE INCOME FROM NON-RESIDENTS TO EMERGING MARKETS: 2016-2018
(Billion US$)



Data on November are estimated.
Source: The Institute of International Finance (IIF).

34. This year, the assets of the emerging economies have been affected by greater risk aversion and by higher interest rates in dollars, as well as by fears of financial contagion after the episodes of sharp depreciation that Turkey and Argentina experienced due to their macroeconomic vulnerabilities. These factors have led the dollar to appreciate widely.

Graph 36
MSCI STOCK INDICES
(2016-2018)

Graph 37
BLOOMBERG COMMODITY INDICES
(2016-2018)

Source: Bloomberg.

35. Between September and December, the **dollar** appreciated 1.2 percent against the currency basket and accumulated an annual appreciation of 4.5 percent. The appreciation of the dollar was mainly associated with expectations that the Fed would make a more accelerated withdrawal of monetary stimulus than other central banks (e.g. the ECB or the Bank of Japan). On the other hand, the euro weakened 1.4 percent compared to its level in September, influenced as well by discussions about Italy's budget and by some evidence of economic slowdown in the region (particularly in Germany), while the pound sterling showed a stronger depreciation, affected by uncertainty about the UK's withdrawal from the European Union (Brexit).

Graph 38
US DOLLAR FED INDEX AND YIELD OF THE 10-YEAR US TREASURY BOND
(2016-2018)

Source: Bloomberg and Fed.

36. The emerging market currencies, on the other hand, showed mixed results, with the depreciation of the Colombian and Mexican pesos standing out. In addition to being

affected by the global depreciation of the dollar, these currencies were affected by the decline in the price of crude as well as by political noise and political discussions about macroeconomic management (discussions of fiscal management in Colombia and discussions about a new economic program in the case of Mexico).

The currencies of other emerging economies, such as the Turkish lira, the Argentine peso, and the Brazilian real, reversed (albeit only partially) the depreciation trend they showed in previous months. The Turkish lira and the Argentine peso appreciated due to the reduction of the external imbalances of these economies, the maintenance of high domestic interest rates, and the announcement of economic measures. On the other hand, the real was favored by the culmination of the electoral process.

Table 27
EXCHANGE RATE

		Dec.17	Sep.18	Dec.18*	Change (%) **
Dollar Index	US Dollar Index	92.12	95.13	96.28	4.5
EURO	Euro	1.200	1.161	1.144	-4.6
UNITED KINGDOM	Pound sterling	1.351	1.303	1.266	-6.3
JAPAN	Yen	112.670	113.680	111.280	-1.2
BRAZIL	Real	3.312	4.048	3.842	16.0
COLOMBIA	Peso	2,982	2,960	3,268	9.6
CHILE	Peso	615	657	691	12.4
MEXICO	Peso	19.65	18.71	19.88	1.2
ARGENTINA	Peso	18.59	41.28	38.00	104.4
PERU	**Sol**	**3.237**	**3.304**	**3.349**	**3.5**
SOUTH AFRICA	Rand	12.36	14.14	14.39	16.5
INDIA	Rupee	63.83	72.50	69.96	9.6
TURKEY	Lira	3.79	6.06	5.26	38.7
RUSSIA	Ruble	57.66	65.57	68.27	18.4
CHINA	Yuan (onshore)	6.51	6.87	6.88	5.8
SOUTH KOREA	Won	1,066.4	1,110.0	1,121.8	5.2
INDONESIA	Rupee	13,555	14,816	14,595	7.7
THAILAND	Bath	32.55	32.32	32.65	0.3
MALAYSIA	Ringgit	4.04	4.14	4.18	3.3
PHILIPPINES	Peso	49.98	53.97	53.12	6.3

* As of December 20.
** An increase of the index means appreciation of the respective currency against the dollar, except euro and pound.
Source: Reuters.

37. As for the PEN, between September and December 2018 the sol depreciated1.4 percent, from S/ 3.30 to S/ 3.35 per dollar, thus recording an accumulated depreciation of 3.5 percent. This was associated with a context of higher risk aversion in international financial markets due to political uncertainty in Europe and to the continuation of trade tensions between the United States and China, as well as with the Fed's normalization process of its monetary policy.

38. In response to this context and given the increased volatility observed in the foreign exchange market, the Central Bank placed currency swaps-sell for a total of US$ 1.58 billion, the placements of these instruments being made especially between the last weeks of October and the first weeks of November. BCRP did not intervene in the spot exchange market in this period.

Graph 39
EXCHANGE RATE AND NET FX INTERVENTION [1/]

1/ Includes net purchases of US$ and net placements of CDLD BCRP, CDR BCRP and FX swaps.

Despite the higher volatility registered in international financial markets, the exchange rate volatility has been lower in 2018 than in previous years, which is why BCRP has reduced the frequency of its interventions in the foreign exchange market.

Table 28
FX INTERVENTION

	Days of trade	Number of days of Intervention				Standard deviation of the exchange rate (annualized % change)
		Sport market	Placement of derivatives and indexed instruments	Total (*spot* and/or placement)	% of days with intervention	
2017	249	55	23	63	25%	4.5%
Jan.17 - Nov.17	230	53	25	61	27%	4.2%
Jan.18 - Nov.18	227	4	25	28	12%	3.4%

* As of November 30.

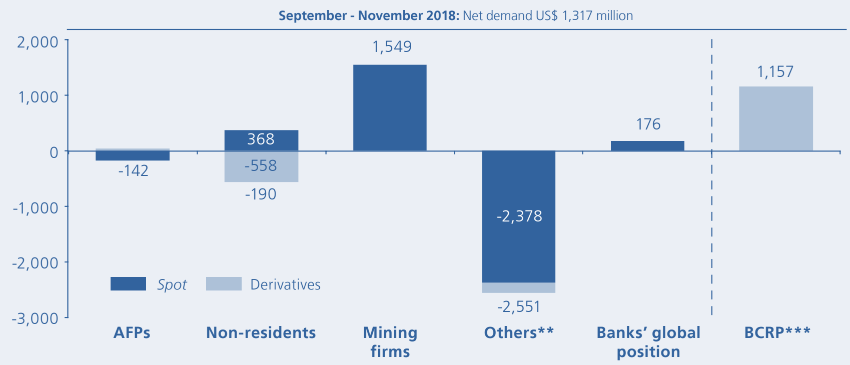
Table 29
INTERVENTION BY TYPE OF INSTRUMENT*
(Million US$)

	Direct intervention:	Direct intervention				Total
	Net purchases of US$	Placement of CDR	Placement of CDLD	Placement FX Swaps Sale	Total placements (B)	intervention (A+B)
2017	**5,246**	**-368**	**1,453**	**-170**	**915**	**6,161**
Jan. - Jul.2018	184	-733	381	-720	-1,072	-888
August 2018	0	0	0	-241	-241	-241
September 2018	0	0	0	-180	-180	-180
October 2018	0	0	0	-1,042	-1,042	-1,042
November 2018*	0	0	0	-356	-356	-356
2018*	**184**	**-733**	**381**	**-2,539**	**-2,891**	**-2,707**

* Negative indicates net sale of US$.
** As of November 30.

39. As regards currency flows in the **local exchange market**, the net demand for dollars observed between September and November 2018 amounted to US$ 1.32 billion. The demand came mainly from companies in the non-financial private sector (US$ 2.42 billion) while the supply came from companies in the mining sector (US$ 1.55 billion). It is worth mentioning that, in contrast with previous periods, non-resident investors' demand fell significantly (US$ 190 million) in this period.

Graph 40
TOTAL FLOW TO THE FOREIGN EXCHANGE MARKET*
(Million US$)



* Negative flows means net demand of US$ in the period
** Includes Banco de la Nación, financial institutions, retail clients, and privates.
*** Fx intervention (direct and indirect) plus maturities of indexed instruments to the exchange rate and Fx swaps (net).

40. In the **fixed income** markets, the yields on US bonds increased between September and October, influenced mainly by positive economic data. This trend reversed thereafter by the increase in global risk aversion associated with commercial tensions. Another factor that contributed to reverse this trend was the statements of Fed Chairman Jerome Powell who said that monetary policy interest rates were "slightly below" the neutral level, which generated expectations of a lower rate adjustment in 2019.

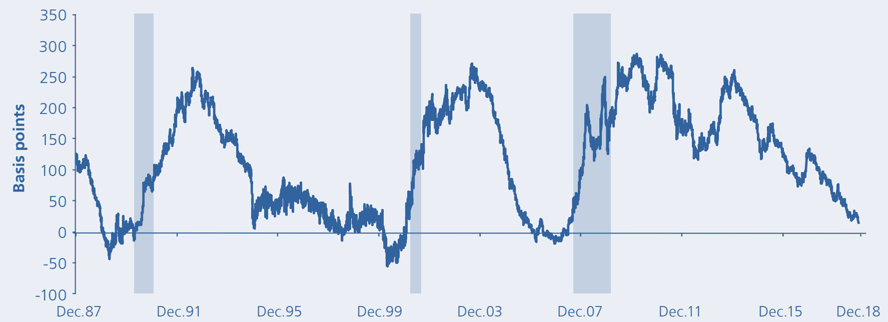
Table 30
YIELDS OF THE 10-YEAR TREASURY BONDS

	Dec.17	Sep.18	Dec.18*	Accumulated Change (bps.)
UNITED STATES	2.41	3.06	2.81	40
GERMANY	0.42	0.47	0.23	-20
FRANCE	0.78	0.80	0.67	-11
ITALY	2.01	3.14	2.73	73
SPAIN	1.56	1.50	1.37	-19
GREECE	4.07	4.15	4.27	20
UNITED KINGDOM	1.19	1.57	1.26	8
JAPAN	0.04	0.12	0.02	-2
BRAZIL	10.26	11.76	9.43	-83
COLOMBIA	6.48	6.89	6.77	29
CHILE	4.55	4.55	4.32	-23
MEXICO	7.65	7.93	8.64	99
PERU	**4.87**	**5.32**	**5.40**	**53**
SOUTH AFRICA	8.86	9.25	9.37	52
INDIA	7.33	8.02	7.28	-5
TURKEY	11.35	17.18	16.02	468
RUSSIA	3.87	4.88	5.04	117
CHINA	3.90	3.63	3.34	-57
SOUTH KOREA	2.47	2.73	2.73	26
INDONESIA	6.29	8.06	7.93	164
THAILAND	2.32	2.81	2.53	21
MALAYSIA	3.91	4.06	4.09	19
PHILIPPINES	5.70	7.23	7.67	197

* As of December 20.
Source: Bloomberg.

It is worth pointing out that the yields on US bonds have risen more in the shorter term tranches. The yield on the 2-year bond rose 78 basis points, following the Fed's rate hikes during 2018, whereas the yield on the 10-year bonds only rose 40 basis points. The spread between the yield of the 10-year Treasury bond and the 2-year Treasury bond fell to 13 basis points, a similar level to that observed before the 2008 crisis.

Graph 41
SPREAD OF THE YIELD OF THE 10-YEAR TREASURY BOND RESPECT TO THE 2-YEAR BOND



Source: Bloomberg and Fed.

41. The **variable-income markets** of developed countries showed losses. These results were associated with higher risk aversion as a result of global commercial tensions, the lower than expected corporate results for the third quarter, and the fall registered in commodity prices.

Table 31
STOCK MARKETS

		Dec.17	Sep.18	Dec.18**	Accumulated % change
VIX*	S&P 500	11.04	12.12	28.38	17.3
UNITED STATES	Dow Jones	24,719	26,458	22,860	-7.5
GERMANY	DAX	12,918	12,247	10,611	-17.9
FRANCE	CAC 40	5,313	5,493	4,692	-11.7
ITALY	FTSE MIB	21,853	20,712	18,577	-15.0
SPAIN	IBEX 35	10,044	9,389	8,597	-14.4
GREECE	ASE	802	692	614	-23.5
UNITED KINGDOM	FTSE 100	7,688	7,510	6,712	-12.7
JAPAN	Nikkei 225	22,765	24,120	20,393	-10.4
BRAZIL	Bovespa	76,402	79,342	85,269	11.6
COLOMBIA	IGBC	11,478	12,464	10,996	-4.2
CHILE	IGP	27,981	26,886	25,708	-8.1
MEXICO	IPC	49,354	49,504	41,683	-15.5
ARGENTINA	Merval	30,066	33,462	29,243	-2.7
PERU	**General index**	**19,974**	**19,564**	**19,085**	**-4.4**
SOUTH AFRICA	JSE	59,505	55,708	51,348	-13.7
INDIA	CNX Nifty	10,531	10,930	10,952	4.0
TURKEY	XU100	115,333	99,957	91,854	-20.4
RUSSIA	Interfax	1,152	1,192	1,083	-6.0
CHINA	Shangai C.	3,307	2,821	2,536	-23.3
SOUTH KOREA	Seul Composite	2,467	2,343	2,060	-16.5
INDONESIA	JCI	6,356	5,977	6,148	-3.3
THAILAND	SET	1,754	1,756	1,596	-9.0
MALAYSIA	KLSE	1,797	1,793	1,651	-8.1
PHILIPPINES	Psei	8,558	7,277	7,563	-11.6

* Variation in basis points.
** As of December 20.
Source: Bloomberg.

In the United States, the Dow Jones index fell 13.6 percent between September and December, the shares of technology companies and companies with strong commercial ties with China being the most affected ones. In Europe, the stock markets indices also fell due to uncertainty about the Brexit, the negotiations of the Italian budget, and the results of the elections in Germany, all of which added more uncertainty to that generated by the commercial war.

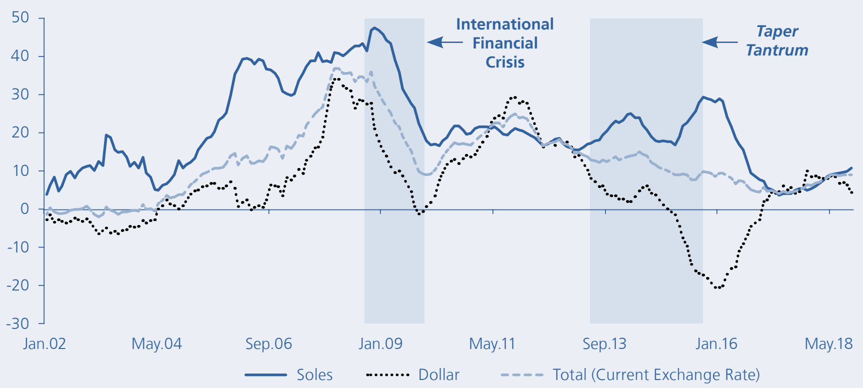
The stock markets in the emerging countries continued showing the downward trend that started in February. In addition to the global factors that determined this trend, there were also specific factors such as the political cycle (Mexico), the fall in the price of commodities (Chile and Colombia), and the persistence of macroeconomic imbalances in some economies, which have been intensified by the outflow of capital from the emerging economies.

Box 1
EFFECTS OF INTERNATIONAL INTEREST RATES ON DOMESTIC CREDIT[2]

An index of financial conditions estimated for Peru is offered herein. The results show that, in a context in which the Central Bank of Peru maintains an expansionary monetary policy stance, the increase in the Fed interest rates has not resulted in tighter credit conditions, but rather has induced businesses to substitute credit in dollars for credit in soles, which reduces the impact of higher international interest rates on domestic credit conditions. This process of credit de-dollarization also reinforces the transmission of domestic monetary policy.

As the graph below shows, credit in dollars was significantly substituted for credit in soles between 2015 and 2016, reducing the credit dollarization ratio from 38 to 30 percent. This rapid replacement of credit in dollars for credit in soles responded, in part, to the impact of the additional reserve measures adopted by BCRP to induce credit de-dollarization. A similar trend, albeit of smaller magnitude, has been observed during 2018 in response to the increase in the cost of credit in dollars associated with hikes in the monetary policy rate of the Fed: between December 2017 and November 2018, the pace of growth of credit in dollars slowed down from 9.9 to 2.1 percent whereas credit in soles grew from 5.3 to 10.6 percent.

CREDIT TO THE PRIVATE SECTOR
(12-month % change)

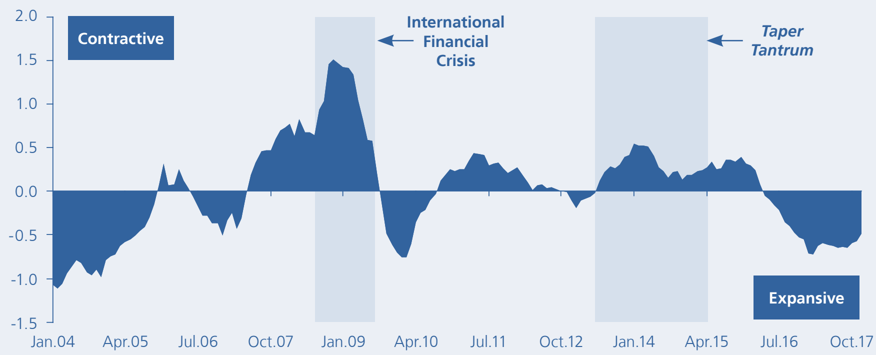


To quantify the joint impact of domestic factors, such as the monetary policy position of BCRP, and external factors, such as the monetary policy position of the Fed, we estimated an index of financial conditions for Peru.

2 This essay is based on the working paper "Estimación de un Índice de Condiciones Monetarias para el Perú" authored by Rafael Nivín and Fernando Pérez Forero.

Hatzius et al. (2010)[3] state that a Financial Conditions Index (FCI) should summarize the information contained in different variables related to the current and future situation of the financial system. Ideally, it should measure financial shocks (exogenous changes in financial conditions), which may affect the future evolution of economic activity and inflation. The index estimated herein uses as a starting point Chapter 3 of the IMF's Global Financial Stability Report (GFSR) of October 2017, which specifies the main variables that are used to obtain this FCI in the case advanced economies and other emerging economies through the methodology proposed by Koop and Korobilis (2014)[4]. In the case of our index, we must also assess financial variables that capture the effect of financial dollarization.

INDEX OF FINANCIAL CONDITIONS FOR PERU (2004-2017)



FINANCIAL VARIABLES USED IN THE ICF

Total credit (Constant ER)	Stock Exchange Index BCRP
Commercial credit	Market capitalization / GDP
Commercial credit / Assets	Mining credit / GDP
Consumer credit	Bonds / GDP BCRP
Consumer credit / Assets	Credit / GDP
Mortgage credit	Spread Credit Default Swaps
Mortgage Loan / Assets	Spread Embig
Default	Spread Interbank Rate-Reference
Total Assets	Spread Active Rate-Pasive Rate
House prices	LSE volatility (GARCH)
Portfolio of AFP / GDP	Volatility Exchange Rate (GARCH)

Source: BCRP, SBS and Bloomberg.

3 Hatzius, Jan, Peter Hooper, Frederic S. Mishkin, Kermit L. Schoenholtz, and Mark W. Watson, "Financial Conditions Indexes: A Fresh Look after the Financial Crisis," NBER Working Papers 16150, National Bureau of Economic Research, Inc July 2010.

4 Koop, Gary and Dimitris Korobilis, "A new index of Financial conditions," European Economic Review, 2014, 71 (C), 101-116.

The results of the index estimated for Peru show that financial conditions tightened during the International Financial Crisis (2008-2009) and the Fed Tapering period (2013-2015). Both episodes were associated with a strong depreciation of the sol, which in a context of financial dollarization, increased the cost of credit in dollars. Today, on the other hand, the expansionary monetary policy position –measured through the reduction of the benchmark interest rate (from 4.25 percent in May 2017 to 2.75 percent in March 2018)– and the reduction of reserve requirements in dollars (from 70 percent in December 2016 to 35 percent in June 2018) have contributed to ease domestic financial conditions, which has reflected in the recovery of the demand for credit in soles, despite the increase in international interest rates.

As previously mentioned, this reflects, in part, the substitution of credit in dollars for credit in soles, a portfolio change that is much more noticeable in segments such as the segment of lending to small and micro-enterprises and medium-sized companies (SMEs).

CREDIT FLOW TO THE PRIVATE SECTOR ON DEPOSITORY CORPORATIONS

	2016		2017		2018*	
Segment	**Millions (S/)**	**Millions (US$)**	**Millions (S/)**	**Millions (US$)**	**Millions (S/)**	**Millions (US$)**
PYMES	221	-125	198	-38	285	-46
Medium businesses	2,471	-567	459	-224	754	-137
Big businesses	-884	261	-1,417	959	653	318
Corporate	1,129	846	-332	1,865	3,127	351
Total	**2,937**	**415**	**-1,091**	**2,562**	**4,819**	**486**

* As of September.
Source: RCC.

In the sectors of corporations and large enterprises, this substitution has been more intensely observed in 2018, as reflected in banks and other depository institutions' increased demand for funding in soles, which has pushed up prime rates in soles. In response to this, BCRP has provided banks with soles injecting liquidity in domestic currency through both security and currency repo operations as well as through the auction of Public Treasury deposit funds.

In conclusion, the monetary policy easing actions carried out by BCRP both through the policy interest rate and the reduction of reserve requirements have contributed to maintain flexible monetary conditions which not only have favored a greater growth of credit in soles, but also have contributed to reduce the financial system's vulnerability vis-à-vis volatility in international financial markets.

Box 2

EFFECT OF BCRP DE-DOLLARIZATION MEASURES ON CREDIT IN THE FINANCIAL SYSTEM[5]

The effect of the measures adopted by BCRP as from December 2014 in terms of additional reserve requirement in foreign currency with the purpose of accelerating the reduction of credit in dollars is quantified in this box. The considerably broad level of details of the consolidated credit registry (CCR) database used to do so allowed us to quantify the effect of the BCRP measures much more accurately, the granularity of the data allowing to control for the effect of changes in the distribution of credit at the level of banks, businesses, and macroeconomic conditions over time.

In December 2014, BCRP established additional reserves in foreign currency that activated if financial institutions failed to reduce their balances of credit in dollars. It should be pointed out that these measures excluded loans for foreign trade operations as well as loans of over US$ 10 million with a maturity term of more than 3 years.

ADDITIONAL RESERVE REQUIREMENTS TO CREDIT IN FOREIGN CURRENCY EXCLUDING FOREIGN TRADE

Date	Credit thresholds that trigger additional reserve requirements	Validity 1/
As of June 2015	0.95 times the balance of Sep.13 or 0.92 times the balance of Dec.14 or 100% PE or US $ 100 MM	Validity 1
As of December 2015	0.9 times the balance of Sep.13 or 0.85 times the balance of Dec.14 or 100% PE or US $ 100 MM	Validity 2
As of December 2016	0.8 times of balance of Sep.13 or 100% PE or US $ 100 MM	Validity 3

1/ The validity of measures 1 and 2 begins with circular 006-2015-BCRP published on January 27, 2015, while period 3 begins with the Circular 041-2015-BCRP, published on November 4, 2015.

It is also worth pointing out that such prudential de-dollarization measures were announced by BCRP in advance in order to generate incentives for financial institutions to reduce their levels of credit in dollars.

The database includes data from 16 banks and 280 thousand companies with monthly data between December 2010 and December 2017, which provides a total of 7.5 million company-month observations. Moreover, control variables include macroeconomic variables such as the interest rate spread, GDP growth, exchange rate expectations, exchange rate volatility, and individual characteristics of the banks (such as data on delinquency, liquidity, profitability, and capitalization) as well as characteristics of the companies that borrow dollars (foreign trade identifier, access to financial hedge identifier, among others).

5 The content of this box is based on the study "Evaluación del impacto de las medidas de desdolarización del crédito en Perú" carried out by Alex Contreras, Rocío Gondo, Erick Oré, and Fernando Pérez Forero, December 2018.

The estimates of the panel data model with fixed effects show the impact of de-dollarization measures on the average degree of dollarization, reflecting that although there already was a slight tendency to reduce credit dollarization, the pace of such a reduction doubled as a result of these measures. The table below shows that the measures effective as from June 2015 reduced the degree of credit dollarization by 1.1 percentage points on average in the 6 months after they were announced, while the measures effective as from December 2015 reduced it by 1.7 additional percentage points in the 12 months after their announcement.

Some differentiated effects were also identified. For instance, the data show that the banks focused on the segments of corporate loans and credit to small and micro businesses were the ones that reacted most to the de-dollarization program in 2013, showing an average reduction of 2.1 and 0.3 percentage points in credit dollarization, respectively. Moreover, the BCRP measures were also oriented to promote a recomposition of currencies in larger loans in dollars. Thus, for example, the measures of December 2015 contributed to reduce the ratio of dollarization by 6.4 and 2.8 percentage points in the third and fourth quartiles of larger amount loans, respectively.

TABLE: IMPACT OF DE-DOLLARIZATION MEASURES
(In percentage points)[1/]

Variables	(1)	(2)	(3)
Measure 2013	**0.6**		
2013 Corporates		-2.1*	
2013 Mype		-0.3*	
2013 Quartile 3			-0.13***
2013 Quartile 4			-0.05***
June 2015 measurement	**-1.1*** **	**-0.9*** **	
Jun 2015 Quartile 4			-1.7***
December 2015 measurement	**-1.7*** **	**-1.4*** **	
Dec 2015 Quartile 2			-2.0***
Dec 2015 Quartile 3			-6.4***
Dec 2015 Quartile 4			-2.8***
Macro controls	Yes	Yes	Yes
Controls banks	Yes	Yes	Yes
Control type of bank	No	Yes	No
Credit size control	No	No	Yes
Obsv	7.231.333	6.953.027	6.953.027
Business	264.787	263.631	263.631

* and *** represent significance at 10% and 1%, respectively.
1/ The impact considers from the date of announcement until the effective date. Thus, the measure of June 2015 considers the months of January to June and the one of December 2015 the months of January to December.

Additionally, estimates of the aggregate level of amortizations and new loans in foreign currency indicate a slowdown in the pace of growth of new loans in dollars and an acceleration in the amortization rate of loans in dollars, which implies that the de-dollarization process also involved a partial substitution of currencies through the prepayment of part of the credit in dollars through the use of new lines of credit in soles.

TABLE: ESTIMATED ANNUALIZED ELASTICITIES OF THE IMPACT OF DE-DOLLARIZATION MEASURES ON:

	(1)	(2)
New loans in dollars	-3.88***	-3.13***
Amortizations in dollars	0.31***	0.28***
Growth rate of credit in dollars		-1.26***

*** represents significance at 1%. The estimates in column (1) include controls by exchange rate, credit segment and type of company. Those in column (2) additionally include variables associated with the exchange rate.

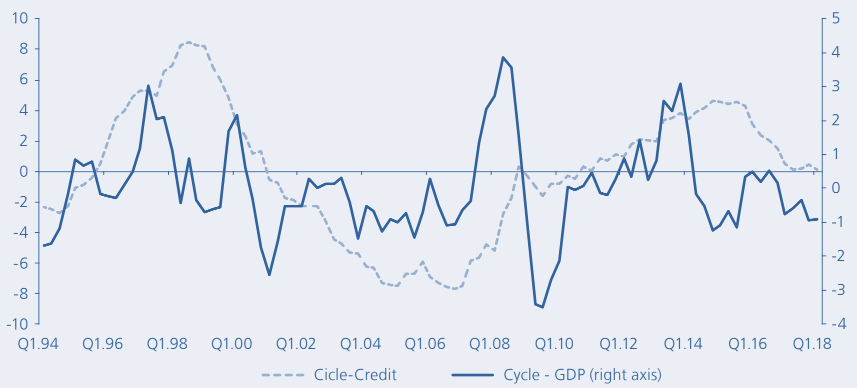
Therefore, based on the above statistical evidence, we can conclude that the BCRP measures have contributed to reduce the degree of dollarization of credit to the private sector. This de-dollarization process contributes to reduce the financial system's vulnerability to the foreign exchange-credit risk while strengthening the transmission mechanism of monetary policy at the same time.

Box 3
THE FINANCIAL CYCLE IN PERU[6]

The measurement of financial cycles is essential to assess potential financial risks associated with periods of excessive credit growth that introduce vulnerabilities to the financial system. An early warning of potential imbalances helps to take preventive actions on a timely basis.

In this box we estimate Peru's financial cycle using different methodologies and establish the difference between the financial cycle and the business cycle. It is worth pointing out that the financial cycle is more closely related to the evolution of asset prices, credit, and other financial variables, and to a lesser extent, to the business cycle. We also detect episodes in which credit to the private sector shows a rate of acceleration that differs significantly from the dynamics of the economy's real sector; for example, a significant and sustained flow of credits that is not accompanied by a similar growth of the economy may indicate that this dynamic is misaligned to its macroeconomic fundamentals and may generate inefficient resource allocations. In this line, the credit-to-GDP ratio[7] is often used as an indicator of the formation of vulnerabilities associated with the financial cycle.

REAL AND FINANCIAL CYCLE (%)



Memo: The Hodrick-Prescott filter is used with a smoothing parameter of 400,000 in case of credit and 1,600 in case of GDP.

The graph above shows Peru's business cycle gap and its financial cycle gap based on the credit-to-GDP ratio, both of which have been calculated using the Hodrick-Prescott

6 Paper based on the article "Ciclos Financieros en el Perú" witten by Fernando Pérez Forero and Diego Vilchez Neira.

7 This ratio is usually calculated as the division of the stock of loans granted to the private sector at the end of the period (expressed in domestic currency) by the nominal GDP accumulated over the past four quarters.

filter[8]. We can also see a greater persistence and amplitude of the credit cycle compared to the business cycle, as well as the low level of correlation between both variables.

It should be pointed out that even if the correlation between the two cycles is not very high, we must take into account that the aim of macro prudential policies is to manage the financial cycle –and not the business cycle– and to prevent the generation of systemic financial risks through early actions. In line with these arguments, several central banks and international institutions have taken actions aimed at preventing these events. For example, in 2010 the Basel Committee on Banking Supervision introduced the use of counter-cyclical capital reserves in Basel III, which is activated when "excessive credit growth" is observed. This measure, which is intended to protect commercial banks from the fluctuations of the financial cycle and the associated systemic vulnerabilities, was also implemented in Peru as of 2012[9]. A widely used approach to determine phases of "excessive" credit growth –relative to the real growth of the economy– involves calculating the trend of the credit-to-GDP ratio and analyzing the difference between such estimate and the observed ratio[10]. As a robustness exercise, estimates were made with the Christiano and Fitzgerald filter (2003: "The Band Pass Filter", International Economic Review, 44 (2), pp. 435-465[11]) as well as a Bayesian estimate using the Kalman filter based on a state space representation following Galati et al. (2016: "Measuring financial cycles with a model-based filter: Empirical evidence for the United States and the euro area," DNB Working Papers 495, Netherlands Central Bank, Research Department).

The next graph shows the financial cycle using the three alternative methodologies and quarterly data from 1994 to 2018 so that the analysis with each method covers similar periods of expansion and contraction. What we see first is an expansionary cycle between 1994 and 1998. Then, after the banking crisis of 1998, we see the start of a declining phase in the financial cycle after which begins a recovery phase in the mid-2000s when credit to the private sector registered high growth rates. This expansionary phase continued until 2013-2014, which is precisely when the episode called Tapering took place.

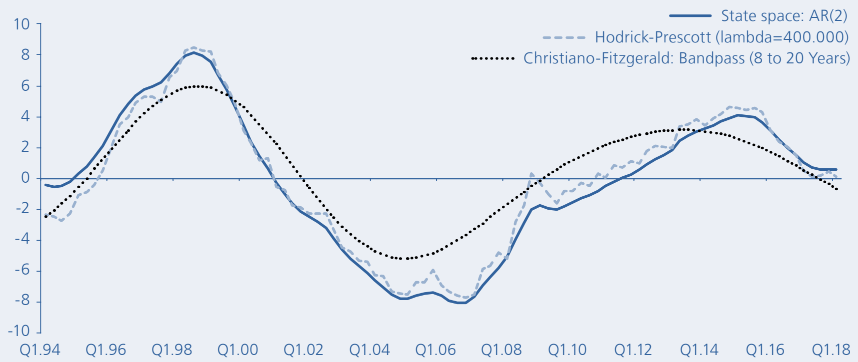
8 According to the stylized facts of the financial cycle, a higher than usual smoothing parameter is usually used in the filter estimation. Hodrick and Prescott (1982: "Postwar U.S. Business Cycles: an Empirical Investigation"; Journal of Money, Credit and Banking, 29 (1), Feb. 1997, pp. 1-16) suggest to use a parameter with a value of 1,600 for quarterly data using the dynamics of business cycles as a reference (see also Maravall and Del Río (2001): "Time aggregation and the Hodrick-Prescott filter", Bank of Spain – Servicio de Estudios – Documento de Trabajo No. 0108). In contrast, Borio and Lowe (2002: "Asset prices, financial and monetary stability: exploring the nexus". BIS Working Papers No. 114) estimate that a parameter of 400,000 would reflect the dynamics of the credit-to-GDP ratio more accurately.

9 SBS Resolution N°8425-2011.

10 For example, the BIS calculates the gap with respect to the trend of this ratio and uses it to determine when capital reserves should be accumulated/de-accumulated. It recommends using a 2 percent deviation as the activation rule, but also suggests using the judgment of experts in the sector in this process.

11 Aikman et al. (2015: "Curbing the Credit Cycle", The Economic Journal, 125 (585), pp. 1072-1109) say that the medium-term fluctuations that must be considered are those between 8 and 20 years. Such fluctuations are the ones that have been considered in the assessment of this filter.

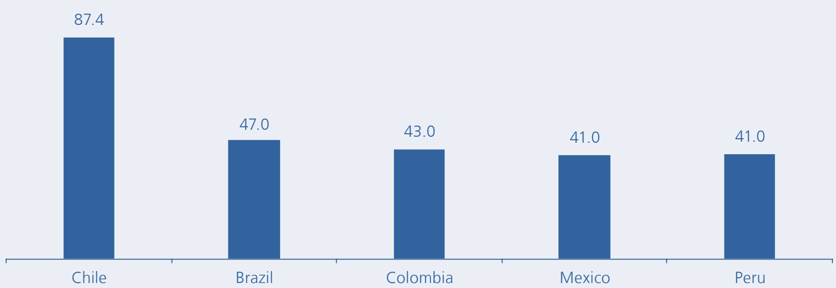
PERU: CYCLE OF CREDIT / GDP
(%)



Memo: The Hodrick-Prescott filter is used with a smoothing parameter of 400,000, the Bandpass filter captures the frequencies between 8 and 20 years and the Kalman filter with a state space specification that considers the trend, the Seasonality and cycle.

Despite the high growth of credit to the private sector compared to the evolution of economic activity, there is still enough space for the financial system to continue deepening and extending the coverage of its services to larger segments of the population. This space is reflected, for example, in Peru's low credit-to-GDP ratio in comparison to the ratios of other countries in the region.

RATIO CREDIT/GDP*
(%)



* As of Q3 2018.
Source: IMF.

Taking into account the above, we can conclude that the financial cycle has begun a new phase, which is similar to that observed at the beginning of the last decade, with higher output growth rates, an inflation rate within the target range, and a considerably lower degree of financial dollarization, which reduces the appearance of risks in the economy. Moreover, all of the empirical exercises show that there is currently no evidence of an excessive growth of credit given that the financial cycle gap estimated for 2018 is close to zero.

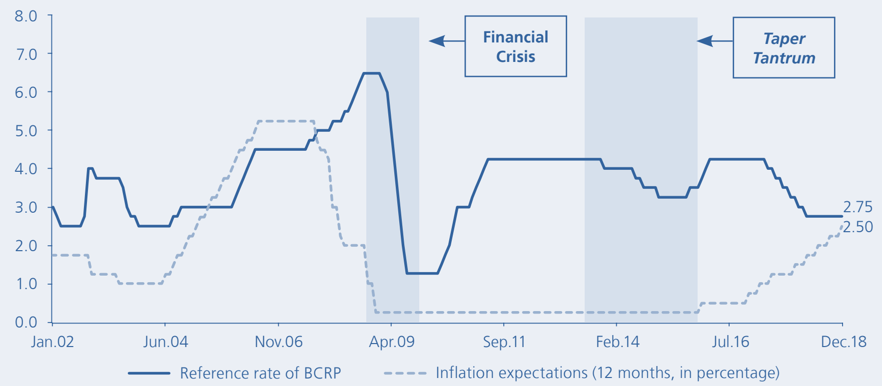
Box 4

THE BCRP MONETARY POLICY AND THE FED INTEREST RATE

In inflation targeting regimes, such as the one guiding the BCRP monetary policy, the benchmark interest rate is set in order to anticipate and respond in a timely and effective manner to future determinants of inflation. International factors, such as the Fed's interest rate, may have an indirect effect on the monetary policy rate of BCRP by affecting the output gap, the exchange rate, and imported inflation. This, however, does not imply that increases in the Fed interest rate will generate automatic increases in the BCRP interest rate.

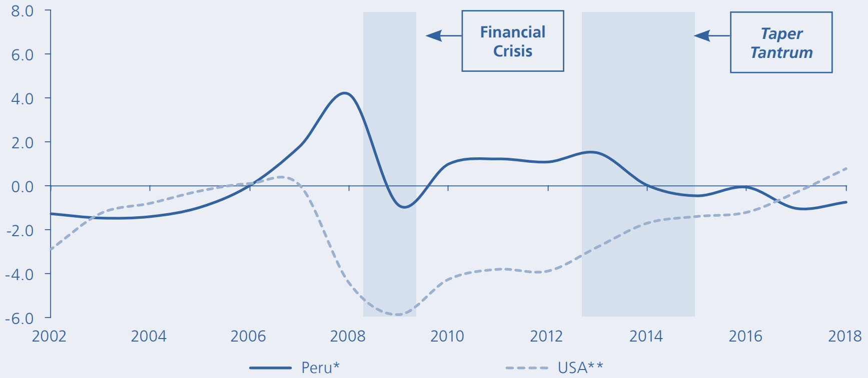
In fact, as the following graph shows, changes in the direction of the Fed rate and the BCRP rate have coincided only when the economic cycles and inflation have evolved in a similar way in both the US economy and the Peruvian economy. Thus, for example, in 2008 and 2009, both BCRP and the Fed reduced their respective monetary policy interest rates in response to the international financial crisis. Since both economic activity and inflation slowed down significantly then, an expansionary monetary policy stance was required in both countries. The correlation observed between both monetary policy rates since 2002 is 18 percent.

REFERENCE RATE AND INFLATION EXPECTATIONS: 2003-2018



The graph below shows the evolution of the economic cycle for Peru and the United States (USA), focusing on the output gap, which is an indicator of economic activity that measures potential inflationary demand pressures. This indicator was negative in 2009 in both countries. As from 2010, this indicator shows a fairly rapid recovery in the case of Peru, which coincides with the reversal of monetary stimulus by the Central Bank. On the other hand, the output gap was negative for a long period of time in the US, which coincided with a level of interest rates that remained at historical minimum levels. The correlation between the output gap of these two countries has been -40 percent since 2002.

OUTPUT GAP: 2002-2018
(As % potential GDP)



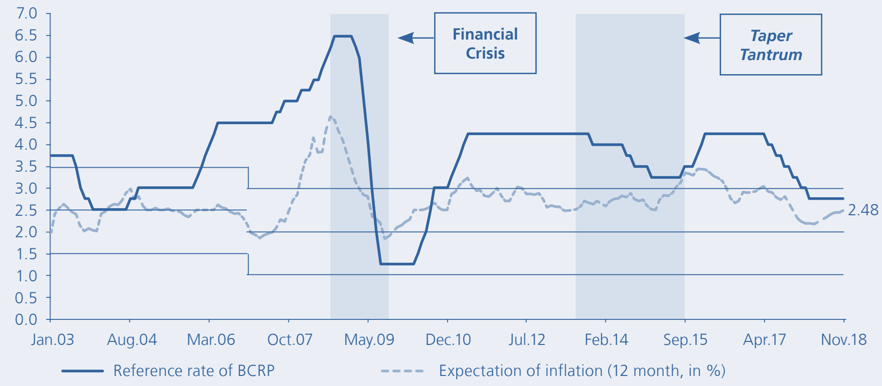
* BCRP.
**USA Congress office Budget.

As from 2015, we see more clearly that the output gap closes in the US, whereas in Peru it becomes more negative, reflecting, in part, the impact of the fall in commodity prices on private investment. In line with the macroeconomic fundamentals observed in each of these countries, the Fed began to gradually raise its monetary policy rate, while BCRP lowered its policy rate from 4.25 to 2.75 percent between May 2017 and March 2018 in response to a negative output gap. During this period, the BCRP expansionary policy position contributed to the recovery of aggregate spending and domestic demand, as well as to increase the pace of growth of the demand for credit. As a result, the latter increased from a real rate of 2.3 percent in the second quarter of 2017 to 7.5 percent in the third quarter of 2018.

Another fundamental determinant of monetary policy is expectations of inflation in the forecast horizon. The correlation between the benchmark rate and expectations of inflation in 12 months is 63 percent. The following graph shows the high correlation existing in Peru between the monetary policy rate and the evolution of inflation expectations one year ahead.

Inflation expectations depend on macroeconomic conditions such as the output gap, imported inflation and the foreign exchange rate, and the monetary policy stance. Therefore, the Fed rate may also have an indirect effect on inflation expectations, which may lead to changes in the monetary policy rate of BCRP. Thus, if the increase in the Fed interest rates generates a persistent depreciation in the local currency, as happened in 2014 and 2015, it is very likely that BCRP will respond to this by modifying its monetary policy stance to offset the impact of persistent depreciation on inflation expectations.

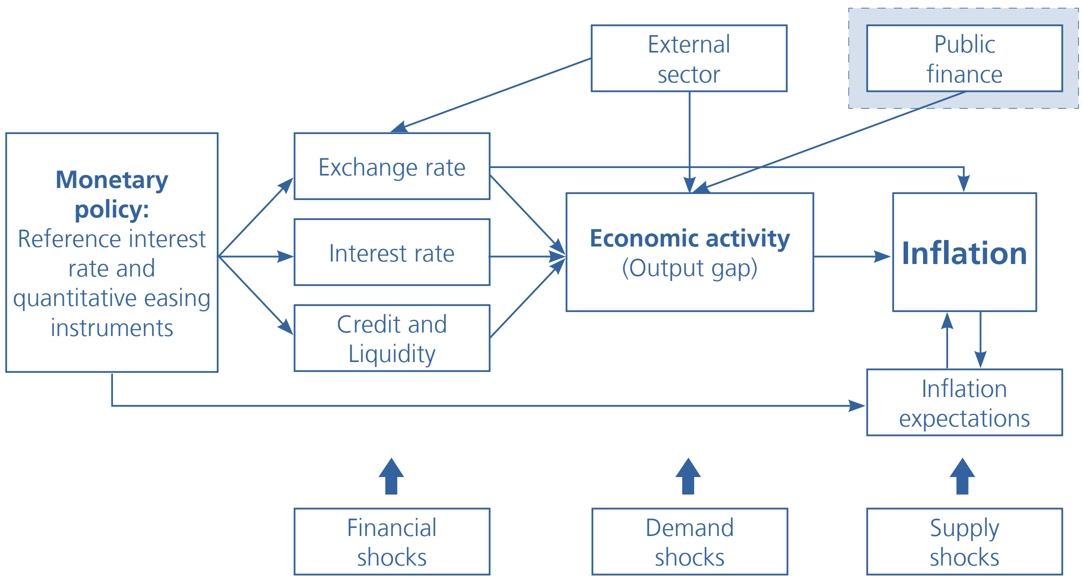
REFERENCE RATE AND EXPECTATION OF INFLATION: 2003-2018



It is worth pointing out that the independence of the central bank in economies with credible monetary schemes, sound fundamentals, and flexible exchange rate regimes is essential to take the monetary policy actions required to respond to domestic macroeconomic conditions. The interest rate of the Fed is one of the determinants of macroeconomic conditions, but it does not necessarily determine the direction of monetary policy.

Chapter 3

PUBLIC FINANCES



III. Public Finances

Fiscal Accounts at November 2018

42. The **fiscal deficit** accumulated in the last twelve months decreased from 3.1 percent of GDP at the end of 2017 to 2.3 percent of GDP in November 2018 due to the increase in the current revenues of the general government, from 18.1 to 19.5 percent of GDP, while current expenditure rose only from 15.4 to 15.6 percent of GDP.

Graph 42
ECONOMIC BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2014 - 2018
(Accumulated last 12 months - % GDP)

Graph 43
CURRENT REVENUES OF THE GENERAL GOVERNMENT: 2014 - 2018
(Accumulated last 12 months - % GDP)

Graph 44
NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT: 2014 - 2018
(Accumulated last 12 months - % GDP)

This figures reflect the consolidation trend observed in public finances as a result of which public finances will show a balance compatible with solvency, that is, with a sustainable trend in the public debt.

43. In January-November 2018, the economic deficit totaled S/ 7.75 billion, a sum S/ 4.99 billion lower than that recorded in the same period of 2017. This lower deficit is mainly explained by the increase in the current revenues of the general government (15.3 percent), particularly tax revenue, offset by higher non-financial expenditures, including both current expenditure and expenditure in gross capital formation, as well as higher repayments of debt interests.

Table 32
ECONOMIC BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR
(Million S/)

	Jan.-nov.			Var. %	
	2016	**2017**	**2018**	**2017**	**2018**
1. General government current revenues	**110,844**	**113,634**	**131,045**	**2.5**	**15.3**
a. Income tax	33,566	32,837	38,292	-2.2	16.6
b. Value added tax	48,149	49,800	55,496	3.4	11.4
c. Excise tax	5,365	5,739	6,266	7.0	9.2
d. Others	23,765	25,258	30,991	6.3	22.7
2. General government non-financial expenditure	**-111,594**	**-118,972**	**-128,815**	**6.6**	**8.3**
a. Current expenditure	-87,367	-92,254	-99,647	5.6	8.0
b. Gross capital formation	-20,780	-21,922	-25,647	5.5	17.0
c. Other	-3,447	-4,796	-3,520	39.1	-26.6
3. Others	**-783**	**648**	**-385**		
4. Primary balance (=1+2+3)	**-1,533**	**-4,690**	**1,845**		
5. Interests	**-7,032**	**-8,051**	**-9,592**		
6. Overall Balance (=4+5)	**-8,565**	**-12,740**	**-7,747**		

44. The increase in current revenues is explained by the growth of revenues from the income tax –resulting mainly from the regularization of this tax by mining companies– and the added value tax (VAT), in line with the recovery of domestic demand. In addition, there was also a decrease in tax refunds, particularly in those related to exports.

The non-financial public expenditure of the general government increased by 8.3 percent in January-November 2018 compared to the same period of 2017. The increase in current expenditure is mainly explained by the increase in wages and transfers, while gross capital formation increased by 17.0 percent, driven mainly by investment in transportation-related infrastructure works carried out in the country and by progress in the implementation of the infrastructure projects for the Pan American Games.

45. It is estimated that the cost of projects implemented within the framework of the **Reconstruction with Changes** program in the period of January-November 2018 amounted to S/ 1.26 billion, which represents 28 percent of the annual budget framework and 4.9 percent of the total amount projected for reconstruction. Moreover, S/ 550 million has been accrued in terms of capital expenditure –20 percent of the total–, the projects carried out by local and regional governments (with S/ 186 million and S/ 185 million, respectively) standing out.

Furthermore, at November 2018 the sports infrastructure projects for the Pan American Games show an implementation degree of 66 percent of the modified institutional budget, the most representative projects in terms of the amount of investment at November being the Villa Deportiva Nacional (VIDENA) and the Pan American Village.

Forecasts

46. The fiscal deficit projected for 2018 has been revised down from 2.8 percent of GDP in September 2018 to 2.7 percent of GDP in this report. This favorable trend is explained by estimations of higher revenues (up from 19.1 percent of GDP in the report of September 2018 to 19.3 percent of GDP in this report). Non-financial expenditure would be equivalent to 20.6 percent of GDP, close to the level projected originally.

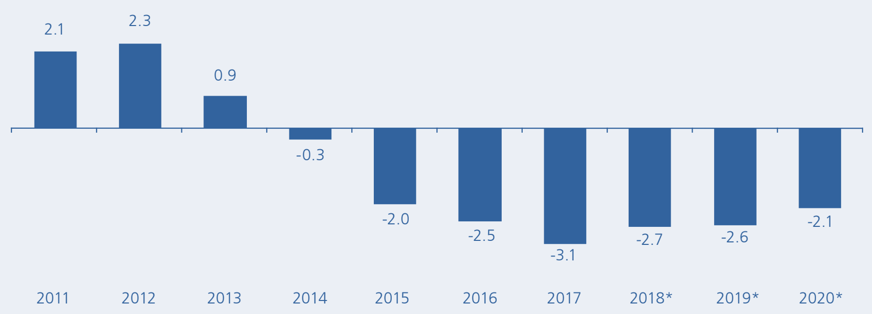
In 2019 and 2020 the deficit is estimated to decrease to 2.6 and 2.1 percent of GDP, respectively, the lower weight of non-financial expenditure (20.4 percent of GDP) between 2018 and 2019 being noteworthy due to the lower dynamism of expenditure at the level of local and regional governments during the first year that the new authorities of the subnational governments are in office.

Table 33
NON-FINANCIAL PUBLIC SECTOR
(% GDP)

	2017	2018*		2019*		2020*
		IR Sep.18	IR Dec.18	IR Sep.18	IR Dec.18	IR Dec.18
1. General government current revenues	**18.1**	**19.1**	**19.3**	**19.3**	**19.3**	**19.4**
Real % change	*0.4%*	*10.4%*	*11.7%*	*4.5%*	*4.0%*	*4.9%*
2. General government non-financial expenditure [1/]	**20.1**	**20.5**	**20.6**	**20.4**	**20.4**	**20.0**
Real % change	*4.2%*	*6.7%*	*7.0%*	*3.2%*	*3.3%*	*2.0%*
Of which:						
Current expenditure	15.4	15.6	15.6	15.7	15.6	15.3
Real % change	*3.9%*	*6.3%*	*6.5%*	*4.1%*	*4.2%*	*1.6%*
Gross capital formation	4.0	4.3	4.4	4.1	4.2	4.2
Real % change	*1.6%*	*11.8%*	*14.6%*	*0.0%*	*-0.5%*	*3.8%*
3. Others	**0.1**	**-0.1**	**-0.1**	**-0.1**	**-0.1**	**-0.1**
4. Primary balance (1-2+3)	**-1.9**	**-1.5**	**-1.3**	**-1.3**	**-1.2**	**-0.7**
5. Interests	**1.2**	**1.3**	**1.3**	**1.3**	**1.4**	**1.5**
6. Overall Balance	**-3.1**	**-2.8**	**-2.7**	**-2.6**	**-2.6**	**-2.1**

1/ Includes net accrued expenses to FEPC.
* Forecast.
IR: Inflation Report.

Graph 45
ECONOMIC BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2011 - 2020
(% GDP)



* Forecast.

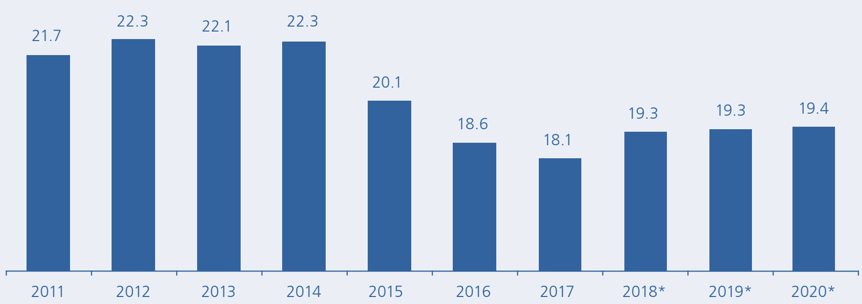
47. It is estimated that current revenues will increase to 19.3 percent of GDP in both 2018 and 2019. This upward correction of revenue in 2018 from the estimation considered in our previous report is explained mainly by lower tax refunds. In 2019 these levels of revenues in GDP terms are expected to continue being observed, while in 2020 revenues are estimated to increase by 0.1 percentage points of GDP to 19.4 percent by the end of the forecast horizon.

Table 34
CURRENT REVENUES OF THE GENERAL GOVERNMENT
(% GDP)

	2017	2018*		2019*		2020*
		IR Sep.18	IR Dec.18	IR Sep.18	IR Dec.18	IR Dec.18
TAX REVENUES	**13.4**	**14.4**	**14.5**	**14.5**	**14.6**	**14.8**
Income tax 1/	5.3	5.6	5.6	5.5	5.5	5.6
Value added tax	7.8	8.2	8.2	8.3	8.3	8.4
Excise tax	0.9	1.0	0.9	1.1	1.0	1.0
Import duties	0.2	0.2	0.2	0.2	0.2	0.2
Other tax revenues	1.6	1.7	1.8	1.7	1.7	1.7
Tax returns	-2.5	-2.4	-2.2	-2.3	-2.2	-2.1
NON-TAX REVENUES	**4.7**	**4.7**	**4.8**	**4.7**	**4.7**	**4.6**
Contributions to social security	2.1	2.2	2.2	2.2	2.2	2.2
Own resources and transfers	1.7	1.5	1.6	1.5	1.5	1.5
Oil and gas royalties and other royalties	0.6	0.7	0.7	0.6	0.6	0.6
Rest	0.4	0.4	0.4	0.3	0.4	0.4
TOTAL	**18.1**	**19.1**	**19.3**	**19.3**	**19.3**	**19.4**

1/ Includes revenues by repatriation of capital.
* Forecast.
IR: Inflation Report.

Graph 46
CURRENT REVENUES OF THE GENERAL GOVERNMENT: 2011 - 2020
(% GDP)



* Forecast.

48. In 2018, expenditure would represent 20.6 percent of GDP, the projection having been revised up by 0.1 percentage point of GDP. Compared to the projection of 2017, this represents an increase of 0.2 percentage points of GDP in current expenditure (15.6 percent of GDP) and an increase of 0.4 percentage points of GDP in gross capital formation (4.4 percent of GDP). These projections take into account a greater implementation of projects by the local governments, as well as the projects for the Pan American Games, and to a lesser extent, the projects and public works carried out within the framework of the Plan of Reconstruction with Changes.

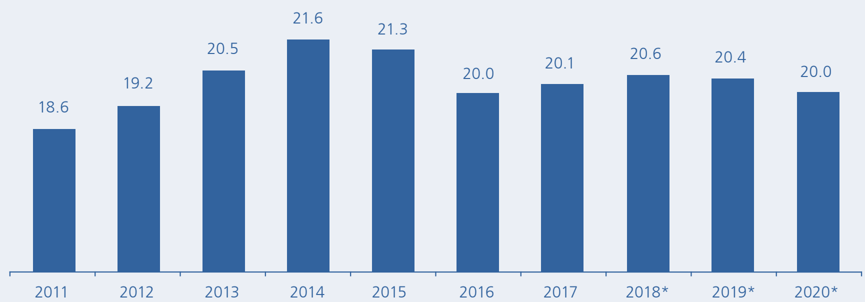
As forecast in the Inflation Report of September, it is estimated that in 2019 non-financial expenditure would be equivalent to 20.4 percent of GDP. Moreover, it is worth pointing out that in 2019 gross capital formation would be lower than in the previous year given that the change in the administration of local and regional governments is foreseen to affect the pace of public investment. In 2020 the non-financial expenditure of the general government would reach 20.0 percent of GDP.

Table 35
NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT
(% GDP)

	2017	2018*		2019*		2020*
		IR Sep.18	IR Dec.18	IR Sep.18	IR Dec.18	IR Dec.18
Current expenditure	**15.4**	**15.6**	**15.6**	**15.7**	**15.6**	**15.3**
National Government	10.5	10.7	10.5	10.7	10.6	10.3
Regional Governments	3.3	3.4	3.4	3.2	3.4	3.3
Local Governments	1.6	1.6	1.7	1.8	1.7	1.7
GASTO DE CAPITAL	**4.7**	**4.9**	**4.9**	**4.7**	**4.7**	**4.7**
Gross capital formation	**4.0**	**4.3**	**4.4**	**4.1**	**4.2**	**4.2**
National Government	1.4	1.5	1.5	1.7	1.8	1.7
Regional Governments	0.8	0.9	0.9	0.8	0.8	0.8
Local Governments	1.8	1.9	2.0	1.7	1.6	1.7
Others	**0.7**	**0.6**	**0.5**	**0.6**	**0.6**	**0.5**
TOTAL	**20.1**	**20.5**	**20.6**	**20.4**	**20.4**	**20.0**
National Government	12.6	12.7	12.5	13.0	12.9	12.4
Regional Governments	4.1	4.2	4.3	4.0	4.1	4.1
Local Governments	3.4	3.6	3.7	3.4	3.3	3.5

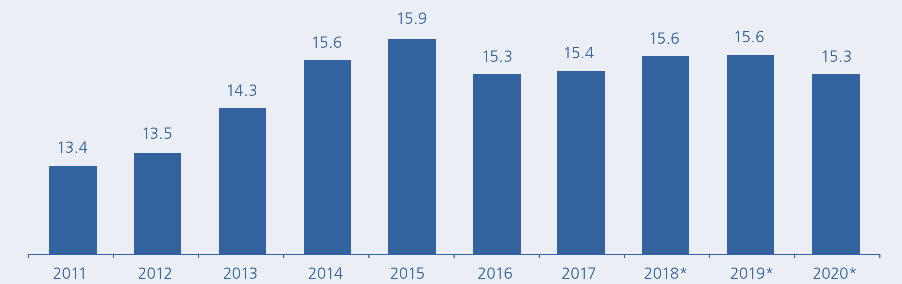
* Forecast.
IR: Inflation Report.

Graph 47
NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT: 2011 - 2020
(% GDP)



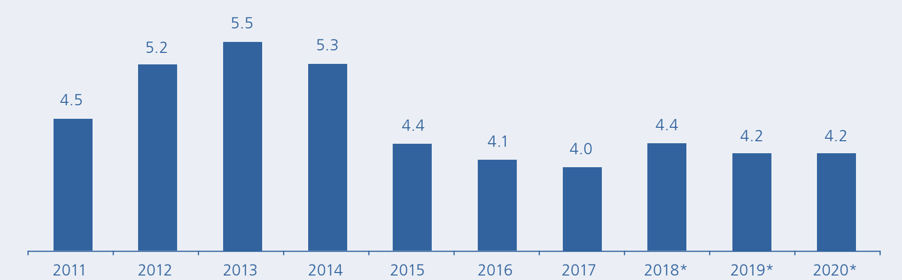
* Forecast.

Graph 48
CURRENT EXPENDITURE OF THE GENERAL GOVERNMENT: 2011 - 2020
(% GDP)



* Forecast.

Graph 49
GROSS CAPITAL FORMATION OF THE GENERAL GOVERNMENT: 2011 - 2020
(% GDP)



* Forecast.

Table 36
GROSS CAPITAL FORMATION OF THE NON-FINANCIAL PUBLIC SECTOR
(Million S/)

Main items	2017	2018*	2019*	2020*
Reconstruction with Changes 1/	35	850	3,500	4,500
PanAmerican Games 2/	362	833	635	-.-
Lima Metro's Line 2	674	467	520	2,000
Talara Refinery	1,961	1,986	2,700	1,690

* Forecast.
1/ Only includes investment expenses.
2/ It only considers the investment expenditure of the national government (does not include road works).

49. The structural primary balance seeks to reflect the effects of monetary policy decisions beyond the effects of factors that are not within government control, such as the effects of export prices and their impact on revenues from the income tax or the stage of the business cycle and its effect on tax revenue. In

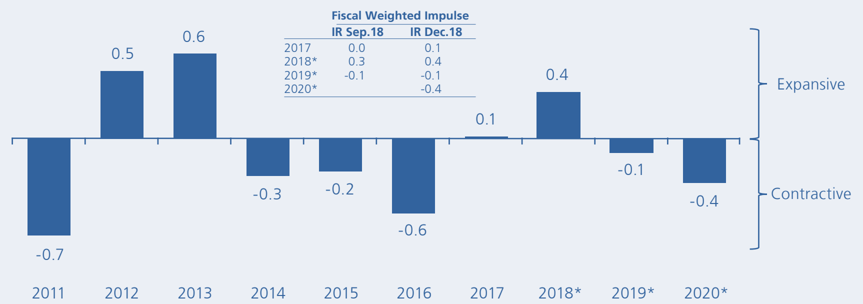
addition, the **weighted fiscal impulse** considers the multiplier effects of changes in the structural components of fiscal revenues, current expenditures, and capital expenditures to obtain a measurement that takes into account the relative difference of the impacts of changes in these three variables on productive activity. Thus, between 2017 and 2018 the weighted fiscal impulse went from 0.1 to 0.4 percent of GDP. On the other hand, a contractionary position is projected for 2019 and 2020, in line with the need of consolidating public finances.

Table 37
STRUCTURAL BALANCE AND FISCAL IMPULSE
(% Potential GDP)

	2016	2017	2018*	2019*	2020*
I. Conventional fiscal balance					
1. Current revenues	18.6	17.9	19.2	19.2	19.4
2. Non-financial expenditures	-19.9	-19.9	-20.4	-20.3	-19.9
i. Current	-19.9	-15.2	-15.5	-15.6	-15.2
ii. Capital	0.0	-4.7	-4.9	-4.7	-4.7
3. Others	-0.1	0.1	-0.1	-0.1	-0.1
4. Conventional primary balance	-1.4	-1.9	-1.3	-1.2	-0.7
II. Structural primary balance 1/					
1. Current revenues	18.5	18.0	19.2	19.2	19.4
2. Non-financial expenditures	-19.9	-19.9	-20.4	-20.3	-19.9
i. Current	-15.2	-15.2	-15.5	-15.6	-15.2
ii. Capital	-4.7	-4.7	-4.9	-4.7	-4.7
3. Others	-0.1	,0.1	-0.1	-0.1	-0.1
4. Structural primary balance	-1.5	-1.9	-1.3	-1.2	-0.6
III. Weighted fiscal impulse	**-0.6**	**0.1**	**0.4**	**-0.1**	**-0.4**

* Forecast.
1/ The structural result deduces the transitory effects linked to the business cycle, as well as the effects of commodity prices.

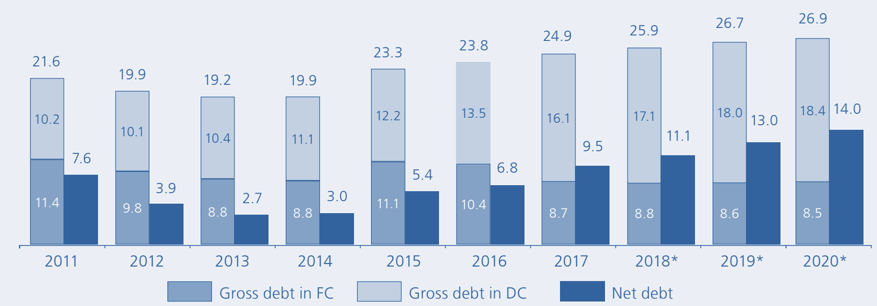
Graph 50
FISCAL WEIGHTED IMPULSE 1/
(% Potential GDP)



1/ The weighted impulse takes account the multiplier model of changes in the incomes, current expensives and public investment.
* Forecast.

50. The net public debt would increase from 9.5 percent of GDP in 2017 to 11.1 percent of GDP in 2018, while in 2019 and 2020 the increase in the net debt would be offset by a lower fiscal deficit. On the other hand, in gross terms the debt would increase at a lower rate, from 24.9 percent of GDP in 2017 to 25.9 percent of GDP in 2018, to 26.7 percent of GDP in 2019 and to 26.9 percent of GDP in 2020. The Fiscal Responsibility Act establishes the equivalent of 30 percent of GDP as the limit of the public debt.

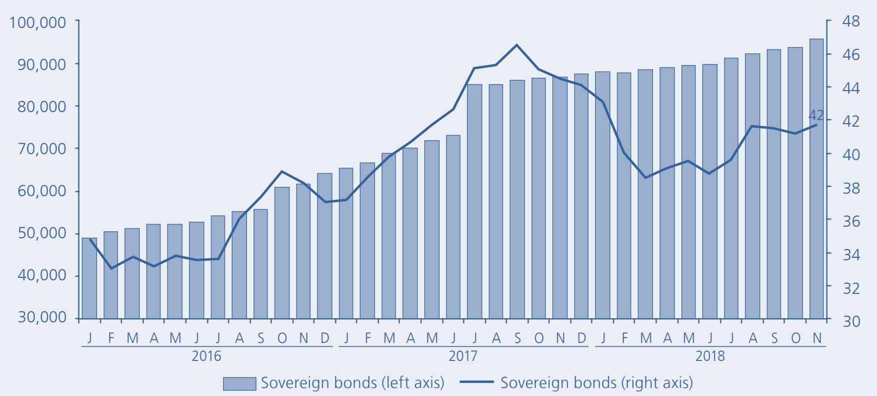
Graph 51
NON-FINANCIAL PUBLIC SECTOR DEBT: 2011 - 2020
(% GDP)



* Forecast.

The balance of **sovereign bonds** was S/ 95.67 billion in November 2018, S/ 2.29 billion higher than the balance in the third quarter of 2018. On the demand side, the participation of non-resident investors stands out as the main investors in these instruments since their holdings increased from S/ 38.76 billion in September to S/ 39.89 billion in November.

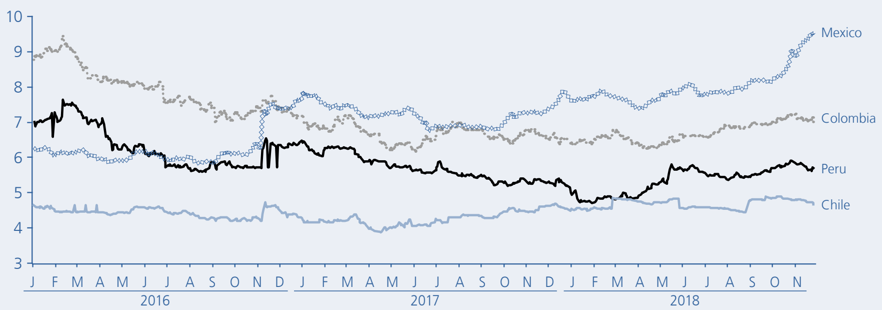
Graph 52
BALANCE OF SOVEREIGN BONDS AND SHARES OF NON-RESIDENT INVESTORS
(Amounts in million soles and shares in %)



Source: MEF.

The yield on 10-year bonds in domestic currency in the region decreased 26 basis points on average between September and November 2018, mainly due to the good performance of the Brazilian bond associated with the reduction of its political risk. In Peru, the yield increased from 5.60 to 5.67 percent amid a context of volatility in financial markets, no capital outflows being observed.

Graph 53
10-YEAR TREASURY BOND YIELDS IN DOMESTIC CURRENCY
(%)



Source: MEF and Bloomberg.

51. The sum required to finance the fiscal deficit plus the amounts required for the debt repayments show that financing requirements will continue to fall in the 2018-2020 period. Thus, the financing requirement, which in 2017 was S/ 39.43 billion (5.6 percent of GDP), is estimated to decline to S/ 31.16 billion (4.2 percent of GDP) in 2018, to S/ 24.92 billion (3.2 percent of GDP) in 2019, and to S/ 21.95 billion (2.6 percent of GDP) in 2020.

The disbursement and amortization figures of 2018 have been revised from those considered in our September Inflation Report mainly as a result of debt management operations carried out in November. A part of Global Bond BG30MAR2019 (US$ 247 million out of a total of US$ 396 million) was repurchased through the first operation, placing sovereign bonds for a total of S/ 822 million, while the second operation allowed to repurchase a part of Global Bond BG30MAR2019 and Sovereign Bonds BS12AGO2020 and BS12FEB2029 as well as to prepay the loans of international organizations, placing a sovereign bond (BS12FEB2029E) for a total of S/ 10.35 billion. The difference between the amount of the placement and the repurchases and prepayment constitutes the pre-financing of the public sector operations of 2019. This debt management operation is discussed in further detail in Box 7.

Table 38
FINANCIAL REQUIREMENTS OF THE NON-FINANCIAL PUBLIC SECTOR AND ITS FUNDING
(Million S/)

	2017	2018*		2019*		2020*
		IR Sep.18	IR Dec.18	IR Sep.18	IR Dec.18	IR Dec.18
I. USES	**39,428**	**24,833**	**31,157**	**25,645**	**24,921**	**21,953**
1. Amortization	17,695	4,199	11,479	5,189	4,390	4,043
a. External	13,566	1,511	4,209	3,810	3,012	1,319
b. Domestic	4,130	2,689	7,270	1,378	1,379	2,723
Of which: Recognition bonds	*818*	*1,030*	*1,183*	*650*	*650*	*550*
2. Overall Balance	21,733	20,634	19,679	20,457	20,531	17,910
(Negative sign indicates surplus)						
II. SOURCES	**39,428**	**24,833**	**31,157**	**25,645**	**24,921**	**21,953**
1. Disbursements and other	33,080	18,006	27,137	24,339	22,202	18,427
2. Change on deposits and other [1/]	6,348	6,827	4,020	1,306	2,719	3,525

1/ A positive sign indicates a reduction of deposits.
* Forecast.
IR: Inflation Report.

Box 5

DEBT MANAGEMENT OPERATION OF THE PERUVIAN GOVERNMENT IN THE INTERNATIONAL MARKET

On November 29, 2018, the Ministry of Economy and Finance (MEF) announced two international debt management operations[12] aimed at improving the conditions of the public debt: an offer to purchase cash sovereign bonds 2020 and 2029 (including Global Depositary Notes (GDN)[13] and 2019 global bonds, which would be financed through the issuance of a new bond maturing in 2029. The resulting resources would be used to prepay some loans granted by international organizations and to pre-finance the operations of FY 2019.

The results of the first operation were announced on Friday, November 30 at 9 a.m. and the bonds were settled on December 6 through the International Central Securities Depositary Euroclear, which allowed non-resident investors to participate directly and to pay the securities in dollars. The repurchase price offered sought to compensate investors for the coupons that would not be received and for the reinvestment risk. In total, the MEF repurchased S/ 4.43 billion of 2020 and 2029 BTP as well as US$ 0.5 million of Global Bond 2019, and issued a total of S/ 10.35 million of a new 2029BTP.

RESULTS OF THE DEBT MANAGEMENT OPERATION
(Million S/)

	Supply			Saving amount	
Bonds	**Coupon rate (%)**	**Original balance***	**Repurchasing price****	**Nominal value**	**Actual balance**
BTP 12Aug2020	7.84	4,400.9	1,081.5	2,827.3	1,573.6
BTP 12Feb2029	6.00	1,644.8	1,025.8	1,605.9	39.0
Global 30Mar2019	7.13	149.2	1,020.5	0.5	148.7
BTP 12Feb2029	5.94	0.0			10,350.0
Balance BTP (Mill. S/)		**6,045.7**		**4,433.2**	**11,962.6**
Global balance(Mill. US$)		**149.2**		**0.5**	**148.7**

* As of October 31, 2018.
** Per each S/ 1 000 of nominal value (BTP) and US$ 1 000 (global bond).

12 Through Resolution No. 408-2018-EF/52 dated November 28, 2018, the MEF approved the implementation of a debt management operation and the issuance of a bond for a maximum amount of US$ 3.50 billion to finance the following operations: repurchase and switch of global and sovereign bonds and the partial and/or total prepayment of certain loans, and pre-financing the public sector's financial requirements for fiscal year 2019.

13 GDN are financial instruments created by a depositary bank that allows foreign investors to acquire debt instruments in the international market in dollars and to receive the bond coupons in US dollars, even if both the bonds and the coupons are denominated in soles.

Through this operation, the MEF placed S/ 10.35 billion of the new 2029BTP at a coupon rate of 5.94 percent, S/ 4.43 billion through the repurchase and switch of 2020 and 2029BTPs and S/ 5.92 billion through auctions. It is estimated that non-resident investors acquired about 70 percent of the total amount issued. The spread of 2029BTP on the Peruvian global bond and the equivalent US Treasury bond is 194 and 298 basis points, respectively. The operation involves repurchasing a bond with the same characteristics as the new bond to comply with the conditions for accessing the second stage of the agreement with Euroclear for the implementation of the Secondary Market Link model and to be included in the J.P. Morgan index, which requires the initial issuance to be over US $ 500 million. The repurchased 2029BTP was first issued on July 9, 2013, for a total of S/ 1 138 million at a coupon rate of 6.0 percent and a maturity term of 15 years. The balance of the bond amounted to S/ 1 645 million.

ISSUE OF BTP 2029 (5.49%)	
Auction date	29-Nov-2019
Issue date	06-Dec-2018
Maturiry date	12-Feb-2029
Coupon date	5.94%
Issue date	S/ 10,350 million
Price	99.91
Yield rate	5.95%
Credit rating	
-Moody's	A3
-Fitch	A

The impact of this debt operation is an increase of S/ 5 917 million in the balance of BTPs and a reduction of US$ 0.5 million in global bonds. Before the debt operation, on October 31, the bonds involved in this operation were held by banks (42 percent) and by non-resident investors (26 percent), with Banco de la Nación standing out as the main holder of 2029BTP (88 percent).

As mentioned above, the resources obtained will be used to prepay obligations with multilateral organizations for a total of US$ 543.4 million. The difference between the amount of bonds placed (S/ 10.35 billion) and the amounts repurchased from 2020 and 2029 BTPs and Global Bond 2019, including the prepayment of the aforementioned loans, is S/ 4 078.5 million. This amount will be used to pre-finance public sector operations in 2019.

As a result of this debt management operation, the public debt in foreign currency will decrease from 36.2 to 34.4 percent. In addition to this, it should be pointed out that the average term of sovereign bonds and global bonds will increase from 12.9 to 13.0 years.

Box 6

EVOLUTION OF THE COMPOSITION OF THE NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT

The non-financial expenditure of the general government has increased in recent years. After recording 18.6 percent of GDP at the beginning of this decade (2011), it reached a peak of 21.6 percent of GDP in 2014 and then registered 20.4 percent of GDP from December 2017 to November 2018. This upward trend in non-financial expenditure reflects mainly an increase of around 2 percentage points of GDP in non-financial current expenditure.

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

* Period December 2017 - November 2018.

The increase observed in non-financial current expenditure between 2011 and the period of December 2017-November 2018 results from an increase in salaries and wages (1.4 percentage points of GDP) and from an increase in goods and services (0.6 percentage points).

CURRENT NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT
(% GDP)

* Period December 2017 - November 2018.

The dynamics of remuneration expenditure reflected, in part, the wage reforms undertaken in important sectors of public administration as of 2012, which included the reform of the Public Teaching Career, the comprehensive remuneration policy in the health sector, and the reform of the income structure for the Armed Forces and the National Police of Peru.

Moreover, this higher spending also reflected a greater hiring of personnel in the public sector. The information of the Ministry of Labor and Promotion of Employment (MTPE) based on administrative documents on the public sector payroll allows to break down the data of public employment by labor regimes.

EMPLOYMENT IN THE GOVERNMENT BY LABOUR REGIMEN (Thousand people)	2013	2014	2015	2016	2017
Public regime (DLeg276)	225	233	243	252	251
Private regime (DLeg728)	160	154	152	155	153
CAS	214	230	240	259	262
Military and Police	143	156	159	163	165
Teacher	204	202	209	231	240
Others	370	360	363	373	364
TOTAL	**1,317**	**1,334**	**1,365**	**1,434**	**1,435**

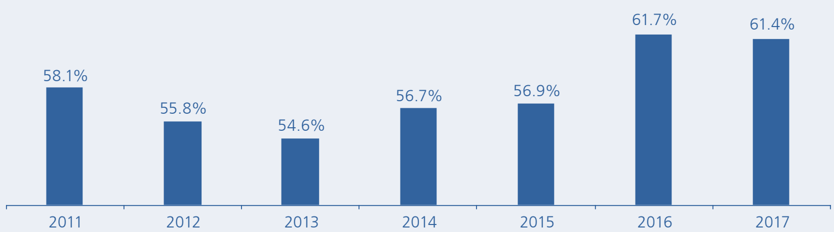
Fuente: MTPE . Monthly average. Includes non-personal services.

As the table above shows, the number of people employed in the public sector increased from 1.3 million to 1.4 million between 2013 and 2017, the most significant increases being observed in the regimes of Administrative Services Recruitment (CAS) system, teaching staff, the former public system governed by Legislative Decree 276, and the armed and police forces.

Because of its permanent nature, the increase in remunerations expenditure implies a greater budgetary rigidity in the short term that not only makes it more difficult to adjust the level of expenditure vis-á-vis adverse events –such as a significant reduction in tax revenues or losing access to capital markets–, but also to launch new reform programs.

It is worth pointing out that a definition of non-flexible or rigid non-financial expenditure includes not only the remunerations schedule, but also expenditure in basic services (electricity, water, rent, among others), pensions, infrastructure maintenance, and the payment of contractual obligations linked to public-private partnerships[14]. Between 2011 and 2017, this rigid component of spending has increased from 58.1 to 61.4 percent of the non-financial expenditure of the general government.

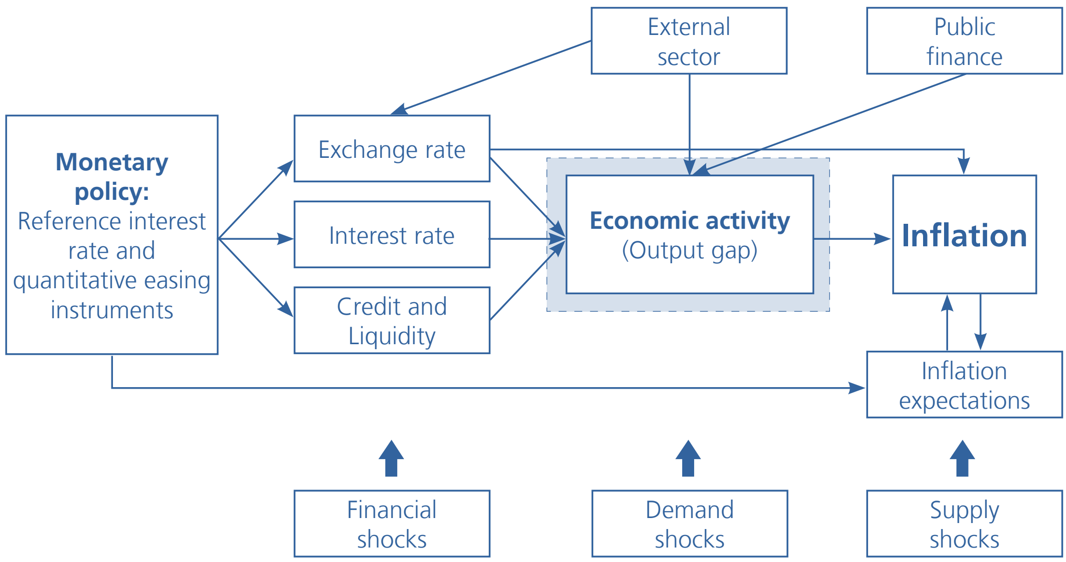
RIGID COMPONENT OF EXPENDITURE OF THE GENERAL GOVERNMENT
(% Non-financial expenditure)



In the long term, since the State is fundamentally a provider of skilled labor-intensive services (education, health, justice, security, infrastructure, regulation), it will not be possible to increase the quality and coverage of these services without the development of flexible labor regimes that promote the recruitment and retention of the human skills required to provide them.

14 This concept is developed in the Technical Report 004-2017-CD/ST of the Technical Secretariat of the Fiscal Council, September 2017.

Chapter 4
ECONOMIC ACTIVITY



IV. Economic Activity

Recent Trends and Expectations

52. In the period of January to October 2018, Peru's GDP showed a growth rate of 3.7 percent, a higher rate than that recorded in the same period of 2017 (2.6 percent). This recovery in the pace of growth was associated with the greater dynamism of activity in the non-primary sectors, particularly in the sectors of services and manufacturing.

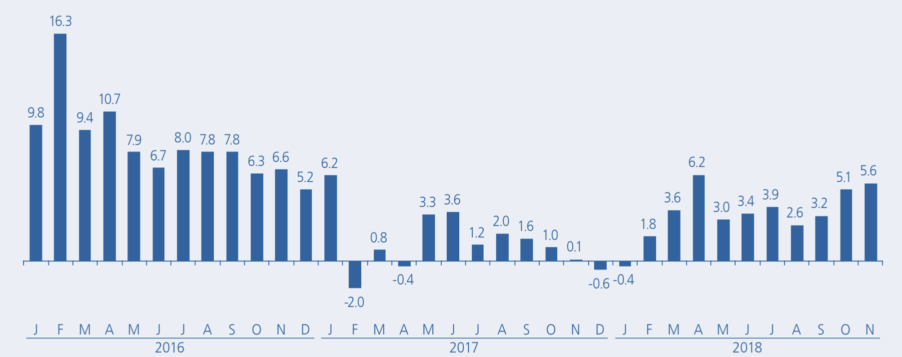
Table 39
PRIMARY GDP AND NON-PRIMARY GDP: JANUARY - OCTOBER
(Real % change)

	2014	2015	2016	2017	2018
GDP	**2.8**	**2.9**	**4.2**	**2.6**	**3.7**
Primary sectors	-0.4	5.3	10.1	3.9	2.5
Non-Primary sectors	3.7	2.2	2.6	2.3	4.1

53. Recent and advanced indicators of economic activity point to a favorable trend in the last months of the year, which would confirm the growth forecast of 4.0 percent considered in our reports since the Inflation Report of March 2018.

    a) The **demand for electricity** has maintained high positive growth rates since February, showing an accumulated average rate of 3.4 percent in comparison with the same period of 2017 and reaching a rate of 5.6 percent in November.

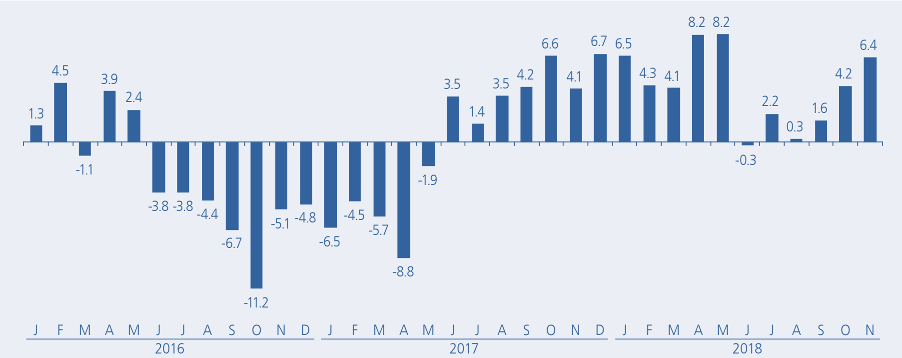
Graph 54
ELECTRICITY CONSUMPTION
(12 month % change)



Source: COES.

b) The **domestic consumption of cement** has been showing a faster pace of growth since August and registered a rate of 6.4 percent in November.

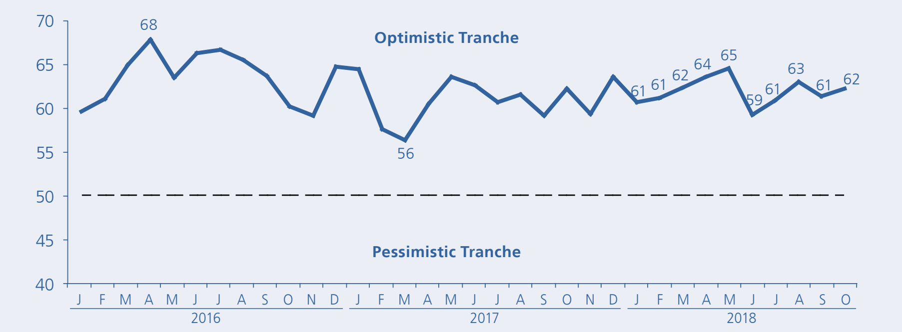
Graph 55
DOMESTIC CEMENT CONSUMPTION
(12 month % change)



Source: INEI.

c) In October 2018, the **consumer confidence index**, measured as the expected economic situation of the household in a year's time, showed a recovery after falling slightly in September.

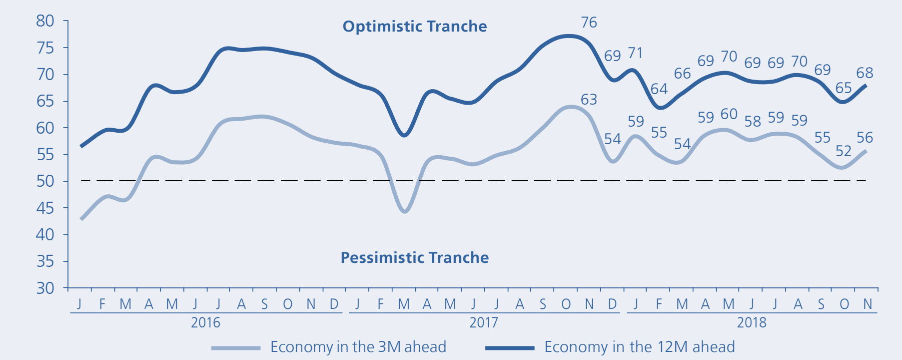
Graph 56
EXPECTATION ABOUT ECONOMIC SITUATION OF THE HOUSEHOLD IN 12 MONTHS
(INDICCA, Lima Metropolitana)



Source: Apoyo.

d) **Expectations about the economy** in 3 months and in 12 months, which showed a slower pace of growth in September and October, recovered in November.

Graph 57
EXPECTATIONS ABOUT THE ECONOMY IN 3 AND 12 MONTHS AHEAD

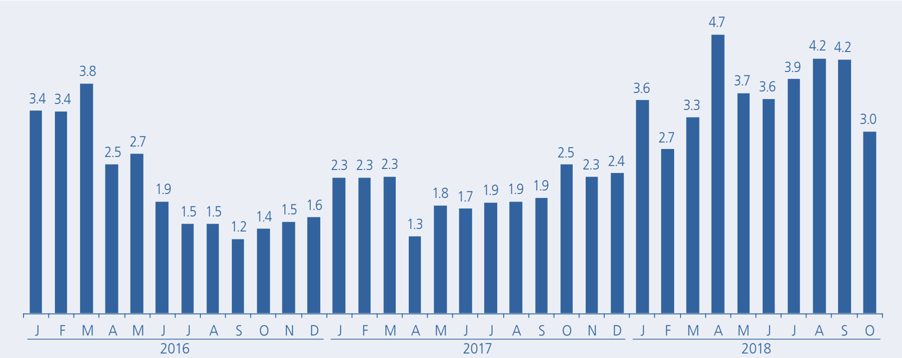


Source: BCRP.

e) According to information of SUNAT's Electronic Payroll System, which records data on the number of workers employed in all the formal companies and in the public sector of Peru, the number of **formal jobs**[15] in the country showed a growth rate of 3.0 percent in October.

15 These positions are considered jobs given that a worker may work for more than one work center.

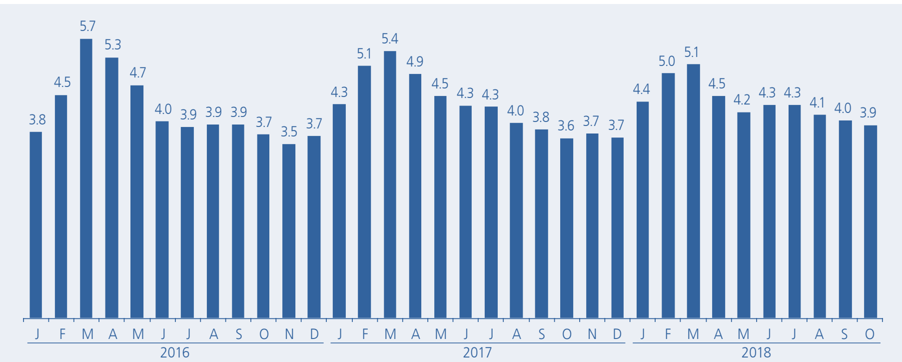
Graph 58
FORMAL JOBS
(12 month % change)



Source: Sunat-Electronic payroll.

f) The rate of unemployment in the country has showed a downward trend since July of this year, a rate of 3.9 percent being recorded in October.

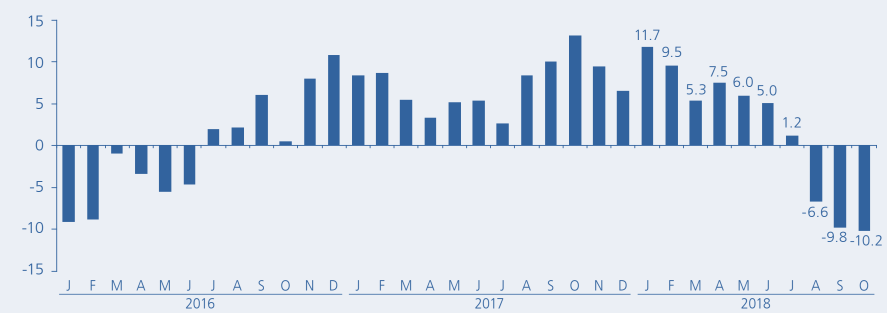
Graph 59
DOMESTIC UNEMPLOYMENT RATE
(Quarterly moving, %)



Source: INEI.

g) The **terms of trade** fell 9.8 and 10.2 percent in September and October, respectively, due to the decline in the prices of exports.

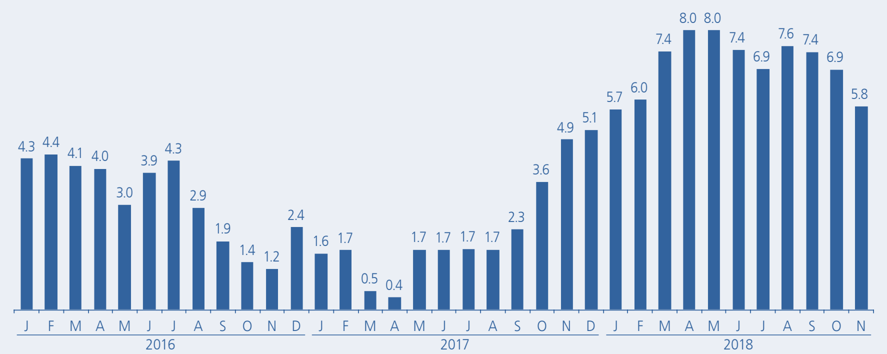
Graph 60
TERMS OF TRADE
(12 month % change)



Source: BCRP.

h) **Total credit to the private sector** has maintained growth rates above 5.0 percent in real terms during 2018 and accumulates a growth rate of 5.8 percent at November.

Graph 61
REAL CREDIT TO THE PRIVATE SECTOR
(12 month % change)



Source: BCRP.

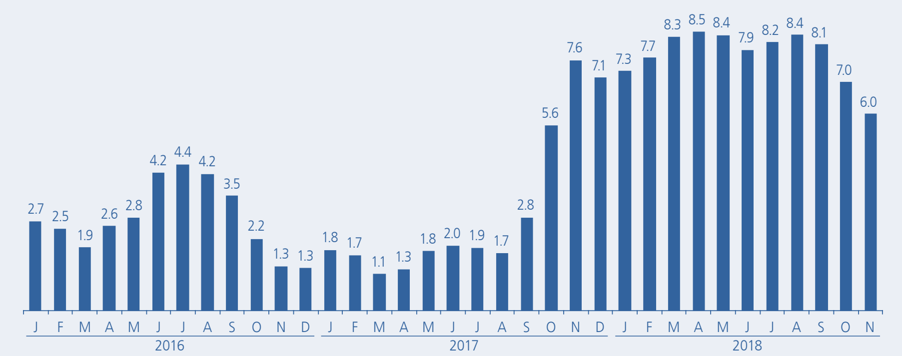
i) **Consumer loans**, which have been showing growth rates of over 10.0 percent since March of this year, recorded a growth rate of 10.7 percent in November.

Graph 62
REAL CREDIT OF CONSUMPTION
(12 month % change)

Source: BCRP.

j) **Mortgage loans** have maintained high growth rates in real terms (around 8 percent) during 2018, although a slight decline was observed in November.

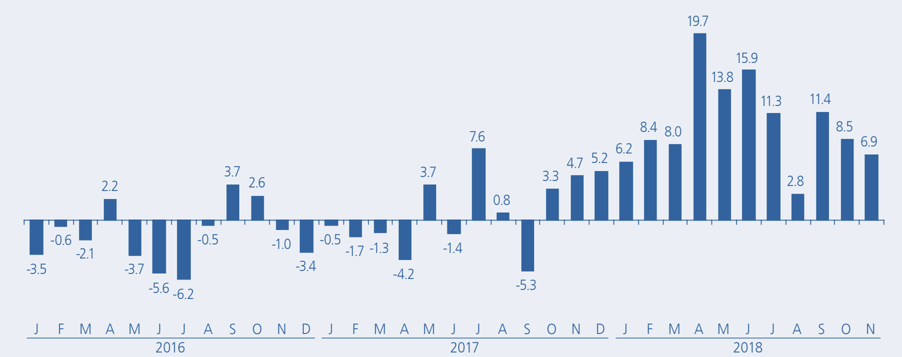
Graph 63
MORTGAGE REAL CREDIT
(12 month % change)



Source: BCRP.

k) After showing a lower rate in August, **revenues from the income tax** grew around 9 percent in real terms on average between September and November.

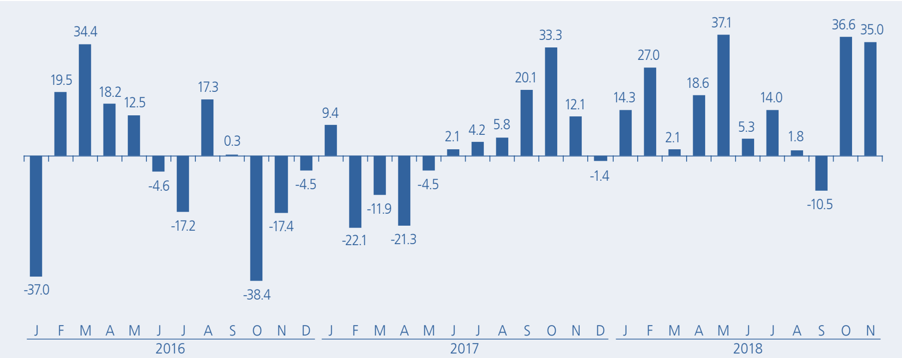
Graph 64
VALUE ADDED TAX
(12 month real % change)



Source: SUNAT.

l) **Gross capital formation in the public sector** grew 36 percent in real terms on average between October and November, indicating a recovery in this variable from the previous quarter.

Graph 65
GENERAL GOVERNMENT INVESTMENT
(12 month real % change)



Source: BCRP.

54. Reflecting economic agents' convergence to the GDP growth rate forecast in our Inflation Report, Peru's GDP is expected to grow between 3.5 and 3.8 percent in 2018, between 3.8 and 3.9 percent in 2019, and 4.0 percent in 2020.

Table 40
MACROECONOMIC EXPECTATIONS SURVEY: GDP GROWTH
(% change)

	IR Mar.18	IR Jun.18	IR Sep.18	IR Dec.18*
Financial entities				
2018	3.5	3.5	3.8	3.8
2019	3.7	3.8	4.0	3.9
2020	--	--	--	4.0
Economic analysts				
2018	3.5	3.6	4.0	3.8
2019	3.8	3.8	4.0	3.9
2020	--	--	--	4.0
Non-financial firms				
2018	3.0	3.5	3.5	3.5
2019	4.0	3.8	3.8	3.8
2020	--	--	--	4.0

* Survey conducted on November 29.
IR: Inflation Report.
Source: BCRP.

Forecasts

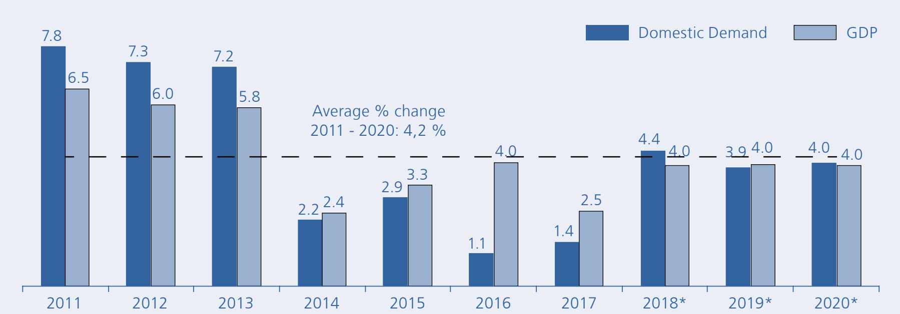
55. Peru's GDP growth rate would increase from 2.5 percent in 2017 to 4.0 percent in 2018 due mainly to the recovery of domestic demand, which would register a growth rate of 4.4 percent this year after having grown at a rate of 1.4 percent in 2017. Furthermore, it is worth highlighting the recovery of private consumption (up from 2.5 to 3.7 percent), private investment (up from 0.2 to 4.7 percent), and public investment (up from -2.3 to 9.9 percent).

Table 41
DOMESTIC DEMAND AND GDP
(Real % change)

	2017	2018*		2019*		2020*
		IR Sep.18	IR Dec.18	IR Sep.18	IR Dec.18	IR Dec.18
Domestic demand	**1.4**	**4.4**	**4.4**	**4.0**	**3.9**	**4.0**
Private consumption	2.5	3.8	3.7	3.6	3.7	3.9
Public consumption	-0.2	3.4	1.8	3.2	2.9	1.8
Private investment	0.2	5.5	4.7	6.5	6.5	6.0
Public investment	-2.3	9.9	9.9	2.8	2.8	3.4
Change on inventories (contribution)	-0.1	0.0	0.4	0.0	-0.2	0.0
Exports	**7.8**	**3.5**	**2.1**	**4.6**	**4.7**	**4.8**
Imports	**4.1**	**5.0**	**3.6**	**4.7**	**4.3**	**5.1**
GROSS DOMESTIC PRODUCT	**2.5**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**

* Forecast.
IR: Inflation Report.

Graph 66
DOMESTIC DEMAND AND GDP: 2011 - 2020
(Real % change)



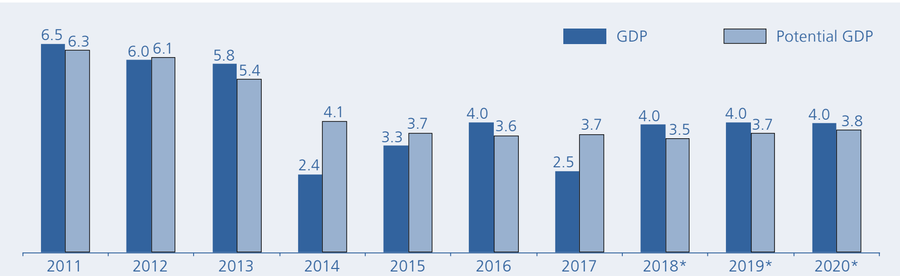
* Forecast.

56. In 2019 the output is projected to grow 4.0 percent of GDP, driven by a greater dynamism in exports of goods and services (which would increase from 2.1 percent in 2018 to 4.7 percent in 2019) associated with the recovery of copper exports.

    The sound growth of employment and the availability of financing would support the growth of private consumption at a rate of 3.7 percent, while private investment would show a faster pace of growth with a rate of 6.5 percent. On the other hand, public investment is foreseen to slow down due to the start of new government administrations at the level of subnational governments.

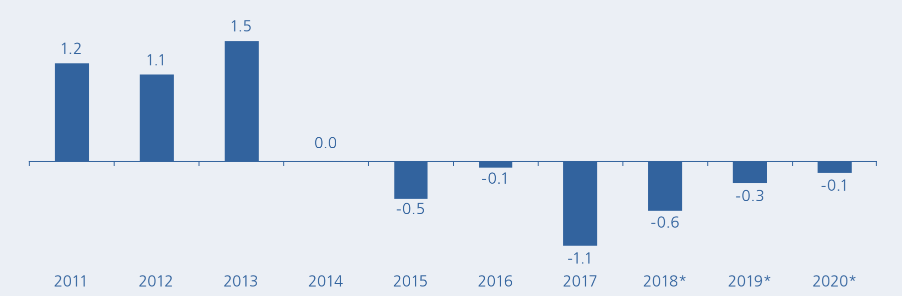
57. Although the GDP growth rate in the period of 2018-2020 is above the growth of the potential output, it is estimated that there is still a negative output gap (percentage margin between the level of GDP and its potential level of growth) in this period. This is the reason why there is still an expansionary bias in macroeconomic policies.

Graph 67
GDP AND POTENTIAL GDP
(% change)



* Forecast.

Graph 68
OUTPUT GAP
(% potential GDP)

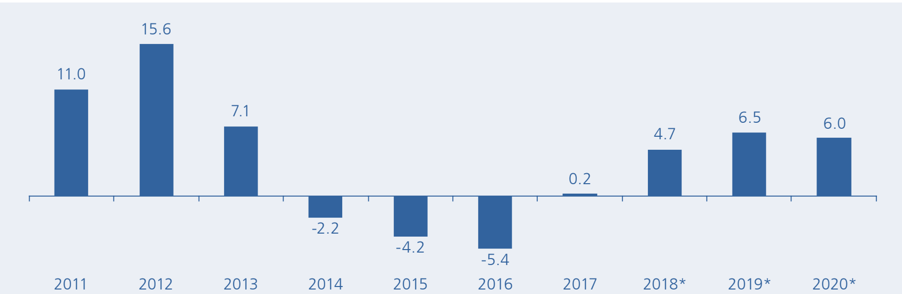


* Forecast.

This projection considers that the greater dynamism of investment and the adoption of measures oriented to expand productivity will account for a slightly higher rate of growth of the potential output (3.8 percent in 2020).

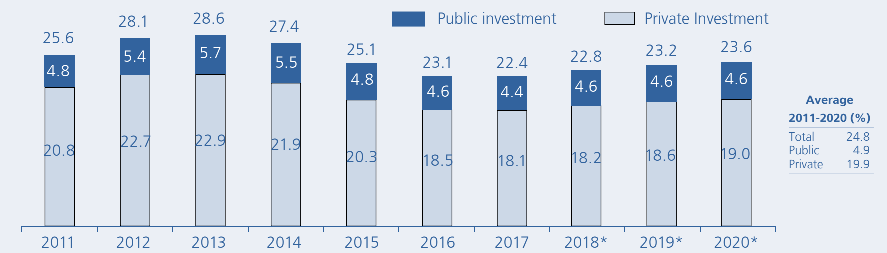
58. After recording three years of continuous declines between 2014 and 2016 and a minimum increase in 2017, private investment began to grow again in 2018, with growth rates of 6.5 and 6.0 percent being projected for 2019 and 2020 percent, respectively. In GDP terms, total investment registered a minimum level in 2017 (22.4 percent of GDP). In 2020 it is projected to record a rate of 23.6 percent.

Graph 69
PRIVATE INVESTMENT: 2011 - 2020
(Real % change)



* Forecast.

Graph 70
GROSS FIXED INVESTMENT: PRIVATE AND PUBLIC SECTORS 2011-2020
(% real GDP)



* Forecast.

59. The **main private investment projects announced** to be carried out in 2019-2020 amount to approximately US$ 19 billion considering the greater dynamism expected in the mining sector after the onset of important projects this year.

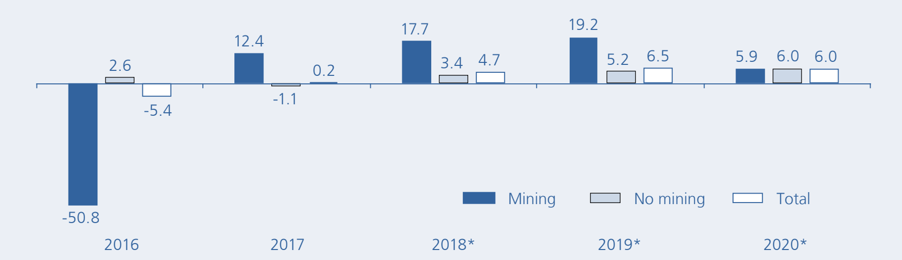
Table 42
PRIVATE INVESTMENT PROJECTS ANNOUNCED: 2019-2020
(Billions of US$)

	Total investment	Number of projects
Mining	9.8	31
Hydrocarbons	1.3	15
Energy	1.0	10
Industry	0.3	6
Infraestructure	4.4	24
Other sectors	2.4	49
TOTAL	**19.3**	**135**

Source: Media and information of companies.

In the **mining sector**, projects expected to be completed in 2019 include the expansion of Southern's Toquepala, Yanacocha's Quecher Main, and Minsur's Relaves B2 San Rafael while the projects that began their construction in 2018 are expected to continue being implemented. Projects worth highlighting among the latter include the onset of important projects such as Quellaveco, the expansion of Toromocho, and Mina Justa, which together represent an estimated investment of US$ 8.2 billion. Quellaveco would start production in 2022 (the company has announced that the project is on schedule). On the other hand, Toromocho, which is expected to increase its production by 45 percent after the project is completed in 2020, has already carried out 25 percent of the works projected while Marcobre's Mina Justa, with an investment of US$ 1.6 billion, is at the stage of preliminary works.

Graph 71
PRIVATE INVESTMENT
(Real % change)



* Forecast.

Projects in the sector of **infrastructure** include the expansion of International Airport Jorge Chávez with an estimated investment of US$ 1.5 billion as well as Line 2 of the Lima Metro. With respect to the latter, Ositran gave a favorable opinion to the second addendum to the concession contract that will redefine the schedule for the works to be carried out in order that the land required for the expansion of the airport is assigned to the concessionaire. The addendum also established the timeframes in which the concessionaire must concludes each of the remaining phases of the project. According to Ositran, the degree of completion of the project –given in concession in 2014– is 23.9 percent, both in terms of project execution and investment.

Table 43
MAIN ANNOUNCEMENTS OF PRIVATE INVESTMENT PROJECTS: 2019-2020

SECTOR	INVESTOR	PROJECTS
MINING	Angloamerican Grupo Breca Aluminium Corp. of China (Chinalco) Minera Barrick Minera Yanacocha	Quellaveco Justa Mine Expansion of Toromocho Mine Optimization Lagunas Norte Quecher Main
HYDROCARBONS	Calidda Gas Natural del Perú Karoon Gas Pluspetrol Perú Corp.	Massive use of gas Exploration Lote Z-38 Expansion of transportation capacity
ENERGY	Interconexión Eléctrica Luz del Sur	Mantaro-Nueva Yanango-Carapongo Connection Santa Teresa 2
INDUSTRY	Arca Continental Corporación Aceros Arequipa Precor	Improvements in infrastructure and equipment Expansion of Pisco plant Mega Planta in Chilca
INFRASTRUCTURE	Grupo Volcan Consorcio Nuevo Metro de Lima Lima Airport Partners Grupo Romero APM Terminals Consorcio Paracas	Chancay Port Terminal Project Line 2 of the Metro network of Lima and Callao Expansion of International Airport (Jorge Chavez) Modernization Salaverry Port Terminal Modernization Muelle Norte San Martin Port Terminal Project
OTHER SECTORS	Entel Grupo Falabella Inversiones Centenario Armas Domo Grupo Interbank Grupo Breca Cencosud Edifica	Development of services 4G Expansion of new shopping centers Real Estate investments and expansion of shopping centers Real Estate investments Expansion of new shopping centers Expansion of new shopping centers Shopping center Real Estate investments

Source: Information on companies, newspaper and specialized media.

60. In the first quarter of the year, Proinversión awarded the mining project of Michiquillay to Southern Peru. At end May, it awarded the modernization project of Salaverry Port Terminal to Consorcio Transportadora Salaverry, formed by Tramarsa and Naviera Tramarsa, both of which are companies of the Romero Group. These two projects represent investments for a total of US$ 2.7 billion. Another project to be given in concession by the end of 2018 is the implementation of broadband infrastructure in six regions (Ancash, Arequipa, Huánuco, La Libertad, Pasco, and San Martín) with an investment of US$ 359 million. Proinversión's portfolio of projects to be carried out under concession contracts until 2020 represent investments for a total of US$ 3.5 billion.

Table 44
MAIN PROJECTS TO BE IMPLEMENTED THROUGH CONCESSION ARRANGEMENTS IN 2018-2020
(Million US$)

	2018-2020
A. Awarded	**2,720**
Michiquillay Mining Project	2,500
Port Terminal of Salaverry	220
B. Called	**3,505**
Headworks and Conduction for the Drinking Water Supply in Lima	720
Ancon Industrial Park	500
Longitudinal section 4: Huancayo-Izcuchaca-Mayocc-Ayacucho and Ayacucho-Andahuaylas-Puente Sahuinto / Dv. Pisco-Huaytará-Ayacucho.	464
Broadband for Comprehensive Connectivity and Social Development for Ancash, Arequipa, Huánuco, La Libertad, Pasco y San Martín	359
Wide-Scale Use of Natural Gas - Distribution System through a Natural Gas Grid across the Regions of Apurimac, Ayacucho, Huancavelica, Junin, Cusco, Puno and Ucayali.	350
Huancayo - Huancavelica Railroad	227
Transmission Line 500 kV Substation Piura Nueva - Frontera	144
Hospitals of High complexity: Piura	144
Link 500 Kv La Niña - Piura, Substations, Lines and Associated Expansions.	128
Hospitals of High complexity: Chimbote	110
Repowering at 1000 MVA LT 500 kV Carabayllo - Chimbote -Trujillo and Variable Reactive Compensator + 400 / -150 MVAR at SE Trujillo Norte 500 kV	90
Improvement of tourism services in Choquequirao archeologic park, Apurimac-Cusco	63
Link 220 Kv Pariñas - Nueva Tumbes, Substations and Associated Expansions.	49
Link 220 Kv Tingo María - Aguaytía, Substations, Lines and Associated Expansions.	32
Puerto Maldonado-Iberia 138 kV Electric Transmission Line	23
SE Planicie 500/220 KV	20
Variable Reactive Compensator + 400 / -150 MVAR in the San Juan Substation	19
Improvement of the Sewage System and Treatment for wastewater of the city of Puerto Maldonado	19
SE Nueva Chincha 220/60 KV	18
SE Nueva Nazca 220/60 KV	17
SE Nueva Carhuaquero 220 KV	10

Source: Proinversión.

61. In terms of production sectors, greater dynamism in the non-primary sectors would explain the anticipated acceleration of activity from a rate of 2.5 percent in 2017 to 4.0 percent in 2019 and 2020.

Table 45
GDP BY PRODUCTION SECTOR
(Real % change)

	2017		2018*			2019*		2020*
	Jan.-Oct.	Year	Jan.-Oct.	IR Sep.18	IR Dec.18	IR Sep.18	IR Dec.18	IR Dec.18
Primary GDP	**3.9**	**3.1**	**2.5**	**2.6**	**3.3**	**4.2**	**3.9**	**3.3**
Agriculture and livestock	1.9	2.6	7.9	6.0	7.0	4.0	4.0	4.0
Fishing	30.7	4.7	18.1	30.0	39.8	-4.2	-6.7	5.4
Metallic mining	4.1	4.5	-1.2	-1.1	-1.3	5.0	5.3	3.0
Hydrocarbons	-2.5	-2.4	-0.7	-0.4	-0.1	2.2	4.4	-0.5
Based on raw materials	9.0	1.9	7.7	10.7	13.9	4.1	0.0	5.5
Non-Primary GDP	**2.3**	**2.3**	**4.1**	**4.3**	**4.1**	**4.0**	**4.0**	**4.2**
Non-primary industries	-0.6	-0.9	3.6	3.8	3.6	3.4	3.8	3.8
Electricity and water	1.4	1.1	3.5	3.4	3.9	4.0	4.0	4.0
Construction	1.0	2.1	4.7	6.0	5.9	7.0	6.9	7.5
Commerce	0.9	1.0	2.7	3.3	2.7	3.1	3.4	3.5
Services	3.3	3.3	4.4	4.5	4.3	3.9	3.9	4.0
GDP	**2.6**	**2.5**	**3.7**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**

* Forecast.
IR: Inflation Report.

a) The **agriculture sector** is estimated to grow 7.0 percent in 2018 due to the normalization of weather conditions after the 2017 episode of El Niño Costero, which has favored the recovery of products oriented to the domestic market (e.g. rice and lemons) as well as agro-export crops. In 2019 and 2020, this sector is expected to show lower growth rates (4.0 percent in each year), in line with normal weather conditions and a context favorable for agro exports.

b) The **fishing sector** will increase its production by 39.8 percent in 2018 due to the greater catch of anchovy for industrial consumption obtained as a result of the recovery of biomass following the suspension of the second fishing season at the end of 2017. In 2019, anchovy catch would resume normal levels. In 2020, the fishing sector would show a moderate growth rate, in line with normal weather conditions in that year.

c) In the sector of mining, output in the subsector of **metal mining** will decrease by 1.3 percent due to the lower production of copper resulting from technical problems that hindered extraction in Las Bambas, as well as due to the lower production of gold resulting from the lower grades of mineral obtained by Barrick after the closure of its Pierina unit and the depletion of its unit of Lagunas Norte. In 2019 the output is projected to grow at higher rates given that copper production is expected to increase due to the start of operations at Southern's expansion of Toquepala. In addition, iron production is also expected to increase due to the expansion of Shougang. In 2020 growth in the subsector would be driven by the onset of operations at the expansion of Toromocho.

On the other hand, production in the **hydrocarbons** subsector will fall 0.1 percent due to the lower production of gas and natural gas liquids in lot 56 after the maintenance of Las Malvinas separation plant in Camisea. In 2019 the output would improve due to the recovery of natural gas production oriented to the domestic market, while in 2020, it would show a slight contraction due to an expected reduction in the production of natural gas liquids at lot 56.

d) **Non-primary manufacturing** will grow 3.6 percent in 2018 due to the higher production of goods linked to investment, exports, and mass consumption. The subsector is projected to grow 3.8 in both 2019 and 2020, in line with the dynamics of domestic demand.

On the other hand, the subsector of **primary manufacturing** will grow 13.9 percent in 2018, driven by the recovery registered in the production of fishmeal and fish oil compared to last year. In 2019, primary production is foreseen to be affected by the maintenance of Southern's plant scheduled for the first quarter of 2019 and by an anchovy catch slightly lower than in 2018, whereas a recovery in primary production is expected in 2020 due to the recovery of fish production.

e) The **construction** sector will grow 5.9 percent in 2018, in line with the dynamics of total investment. Moreover, in 2019 and 2020 growth in the sector will be driven by private investment and public investment.

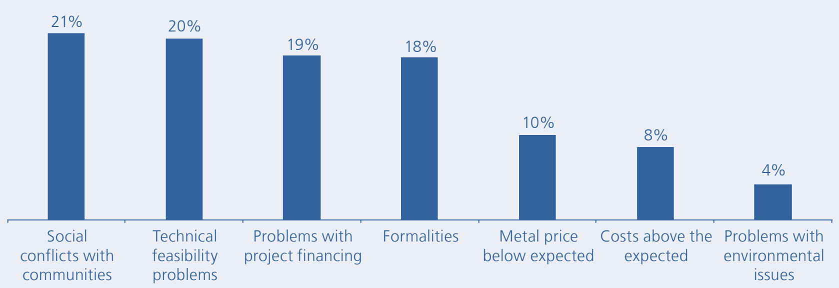
Box 7
OPINION SURVEY ON MINING PROJECTS

In 2011, the Ministry of Energy and Mines (MINEM) estimated that 26 large mining projects (involving an investment of more than US$ 200 million), which at the time were in their exploration stage or had already approved the corresponding Environmental Impact Study, would start their production stage as from 2013. Thus, it was then projected that copper production would increase from 1 million tons to 4.8 million. However, so far only five of these mining projects have started their production stage: Las Bambas, the Expansion of Cerro Verde, Toromocho, Constancia, and La Arena - Phase I. Copper production has risen to 2.5 million tons, which contributed to face adverse external shocks in better conditions in 2014-2016. According to MINEM, the updated investment of the remaining 21 projects is estimated to amount to US$ 42.9 billion.

Motivated by this information, in November of 2028 BCRP conducted a survey to obtain information about the difficulties and risks faced by mining projects, and especially by mining investment. The survey universe consisted of the executives of mining companies, the representatives of companies that provide mining services, and specialized consultants.

Amid a less favorable international context for the mining sector, the main survey results show, in a first section, that the most frequently mentioned reasons that explain recent delays in mining projects are associated with social conflicts (21 percent of responses), technical feasibility problems (20 percent), project financing problems (19 percent), and with paperwork and procedures (18 percent), both at the level of the national government and at the level of subnational governments. Moreover, 10 percent of the respondents said that lower-than-expected metal prices are a factor that affects the projects, 8 percent said that project implementation is affected by higher costs than those anticipated, and 4 percent said that problems are associated with environmental issues.

MOST MENTIONED CAUSES OF PROJECT DELAYS: 2018
(% answers)



The survey also included a section to identify potential risks for the mining sector in general. Respondents perceive that some risks have increased during 2018: 73 percent said that risk associated with the political environment has increased, affecting different government institutions, while 71 percent said that the risk of a trade war between the United States and its trade partners has increased. As for excessive paperwork and procedures to obtain permits, 49 percent of respondents believe that this risk has increased, whereas another 49 percent of respondents think that there has been no variation in this risk in comparison with 2017.

The survey also included questions about risks associated with the performance of different government levels. The answers reflect that respondents think that there is still an important space for actions to improve the resolution of procedures and to support conflict resolution with communities. This result is similar in all the levels of government. Other risks mentioned included the late presence of the State in areas where mining projects are carried out, the influence of regional anti-mining movements, the country's loss of competitiveness in a context of less availability of capital for emerging markets, and the higher costs associated with the lack of infrastructure.

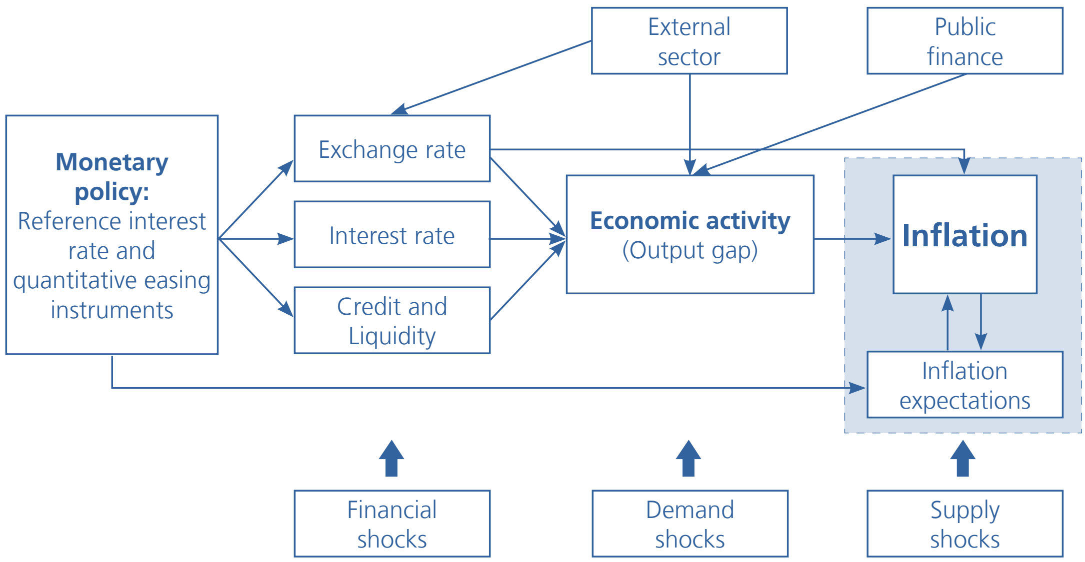
A third section of the survey focused on the main obstacles that must be faced by the mining sector. Respondents believe that a priority is to improve coordination between the different levels of government and also between them and the different State entities linked to the sector, as well as to improve the justice system, increase the presence of the State close to mining projects, and define and standardize criteria among the different authorities and entities that evaluate the projects.

One of the suggestions obtained from the survey is that the procedures in the subnational governments should be standardized. For example, some respondents said that the heterogeneity of the TUPA (Single Text of Administrative Procedures) at the level of the different regional governments should be reduced and that articulated and coordinated development plans should be designed and implemented in each region. As a positive aspect, the experts considered that a gradual progress is being observed in terms of the simplification of environmental requirements and procedures for mining exploration.

In sum, the general perception is that greater coordination is required between the different levels of government (national, regional and local), the private sector, and the different government entities related to the mining sector to facilitate the progress of mining projects and offset the risks faced in this sector. For example, the creation of the General Directorate of Mining Promotion and Sustainability in MINEM and the progress made by the Executive Board of the Energy Mining Sector for National Productive Development (Mesa Ejecutiva del Sector Minero Energético para el Desarrollo Productivo del País) are positive aspects. The latter is a space in which public entities and representatives of mining associations identify barriers and obstacles, opportunities for improvement, and propose solutions.

Since its inception in October, this Mesa has made progress in the transfer of S/ 596 million to the Ministry of Energy and Mines (MEM) to meet the obligations of the Fuel Price Stabilization Fund (Fondo para la Estabilización de Precios de los Combustibles Derivados del Petróleo - FEPC); it has approved the Single Text of Administrative Procedures (TUPA) of the National Superintendence of Control of Services of Security, Weapons, Ammunition and Explosives for Civil Use (Sucamec), which will facilitate the management of inputs in mining, and has improved SUNAT's action guidelines for the control of inputs and equipment used in the extraction of hydrocarbons. In addition, it has contributed to resolve the existing conflict of competences between the National Port Authority (Autoridad Portuaria Nacional - APN) and Dirección General de Capitanías y Guardacostas (DICAPI) regarding the collection of the annual rights for the use of water and riverbank areas, among other actions.

Chapter V
INFLATION



V. Inflation

Recent Trends and Inflation Expectations

62. Between January and November, the rate of core inflation (CPI excluding the prices of food and energy) remained within 2.0 and 2.2 percent, close to the BCRP inflation target range (1 - 3 percent). Moreover, the annual rate of inflation in all the CPI components fluctuated between 0.4 and 2.2 percent, which reflected the reversal of the negative shock that affected agricultural supply due to the occurrence of El Niño Costero in 2017.

Graph 72
INFLATION
(Last 12-month % change)

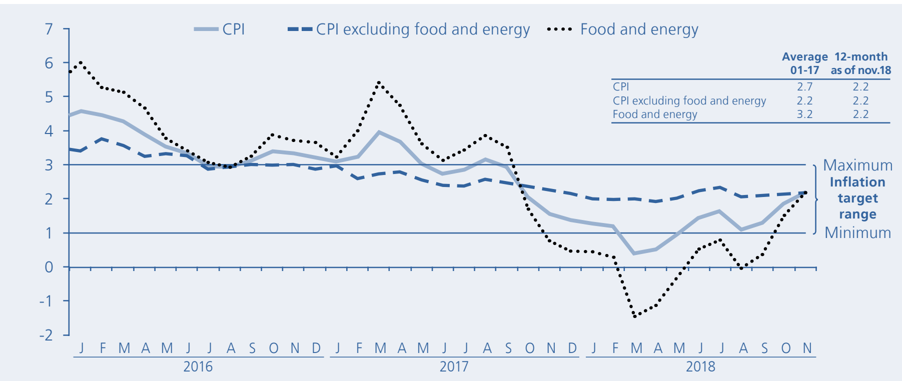
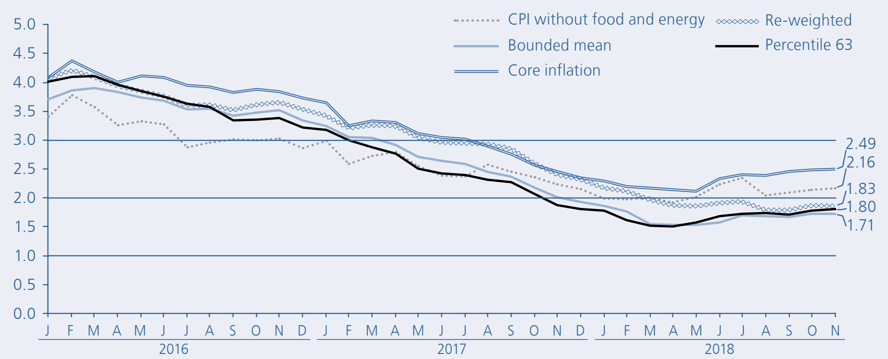


Table 46
INFLATION
(% change)

	Weight	2014	2015	2016	2017	2018 Jan.-Nov.	2018 12 month
CPI	**100.0**	**3.22**	**4.40**	**3.23**	**1.36**	**2.01**	**2.17**
1. CPI excluding food and energy	**56.4**	**2.51**	**3.49**	**2.87**	**2.15**	**1.86**	**2.16**
a. Goods	21.7	2.43	3.57	3.41	1.24	2.17	2.15
b. Services	34.8	2.55	3.44	2.54	2.70	1.67	2.17
2. Food and energy	**43.6**	**4.08**	**5.47**	**3.66**	**0.46**	**2.18**	**2.17**
a. Food and beverages	37.8	4.83	5.37	3.54	0.31	1.92	1.79
b. Fuel and electricity	5.7	-0.85	6.20	4.48	1.55	3.89	4.79
- Fuel	2.8	-5.59	-6.33	0.61	3.95	6.25	6.41
- Electricity	2.9	4.37	18.71	7.53	-0.21	2.09	3.53

63. In addition to the concept that excludes food and energy prices, different methods are used to measure trend inflation. These methods allow us to verify that core inflation has remained in the middle of the target range throughout 2018.

Graph 73
MEASUREMENTS OF THE INFLATIONARY TREND
(Last 12 months % change)



Memo:
CPI without food and energy: Excluding food, fuel and electricity.
Re-weighted: Reduces the weight of items with greater volatility, considers the original weights of each item between the standard deviation of their monthly percentage changes.
Bounded mean: Weighted average of the percentage change of prices between the 34th and 84th percentiles.
Percentile 63: Corresponds to the percentage changes of the item located in the 63th percentile.
Core inflation: CPI excluding foods that have the greatest variability in the monthly variation of their prices

64. The items with the higher positive contribution to inflation in the period January-November were education, food outside the home, potatoes, vehicles, and onions whereas the items with the higher negative contribution to inflation were chicken, national transportation rates, eggs, sugar, and telephone rates.

Table 47
ITEM WITH THE HIGHEST WEIGHTED CONTRIBUTION TO INFLATION: JANUARY - NOVEMBER 2018

Positive	Weight	% Chg.	Contribution	Negative	Weight	% Chg.	Contribution
Education costs (tuition and fees)	8.8	4.9	0.49	Chicken meat	3.0	-3.4	-0.10
Meals outside the home	11.7	2.0	0.28	National transportation	0.3	-18.5	-0.07
Potato	0.9	24.4	0.19	Eggs	0.6	-11.8	-0.06
Purchase of vehicles	1.6	12.2	0.19	Sugar	0.5	-9.3	-0.06
Onion	0.4	54.8	0.17	Telephone	2.9	-2.9	-0.05
Gasoline and lubricants	1.3	10.1	0.12	Banana	0.3	-6.7	-0.03
Lemon	0.2	48.3	0.09	Tangerine	0.2	-12.4	-0.03
Carbonated beverages	1.3	5.3	0.07	Other beans	0.2	-7.4	-0.02
Electricity rates	2.9	2.1	0.07	Avocado	0.1	-6.8	-0.01
Cigarettes	0.1	21.3	0.05	Beans	0.1	-6.6	-0.01
Total			**1.72**	**Total**			**-0.44**

a. **Electricity and Fuels**

Electricity rates increased 2.1 percent in January-November and 3.5 percent in the last twelve months, in line with the adjustments authorized by the regulating agency Osinergmin.

During most of the period, the rate adjustments were mainly associated with the update of the generation and distribution costs –which were affected by variables such as the exchange rate and the wholesale price index–, as well as with the revision of the tolls and charges of the transmission components. Another factor was the update of the cost of energy in generation plants based on renewable resources (wind, solar, and biomass generation plants), which determined a rate rise in January (1.1 percent). Furthermore, the highest rate increase, made mainly to cover the costs incurred by thermal power plants that use diesel oil, was adopted in February (3.2 percent).

In January-November, prices in the category of gasoline and lubricants increased on average 10.1 percent (9.9 in the last twelve months) due to the evolution of the ex-plant prices set by the local refineries, in accordance with the higher international prices of crude oil. Another factor that contributed to this was the increase in the excise tax in May, which affected especially the prices of the most polluting fuels (diesel and low-octane gasoline).

b. **Perishable Food Items**

Price rises standing out in the period of January to November were the rises in the prices of potatoes, onions, and lemons, whereas, on the other hand, the prices of sugar and livestock products (e.g. chicken and eggs) decreased.

In the case of potato prices, the rises in the first months of the year were associated with irregularities in the supply originated mainly by the delayed shipments of potatoes to Lima caused by farmers and merchants to get better prices. In the months thereafter, the rise worth pointing out is the rise in the price of the variety of yellow potatoes, which comes mainly from Huánuco, due to the decrease in plantings, (-9.0 percent in the August-July crop year from the previous crop season).

The price of onions increased 54.8 percent. This price results mainly from lower cultivation in Arequipa, the main producing region (down 12 percent in August-July crop year compared to the previous one), as well as from the lower supply of onions from Camaná since October (after the harvest ended) and from lower cultivation in other regions (e.g. Piura and La Libertad).

The price of lemon, which rose 48.3 percent, began to increase since August due to the irregular supply and the lower supply of the first quality lemons observed as a result of variable weather conditions in the north coast areas that affected the flowering period of plants in these region.

In contrast, the price of sugar decreased 9.3 percent, reflecting the recovery of domestic production which had been affected by El Niño event in 2017. The supply of brown sugar –the most consumed type of sugar in the country– increased 15 percent in the January-November period compared with the same period of the previous year.

The price of chicken also declined, recording an average decrease of 3.4 percent as a result of a greater supply (it is worth mentioning that the placements of baby chickens corresponding to the January-to-November supply increased approximately 8 percent in comparison with the same period of the previous year). Moreover, the price of eggs decreased 11.8 percent due also to higher production (8 percent in the January-November period).

Forecasts

65. BCRP monetary policy actions are taken on the basis of inflation forecasts and projections of inflation determinants elaborated using the macroeconomic information available at the time of decision making. Key indicators used to determine monetary policy actions include inflation expectations, imported inflation (including the impact of the exchange rate), and demand inflationary pressures, all of which are quantified through the concept of the output gap (the difference between the GDP observed and its potential level).

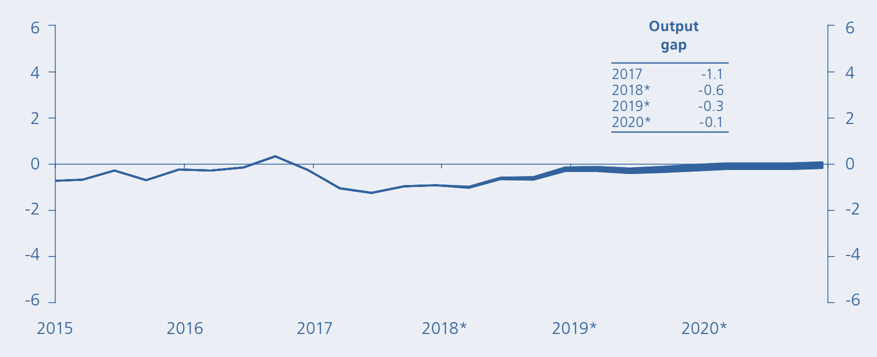
Based on this information, YoY inflation is expected to be around 2.1 percent in 2018 due mainly to lower imported inflation as a result of the reversal of the increase in the price of oil observed in 2018. In 2019 and 2020 the inflation rate is expected to remain around the center of the target range.

Graph 74
INFLATION FORECAST: 2015-2020
(Last 12-month % change)

* Forecast.

66. The forecasts for the next two years consider a negative output gap, which indicates the absence of demand inflationary pressures in the forecast horizon. Moreover, since GDP is expected to grow at a higher rate than its potential level, the output gap would close by 2020.

Graph 75
OUTPUT GAP: 2015-2020
(% Potential GDP)



* Forecast.

67. Inflation expectations surveys applied to financial and non-financial companies and economic analysts reveal that inflation is expected to show a rate between 2.2 and 2.3 percent in 2018 and to remain around the center of the target range in 2019 and 2020 with a rate of 2.5 percent.

Graph 76
EXPECTED INFLATION IN TWELVE MONTHS
(% points)

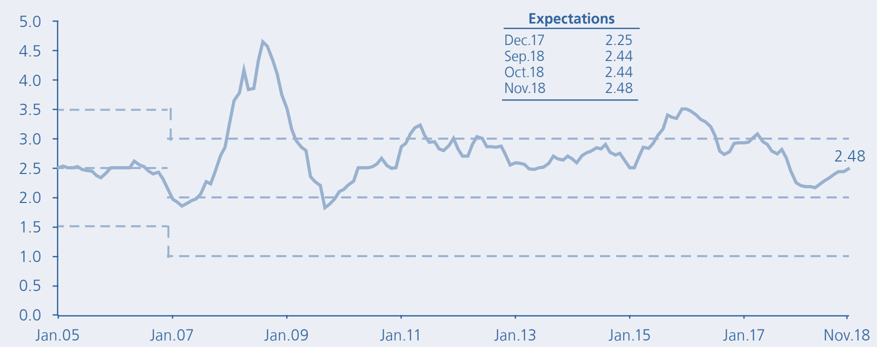


Table 48
SURVEY ON MACROECONOMIC EXPECTATIONS: INFLATION
(%)

	IR Dec.17	IR Mar.18	IR Jun.18	IR Sep.18	IR Dec.18*
Financial entities					
2018	2.5	2.0	2.0	2.1	2.2
2019	2.7	2.5	2.4	2.5	2.5
2020					2.5
Economic analysts					
2018	2.5	2.3	2.1	2.3	2.2
2019	2.6	2.5	2.5	2.5	2.5
2020					2.5
Non-financial firms					
2018	3.0	2.5	2.4	2.4	2.3
2019	3.0	2.5	2.5	2.5	2.5
2020					2.5

* Survey conducted during November 29.
IR: Inflation Report.

68. Another determinant of inflation is its imported component, which combines the effect of the international prices of goods we import –such as oil, wheat, soybean and maize, among other products– with the effect of exchange rate variations. It is foreseen that import prices will fall 1.4 percent in 2019 –reflecting the decline in the prices of commodities such as crude– and 1.7 percent in 2020. In addition, the surveys on expectations show that economic agents expect the US/PEN exchange rate to show levels between S/ 3.35 and S/ 3.41 per dollar at the end of 2019 and levels between S/ 3.35 and S/ 3.44 at the end of 2020.

Table 49
SURVEY ON MACROECONOMIC EXPECTATIONS: EXCHANGE RATE AT END OF PERIOD
(S/ per US$)

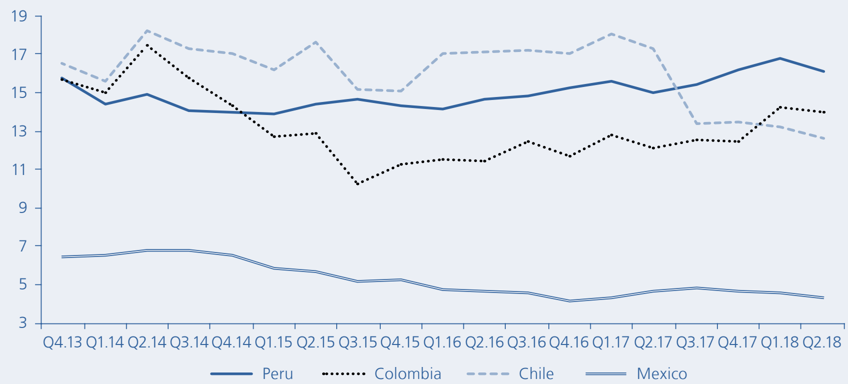
	IR Dec.17	IR Mar.18	IR Jun.18	IR Sep.18	IR Dec.18*
Financial entities					
2018	3.29	3.25	3.30	3.30	3.38
2019	3.28	3.25	3.33	3.30	3.41
2020					3.44
Economic analysts					
2018	3.30	3.28	3.28	3.30	3.36
2019	3.35	3.35	3.35	3.35	3.35
2020					3.35
Non-financial firms					
2018	3.34	3.30	3.29	3.30	3.32
2019	3.40	3.35	3.32	3.33	3.35
2020					3.40

* Survey conducted during November 29.
IR: Inflation Report.

Box 8
Trend in Residential Electricity Rates

Between December 2013 and December 2018, residential electricity rates have increased by 35 percent. In comparison to the main cities of countries members of the Pacific Alliance, this increase has meant that end users in Peru pay the highest residential rates within this group of countries.

RESIDENTIAL SECTOR - MONTHLY CONSUMPTION OF 125KWH
(Cent US$ / kWh)



Memo: Considers capital cities of Pacific Alliance countries.
Source: OSINERGMIN.

The electricity rate has three segments: generation, transmission and distribution. During the period of analysis, the segment that contributed the most to increase the rate is the transmission segment (18 percentage points), followed by the generation segment (15.7 percentage points), and, to a lesser extent, the distribution segment (1.6 percentage points).[16] Contrasting with what happened at the end of 2013 when electricity transmission only contributed with 15 percent of the total rate, this segment now accounts for approximately 25 percent of the total electricity rate.

Various charges have been included in the transmission rate to finance new infrastructure, the rate charges associated with generation plants that use renewable energy resources (RER)

16 Electricity generation, transmission, and distribution rates are updated according to macroeconomic variables such as the exchange rate, the wholesale price index (WPI), and the price of natural gas, among others.

standing out together with cold reserve charges, and charges for the construction of Nodo Energético del Sur (NES). The rate percentage charged for the project Gasoducto Sur Peruano eliminated in February 2017.

Legislative Decree N° 1002 of May 2008 ("Promotion of investment for electricity generation based on renewable energies") was intended to encourage the diversification of the energy matrix towards the use of clean unconventional technologies, such as solar, wind, hydroelectric (up to 20 MW of power), geothermal, biomass, and tidal energies. Through auction mechanisms, RER generation was awarded a price for the energy produced, which is partially financed by the contributions of regulated customers through surcharges on the toll connection to the main transmission system. Today, there are 35 RER generation units that are financed with these surcharges.

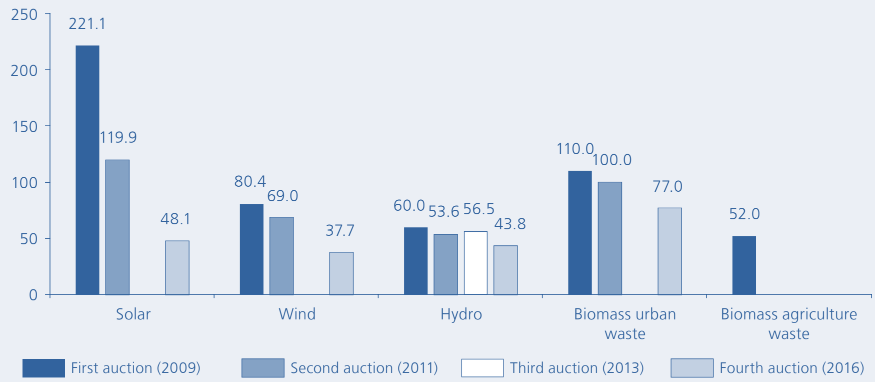
INCREASE IN THE RESIDENTIAL ELECTRIC RATES
(2013-2018)

Components	Contribution (% points)
Generation	15.7
New surcharges in the Transmission Rate	8.4
-Plant Cold Reserve (CR)	1.0
-Plant based on Renewable Energy Resources (RER)	4.2
-Thermal plant of Puerto Bravo (South Energy Node)	1.8
-Thermal plant of Ilo (Southern Energy Node)	1.4
-Unit charge for Compensation of Reliability in the Energy Supply Chain	0.1
Rest of Transmission	9.6
Distribution	1.6
TOTAL	**35.3**

Memo: Increase in the residential electric rates correspond to Enel Distribution (Lima Norte) between December 2013 and December 2018.
Source: OSINERGMIN.

As a result of technological progress, however, the average price of RER generation has decreased significantly over time, particularly in the case of solar and wind power plants. The average price in the case of the former fell 78 percent between the first auction and the fourth one in Peru, while the price of the latter fell 53 percent. The results of the fourth auction would be indicating that the need to subsidize RER generation through a future auction has decreased.

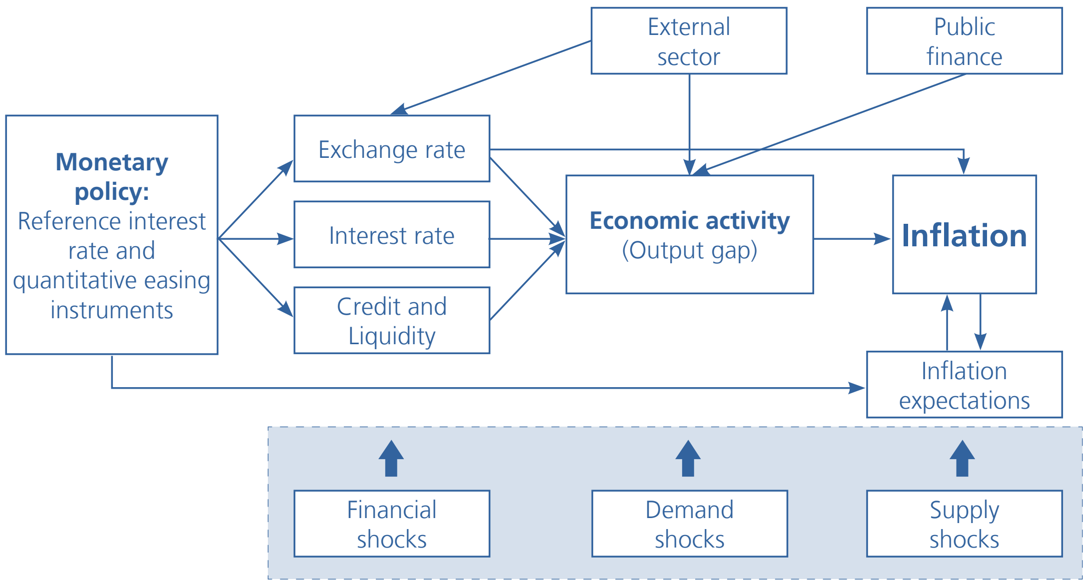
AVERAGE PRICE OF GENERATION AUCTIONS RER IN PERU
(US$/mWh)



Source: Results in auction called by OSINERGMIN.

Chapter VI

BALANCE OF RISKS



VI. Balance of Risks

69. Every forecast is subject to the occurrence of unanticipated events that may deviate the forecast from the central scenario. The materialization of some risks may imply a rate of inflation different from the one originally forecast. The main factors that could more likely deviate the inflation forecast from the baseline scenario include the following:

- **Financial shocks**
  Sharp adjustments in the Fed interest rates or greater international risk aversion could push the exchange rate up. In the short term, through the effect this could have on imported inflation, an increase in the exchange rate could increase inflation from the levels that are consistent with the central forecast scenario. The expected impact of such a scenario is lower than in the previous Inflation Report since expectations of an increase in the Fed interest rate are also lower.

- **External demand shocks**
  The risks associated with commercial tensions between the United States and China remain. Although part of their effects have materialized and have been incorporated into the central scenario of this report, there is still the risk that its up-scaling will compress the growth of global economic activity, reduce the prices of raw materials, and strengthen the dollar. Lower global economic growth and lower prices of raw materials would reduce the output gap, whereas the strengthening of the dollar could contaminate inflation expectations. The risk of such event is lower than that estimated in the September Inflation Report due to the recent commercial truce agreed between the US and China.

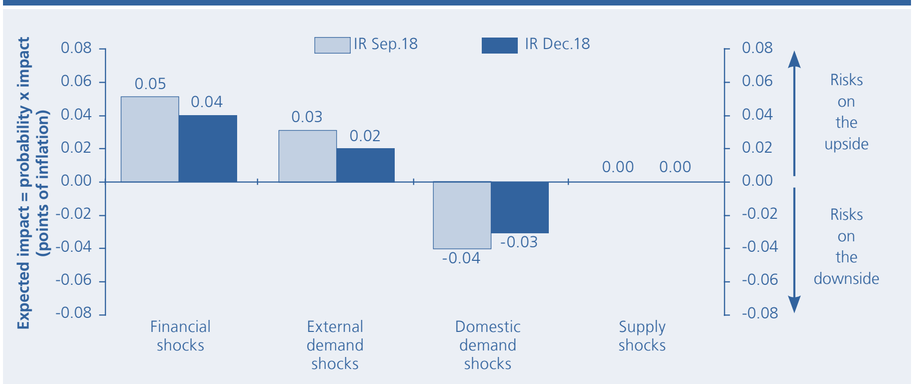
- **Domestic demand shocks**
  Economic recovery could be more moderate if private investment grows at lower rates than expected, which would imply a more negative output gap for a longer period of time, with inflation tending to fall below the

baseline scenario. The expected impact of such a risk has been revised down in comparison with the one estimated in the previous Inflation Report given lower political uncertainty and the improvement observed in business confidence regarding the situation of the economy.

- **Supply shocks**
  The risk of a sudden increase in the price of some food items has practically a nil expected impact, similar to the one considered in the Inflation Report of September. The most likely scenario at the time when this report was completed is that there will be a weak El Niño episode that will hardly have any significant impact on the prices of foodstuffs. Moreover, no significant increase is anticipated in the price of crude that could affect imported inflation and subsequently inflation expectations.

The balance of risks for the inflation forecast shows a slight positive bias due to the higher imported inflation produced by external demand shocks and financial shocks. The latter would be offset in part by the effect of a lower output gap associated with lower investment. This means that the impact of factors that could affect inflation on the upside is higher than the impact of factors that could affect inflation on the downside.

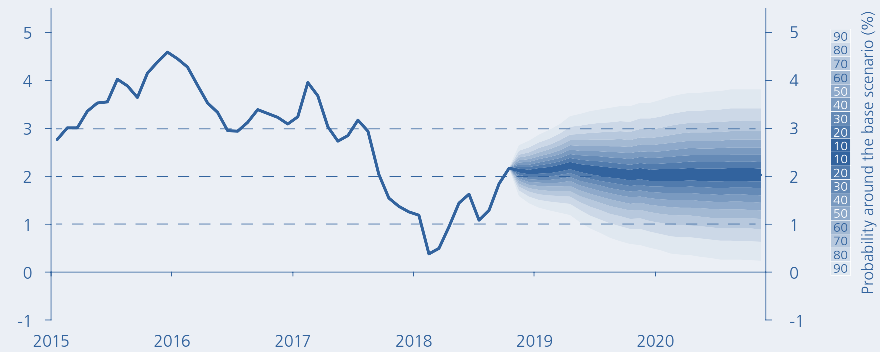
Graph 77
BALANCE OF RISKS AGAINST THE BASE SCENARIO



70. The forecasts show a high probability that inflation will be at the center of the inflation target range in the forecast horizon. The probability that inflation will be between 1.5 and 2.5 percent in December 2019 is estimated at 40 percent. Furthermore, reflecting the positive bias of inflation associated with external demand and financial shocks, the probability that inflation in 2019 will be above

the upper band of the target range is 18 percent, while the probability that it will be below the lower band is 12 percent.

Graph 78
INFLATION FORECAST: 2015 - 2020
(Last 12-month % change)



Memo: The graph shows the probability of occurrence of values of inflation in the future, according to the combination of the statistical analysis and the balance of risks. Each band concentrates 5% probability and the total bands cover 90% of probability. The darker bands contain the path of the base scenario.