INFLATION REPORT

March 2019

Recent trends and macroeconomic forecasts 2019-2020

CENTRAL RESERVE BANK OF PERU

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Recent Trends and Macroeconomic Forecasts 2019 - 2020

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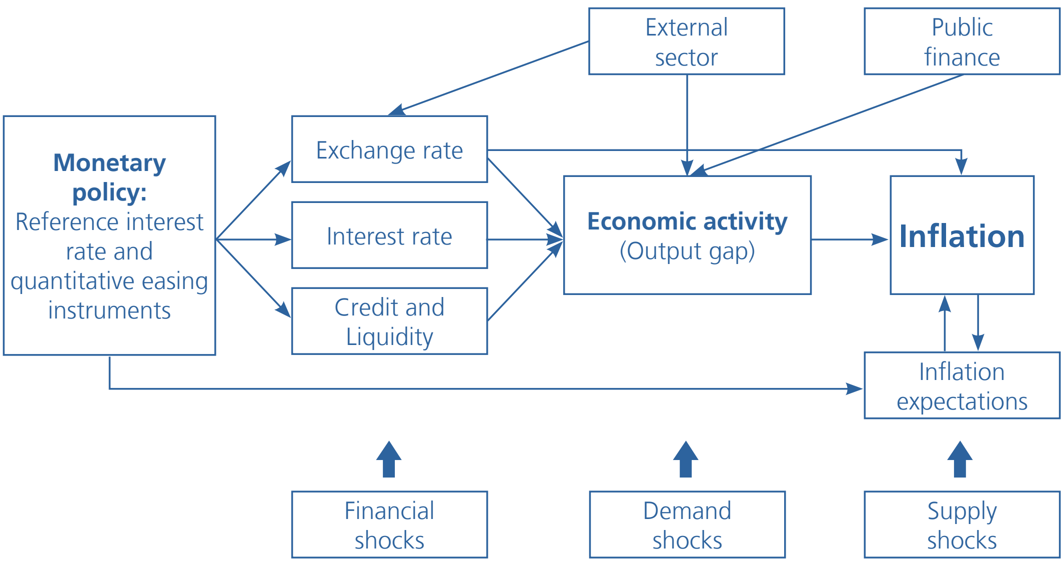

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CONTENT

BOXES

This ***Inflation Report*** was prepared using data on the balance of payments and the gross domestic product as of the fourth 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 February 2019.

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 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 March 21, 2019.

- The following Inflation Report will be published on Friday, July 5, 2019.

Summary

i. A more moderate pace of growth is expected this year in **global economic activity**, with the pace of global growth slowing down from 3.7 percent in 2018 to 3.4 percent due to the negative impact that trade tensions have had so far in the developed economies. However, this slowdown in global growth would be accompanied by more favorable external financial conditions than those foreseen in December as a result of lower expectations of monetary policy adjustments in the major central banks, particularly in the Fed. Moreover, a global growth rate of 3.5 percent is estimated for 2020 in a context in which global trade tensions would subside.

ii. The **terms of trade** would show a moderate recovery in the 2019-2020 forecast horizon (with rates of 1.3 and 0.4 percent, respectively) after having registered a slight decline in 2018 (-0.1 percent). The prices of minerals would be slightly higher as a result of lower concerns of an economic slowdown in China. As it has been observed year-to-date, the progress achieved in U.S.-China trade negotiations and the stimulus measures adopted in the Chinese economy have led to a slight correction in the prices of the main commodities.

iii. The correction of the terms of trade on the upside will imply a higher surplus in the trade balance and, consequently, a lower deficit in the **current account of the balance of payments** than that projected in the Inflation Report of December 2018. Current account deficits of 1.3 percent are now estimated for both 2019 and 2020. **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 as well as the flows projected in the Report of December.

iv. In 2018 **economic activity** grew 4.0 percent), supported by the positive evolution of private mining investment and by the sustained growth of private consumption. In addition to this, public investment reversed the decline observed in 2017 as a result of the amounts invested in the PanAmerican Games and local governments' investment in road infrastructure.

The Peruvian economy would maintain a GDP growth rate of 4.0 percent in 2019 and in 2020. The slowdown of public expenditure this year, associated with the change of subnational authorities, will be offset by higher private spending, in a context of improvement of the terms of trade and business confidence. In 2020, the increased growth of mining production will add to the dynamism of domestic demand due to the progress of mining megaprojects and infrastructure works. As a result, the output gap will tend to close gradually in the forecast horizon.

v. The **fiscal deficit** projected for this year has decreased from 2.6 percent of GDP in our Report of December 2018 to 2.3 percent of GDP in this Report, with estimated lower non-financial expenditures –down from 20.4 to 20.2 percent of GDP– accounting for this change considering the higher decline observed in public investment so far this year. The decreasing trend registered in the fiscal deficit that began in 2018 is foreseen to continue in 2020 with a deficit of 2.1 percent, in line with the fiscal consolidation process. This projection implies a positive weighted fiscal impulse for 2018 and a negative one for 2019 and 2020, which would coincide with greater private expenditure and with the reduction of the output gap.

vi. The BCRP Board has maintained the **benchmark interest rate** at 2.75 percent since March 2018, which is compatible with an expansionary monetary policy stance (real rate of 0.35 percent) in a context of inflation of around 2.0 percent since November and a negative output gap which is projected to continue closing gradually in the forecast horizon.

vii. In line with the expansionary monetary stance of BCRP, **credit to the private sector** grew at a year-on-year rate of 7.6 percent in February, this growing trend being observed in all of the credit segments, especially in the segment of 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 the pace of growth of domestic demand.

viii. Year-on-year **inflation** fell from 2.2 percent in November to 2.0 percent in February 2019, around the midpoint of the target range. Inflation expectations, which have remained within the target range since March 2017, showed a rate of 2.4 percent in February and are estimated to decrease gradually towards 2 percent in the forecast horizon.

ix. The balance of **inflation risk factors** considered in this Report –external demand shocks, international financial shocks, and domestic demand shocks– translates into a neutral bias in the inflation forecast, which contrasts with the bias on the upside considered in the Inflation Report of December.

SUMMARY OF INFLATION REPORT FORECAST

	2017	2018	2019[1/]		2020[1/]	
			IR Dec.18	IR Mar.19	IR Dec.18	IR Mar.19
Real % chg.						
1. Gross Domestic Product	2.5	4.0	4.0	4.0	4.0	4.0
2. Domestic demand	1.4	4.3	3.9	3.9	4.0	4.1
a. Private consumption	2.6	3.8	3.7	3.8	3.9	3.9
b. Public consumption	0.5	2.0	2.9	2.5	1.8	2.2
c. Fixed private investment	0.2	4.4	6.5	6.5	6.0	6.0
d. Public investment	-2.3	8.4	2.8	1.0	3.4	5.0
3. Exports (good and services)	7.8	2.5	4.7	4.6	4.8	5.7
4. Imports (good and services)	4.1	3.4	4.3	4.4	5.1	6.2
5. Economic growth in main trading partners	3.5	3.8	3.5	3.4	3.4	3.4
Memo:						
Output gap[2/] (%)	-1.4 ; -0.8	-0.9 ; -0.2	-0.6 ; 0.2	-0.6 ; 0.2	-0.5 ; 0.5	-0.5 ; 0.5
% change						
6. Inflation	1.4	2.2	2.1	2.0	2.0	2.0
7. Expected inflation[3/]	-	-	2.5	2.4	2.5	2.5
8. Expected depreciation[3/]	-	-	0.3	-1.6	0.4	0.9
9. Terms of trade[4/]	7.2	-0.1	-0.7	1.3	-0.5	0.4
a. Export prices	13.0	6.5	-2.1	-0.5	1.2	2.6
b. Import prices	5.4	6.6	-1.4	-1.8	1.7	2.1
Nominal % change						
10. Currency in circulation	6.7	7.9	8.5	8.1	8.5	8.5
11. Credit to the private sector[5/]	6.7	8.3	9.0	9.0	9.0	9.0
% GDP						
12. Gross fixed investment (nominal)	21.8	22.4	23.0	22.7	23.4	23.1
13. Current account of the balance of payments	-1.2	-1.5	-1.6	-1.3	-1.7	-1.3
14. Trade balance	3.1	3.1	2.7	3.4	2.6	3.4
15. Long-term external financing of the private sector[6/]	5.7	4.4	4.1	4.5	3.8	4.6
16. Current revenue of the general government	18.1	19.3	19.3	19.3	19.4	19.4
17. Non-financial expenditure of the general government	20.1	20.4	20.4	20.2	20.0	20.0
18. Overall balance of the non-financial public sector	-3.1	-2.5	-2.6	-2.3	-2.1	-2.1
19. Balance of total public debt	24.9	25.7	26.7	26.3	26.9	26.4
20. Balance of net public debt	9.5	11.4	13.0	13.2	14.0	14.3

IR: Inflation Report.
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.

I. External Sector

World Economy

1. The growth projection of the global output for this year has been revised down from 3.6 to 3.4 percent due to a more moderate pace of growth of economic activity in the developed economies, whose growth rate has been revised from 2.0 to 1.8 percent. The growth rate projected for the Eurozone has been revised down the most, although the growth forecasts for Japan, Canada, and the United Kingdom have also been revised on the downside due to the particular impact that the lower dynamism of international trade has had on these countries given the significant weight that exports have in these economies. The projected growth rate in the United States of America (USA) has also been revised slightly down, mainly due to the lower-than-expected pace of growth observed in the first months of the year. In addition to this, the emerging economies are projected to grow 4.6 percent, less than estimated in the December Report (4.7 percent).

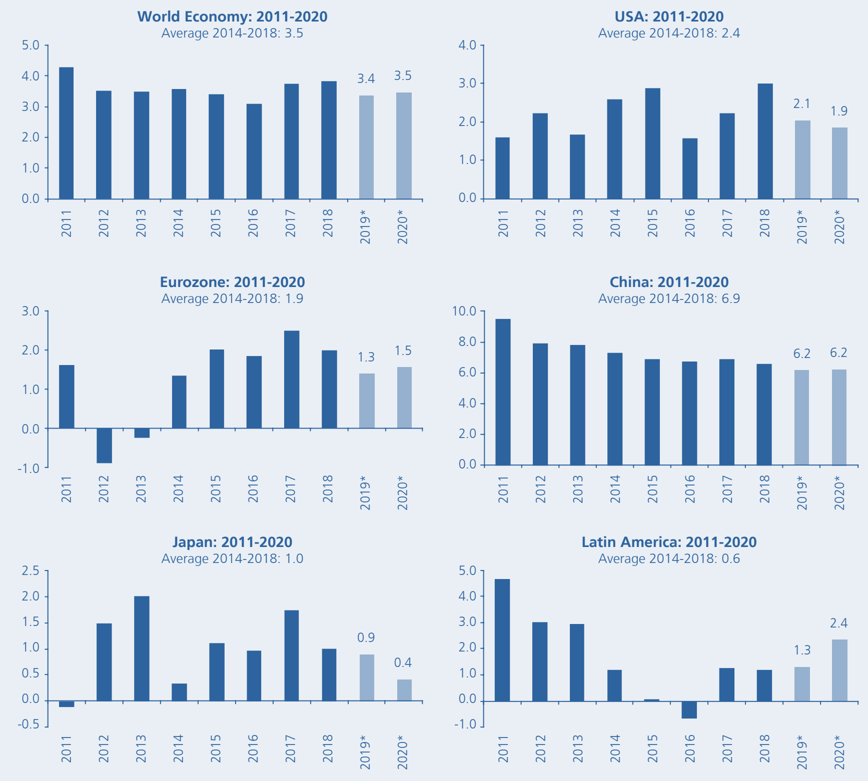
Table 1
GLOBAL GDP GROWTH
(Annual % change)

	PPP% 1/	Trading Peru % 1/	2017	2018	2019*		2020*	
					IR Dec.18	IR Mar.19	IR Dec.18	IR Mar.19
Developed economies	**41.3**	**42.9**	**2.3**	**2.3**	**2.0**	**1.8**	**1.8**	**1.7**
Of which:								
1. USA	15.3	20.2	2.2	2.9	2.2	2.1	2.0	1.9
2. Eurozone	11.6	12.8	2.5	1.8	1.8	1.3	1.6	1.5
Germany	3.3	2.7	2.5	1.5	1.7	1.2	1.6	1.5
France	2.2	0.8	2.3	1.5	1.6	1.3	1.6	1.5
Italy	1.8	1.8	1.5	1.0	1.0	0.3	1.0	0.8
Spain	1.4	4.0	3.0	2.5	2.2	2.2	2.0	1.9
3. Japan	4.3	4.0	1.7	0.8	1.0	0.9	0.4	0.4
4. United Kindgom	2.3	1.3	1.7	1.4	1.4	1.3	1.5	1.5
5. Canada	1.4	2.6	3.0	2.1	1.9	1.8	1.8	1.8
Developing economies	**58.7**	**57.1**	**4.7**	**4.7**	**4.7**	**4.6**	**4.8**	**4.8**
Of which:								
1. Emerging and developing Asia	32.4	34.9	6.5	6.5	6.3	6.3	6.4	6.4
China	18.2	27.9	6.9	6.6	6.2	6.2	6.2	6.2
India	7.4	3.8	6.7	7.3	7.5	7.5	7.6	7.6
2. Commonwealth of Independent States	4.5	0.5	2.1	2.4	2.1	2.1	2.1	2.1
Russia	3.2	0.5	1.5	1.7	1.5	1.5	1.5	1.5
3. Latin America and the Caribbean	7.7	21.6	1.3	1.1	1.8	1.3	2.3	2.4
Brazil	2.5	5.4	1.0	1.3	2.4	2.1	2.3	2.6
Chile	0.4	3.3	1.5	4.0	3.5	3.4	3.3	3.4
Colombia	0.6	2.9	1.8	2.8	3.2	3.0	3.3	3.2
Mexico	1.9	3.0	2.0	2.1	1.9	1.6	2.1	1.7
Argentina	0.7	1.5	2.9	-2.6	-1.0	-1.2	1.3	1.9
Peru	0.3	-	2.5	4.0	4.0	4.0	4.0	4.0
World Economy	**100.0**	**100.0**	**3.7**	**3.7**	**3.6**	**3.4**	**3.6**	**3.5**
Memo:								
Peru's trading partners 1/	65.9		3.5	3.8	3.5	3.4	3.4	3.4

* Forecast.
1/ The weightings correspond to 2017. For the business partners, the top 20 are considered.
Source: Bloomberg, IMF, and Consensus Forecast.

Moreover, the global growth projection of 3.6 percent in 2020 considered in the previous Report has been revised down to 3.5 percent due to the slowdown of growth in the developed economies.

Graph 1
GDP GROWTH
(Real % change)



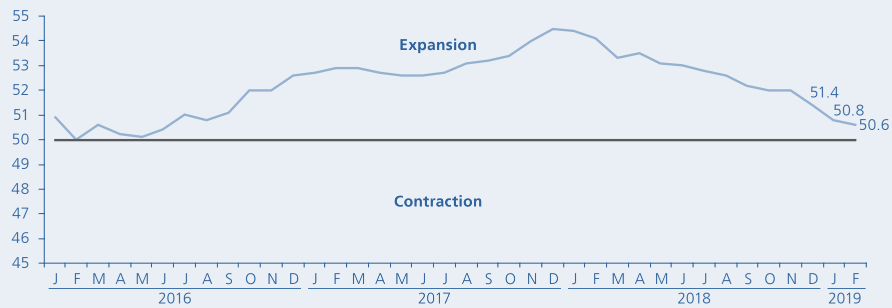
* Forecast.
Source: Bloomberg, IMF, and Consensus Forecast.

2. This projection of world economic activity is consistent with recent developments. On the one hand, global trade indicators have slowed down significantly. An indicator that shows this trend is the Baltic Dry Index –this indicator measures the cost of freight for maritime cargo–, which so far this year has decreased by 43 percent. Moreover, the Purchasing Managers Index (PMI) of global manufacturing registered the tenth consecutive fall in February, this fall being practically generalized at the level of the large economies, including the Eurozone, China, and Japan.

Graph 2
BALTIC DRY FREIGHT RATES INDEX

Source: Bloomberg.

Graph 3
PMI GLOBAL MANUFACTURING



Source: Bloomberg and JPMorgan.

3. This slowdown in global economic activity is accompanied by lower inflationary pressures, which has significantly reduced expectations of monetary policy adjustments in the major central banks, particularly in the Fed. This, together with the progress achieved in the trade negotiations between USA and China and the fiscal stimulus measures adopted in the Chinese economy, have led over the past few weeks to capital flows to the emerging economies, to the depreciation of the dollar against the emerging currencies, and to an increase in the price of most commodities.

4. The economy of the **United States** continued to expand during the fourth quarter of 2018 (2.2 percent), although at a lower rate than in previous quarters. The lower rate of

growth is associated, on the one hand, with the moderate evolution of non-residential investment in a context of lower corporate profits. On the other hand, residential investment continued to show negative rates, in line with the increase in mortgage rates and the recent evolution of housing prices. In fact, the Case-Shiller price index stabilized as of the third quarter and contracted slightly in November and December 2018.

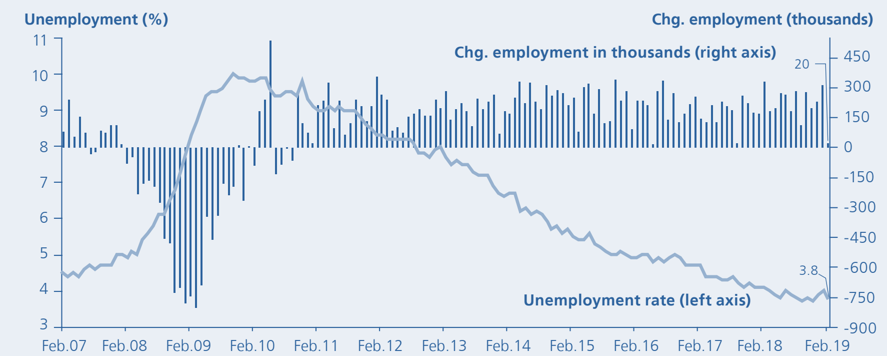
Table 2
USA: GDP
(Annual % change)

	2017	2018				
		Q1	Q2	Q3	Q4	Year
Personal consumption	2.5	0.5	3.8	3.5	2.5	2.6
Gross private investment	4.8	9.6	-0.5	15.2	3.7	5.9
Non-residential investment	5.3	11.5	8.7	2.5	5.4	6.9
Residential investment	3.3	-3.4	-1.3	-3.6	-4.7	-0.3
Change on inventories *	0.0	0.3	-1.2	2.4	0.1	0.1
Exports	3.0	3.6	9.3	-4.9	1.8	4.0
Imports	4.6	3.0	-0.6	9.3	2.0	4.5
Government expenditure	-0.1	1.5	2.5	2.6	-0.4	1.5
GDP	**2.2**	**2.2**	**4.2**	**3.4**	**2.2**	**2.9**

* Contribution to growth.
Source: Bureau of Economic Analysis (BEA).

The recent economic slowdown is consistent with a lower growth projection for 2019, the projection declining from 2.9 percent in 2018 to 2.1 percent. The growth rate in 2019 has been revised slightly down (from 2.2 percent projected in December), in line with the lower-than-expected pace of growth registered in the first quarter of the year due to the contraction of real estate investment and to the lower dynamism of consumption. The latter would have been affected by the recent evolution of employment: 20 thousand jobs were created in the month of February, this figure contrasting with the 180 thousand new jobs expected.

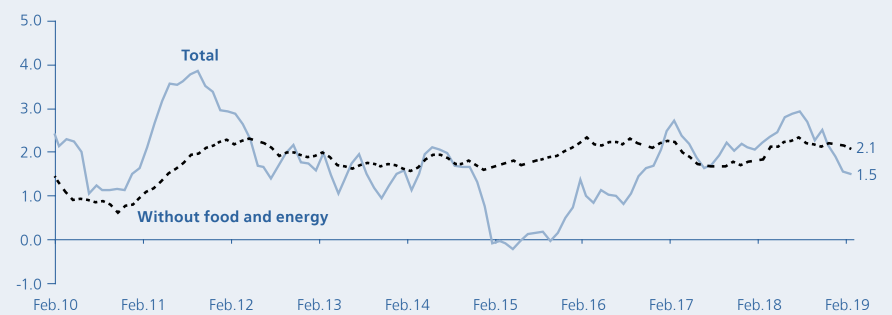
Graph 4
USA: PAYROLL AND UNEMPLOYMENT RATE



Source: Bloomberg.

This lower dynamism has been accompanied by some deceleration of inflation associated mainly with lower energy prices. In February, inflation continued to show the downward trend observed in previous months and recorded a rate of 1.5 percent. Core inflation, which excludes energy and food, showed a smaller reduction with a rate of 2.1 percent in the month.

Graph 5
USA: CONSUMER PRICE INDEX
(Annual % change)



Source: Bloomberg.

In this context, the Fed maintained its interest rate at the meetings of January and March. In addition, at the March meeting, it revised the projections of growth and inflation for 2019 and 2020 to the downside (and the projection of unemployment to the upside).

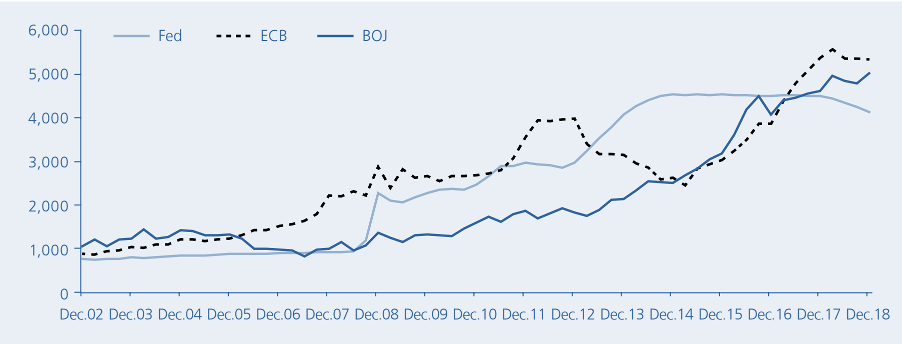
Table 3
PROJECTIONS OF THE FED*

	2019		2020		2021		Long-term	
	Dec.18	Mar.19	Dec.18	Mar.19	Dec.18	Mar.19	Dec.18	Mar.19
GDP growth	2.3	2.1	2.0	1.9	1.8	1.8	1.9	1.9
Unemployment rate	3.5	3.7	3.6	3.8	3.8	3.9	4.4	4.3
PCE price index	1.9	1.8	2.1	2.0	2.1	2.0	2.0	2.0
Core Inflation (Core PCE)	2.0	2.0	2.0	2.0	2.0	2.0	-	-
Memo: Core PCE excluding food and energy.								
Interest rate (%)	2.9	2.4	3.1	2.6	3.1	2.6	2.8	2.8

* It adds data from 17 individual projections of the Committee members at the end of period.

In line with these changes, the Fed reduced the number of expected rate hikes in 2019 from 2 to 0 and maintained the projection of an increase for 2020. It also modified the asset reduction program (which became effective in October 2017) in order to consider a more gradual reduction in the balance sheet and a portfolio re-composition in favor of Treasury bonds.

Graph 6
BALANCES OF THE MAIN CENTRAL BANKS
(Billion US$)



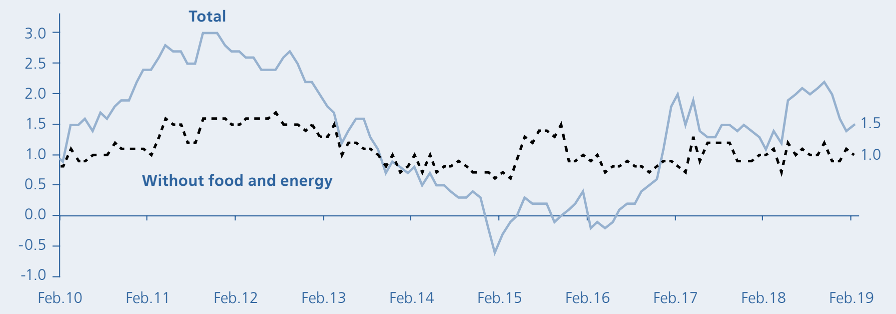
5. The **Eurozone** continued to show a moderation in its growth during the first months of this year. In sector terms, continuing with the trend observed in 2018, the manufacturing sector registered a significant drop. In February, the PMI indicator was below 50 (contraction zone) for the first time in six years, the impact of exports in the context of global slowdown accounting mostly for this result. By countries, the slowdown in Germany stands out: its industrial production fell 0.8 percent in January (affected in part by idiosyncratic shocks associated with environmental regulations in the automotive sector).

   On the expenditure side, the drop in investor confidence stands out. This drop is explained by the deterioration of expectations associated with commercial tensions and with uncertainty regarding the Brexit. Business confidence has steadily declined since June 2018, reaching in February its lowest level in two years.

   In this context, the Eurozone economy is expected to reduce its growth rate from 1.8 percent in 2018 to 1.3 percent in 2019. This projection is a downward revision of the growth rate estimated in the December Inflation Report, particularly in the case of the three largest economies of the bloc (Germany, France, and Italy). In 2020, the Eurozone is estimated to grow 1.5 percent.

   Inflation has been showing a downward trend since October last year (2.3 percent year on year) and reached 1.5 percent in February, reflecting lower energy prices and lower prices in the services sector. Likewise, core inflation has remained at low levels (around 1 percent).

Graph 7
EUROZONE: CONSUMER PRICE INDEX
(Annual % change)

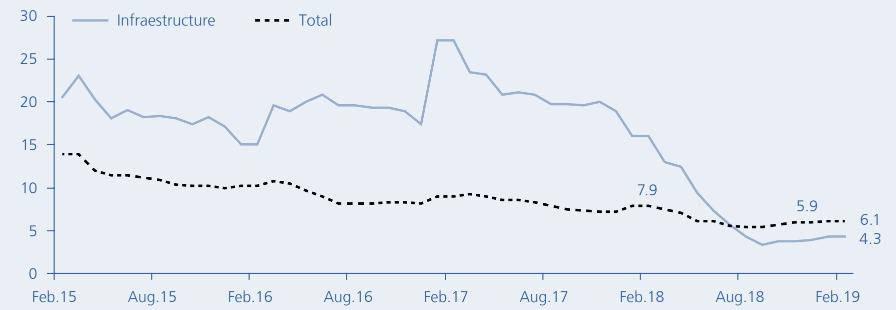


Source: Bloomberg.

Given the moderation of GDP growth and contained inflationary pressures, at its March meeting, the European Central Bank (ECB) maintained the policy interest rates and specified that they will be maintained until the end of the year, which contrasted with its previous announcement that it foresaw rate rises towards the middle of the year. The ECB also announced a third long-term financing program (Targeted Long Term Refinancing Operation - TLTRO III) for the period September 2019 to March 2021 that will allow favorable financial conditions and a better transmission of monetary policy. The ECB said that the slower pace of economic growth is hampering inflation's approaching the inflation target (close to 2 percent).

6. In the emerging economies, GDP growth in **China** was in line with expectations. In the last quarter of 2018, China's output grew 6.4 percent –the lowest rate of the year–, as a result of which GDP grew 6.6 percent in 2018 (6.9 percent in 2017).

Graph 8
CHINA: INVESTMENT IN FIXED ASSETS
(Interannual % Chg)



Source: Bloomberg.

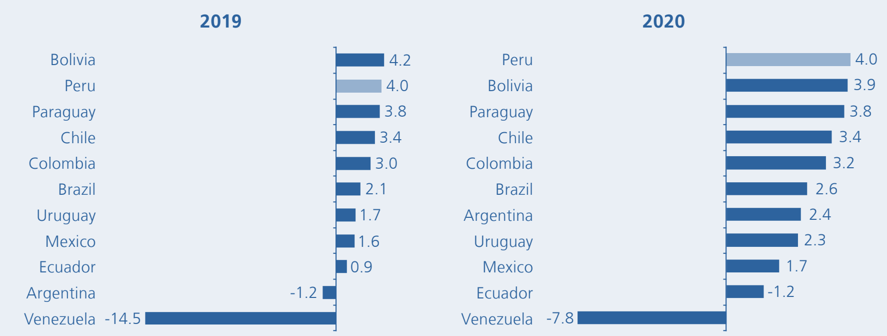
The slowdown in investment stands out, with a year-on-year percentage change that went from 7.9 percent in January 2018 to a bottom level of 5.3 percent in August of that year and then resumed a slightly growing trend and closed at a rate of 5.9 percent in December. This slight recovery was observed in a context of the announcement of measures aimed at contributing to provide financial relief for small businesses and foster a recovery of investment by local governments.

In view of this lower dynamism of economic activity, the Chinese government announced a growth target between 6.0 and 6.5 percent for 2019, a more moderate target than that established for 2018 (around 6.5 percent). The new target is consistent with tax cuts –with a reduction in the rate of the Value Added Tax (VAT), differentiated by sectors, standing out– and with an expansion of public expenditure that would lead to increase the fiscal deficit to 2.8 percent of GDP in 2019 (vs. 2.6 percent of GDP in 2018).

7. **Latin America** is estimated to grow 1.3 percent in 2019 and 2.4 percent in 2020. The growth projection for 2019 has been revised down, in line with recent activity indicators. The region has been affected by trade tensions as well as by fears of a global slowdown.

At the country level, the growth of the output in Chile (3.4 percent) and Colombia (3.0 percent) stand out, although the pace of growth in these countries has been lower than projected in the previous report. In Brazil, a growth rate of 2.1 percent is foreseen after electoral uncertainty and expectations of reforms have been overcome. In contrast, Mexico registers a lower growth rate (1.6 percent) given the situation of PEMEX and its fiscal position. In Argentina, the economy continues to be in recession, with high levels of current account deficits and inflation hindering the expansionary response of monetary and fiscal policies.

Graph 9
GDP GROWTH
(% Change)

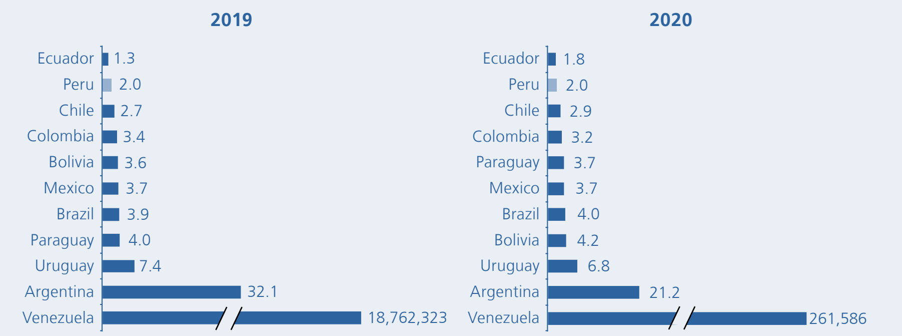


Source: Latin American Consensus Forecast (March 2019) and BCRP (Peru).

It is worth pointing out that a greater flow of capital to the region and a recovery in the price of most commodities have been observed at the time of closing this report, reflecting a less restrictive position of the Fed and the likelihood of a commercial agreement between the United States and China.

Moreover, inflation has been moderating in most countries, in line with the economic slowdown and with the lower exchange rate pressures observed so far in 2019. In countries with inflation targeting schemes, inflation has been showing levels within the inflation target range (with the exception of Chile, where inflation is slightly below the lower band of the target range).

Graph 10
INFLATION
(% Change, end of period)



Source: Latin American Consensus Forecast (March 2019) and BCRP (Peru).

International Financial Markets

8. Between January and February, financial markets benefited from a marked fall in **risk aversion** associated with factors such as the progress achieved in the trade negotiations between the United States and China, expectations of a lower adjustment in the Fed interest rate, and higher-than-estimated corporate results. In spite of this, gains were offset by concerns about global economic slowdown.

These factors led to a recovery in stock markets (after the fall of 2018), to appreciation pressures on the currencies of emerging countries, and to a recovery in the prices of most commodities. In addition, capital flows to the emerging economies have been higher than in previous months so far this year.

Graph 11
FIXED AND VARIABLE INCOME FLOW FROM NON-RESIDENTS TO EMERGING MARKETS
(2016-2019, in billion US$)

Source: The Institute of International Finance (IIF).

Graph 12
MSCI INDEX EMERGING CURRENCIES
(2016-2019)

Memo: An increase (fall) in the index implies a depreciation (appreciation) of the US$ with respect to the basket of emerging currencies.
Source: Bloomberg.

Graph 13
MSCI INDEX EMERGING STOCK MARKET
(2016-2019)

Source: Bloomberg.

9. Most of the **currencies of the emerging market countries** strengthened against the dollar. In addition to the expected least restrictive position of the Fed, there was also an increase in the prices of metals and, in several cases, better activity data. The appreciation of the Chilean peso, the Russian ruble, and the Colombian peso stand out in this scenario. However, other currencies, such as the Argentine peso and the Indian rupee, continued to show weakness. The Argentine peso depreciated after the daily purchases of dollars carried out by the Central Bank of Argentina (due to fluctuations of the dollar in the area of intervention), the contraction of activity, and the political noise linked to the elections in October, while the Indian rupee weakened due to the increase in the price of crude oil (India being an oil importing country), geopolitical tensions with Pakistan, economic slowdown, and the reduction of inflation below its target range.

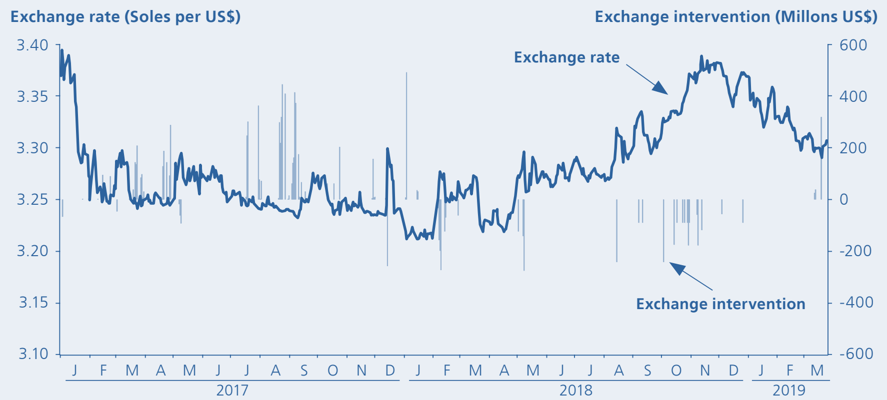
Table 4
EXCHANGE RATES

		Dec.17	Feb.18	Dec.18	Feb.19	Variation (%) Accumulated 2019*	Variation Feb.2019/ Feb.2018 (%)*
DOLLAR INDEX	US Dollar Index	92.12	90.61	96.17	96.16	0.0	6.1
EURO	Euro	1.200	1.219	1.144	1.137	-0.6	-6.7
UNITED KINDGOM	Pound sterling	1.351	1.376	1.281	1.326	3.5	-3.6
JAPAN	Yen	112.670	106.670	109.930	111.370	1.3	4.4
BRAZIL	Real	3.312	3.246	3.880	3.751	-3.3	15.6
COLOMBIA	Peso	2,982	2,866	3,245	3,080	-5.1	7.5
CHILE	Peso	615	595	693	656	-5.4	10.2
MEXICO	Peso	19.65	18.83	19.65	19.28	-1.9	2.4
ARGENTINA	Peso	18.59	20.11	37.65	39.09	3.8	94.4
PERU	**Sol**	**3.237**	**3.266**	**3.372**	**3.298**	**-2.2**	**1.0**
SOUTH AFRICA	Rand	12.36	11.79	14.38	14.08	-2.1	19.4
INDIA	Ruppe	63.83	65.20	69.77	70.83	1.5	8.6
TURKEY	Lira	3.79	3.80	5.29	5.33	0.8	40.5
RUSSIA	Ruble	57.66	56.34	69.68	65.96	-5.3	17.1
CHINA	Yuan (onshore)	6.51	6.33	6.88	6.69	-2.7	5.7
SOUTH KOREA	Won	1,066.4	1,084.2	1,114.0	1,124.6	1.0	3.7
INDONESIA	Rupee	13,555	13,610	14,550	14,035	-3.5	3.1
THAILAND	Bath	32.55	31.48	32.33	31.57	-2.4	0.3
MALAYSIA	Ringgit	4.04	3.92	4.13	4.07	-1.6	3.8
PHILIPPINES	Peso	49.98	52.08	52.49	51.87	-1.2	-0.4

* An increase (fall) in the index implies an appreciation (depreciation) of the US dollar except in the euro and the pound.
Source: Reuters.

In Peru, the Central Bank has intervened in the foreign exchange market three times so far this year, buying dollars for a total of US$ 385 million, while allowing at the same time the maturity of FOREX Swaps-Sell for a total of US$ 1.54 billion. As a result of these operations, the balance of all the instruments of indirect exchange intervention is zero.

Graph 14
EXCHANGE RATE AND FOREIGN EXCHANGE INTERVENTION OF THE BCRP[1/]



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

Table 5
FX INTERVENTION

	Number of trading days in the market	Number of FX intervention days					Standard deviation of the Exchange Rate (Annualized by % chg.)
		Spot Market	Placement of derivatives and indexed instruments	Total (spot and/or placement)	Percentage of days with intervention		
					Spot	Instruments	
2017	249	55	23	63	22%	10%	4.5%
2018	245	4	27	30	2%	11%	3.4%
2019*	60	3	0	3	5%	0%	3.4%

* As of March 26.

10. In **fixed-income markets**, the yield on 10-year US Treasury bonds registered a slight increase in January and February, influenced by the favorable evolution of the economy and the progress made in U.S.-China trade negotiations. This increase was offset by expectations that the Fed will take a less restrictive position and by fears of a global slowdown. On the other hand, yields in the Eurozone declined, given the indications of economic slowdown and the reduction of noise regarding the Italian budget. In the United Kingdom, the rise was in line with a perception of ruling out a disorderly exit from the European Union, while in Japan the slight drop in yield is explained by the economic slowdown. In the emerging economies, yields fell mostly due to the generalized context of greater appetite for higher return assets.

Table 6
YIELDS ON 10-YEAR SOVEREIGN BONDS

	Dec.17	Dec.18	Feb.19	Accumulated variation 2019 (bps.)
USA	2.41	2.69	2.72	3
GERMANY	0.42	0.24	0.18	-6
FRANCE	0.78	0.71	0.57	-14
ITALY	2.01	2.74	2.75	1
SPAIN	1.56	1.41	1.17	-24
GREECE	4.07	4.35	3.65	-69
UNITED KINGDOM	1.19	1.28	1.30	3
JAPAN	0.04	-0.01	-0.03	-2
BRAZIL	10.26	9.24	9.00	-23
COLOMBIA	6.48	6.75	6.85	10
CHILE	4.55	4.24	3.77	-47
MEXICO	7.65	8.64	8.16	-48
PERU	**4.87**	**5.35**	**5.15**	**-20**
SOUTH AFRICA	8.86	9.28	9.15	-13
INDIA	7.33	7.37	7.41	4
TURKEY	11.35	15.80	14.45	-135
RUSSIA	3.87	5.05	4.69	-36
CHINA	3.90	3.31	3.18	-13
SOUTH KOREA	2.47	2.73	2.73	0
INDONESIA	6.29	7.98	7.79	-19
THAILAND	2.32	2.48	2.47	-1
MALAYSIA	3.91	4.08	3.89	-19
PHILIPPINES	5.70	7.67	7.67	0

Source: Bloomberg.

11. On the other hand, a generalized rise that reversed the losses recorded in the fourth quarter of 2018 was observed in the **equity markets**. Factors favoring this result included lower risk aversion associated with the likelihood of a trade agreement between the United States and China, the end of the government shutdown in the United States, and the least restrictive position of the Fed.

    The corporate results of the fourth quarter of 2018 (above expectations) also contributed to this, particularly in the United States, and the stock markets of the emerging countries also benefited from the improvement observed in the prices of commodities.

Table 7
STOCK MARKETS

		Dec.17	Dec.18	Feb.19	Accumulated (%) variation 2019
VIX*	S&P 500	11.04	25.42	14.78	-10.6
USA	Dow Jones	24,719	23,327	25,916	11.1
GERMANY	DAX	12,918	10,559	11,516	9.1
FRANCE	CAC 40	5,313	4,731	5,241	10.8
ITALY	FTSE MIB	21,853	18,324	20,659	12.7
SPAIN	IBEX 35	10,044	8,540	9,278	8.6
GREECE	ASE	802	613	708	15.4
UNITED KINDGOM	FTSE 100	7,688	6,728	7,075	5.2
JAPAN	Nikkei 225	22,765	20,015	21,385	6.8
BRAZIL	Bovespa	76,402	87,887	95,584	8.8
COLOMBIA	IGBC	11,478	11,144	12,221	9.7
CHILE	IGP	27,981	25,950	26,797	3.3
MEXICO	IPC	49,354	41,640	42,824	2.8
ARGENTINA	Merval	30,066	30,293	34,486	13.8
PERU	**General Index**	**19,974**	**19,350**	**20,614**	**6.5**
SOUTH AFRICA	JSE	59,505	52,737	56,002	6.2
INDIA	CNX Nifty	10,531	10,863	10,793	-0.6
TURKEY	XU100	115,333	91,270	104,530	14.5
RUSSIA	Interfax	1,152	1,066	1,188	11.5
CHINA	Shangai C.	3,307	2,494	2,941	17.9
SOUTH KOREA	Seul Composite	2,467	2,041	2,195	7.6
INDONESIA	JCI	6,356	6,194	6,443	4.0
THAILAND	SET	1,754	1,564	1,653	5.7
MALAYSIA	KLSE	1,797	1,691	1,708	1.0
PHILIPPINES	Psei	8,558	7,466	7,705	3.2

* Variation in basis points.
Source: Bloomberg.

II. Balance of Payments

Current Account

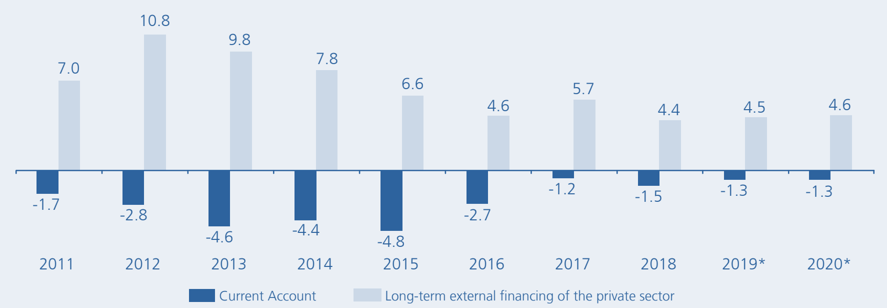
12. In 2018, the current account showed a deficit of 1.5 percent of GDP –a higher deficit than in the previous year (1.2 percent of GDP)–, reflecting the recovery of domestic demand. Moreover, for the third consecutive year, the trade balance continued showing a surplus, the surplus in 2018 being the highest in the past seven years.

    Despite the lower dynamism of global activity forecast for this year, better external financial conditions are expected in the forecast horizon due to the more gradual rise in the interest rates of the Fed and to lower fears of a sharp slowdown in the Chinese economy, as well as due to an improvement in international prices that will be reflected in a lower current account deficit in the next two years.

    The progress made in the trade negotiations between the United States and China and the recent fiscal measures in the latter country have been supporting the main emerging markets as well as commodity markets. Therefore, the prices of exports (metals) are expected to be slightly higher and the prices of imports (crude oil) slightly lower than projected in December, which will imply a slight increase in the terms of trade this year (1.3 percent) and in 2020 (0.4 percent).

13. In this scenario, the current account deficits forecast for 2019 and 2020 have been revised to 1.3 percent of GDP in each year, in line with the expected improvement anticipated in the terms of trade.

Graph 15
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.

Long-term external capital flows to the private sector will continue to finance the current account requirements throughout the forecast horizon. As for capitals directed to the public sector, so far this year non-residents' demand for Peruvian sovereign bonds has been higher than expected in December, in line with greater capital inflows to the emerging markets.

Table 8
BALANCE OF PAYMENTS
(Million US$)

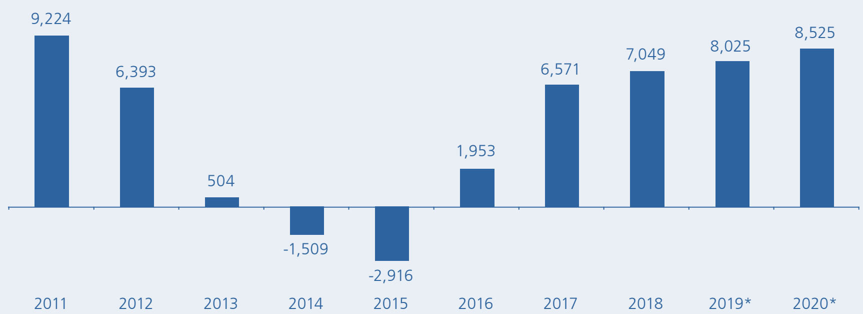
	2017	2018	2019*		2020*	
			IR Dec.18	IR Mar.19	IR Dec.18	IR Mar.19
I. CURRENT ACCOUNT BALANCE	**-2,537**	**-3,349**	**-3,770**	**-2,997**	**-4,103**	**-3,308**
% GDP	*-1.2*	*-1.5*	*-1.6*	*-1.3*	*-1.7*	*-1.3*
1. Trade Balance	6,571	7,049	6,331	8,025	6,318	8,525
a. Exports	45,275	48,942	49,959	51,026	52,988	55,391
Of which:						
i) Traditional	33,446	35,540	34,824	36,431	36,232	39,175
ii) Non traditional	11,699	13,214	14,976	14,424	16,597	16,037
b. Imports	-38,704	-41,893	-43,628	-43,000	-46,670	-46,866
2. Services	-1,434	-2,532	-2,256	-2,697	-2,427	-2,854
3. Investment income	-11,263	-11,422	-11,515	-11,988	-11,834	-12,811
4. Current transfers	3,589	3,556	3,669	3,662	3,840	3,832
Of which: Remittances	3,051	3,225	3,364	3,364	3,532	3,532
II. FINANCIAL ACCOUNT	**4,472**	**-151**	**4,533**	**7,333**	**6,686**	**6,389**
1. Private Sector	1,223	-2,250	3,759	2,229	4,614	4,118
a. Long-term	1,653	1,367	4,645	3,525	4,634	4,227
b. Short-term[1/]	-430	-3,617	-886	-1,296	-20	-109
2. Public Sector[2/]	3,249	2,099	775	5,104	2,072	2,270
III. CHANGE ON NIRs	**1,936**	**-3,500**	**763**	**4,335**	**2,583**	**3,081**

1/ Includes net errors and omissions, and NIR's effect valuation.
2/ Includes net foreign investments, portfolio investment, and private sector's long-term disbursement.
* Forecast.
IR: Inflation Report.

14. The **trade balance**, which recorded a surplus of US$ 7 billion in 2018, is projected to exceed US$ 8 billion in the forecast horizon. Exports would increase from US$ 49 billion in 2018 to US$ 55 billion in 2020, while imports would increase from US$ 42 billion in 2018 to US$ 47 billion in 2020.

    These forecasts are consistent with a scenario in which better prices for our exports are expected, together with lower prices of crude, more favorable external financial conditions, and a sustained pace of growth of economic activity (4.0 percent).

Graph 16
TRADE BALANCE: 2011-2020
(Million US$)



* Forecast.

Table 9
TRADE BALANCE
(% change)

	2017	2018	2019*	2020*
1. Value:				
Exports	22.1	8.1	4.3	8.6
Traditional products	27.7	6.3	2.5	7.5
Non-traditional products	8.3	13.0	9.2	11.2
Imports	10.2	8.2	2.6	9.0
2. Volume:				
Exports	8.1	1.5	4.8	5.8
Traditional products	8.4	-1.6	3.5	5.0
Non-traditional products	7.2	10.8	8.2	7.9
Imports	4.6	1.6	4.5	6.7
3. Price:				
Exports	13.0	6.5	-0.5	2.6
Traditional products	17.8	8.0	-1.0	2.4
Non-traditional products	1.1	1.9	0.9	3.0
Imports	5.4	6.6	-1.8	2.1

* Forecast.

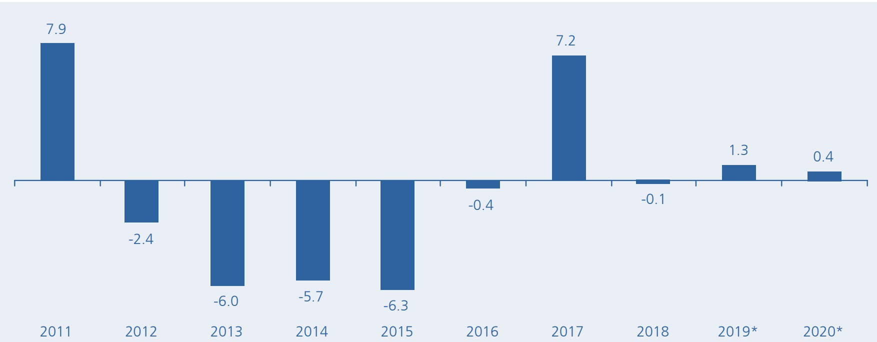
Exports in 2018 reflected the high average prices of our main minerals and the higher volumes of non-traditional exports (agricultural, fishing, and chemical products). On the other hand, the volume of traditional exports declined due to a lower mining production given that the mining output was affected in part by lower grades of minerals, by the depletion of mines, and by some technical problems. Although export prices are foreseen to reflect better levels than those expected in the December Report, the growth of exports in the next two years will continue to be explained mainly by higher volumes of exports. A positive impact on the volume of traditional exports is expected from the normalization of copper mining production as well as from the expansion of Southern's Toquepala mine in 2019 and that of Chinalco's Toromocho mine in 2020, together with a more moderate positive impact of global growth on the demand for our non-traditional products.

As for **imports**, the growth of imports in 2018 reflected mainly the higher prices of oil and oil derivatives. In 2019 and 2020, imports are expected to grow in line with the projected evolution of domestic demand, particularly private investment, and oil prices.

Terms of Trade

15. Recent external conditions have also led to revise the projections of the **terms of trade** on the upside. In 2019, the terms of trade are expected to show an expansion of 1.3 percent. The (annual average) price of exports would decrease by 0.5 percent compared to 2018, while the prices of imports would fall by 1.8 percent. In 2020, the terms of trade would grow 0.4 percent.

Graph 17
TERMS OF TRADE: 2011-2020
(Annual average % change)



* Forecast.
Source: BCRP.

Table 10
TERMS OF TRADE: 2017-2020
(Annual average)

	2017	2018	2019*		2020*	
			IR Dec.18	IR Mar.19	IR Dec.18	IR Mar.19
Terms of Trade (% chg.)	**7.2**	**-0.1**	**-0.7**	**1.3**	**-0.5**	**0.4**
Price of exports (% chg.)	**13.0**	**6.5**	**-2.1**	**-0.5**	**1.2**	**2.6**
Copper (US$ cents per pound)	280	297	280	286	281	289
Zinc (US$ cents per pound)	131	133	115	122	111	117
Lead (US$ cents per pound)	105	102	90	94	91	95
Gold (US$ per troy ounce)	1,257	1,269	1,244	1,319	1,281	1,358
Price of imports (% chg.)	**5.4**	**6.6**	**-1.4**	**-1.8**	**1.7**	**2.1**
Oil (US$ per barrel)	51	65	60	58	60	59
Wheat (US$ per ton)	145	186	185	173	209	181
Maize (US$ per ton)	131	132	152	146	157	154
Soybean oil (US$ per ton)	707	637	627	662	642	682
Soybean grain (US$ per ton)	348	379	349	343	355	350

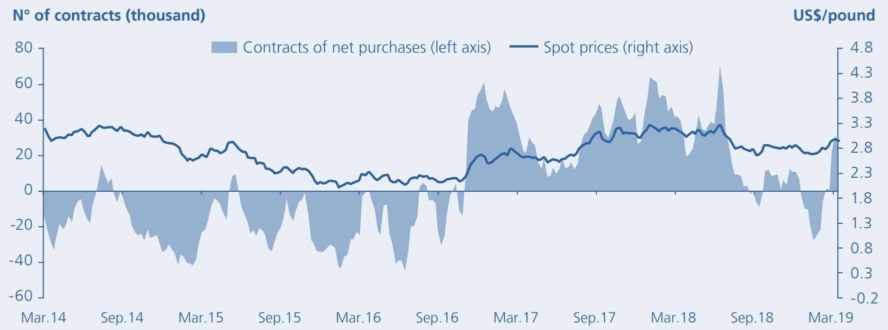
IR: Inflation Report.
* Forecast.
Source: BCRP.

a. Copper

In February, the price of **copper** reached a monthly average of US$ 2.85 a pound, a price 3 percent higher than that registered in December 2018. The price of copper recovered after having decreased 11 percent between December 2017 and December 2018.

The price of this metal recovered mainly in February, supported by the perception of a tighter market and the improvement of investor confidence associated with positive signs in the trade negotiations between China and the United States, which reflected in an increase in non-commercial positions.

Graph 18
COPPER: NON-COMMERCIAL CONTRACTS



Memo: 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.

The global copper market is expected to show a deficit and it is estimated that inventories could fall below the average levels observed in recent years. On the demand side, it is estimated that China's copper consumption will be supported by stricter bans on the use of recycled copper and that the demand of the rest of the world for this metal will evolve in line with global economic growth.

On the supply side, the effect of the onset of new projects in 2019, such as Cobre Panamá (Panama), Mirador (Ecuador) and Carrapateena (Australia), would be offset by the lower production of existing mines, particularly the Grasberg mine in Indonesia. It is estimated that this mine will produce less than half the amount of copper it produced in 2018 as a result of its transition from an open pit mine to a pit mine.

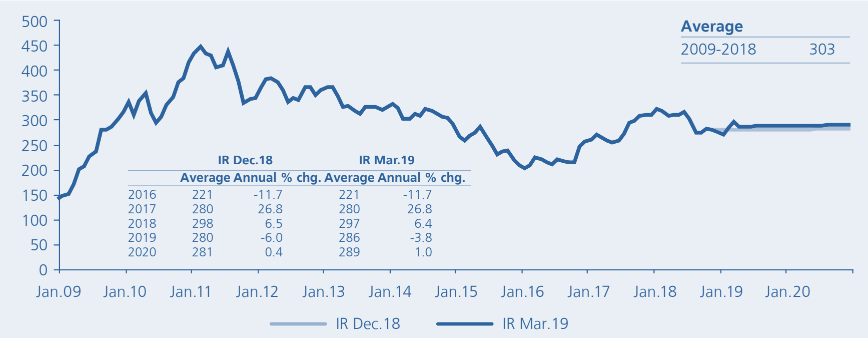
Table 11
WORLD REFINED COPPER USAGE AND SUPPLY TRENDS
(Thousand metric tonnes, copper)

	2016	2017 2/	2018 2/	2019 /3
World Mine Production	20,357	20,060	20,520	20,674
World Refined Production (Secondary+Primary)	23,338	23,524	23,876	23,895
World Refined Usage	23,605	23,789	24,263	24,187
Refined Balance1/	-267	-265	-387	-292

1/ Surplus/deficit is calculated using refined production minus refined usage.
2/ Estimated on March 2019.
3/ Forecast of Wood Mackenzie's volume on March 2019.
Source: ICSG.

Based on the recent evolution of prices and prospects for the supply-demand balance, the average price of copper in 2019 and 2020 has been revised up. It is estimated that prices will correct the fall of 2018 and will show levels slightly above the ones estimated in the December Inflation Report. The risks of this projection are mainly associated with greater commercial tensions or with a greater-than-expected slowdown in China.

Graph 19
COPPER: JANUARY 2009 - DECEMBER 2020
(US$ cents/pd.)



Source: Bloomberg and BCRP.

b. Zinc

The international price of **zinc** increased 3 percent between December and February of 2019, this recovery being observed after the price of zinc decreased 18 percent in December 2018 compared to December 2017.

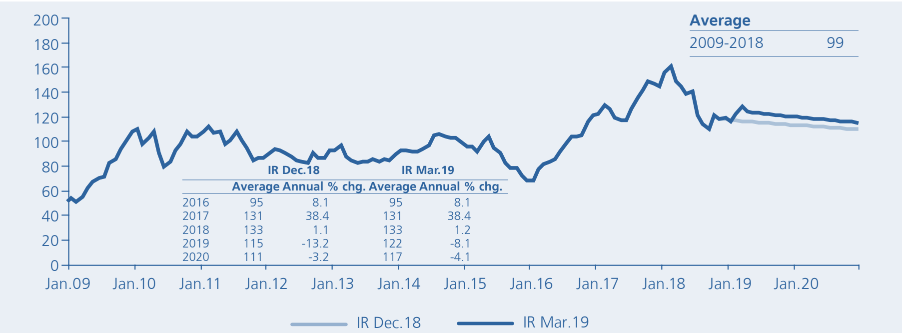
The recovery in the price of zinc in the last two months was associated not only with the global factors mentioned above, but also with signs of a tighter global market reflected in the increasingly low levels of inventories (which show minimum low levels in the past 10 years) and the increase in China's zinc imports (which reached an all-time high in 2018). The supply of refined products continues to be constrained by bottlenecks associated with the environmental measures imposed by the Chinese government on foundries, which prevent the flow of mineral resulting from new mine production capacity from being transformed into refined zinc. This, together with the outlook for a moderate growth in demand, implies that the global zinc market would show a lower deficit in 2019.

Table 12
WORLD REFINED ZINC USAGE AND SUPPLY TRENDS
(Thousand metric tonnes, zinc)

	2014	2015	2016	2017	2018	2019
World Mine Production	13.42	13.63	12.60	12.61	12.87	13.88
World Refined Production	13.40	13.81	13.57	13.27	13.28	13.81
World Refined Usage	13.68	13.64	13.70	13.71	13.66	13.88
Refined Balance (in thousand)	-277	169	-128	-442	-386	-72

Source: ILZSG.

Graph 20
ZINC: JANUARY 2009 - DECEMBER 2020
(US$ cents/pd.)



Source: Bloomberg and BCRP.

In line with these developments, the projection of the zinc price is revised up, given that the growth in the supply of refined zinc is slower than expected in the previous inflation report. Conversely, lower zinc refining could mean a lower demand for concentrates in a context in which a significant increase in mine production is expected. Therefore, an increasing surplus is estimated in the market of concentrate zinc, but a deficit is expected in the market of refined zinc.

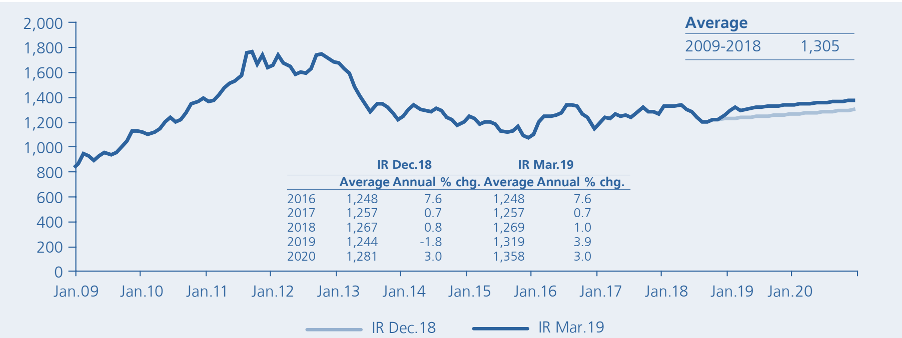
c. Gold

In February, the price of **gold** rose 5 percent, reaching an average of US$ 1,320 a troy ounce, reversing in this way the 1 percent drop recorded in 2018.

The price of gold has increased in recent months, influenced by the Fed's decision to change its stance towards a more gradual adjustment of its monetary policy, which has generated lower expected returns in dollars, indications of a slowdown in the global economy, and the return of investment inflows towards ETFs in gold.

In line with this context, the projections for the price of gold are revised up compared to those projected in the December Report. The main risk factors that could affect this projection continue to be monetary adjustments and geopolitical risks.

Graph 21
GOLD: JANUARY 2009 - DECEMBER 2020
(US$/tr. ounce)



	IR Dec.18		IR Mar.19	
	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	1,267	0.8	1,269	1.0
2019	1,244	-1.8	1,319	3.9
2020	1,281	3.0	1,358	3.0

Source: Bloomberg and BCRP.

d. Crude Oil

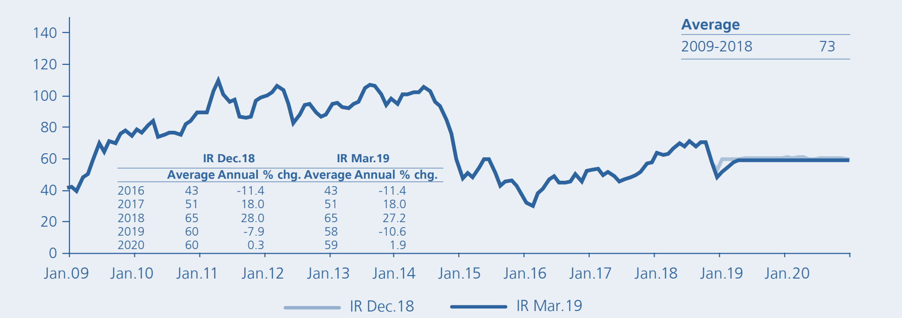
In February 2019, the average price of **WTI oil** increased 14 percent compared to December, thus reversing in part the 16 percent drop it accumulated in 2018.

The price of oil has been strongly influenced by the continued growth of US oil production and, conversely, by the decision of the OPEC and other producers (Russia mainly) to cut oil production to balance the market (after reaching a record production in November). Thus, after the sharp drop it registered in the last quarter of 2018, the price of oil has recovered strongly in the first two months of the year, which has coincided with the lower supply of Venezuela resulting from the political crisis affecting this country and the US sanctions, as well as with the lower production of Iran, which was also affected by the sanctions imposed by the United States.

In the forecast horizon, even though it is expected that it will show a slight increase continuing with the trend observed in recent months, the price of oil would continue to be at lower levels than those projected in the previous Inflation Report.

The main risk factors for this projection are linked to geopolitical events that could introduce an upward bias in the price. On the other hand, downward biases would be associated with a larger-than-expected global slowdown and with a higher production of shale oil in the US.

Graph 22
WTI OIL: JANUARY 2009 - DECEMBER 2020
(US$/bl.)



Source: Bloomberg and BCRP.

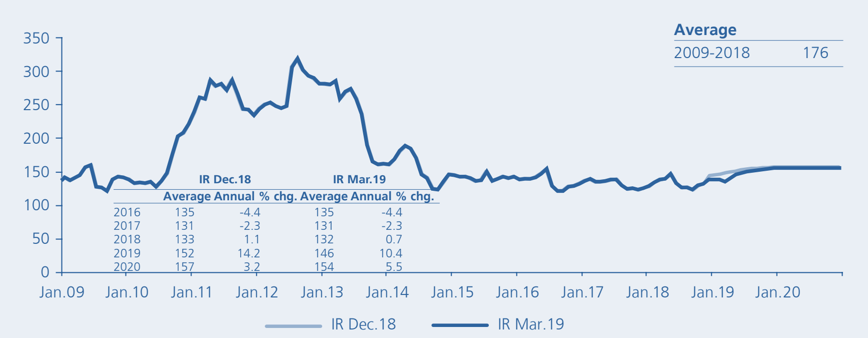
e. Imported Food

The price of **maize** has remained relatively stable during the first two months of the year, recording an average price of US$ 137 per metric ton in February after the average international price of maize accumulated an increase of 10 percent in 2018.

The price of maize was affected by downward pressures due to uncertainty associated with the commercial conflict between the United States and China. In addition to this, there are also expectations of a greater supply of US maize for the 2019/2020 crop year due to the likelihood of crop substitution (US producers are evaluating the convenience of rotating soybean crops to corn cultivation due to China's lower demand for soybean). This higher cultivation of maize would compensate for the lower production in Brazil, whose first crop season has been affected by unfavorable weather conditions (drought).

As a result of these events, the average price of maize projected for 2019 has been revised slightly down, this downward revision being limited by low global inventories and expectations of stable demand.

Graph 23
MAIZE: JANUARY 2009 - DECEMBER 2020
(US$/MT)



	IR Dec.18		IR Mar.19	
	Average Annual	% chg.	Average Annual	% chg.
2016	135	-4.4	135	-4.4
2017	131	-2.3	131	-2.3
2018	133	1.1	132	0.7
2019	152	14.2	146	10.4
2020	157	3.2	154	5.5

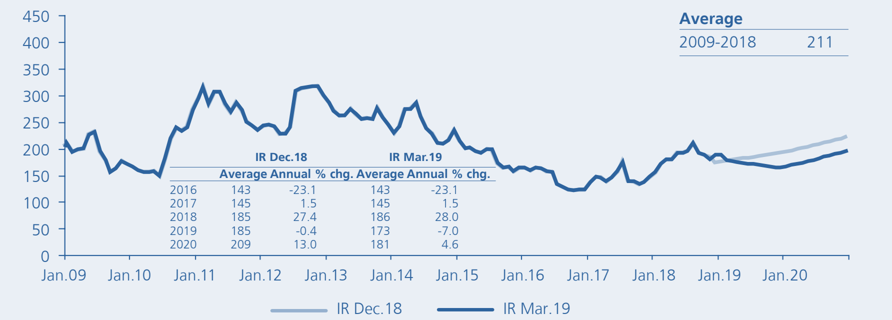
Source: Bloomberg and BCRP.

Since our last Inflation Report was published in December 2018, the price of **wheat** has decreased 5 percent, reaching a monthly average of US$ 179 per MT in February and reversing part of the 28 percent increase it recorded in 2018 due to the lower production foreseen for the 2018/2019 farming season.

The price of wheat decreased in the past two months due to the better production prospects anticipated in the main wheat exporting countries for the next crop year (2019/2020). Another factor influencing this price decrease is lower expectations that Russia will impose restrictions on its wheat exports, which favors a well-supplied global market and greater competition with US wheat.

The price of wheat is estimated to show lower levels than those foreseen in the previous Inflation Report. Among the risks that could affect the projection, it is worth pointing out the variations in production estimates of the Black Sea wheat, particularly in Russia, and the impact of extreme cold on the yield of US winter wheat.

Graph 24
WHEAT: JANUARY 2009 - DECEMBER 2020
(US$/MT)

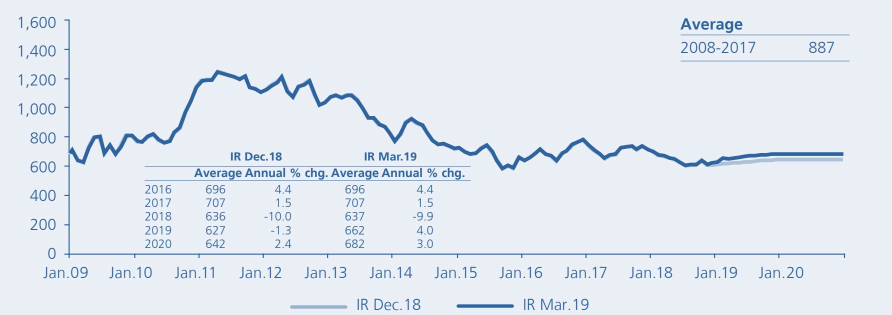


Source: Bloomberg and BCRP.

As of February, the average price of **soybean oil** was US$ 653 the MT, 5 percent higher than in December 2018. This recovery in the average price of soybean oil follows a decline of 13 percent registered in this price in 2018.

The price of soybean oil rose influenced by the increase in crude prices, the higher-than-expected increase in the price of palm oil, and the progress made in trade negotiations between China and the US, which would imply the elimination of China's retaliatory measures for soybean imports.

Graph 25
SOYBEAN OIL: JANUARY 2009 - DECEMBER 2020
(US$/MT)



Source: Bloomberg and BCRP.

Taking into account these recent developments and the prospects of lower cultivation of soybean for the 2019/20 crop year, it is estimated that prices will be above the price levels estimated in the previous Inflation Report. It is expected that if the United States-China trade conflict continues, US farmers will shift from soybean cultivation to other grains such as maize. Therefore, the main risks for this projection presents are a variation in the price of crude oil and a lower production of soybean in South America.

External Financing

16. **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. Mining investment projects stand out among the expected investments in 2019-2020, which would amount to US$ 10 billion. Megaprojects expected to continue being implemented include the mega projects of Quellaveco, Mina Justa, and the expansion of Toromocho, and other lower scale projects such as Quecher Main and Relaves B2 San Rafael.

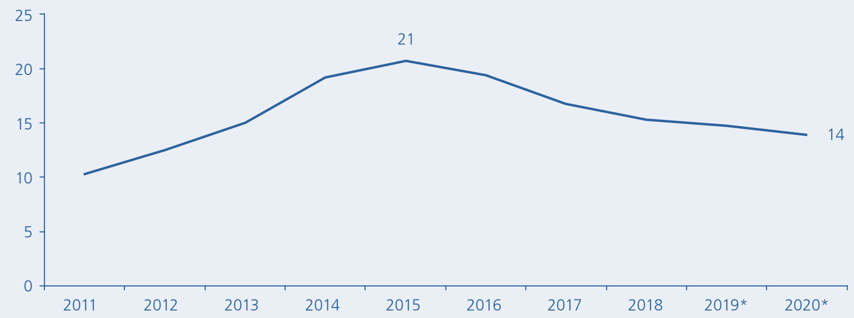
Table 13
FINANCIAL ACCOUNT OF THE PRIVATE SECTOR
(Million US$)

	2017	2018	2019*	2020*
PRIVATE SECTOR (A + B)	**1,223**	**-2,250**	**2,229**	**4,118**
% GDP	*0.6*	*-1.0*	*0.9*	*1.6*
A. LONG-TERM	**1,653**	**1,367**	**3,525**	**4,227**
1. ASSETS	**-2,929**	**-2,839**	**-4,229**	**-3,774**
2. LIABILITIES	**4,582**	**4,206**	**7,754**	**8,001**
Foreign direct investment in the country	6,769	6,175	7,435	8,002
Long-term loans	-3,906	-1,742	-93	-584
Portfolio investment	1,719	-228	412	584
B. SHORT-TERM[1/]	**-430**	**-3,617**	**-1,296**	**-109**

1/ Includes net erros and omissions.
* Forecast.

Private external indebtedness would show a declining trend during the forecast horizon and would therefore represent 14.0 percent of GDP in 2020. This projection is compatible with a greater use of local financing sources.

Graph 26
BALANCE OF MEDIUM- AND LONG-TERM EXTERNAL DEBT: 2011-2020
(% GDP)



* Forecast.

The **public financial account** has been revised to the upside compared to the December projection mainly as a result of non-residents' greater demand for our sovereign bonds, as has been observed in the first months of this year, in line with greater capital inflows to the emerging economies, particularly the bond markets.

Table 14
FINANCIAL ACCOUNT OF THE PUBLIC SECTOR
(Million US$)

	2017	2018	2019*	2020*
I. Disbursements*	**3,045**	**1,809**	**1,844**	**1,224**
II. Amortization	**-4,505**	**-1,614**	**-1,542**	**-335**
III. Net external assets	**601**	**-213**	**-225**	**-240**
IV. Other transactions involving treasury bonds (IV=a-b)	**4,108**	**2,117**	**5,028**	**1,622**
a. Sovereign Bonds holded by non-residentes	4,554	1,809	5,026	1,622
b. Global Bonds holded by residentes	446	-309	-1	0
V. TOTAL (V = I+II+III+IV)	**3,249**	**2,099**	**5,104**	**2,270**

* Includes bonds.

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.

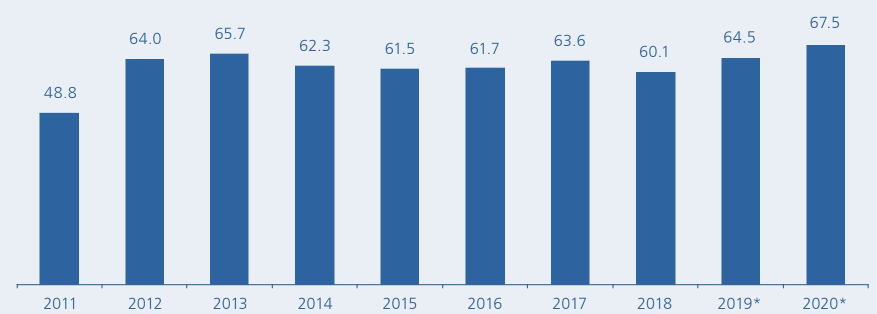
Table 15
NIR INDICATORS

	2017	2018	2019*	2020*
NIR as a % of:				
a. GDP	29.7	26.7	27.2	26.9
b. Short-term external debt1/	423	428	508	526
c. Short-term external debt plus current account deficit	362	345	411	418

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

18. The improvement of the current account and the greater demand for sovereign debt securities explain the greater accumulation of international reserves in the forecast horizon in comparison with the forecast in December. The flow of NIRs this year would amount to US$ 4.3 billion and in 2020, to US$ 3.1 billion. As a result of this, NIRs are estimated to amount to almost US$ 68 billion in 2020.

Graph 27
NET INTERNATIONAL RESERVES: 2011-2020
(Billion US$)



* Forecast.

III. Economic Activity

Expenditure-Side GDP

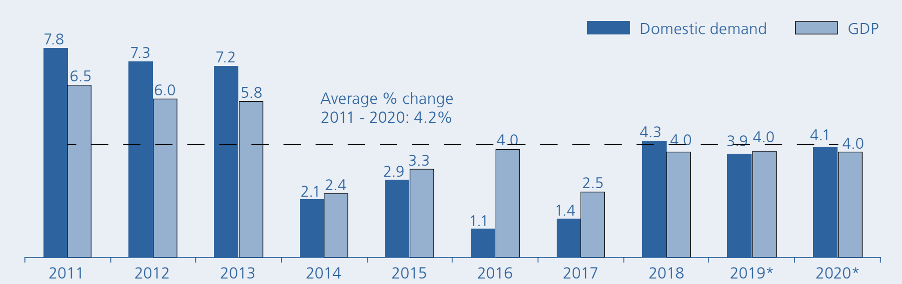
19. The pace of GDP growth rate in 2019 (4.0 percent) is projected to continue in 2020, driven by a greater dynamism of domestic demand and external demand that would be favored by the increase in mining production and by the positive evolution of agro-industrial exports. The growth of domestic demand would be explained again by private investment (6.0 percent) and private consumption (3.9 percent), while public investment would show a faster pace of growth than in 2019 (5.0 percent versus 1.0 percent). These projections are in line with the expected evolution of non-primary activity (4.2 percent).

Table 16
DOMESTIC DEMAND AND GDP
(Real % change)

	2017	2018*	2019*		2020*	
			IR Dec.18	IR Mar.19	IR Dec.18	IR Mar.19
Domestic demand	**1.4**	**4.3**	**3.9**	**3.9**	**4.0**	**4.1**
Private consumption	2.6	3.8	3.7	3.8	3.9	3.9
Public consumption	0.5	2.0	2.9	2.5	1.8	2.2
Private investment	0.2	4.4	6.5	6.5	6.0	6.0
Public investment	-2.3	8.4	2.8	1.0	3.4	5.0
Change on inventories (contribution)	-0.3	0.3	-0.2	-0.2	0.0	0.0
Exports	**7.8**	**2.5**	**4.7**	**4.6**	**4.8**	**5.7**
Imports	**4.1**	**3.4**	**4.3**	**4.4**	**5.1**	**6.2**
GROSS DOMESTIC PRODUCT	**2.5**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**

* Forecast.
IR: Inflation Report.

Graph 28
DOMESTIC DEMAND AND GDP: 2011 - 2020
(Real % change)



* Forecast.

20. Current and advanced indicators of economic activity point to the continuation of a recovery phase. The growth rates of the following indicators are worth highlighting:

    a) The demand for electricity: annual rate of 6.2 percent in March 2019.
    b) Domestic consumption of cement: annual rate of 4.8 percent in February 2019.
    c) Total credit to the private sector: real annual rate of 5.5 percent in February 2019.
    d) Volume of non-traditional exports: annual rate of 14.6 percent in January 2019.
    e) Formal jobs in the private sector: annual rate of 4.2 percent in January 2019.
    f) Consumer confidence: 64 points in February 2019.
    g) Business confidence about the economy in 3 months and in 12 months: 58 and 70 points, respectively, in February 2019.
    h) International price of copper: 8.7 percent accumulated so far this year.
    i) Mining investment: annual rate of 48.0 percent in US$ in January 2019.
    j) Volume of imports of non-durable consumption goods: annual rate of 9.8 percent in February 2019.

21. Private agents expect GDP to grow between 3.9 and 4.0 percent in 2019 and 4.0 percent in 2020.

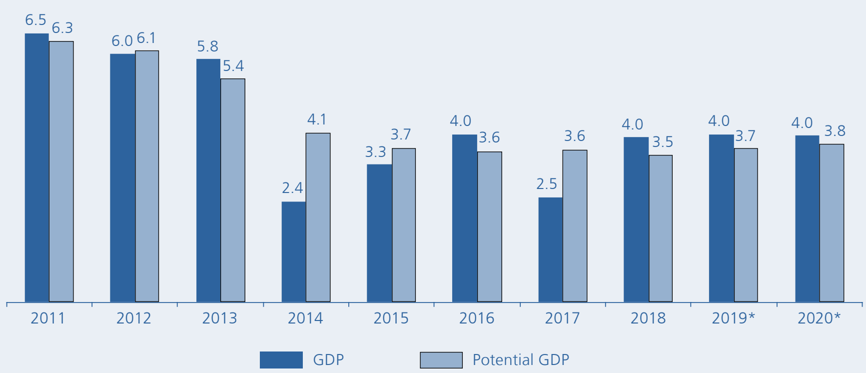
Table 17
MACROECONOMIC EXPECTATIONS SURVEY: GDP GROWTH
(% change)

	IR Jun.18	IR Sep.18	IR Dec.18	IR Mar.19*
Financial entities				
2019	3.8	4.0	3.9	3.9
2020	--	--	4.0	4.0
Economic analysts				
2019	3.8	4.0	3.9	3.9
2020	--	--	4.0	4.0
Non-financial firms				
2019	3.8	3.8	3.8	3.9
2020	--	--	4.0	4.0

* Survey conducted on February 28.
Source: BCRP.

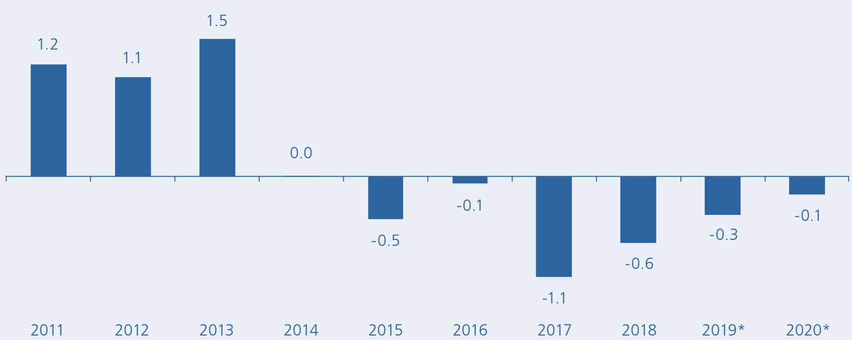
22. Taking into account the GDP growth projection, the output gap (percentage margin between the GDP level and its potential) would be gradually closed in the forecast horizon. The current forecast considers that the greater dynamism of investment, which expands the capital balance, and the adoption of measures that increase productivity will account for a slightly higher growth rate of the potential output (3.8 percent in 2020 versus 3.7 percent in 2019).

Graph 29
GDP AND POTENTIAL GDP
(% change)



* Forecast.

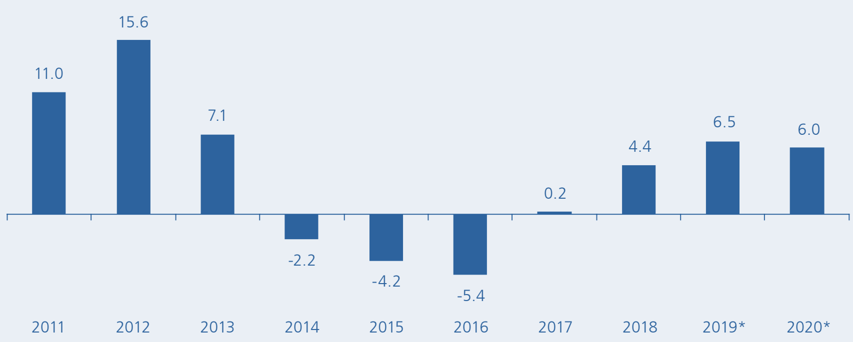
Graph 30
OUTPUT GAP
(% Potential GDP)



* Forecast.

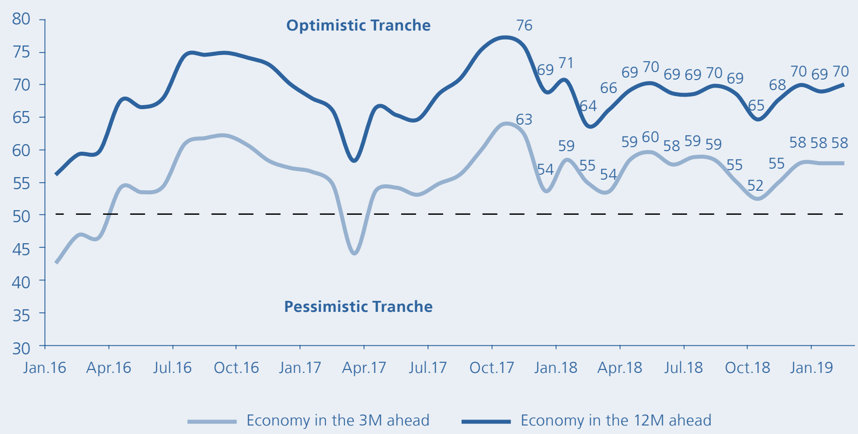
23. Showing the highest rate observed since 2013, private investment grew 4.4 percent in 2018, this growth of investment being particularly noteworthy in copper and iron mining projects. Since no major shocks are foreseen, investment is expected to show a favorable evolution in 2019 and 2020 and to register growth rates of 6.5 percent in 2019 and 6.0 percent in 2020.

Graph 31
PRIVATE INVESTMENT: 2011 - 2020
(Real % change)



* Forecast.

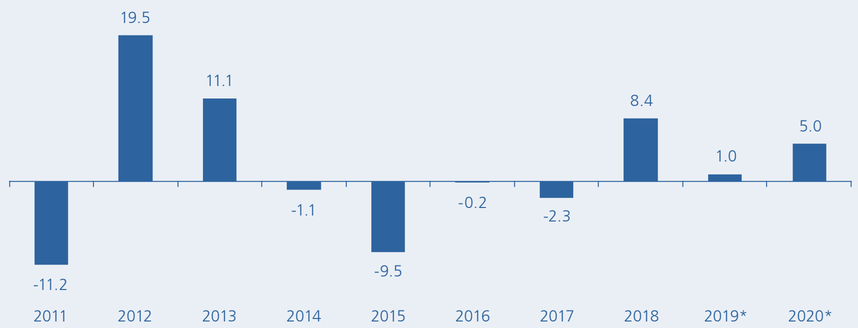
Graph 32
EXPECTATIONS ABOUT THE ECONOMY IN 3 AND 12 MONTHS AHEAD



Source: BCRP.

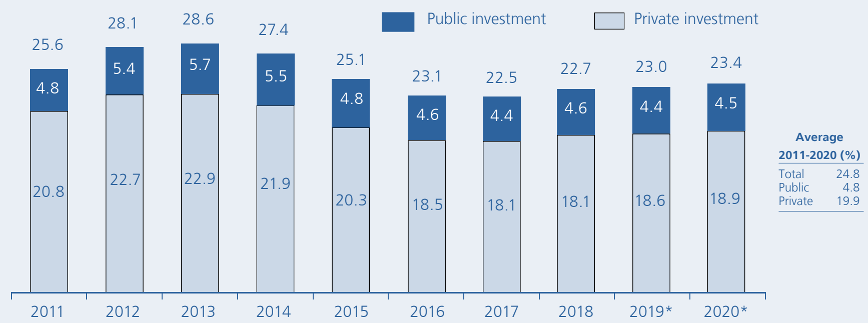
24. On the other hand, after 4 years of decline, public investment grew 8.4 percent in 2018 as a result of increased expenditure in road infrastructure and sanitation works, as well as expenditure in the construction of sports complexes for the Pan American Games and the reconstruction projects that are being carried out in the north of the country. Public investment in 2019 is expected to be affected during the first months of the year by the change of subnational authorities, as pointed out in our previous Inflation Report, as well as by the completion of the construction projects for the Pan American Games towards the middle of year. Thus, it is expected to grow 1.0 percent in 2019 and to recover thereafter to 5.0 percent in 2020. Based on this projection, gross fixed investment would reach 23.4 percent of GDP in 2020.

Graph 33
PUBLIC INVESTMENT: 2011-2020
(Real % change)



* Forecast.

Graph 34
GROSS FIXED INVESTMENT: PRIVATE AND PUBLIC SECTORS 2011-2020
(% real GDP)



* Forecast.

25. The **main private investment projects announced** to be carried out in 2019-2020 amount to approximately US$ 19.6 billion, considering the greater dynamism expected in the mining sector after the onset of important projects this year.

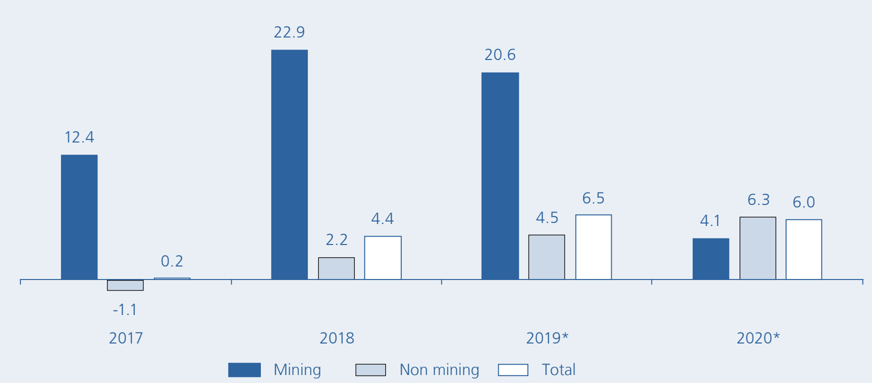
Table 18
PRIVATE INVESTMENT PROJECTS ANNOUNCED: 2019-2020
(Billion US$)

	Total investment	Number of projects
Mining	9.7	33
Hydrocarbons	1.4	16
Energy	1.0	10
Industry	0.4	8
Infraestructure	3.9	23
Other sectors	3.3	57
TOTAL	**19.6**	**147**

Source: Media and information of companies.

Investment is expected to continue growing in the **mining sector**. Projects contributing to this growth include the construction of projects such as Quellaveco (US$ 5.3 billion), Mina Justa (US$ 1.6 billion), and the expansion of Toromocho (US$ 1.3 billion) and, to a lesser extent, other projects currently under construction, such as Quecher Main (US$ 0.3 billion) and Relaves B2 San Rafael (US$ 0.2 billion). It should be pointed out that, in 2018, mining investment registered a nominal increase of 26 percent compared to the previous year. The Expansion of Marcona (Shougang) was completed in July 2018, while the Expansion of Toquepala (Southern) started the testing phase during the fourth quarter of 2018. These projects represented investments of US$ 1.3 billion and US$ 1.26 billion, respectively.

Graph 35
PRIVATE INVESTMENT: 2011 - 2020
(Real annual % change)



* Forecast.

In the **sector of infrastructure**, the projects that will give greater dynamism to this sector include the expansion of International Airport Jorge Chávez, Line 2 of the Lima Metro, the modernization of the ports of San Martin and Salaverry, and the start of Phase I of the construction of the Port Terminal of Chancay.

Investment in other sectors worth pointing out include investments in the subsectors of retail, real estate, and services. Significant investments are expected in the retail subsector with the completion and development of new shopping center projects, the most representative investors being Grupo Ripley, Intercorp, and Grupo Falabella, with different projects such as the expansion of Mall Aventura Santa Anita, Mall Plaza Comas, and Real Plaza Puruchuco. In addition, new housing and office buildings projects as well as hotels and education centers are being developed in the subsectors of real estate and services.

Table 19
MAIN ANNOUNCEMENTS OF PRIVATE INVESTMENT PROJECTS: 2019-2020

SECTOR	INVESTOR	PROJECT
MINING	Angloamerican Grupo Breca Aluminium Corp. of China (Chinalco) Minera Yanacocha Bear Creek Mining Corp	Quellaveco Justa Mine Expansion of Toromocho Mine Quecher Main Corani
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 Cementos Inka	Improvements in infrastructure and equipment Expansion of Pisco plant Planta de Molienda en Pisco
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 InterContinental 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 Hotels Real Estate investments

Source: Information on companies, newspaper and specialized media.

26. For the period 2019-2020, Proinversión reports an investment portfolio of US$ 8.5 billion. Moreover, projects to be awarded under concession contracts in 2019 are estimated to amount to US$ 2.4 billion.

Table 20
MAIN PROJECTS TO BE IMPLEMENTED THROUGH CONCESSION ARRANGEMENTS IN 2019-2020
(Million US$)

	2018-2020
To award	**8,582**
Peripheral Ring Road	2,049
Headworks and Conduction for the Drinking Water Supply in Lima	720
Hydraulic consolidation system in the Chancay valley - Lambayeque	619
New San Juan de Marcona Port Terminal	540
System of water consolidation in the valleys of Ica, Pisco and irrigable areas of the provinces of Huaytará and Castrovirreyna in Huancavelica	520
Longitudinal of the Sierra road project, Section 4	464
Massive Use of Natural Gas - Distribution System through a Natural Gas Grid Across The Central and Southern Regions	400
Algarrobo mining project	350
Treatment system for wastewater from the basin of Lake Titicaca	263
Two new hospitals of high complexity	254
National hospital Hipólito Unanue	250
Huancayo - Huancavelica Railway	227
La Niña - Piura 500 kV Connection, Substations, Lines, and Associated Expansions; Pariñas - Nueva Tumbes 220 kV Connection, Substations, and Associated Expansions; and Tingo María - Aguaytía 220 kV Connection, Substations, Lines, and Associated Expansion	209
Hospital Cayetano Heredia	186
INA Essalud Lima	170
Specialized health services in Piura district hospital. Resizing of health services at Sullana level III support hospital	160
Piura Nueva - Frontera 500 kV Electric Transmission Line	144
Hospital Huaycán	120
New Central Military Hospital	116
International Terminal for Containers - Chimbote	110
Others	712

Source: Proinversión.

Sector GDP

27. By production sectors, the growth of GDP in 2018 was based on the recovery of the non-primary sectors. In 2019 and 2020, the expansion of the output will continue to be supported by the sustained growth of the non-primary sectors, while output in the primary sectors would show a faster pace of growth towards 2020.

Table 21
GDP BY PRODUCTION SECTOR
(Real % change)

	2017	2018	2019*		2020*	
			IR Dec.18	IR Mar.19	IR Dec.18	IR Mar.19
Primary GDP	**3.1**	**3.3**	**3.9**	**3.0**	**3.3**	**3.4**
Agriculture and livestock	2.6	7.5	4.0	4.5	4.0	4.0
Fishing	4.7	39.7	-6.7	-4.5	5.4	2.0
Metallic mining	4.5	-1.5	5.3	3.3	3.0	4.3
Hydrocarbons	-2.4	0.0	4.4	3.0	-0.5	-0.5
Based on raw materials	1.9	13.2	0.0	0.5	5.5	1.2
Non-Primary GDP	**2.3**	**4.2**	**4.0**	**4.2**	**4.2**	**4.2**
Non-primary industries	-0.9	3.7	3.8	4.0	3.8	3.8
Electricity and water	1.1	4.4	4.0	4.5	4.0	4.5
Construction	2.1	5.4	6.9	6.5	7.5	7.5
Commerce	1.0	2.6	3.4	3.4	3.5	3.5
Services	3.3	4.4	3.9	4.2	4.0	4.0
GDP	**2.5**	**4.0**	**4.0**	**4.0**	**4.0**	**4.0**

* Forecast.
IR: Inflation Report.

a) The **agriculture sector** grew 7.5 percent in 2018 due to better weather conditions and to the high availability of water resources left by El Niño Costero in 2017. As a result of these factors, historical volumes of various crops were obtained in crops oriented to the domestic market (rice, bananas, yuccas, tangerines, and lemons) as well as in export-oriented crops (avocadoes, olives, coffee, cocoa, and blueberries).

   A growth rate of 4.5 and 4.0 percent is expected for 2019 and 2020, respectively, due to the sustained growth of agro-exports and the higher output of the poultry sector. It is worth mentioning that after having achieved historically high yields in 2018, some crops could show some yield alternation (lemons and olives) and that the delay in the water cycle in 2019 would reduce the sowing of short-vegetative period crops (potatoes, rice, and hard yellow maize).

b) In 2018 the **fishing sector** grew 39.7 percent, recording its highest rate since 2011. This growth is mainly explained by the two good anchovy fishing seasons with high catch rates observed in the year due to the absence of weather anomalies. In 2019, the sector would have a lower production (-4.5 percent) given the normalization of the anchovy catch. On the other hand, a moderate growth rate (2.0 percent) is projected for 2020, in line with the normal weather conditions foreseen for that year.

c) Output in the **metal mining sector** fell 1.5 percent in 2018 due to lower production of gold (mainly at the mines of Buenaventura and Barrick), of copper (due to a geotechnical problem at Las Bambas), silver, lead, and molybdenum.

   In 2019, the sector is expected to grow 3.3 percent given that a higher copper production (5.2 percent) is foreseen mainly as a result of the start of operations at the Toquepala expansion and the recovery of Las Bambas. In addition to this, a greater iron extraction (36.4 percent) is also expected due to the expansion of the Shougang's Marcona plant. This growth rate would increase to 4.3 percent in 2020 due to the expansion of Toromocho and also due to the fact that the expansions of the two mines mentioned above would reach their commercial production level in 2020.

d) In 2018, the production of the **hydrocarbons** sector remained constant compared to the previous year, because the greater extraction of oil was offset by a lower production of gas and liquid natural gas due to maintenance of Las Malvinas separation plant in the third quarter of the year.

   The production of natural gas and natural gas liquids is expected to normalize in 2019, and since no major production disruptions in the production of lot

192 are expected after those observed in the first quarter of the year, a growth rate of 3 percent is projected. Moreover, in 2020 the production of natural gas would moderate due to lower yields in lot 56, as a result of which an increase of -0.5 percent is expected in this subsector.

e) **Non-primary manufacturing** grew 3.7 percent in 2018 due to an increased production of goods linked to investment, inputs, and mass consumption. A growth rate of 4.0 is projected for 2019 and a growth rate of 3.8 percent is estimated for 2020, in line with the growth of domestic demand, both in terms of consumption and private investment,

The subsector of primary manufacturing grew 13.2 percent in 2018, driven by the recovery in the production of fishmeal and fish oil compared to the previous year. This growth is expected to slow down to 0.5 percent due to the maintenance of the Southern plant scheduled for the first quarter of 2019 and due to slightly lower levels of anchovy catch than those registered in 2018. In 2020, primary manufacturing is expected to grow 1.2 percent due to the recovery of the fishing output and the refining of non-ferrous metals. However, the latter would be offset by PetroPerú's lower refining of crude oil after the company announced that it would stop production in the current Talara refinery in 2020 with the purpose of interconnecting this refinery with the new production units that are part of the new refinery project.

f) The **construction sector** grew 5.4 percent in 2018, in line with the evolution of total investment. In 2019 and 2020, growth in the sector will be driven by private investment.

Box 1
RECENT EVOLUTION OF EL NIÑO[1]

According to Communiqué N° 6 of the ENFEN (March 22), we are experiencing a weak Niño Costero event. The arrival of a Kelvin wave is expected in April, together with the weakening of the trade winds and the South Pacific Anticyclone. As a result, the warm weather conditions observed today would remain until the month of May in the north coast of the country. This does not mean that we will still have the same temperatures as those currently observed because the temperature should decrease due to the change of season, but it would still be higher than the average temperature in this period. As for rainfall, a higher occurrence of rains with higher-than-normal values is expected in the upper middle basins of the north coast. In the last two weeks of March, anomalies in the sea surface temperature in the areas near the main ports of the country declined in comparison to what was observed in January, February, and the first half of March.

	Anomalies of the Sea Surface Temperature (In degrees Celsius)						Temperature (In degrees Celsius)
	Paita	**Chicama**	**Chimbote**	**Huacho**	**Callao**	**Pisco**	**Paita**
Jan.18	-0.7	-0.9	-1.7	-1.0	-0.5	-0.9	19.9
Feb.	1.1	-0.9	-2.6	-1.6	-1.5	-2.1	24.1
Mar.	-2.0	-1.9	-3.0	-2.3	-2.5	-1.3	20.9
Apr.	-2.1	-0.5	-1.7	-1.5	-1.6	-0.3	18.7
May.	-0.7	-0.4	-1.4	-0.9	-1.1	-0.9	18.6
Jun.	-1.0	-0.5	-1.0	-0.7	-0.5	-1.2	17.4
Jul.	0.2	0.1	-0.6	-0.7	-0.3	-0.2	17.7
Aug.	0.9	0.5	-0.5	-0.5	-0.4	-0.1	17.9
Sep.	0.7	0.1	-0.3	-0.2	-0.2	0.1	17.3
Oct.	0.3	0.5	0.1	0.1	-0.1	0.6	17.5
Nov.	2.7	1.6	0.2	0.2	0.9	0.9	20.5
Dec.	2.1	2.8	1.6	1.8	1.4	0.6	20.7
Jan.19	1.4	2.6	1.7	1.6	1.4	0.2	21.8
Feb.19	1.0	1.8	1.1	1.6	1.3	0.0	23.7
Mar.19*	-0.1	0.4	-0.7	0.2	0.3	-0.3	23.0
I Week	0.9	0.6	-0.2	1.1	0.9	1.0	24.1
II Week	1.2	0.0	-0.6	0.7	0.6	0.8	24.4
III Week	-1.1	1.0	-0.8	-0.5	-0.2	-1.9	21.8
IV Week	-2.8	-0.7	-1.6	-1.6	-0.8	-1.8	19.7

* As of March 24.
Source: IMARPE.

Although the ENFEN and Senamhi issued warnings about the possibility that the North Coast would experience rainy days (90th percentile) and very rainy days (99th percentiles) in March, the rains have not been as intense as forecast. Thus, rainfall accumulations in most agricultural areas have been below their average level in the month, contrasting with what happened in

1 This Box is based on the information provided by the official communiqués of the EFEN and the NOAA as well as on interviews with representatives of Servicio Nacional de Meteorología e Hidrología del Perú (Senamhi), Instituto Geofísico del Perú, and Instituto del Mar Peruano (IMARPE).

February when the accumulated rainfall reached levels above their historical average. On the other hand, accumulated rains throughout the season have allowed to maintain an adequate availability of water in the reservoirs of Piura and Lambayeque.

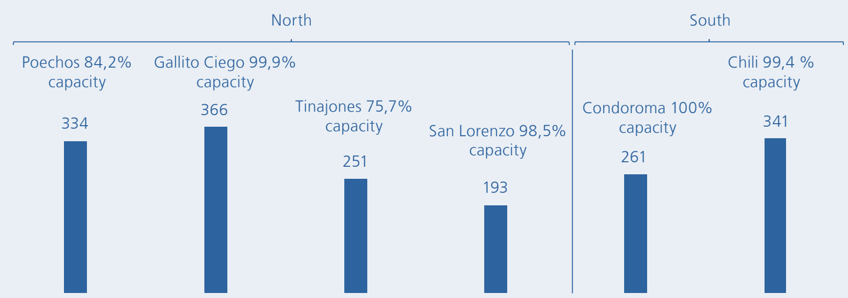
ACCUMULATED RAINFALL IN THE NORTHERN REGION
(In mm.)

	Piura				Lambayeque				Tumbes			
	Ayabaca		El Partidor		Jayanca		Lambayeque		La Cruz		Papayal	
	Rain (mm.)	**Anomaly** (%)	**Rain** (mm.)	**Anomaly** (%)	**Rain** (mm.)	**Anomaly** (%)	**Rain** (mm.)	**Anomaly** (%)	**Rain** (mm.)	**Anomaly** (%)	**Rain** (mm.)	**Anomaly** (%)
Jan.2017	182	11%	96	11%	11	-38%	2	-68%	121	240%	150	24%
Feb	336	29%	533	187%	350	831%	70	687%	75	-23%	84	-56%
Mar	581	90%	1,277	467%	735	1,066%	125	646%	405	335%	309	112%
Jan.2018	180	10%	14	-84%	3	-86%	5	-8%	12	-66%	24	-80%
Feb	128	-51%	22	-88%	0	-100%	0	-97%	46	-53%	39	-80%
Mar	179	-42%	0	-100%	1	-98%	1	-92%	1	-99%	10	-93%
Jan.2019	160	-2%	21	-76%	0	-99%	0	-100%	19	-47%	51	-58%
Feb	416	60%	312	68%	107	184%	20	121%	103	6%	160	-17%
Mar												
1-10	53.1	-37%	52.7	-5%	16.9	-11%	1.8	-40%	9.1	-68%	0.6	-99%
11-20	68.0	-39%	19.6	-76%	0.0	-100%	1.3	-70%	16.7	-51%	38.8	-26%

Rains below normal   Rains above normal

Source: Senamhi.

VOLUME OF WATER STORED - RESERVOIRS BY REGIONS[1/]
(Thousand of cubic feet)



1/ As of March 27, 2019.
Source: ANA.

El Niño and Economic Activity

An episode of El Niño impacts economic activity through two channels: (i) it affects the production of goods and services in the economy, which reduces the gross domestic product, and (ii) it destroys the economy's capital stock, affecting the level of potential GDP once. However, the impact will depend on the magnitude of the event and on the rainfall it generates.

One of the main sectors affected by this weather phenomenon is the agricultural sector. Of the main crops grown on the north coast, lemons and bananas are the most affected by excessive rains. As previously mentioned, even though rains are above their normal rainfall average, those observed today register a lower rainfall than the record levels seen during El Niño Costero 2017. If the warm weather continues with the presence of the Kelvin wave in April, the crop showing the higher risk is the mango Kent, because it requires cold temperature during the flowering period in the middle of the year[2]. In addition to rainfall, excessive heat generates health risks (pests) for rice (*mosquilla* and *sogata*), lemons (white louse), cotton (*arrebiatado* and cotton worms), and grapes (mildew).

In the fishing sector, the warming of the sea reduces biomass through two channels: (i) it decreases the availability of phytoplankton, which is the basis of the food chain in the sea, and (ii) it affects the spawning of anchovy. Although some species, such as the parrot fish (*perico*) and mackerel, are favored by the increase in temperature, the reduction in anchovy catch has a negative impact on the growth of the sector.

It is worth pointing out, however, that based on the information available to date and considering the magnitude of the event expected, no significant effects are foreseen on these sectors.

2 This crop needs a cold weather shock, with temperatures of 16-18°C in the middle of the year.

Box 2
INDICATORS OF EMPLOYMENT

Two types of data sources may be used to analyze the evolution of employment in Peru: surveys and administrative records. The former can be used to obtain data from households or companies, while the latter –administrative records, such as the Electronic Payroll– provide companies' information to the government on a mandatory basis. These two data sources are analyzed herein.

A comparison between the available data sources by geographic areas, method used, sample, frequency, and surveyed sector is offered below.

COMPARISON BETWEEN DATA SOURCES

	Electronic Payroll	Monthly Employment Survey - MTPE	Monthly Employment Survey - INEI	National Household Survey - INEI
Product	Electronic Payroll of SUNAT	ENVME	EPE	ENAHO
Geographical scope	National	National	Metropolitan Lima	National
Method	Survey of formal companies and institutions (public and private)	Survey of formal private companies	Household survey	Household survey
Sample	Total: 326 thousand companies and institutions (33 thousand private companies with 10 more workers)	6,502 companies of the year 2009 with 10 more workers	4,800 homes per quarter	36,996 homes per year
Frequency	Monthly	Monthly	Monthly	Monthly/Quaterly
Sector	Formal	Formal without construction	Formal/Informal	Formal/Informal

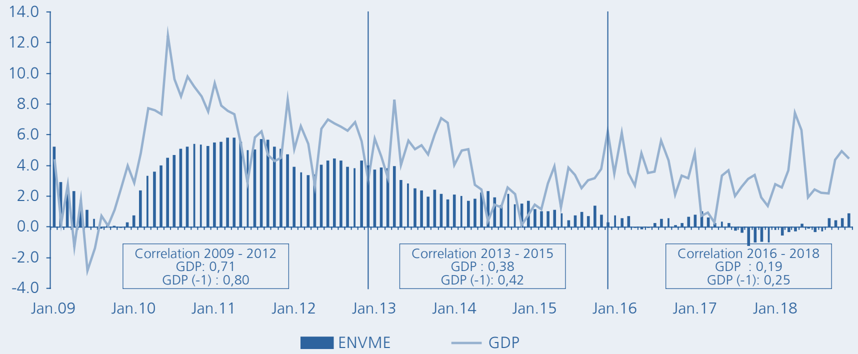
Formal Employment

Two data sources are used in Peru to follow-up the evolution of formal employment every month: The National Survey of Monthly Variation of Employment (ENVME - *Encuesta Nacional de Variación Mensual de Empleo*) conducted by the Ministry of Labor and Employment Promotion (MTPE) and the SUNAT's Electronic Payroll System, to which all formal companies report on a monthly basis.

The ENVME is a survey applied to formal private companies with 10 or more workers in the urban areas of the country. The current sample includes 6,502 companies selected from the electronic payroll in **March 2009**. This survey has been losing representativeness as an indicator of formal employment because the sample is not regularly updated.

Therefore, given that companies that have contributed to the growth of employment have not been included in the sample, it has lost its relationship with the dynamics of the output (GDP), the correlation coefficient of the ENVME and GDP having deteriorated in recent periods from a coefficient of 71 percent in 2009 - 2012 to a coefficient of 19 percent in the period of 2016 - 2018.

ECONOMIC ACTIVITY AND EMPLOYMENT IN THE PRIVATE SECTOR - ENVME
(Monthly - % change 12 months)



For example, in 2018 the growth of formal jobs in companies with more than 10 workers has been 4.8 percent in the universe of formal companies reporting to the electronic payroll, whereas the survey of the Ministry of Labor reports only a growth rate of 0.1 percent in the same year.

EMPLOYMENT IN THE FORMAL PRIVATE SECTOR

	Levels		Variation 2018/2017	
	2017	2018	Chg. in Thousands	% chg.
Monthly Survey of companies with more than 10 workers1/ (Index: October 2010 =100)	112.3	112.4	n.a	0.1
Electronic payroll2/ (In thousands of workers)				
Total	3,509	3,660	152	4.3
Companies with more than 10 workers	2,632	2,759	126	4.8

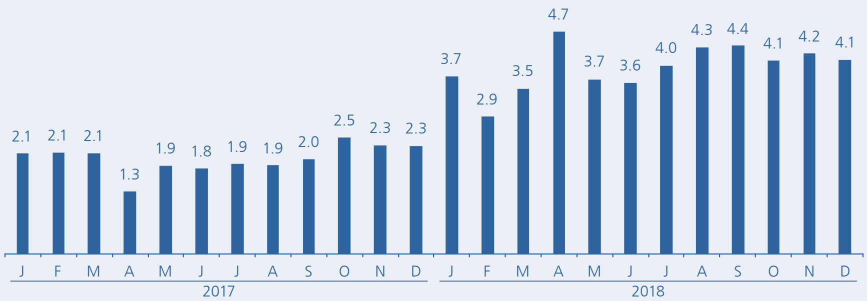
1/ Not include construction.
2/ Prepared from Sunat information.
Source: MTPE and SUNAT.

The SUNAT's Electronic Payroll[3] is an administrative database with monthly information on jobs and wages in the universe of formal companies, and is therefore the best source of data

3 The Payroll Record has two components: Labor-related information (T-Register) and data of monthly payments (PLAME).

on formal employment. The MTPE[4], the Sunat[5] and the BCRP publish indicators of the formal labor market based on the information of the Electronic Payroll system. The Central Bank publishes information on the number of jobs and the average remuneration level in the total formal sector[6], as well as on the private and public components.

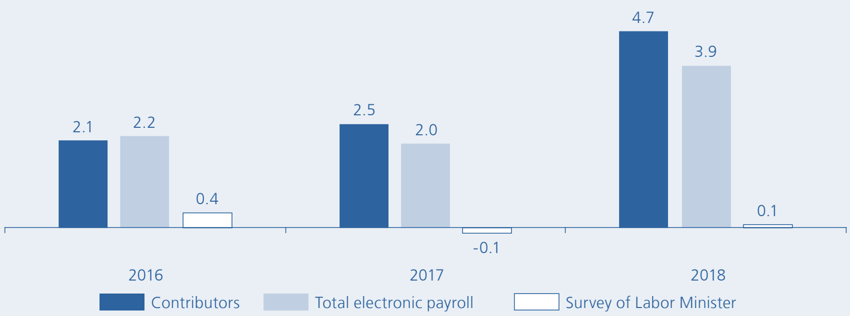
TOTAL FORMAL JOBS
Electronic payroll
(% change 12 months)



According to the Electronic Payroll system, formal jobs have shown a significant growth in recent years, which is consistent with the information on formal employment collected in other administrative records. For example, the growth rate of employment registered in the electronic payroll over the past three years is consistent with the increase observed in the number of contributors to the ONP and the AFPs. This is not the case with the Survey of the Ministry of Labor (ENVME).

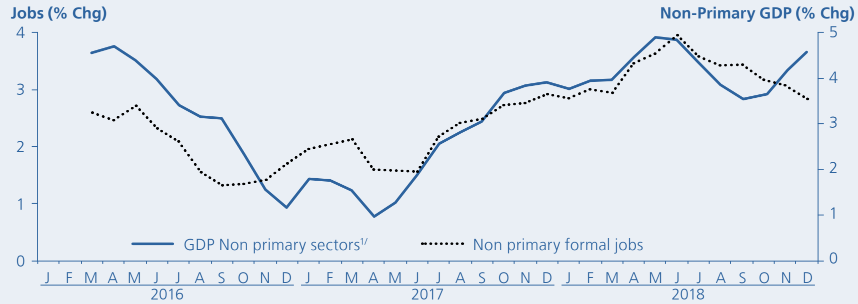
Additionally, as the following graph shows, a great deal of the growth of employment is closely linked to the dynamism of non-primary economic activity (correlation of 80 percent), which also reflects the reliability of the data obtained from the Electronic Payroll system.

FORMAL EMPLOYMENT AND CONTRIBUTORS TO THE ONP AND AFP'S
(Annual % change)



4 MTPE publishes information based on the Electronic Payroll system in its yearbook, and monthly data in its formal employment report.
5 SUNAT publishes the information of the Electronic Payroll in its Tables of Nota Tributaria.
6 The number of formal jobs may differ from the number of workers because a single person can have more than one job.

FORMAL EMPLOYMENT AND GDP OF NON-PRIMARY SECTORS[1/]
(Quaterly moving, % real change 12 months)



1/ Includes the trade, service and construction sectors.

Household surveys: ENAHO and EPE

The National Institute of Statistics and Informatics (INEI) conducts two surveys that also collect information on employment. The National Household Survey (Encuesta Nacional de Hogares - ENAHO) is applied nationwide[7], but it is not specifically an employment survey. On the other hand, the Permanent Employment Survey (Encuesta Permanente de Empleo - EPE) was designed to follow the labor market in Metropolitan Lima[8]. The main aggregate indicators of the labor market are constructed based on these two surveys, including variables such as the Working Age Population, Economically Active Population (EAP), Employed and Unemployed Economically Active Population. However, as pointed out by the INEI, the survey may contain information errors due to problems in the process of data collection[9].

NATIONAL EMPLOYMENT INDICATORS - ENAHO

	Levels				Change 2018/2017	
	2015	2016	2017	2018	%	In thousands
A. Working age population	23,034	23,402	23,772	24,142	1.6	371
B. Labor force	16,498	16,904	17,216	17,463	1.4	247
C. Participation rate (A/B)	71.6	72.2	72.4	72.3	-0.1	n.a
D. Employed	15,919	16,197	16,511	16,777	1.6	266
J. Rate of Employed (D/A)	69.1	69.2	69.5	69.5	0.0	n.a
F. Unemployed (B-D)	579	707	705	686	-2.6	-18
G. Unemployment rate (F/B)	3.5	4.2	4.1	3.9	-0.2	n.a
H. Not in labor force (A-B)	6,536	6,498	6,556	6,680	1.9	124

Source: INEI-ENAHO.

In terms of sources of data on employment, the SUNAT Electronic Payroll system has become the best indicator of formal employment in Peru because it is a monthly census of formal companies. On the other hand, the surveys prepared by INEI are the only source that provide information about the total labor market.

7 ENAHO is a nationwide survey applied to people aged 14 and over, which allows obtaining information by urban and rural geographical areas. A total of 36,996 households were surveyed in 2018 (23,348 households in urban areas and 13,648 in rural areas).

8 EPE surveys people aged 14 years and over in Metropolitan Lima and Callao. In 2018, this survey covered 19,200 households.

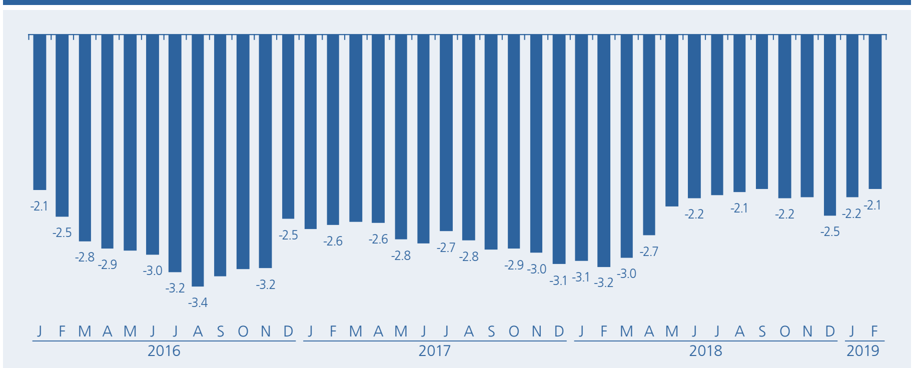
9 In its report on the quality of ENAHO-2017, INEI highlighted that 22.4 percent of the information on employment was provided by another member of the household that is not a worker (indirect responses).

IV. Public Finances

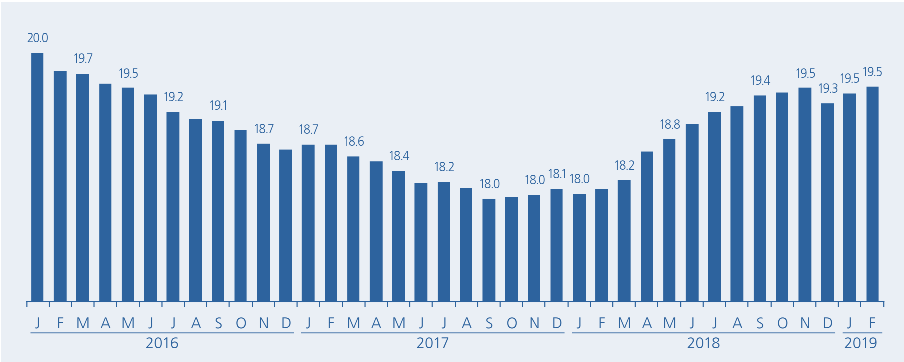
Recent Trends in Fiscal Accounts

28. In 2018, the **fiscal deficit** was equal to 2.5 percent of GDP, 0.6 percentage points lower than in 2017, this reduction reflecting mainly the increase in the current revenues of the general government, from 18.1 to 19.3 percent of GDP. As of February this year, the cumulative fiscal deficit was even lower and reached 2.1 percent of GDP, in part due to a temporary effect associated with the change of authorities at the level of the subnational governments, but mainly due to higher tax revenues.

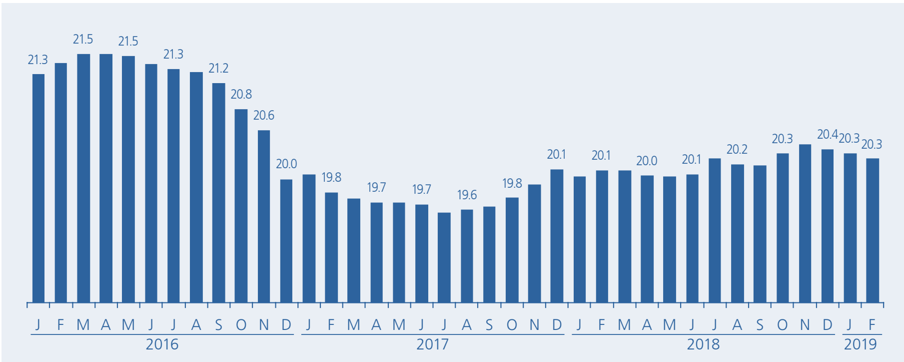
Graph 36
ECONOMIC BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2016 - 2019
(Accumulated last 12 months - % GDP)



Graph 37
CURRENT REVENUES OF THE GENERAL GOVERNMENT: 2016 - 2019
(Accumulated last 12 months - % GDP)



Graph 38
NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT: 2016 - 2019
(Accumulated last 12 months - % GDP)



29. In 2018, the increase in current revenues (13.0 percent) is explained by a better tax collection of tax revenues from the VAT and the income tax, in line with the recovery of domestic demand. Revenues from the income tax grew mainly due to legal entities' higher payments on account of the corporate income tax (due to the profits of mining companies), as well as due to the greater regularization of tax payments as a result of higher profits, particularly in the mining sector. In addition, in the first two months of 2019, current revenues have increased 10.4 percent due to increased revenues from the VAT and the excise tax, the latter resulting from the increase in the excise tax rates established in May 2018.

The non-financial expenditure of the general government increased by 7.3 percent in 2018 due to higher current expenditures as well as due to higher expenditure in gross capital formation. The increase in wage payments and transfers by the national government stand out in the case of the former, while expenditures on road infrastructure projects and the Pan American Games stand out in the case of the latter. On the other hand, in the period of January-February 2019, non-financial expenditure decreased by 1.1 percent due to lower spending in all local governments, this decline being offset by the national government's expenditure. It is worth mentioning that despite the general effect of the change of subnational authorities there was an increase in public investment in the North of the country due to the continuation of projects related to the Reconstruction with Changes Program.

Table 22
ECONOMIC BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR
(Million S/)

	2017	2018	% chg.	Jan.-Feb. 2018	Jan.-Feb. 2019	% chg.
1. General government current revenues	**126,446**	**142,938**	**13.0**	**22,963**	**25,345**	**10.4**
a. Income tax	36,755	41,598	13.2	7,089	7,254	2.3
b. Value Added Tax	54,643	60,669	11.0	10,114	11,173	10.5
c. Excise tax	6,329	6,850	8.2	1,036	1,426	37.6
d. Other	28,720	33,821	17.8	4,723	5,492	16.3
2. General government non-financial expenditure	**140,512**	**150,756**	**7.3**	**18,234**	**18,035**	**-1.1**
a. Current expenditure	107,436	114,498	6.6	15,905	15,637	-1.7
b. Gross capital formation	27,888	32,065	15.0	2,097	1,803	-14.0
c. Other	5,188	4,193	-19.2	232	595	156.0
3. Other	**669**	**-335**		**-87**	**285**	
4. Primary balance (=1+2+3)	**-13,397**	**-8,152**		**4,642**	**7,595**	
5. Interests	**8,336**	**10,032**		**3,455**	**3,771**	
6. Overall Balance (=4-5)	**-21,733**	**-18,184**		**1,187**	**3,824**	

30. In 2018, spending for the Reconstruction with Changes Program amounted to S/ 2.06 billion, which represented a budget execution of 44 percent of the annual budgetary framework. With regard to capital expenditure, S/ 886 million was accrued, which represented an execution of 32 percent, the projects carried out by local governments standing out (S/ 378 million).

    On the other hand, the degree achieved in the implementation of the sports infrastructure projects for the Pan American Games at the end of 2018 was equivalent to 94 percent of the Modified Institutional Budget (MIB), which represent a little more than 60 percent of the total budget allocated to the execution of this item. By projects, the most representative ones given the amount spent were the National Sports Village (VIDENA) and the Pan American Village. A total of 10 percent of the MIB has been spent by February 2019.

Forecasts

31. The fiscal deficit projected for this year has been revised down from 2.6 percent of GDP in the December Report of 2018 to 2.3 percent of GDP in this report given that the projection of non-financial expenditures has also been revised downwards (from 20.4 to 20.2 percent of GDP) as a result of the execution of expenditure observed so far this year.

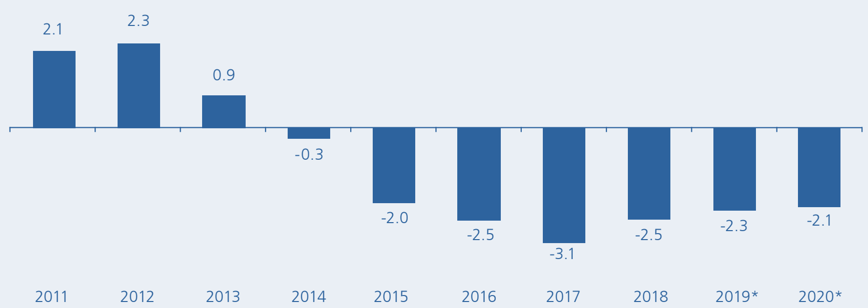
In 2020, the deficit is expected to be equal to 2.1 percent of GDP, a level similar to that projected in the December Report, since the lower spending projected in gross national capital formation will be offset by higher current expenditures.

Table 23
NON-FINANCIAL PUBLIC SECTOR
(% GDP)

	2017	2018	2019*		2020*	
			IR Dec.18	IR Mar.19	IR Dec.18	IR Mar.19
1. General government current revenues	**18.1**	**19.3**	**19.3**	**19.3**	**19.4**	**19.4**
Real % change	*0.4%*	*11.6%*	*4.0%*	*4.0%*	*4.9%*	*5.1%*
2. General government non-financial expenditure	**20.1**	**20.4**	**20.4**	**20.2**	**20.0**	**20.0**
Real % change	*4.2%*	*5.8%*	*3.3%*	*3.2%*	*2.0%*	*3.2%*
Of which:						
Current expenditure	15.4	15.5	15.6	15.6	15.3	15.4
Real % change	*3.9%*	*5.1%*	*4.2%*	*4.8%*	*1.6%*	*2.9%*
Gross capital formation	4.0	4.3	4.2	4.1	4.2	4.1
Real % change	*1.6%*	*13.3%*	*-0.5%*	*-2.4%*	*3.8%*	*4.9%*
3. Other	**0.1**	**0.0**	**-0.1**	**-0.1**	**-0.1**	**-0.1**
4. Primary balance (1-2+3)	**-1.9**	**-1.1**	**-1.2**	**-1.0**	**-0.7**	**-0.7**
5. Interests	**1.2**	**1.4**	**1.4**	**1.4**	**1.5**	**1.4**
6. Overall Balance	**-3.1**	**-2.5**	**-2.6**	**-2.3**	**-2.1**	**-2.1**

* Forecast.
IR: Inflation Report.

Graph 39
ECONOMIC BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2011 - 2020
(% GDP)



* Forecast.

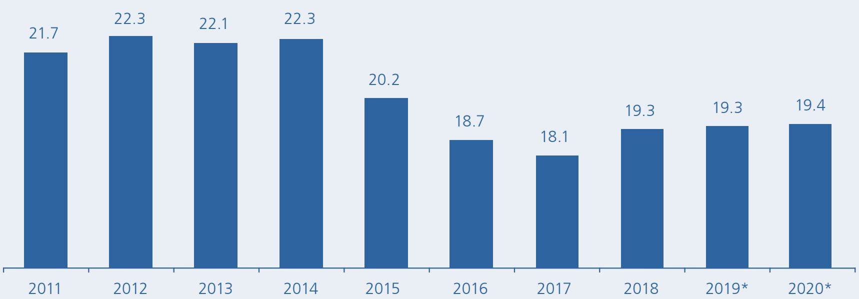
32. It is estimated that current revenues will remain at 19.3 percent of GDP in 2019 and that they will increase to 19.4 percent in 2020, which is consistent with the projected evolution of domestic demand.

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

	2017	2018	2019*		2020*	
			IR Dec.18	IR Mar.19	IR Dec.18	IR Mar.19
TAX REVENUES	**13.4**	**14.5**	**14.6**	**14.6**	**14.8**	**14.8**
Income tax[1/]	5.3	5.6	5.5	5.5	5.6	5.6
Value Added Tax	7.8	8.2	8.3	8.3	8.4	8.4
Excise tax	0.9	0.9	1.0	1.0	1.0	1.0
Import duties	0.2	0.2	0.2	0.2	0.2	0.2
Other tax revenues	1.6	1.8	1.7	1.8	1.7	1.7
Tax returns	-2.5	-2.3	-2.2	-2.2	-2.1	-2.1
NON-TAX REVENUES	**4.7**	**4.8**	**4.7**	**4.7**	**4.6**	**4.6**
Contributions to social security	2.1	2.2	2.2	2.2	2.2	2.2
Own resources and transfers	1.7	1.6	1.5	1.5	1.5	1.5
Fees and royalties	0.6	0.7	0.6	0.6	0.6	0.6
Other	0.4	0.4	0.4	0.4	0.3	0.3
TOTAL	**18.1**	**19.3**	**19.3**	**19.3**	**19.4**	**19.4**

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

Graph 40
CURRENT REVENUES OF THE GENERAL GOVERNMENT: 2011 - 2020
(% GDP)



* Forecast.

33. The projection of non-financial expenditure in 2019 is revised down from the estimate considered in the last Inflation Report, so expenditure would represent 20.2 percent of GDP at the end of the year. This reduction is based on the lower expenditure made in February in some infrastructure projects, with this reduction exceeding the slight upward correction of local governments' spending in the north of the country in the framework of the Integral Reconstruction with Changes Program. In 2020, investment spending would recover dynamism (with a growth rate of 5 percent), as a result of which non-financial expenditures would represent 20.0 percent of GDP.

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

	2017	2018	2019*		2020*	
			IR Dec.18	IR Mar.19	IR Dec.18	IR Mar.19
Current expenditure	**15.4**	**15.5**	**15.6**	**15.6**	**15.3**	**15.4**
National Government	10.5	10.4	10.6	10.5	10.3	10.3
Regional Governments	3.3	3.4	3.4	3.3	3.3	3.3
Local Governments	1.6	1.7	1.7	1.7	1.7	1.8
CAPITAL EXPENDITURE	**4.7**	**4.9**	**4.7**	**4.6**	**4.7**	**4.6**
Gross capital formation	**4.0**	**4.3**	**4.2**	**4.1**	**4.2**	**4.1**
National Government	1.4	1.5	1.8	1.7	1.7	1.7
Regional Governments	0.8	0.8	0.8	0.8	0.8	0.8
Local Governments	1.8	2.0	1.6	1.6	1.7	1.7
Other	**0.7**	**0.6**	**0.6**	**0.6**	**0.5**	**0.5**
TOTAL	**20.1**	**20.4**	**20.4**	**20.2**	**20.0**	**20.0**
National Government	12.6	12.4	12.9	12.8	12.4	12.5
Regional Governments	4.1	4.2	4.1	4.1	4.1	4.0
Local Governments	3.4	3.8	3.3	3.3	3.5	3.4

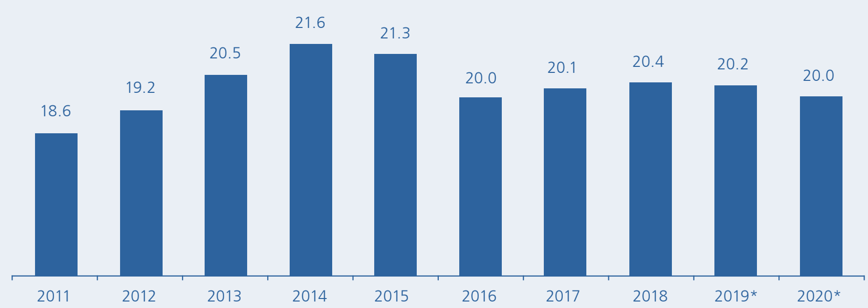
* Forecast.
IR: Inflation Report.

Table 26
MAIN PUBLIC INVESTMENT PROJECTS
(Million S/)

Main items	**2017**	**2018**	**2019***	**2020***
Reconstruction with Changes[1/]	35	876	3,500	4,500
PanAmerican Games[2/]	363	920	740	-.-
Lima Metro's Line 2	674	370	420	1,300
Talara Refinery	1,961	1,900	2,430	2,010

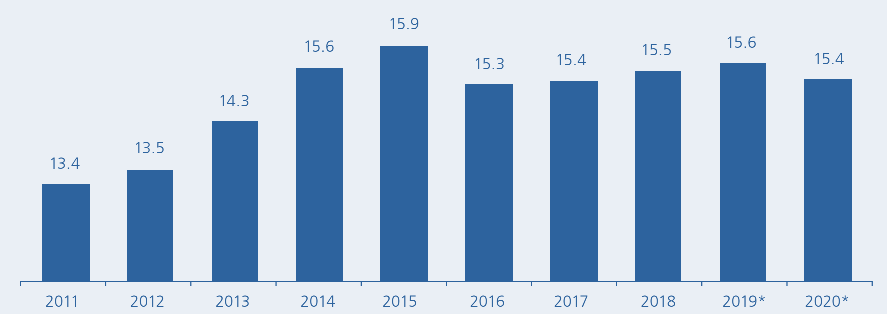
1/ Only includes investment expenses.
2/ Only considers the investment expenditure of the national government in main sport infraestructure projects.
* Forecast.

Graph 41
NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT: 2011 - 2020
(% GDP)



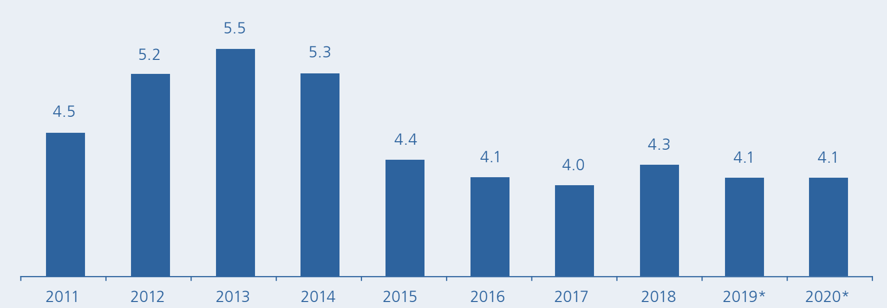
* Forecast.

Graph 42
CURRENT EXPENDITURE OF THE GENERAL GOVERNMENT: 2011 - 2020
(% GDP)



* Forecast.

Graph 43
GROSS CAPITAL FORMATION OF THE GENERAL GOVERNMENT: 2011 - 2020
(% GDP)



* Forecast.

34. The **structural primary balance** seeks to identify the effects of fiscal 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, a contractionary position is projected for 2019 and 2020, in line with the goal of consolidating public finances.

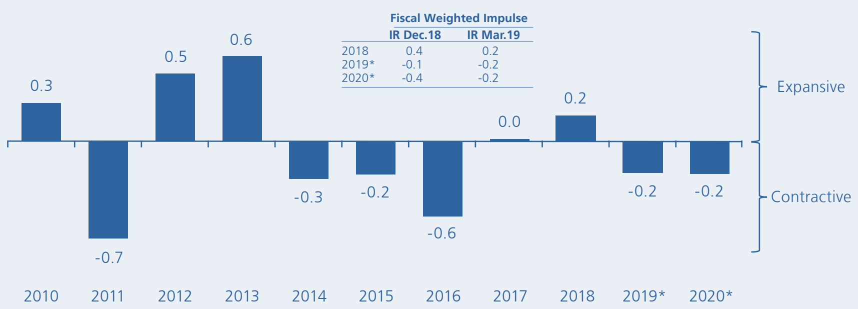
Table 27
STRUCTURAL BALANCE AND FISCAL IMPULSE
(% Potential GDP)

	2017	2018	2019*	2020*
I. Conventional fiscal balance				
1. Current revenues	17.9	19.2	19.2	19.4
2. Non-financial expenditures	-19.9	-20.2	-20.1	-20.0
i. Current	-15.2	-15.4	-15.5	-15.4
ii. Capital	-4.7	-4.9	-4.6	-4.6
3. Other	0.1	0.0	-0.1	-0.1
4. Conventional primary balance	-1.9	-1.1	-1.0	-0.7
II. Structural primary balance[1/]				
1. Current revenues	18.0	19.4	19.4	19.6
2. Non-financial expenditures	-19.9	-20.2	-20.1	-19.9
i. Current	-15.2	-15.3	-15.5	-15.3
ii. Capital	-4.7	-4.9	-4.6	-4.6
3. Other	0.1	0.0	-0.1	-0.1
4. Structural primary balance	-1.8	-0.9	-0.8	-0.5
III. Fiscal impulse[2/]	**0.2**	**-0.7**	**-0.1**	**-0.3**
5. Net effect of multipliers[3/]	-0.2	0.9	-0.1	0.1
IV. Weighted fiscal impulse (IV = III + 5)	**0.0**	**0.2**	**-0.2**	**-0.2**

1/ The structural result deduces the transitory effects linked to the business cycle, as well as the effects of commodity prices.
2/ In 2017 and 2018, includes the impact of temporary revenues as the repatriation of assets, excluding structural revenues
3/ Multipliers: (i) if the Output gap is negative: Revenues -0.25, current expenditure 1.42, capital expenditure 0.93.
(ii) if the Output gap is positive: Revenue 0, current expenditure 0.73, capital 0.28.

* Forecast.

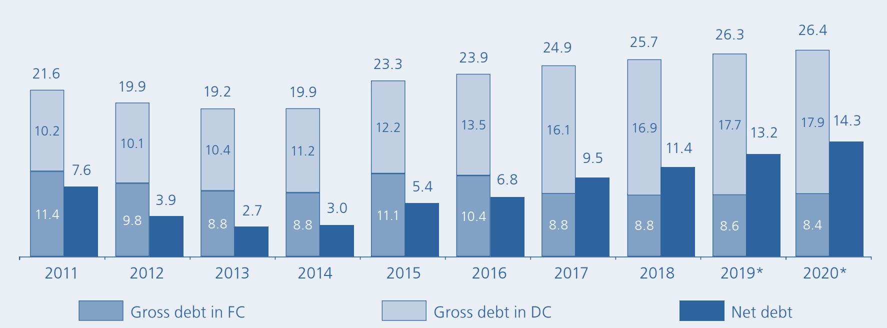
Graph 44
FISCAL WEIGHTED IMPULSE[1/]
(% Potential GDP)



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

35. The net public debt is expected to increase from 11.4 percent of GDP in 2018 to 13.2 percent of GDP at the end of 2019 and to reach thereafter 14.3 percent of GDP in 2020. In gross terms, the debt in the next two years would amount to 26.3 percent of GDP in 2019 and to 26.4 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 45
NON-FINANCIAL PUBLIC SECTOR DEBT: 2011 - 2020
(% GDP)



* Forecast.

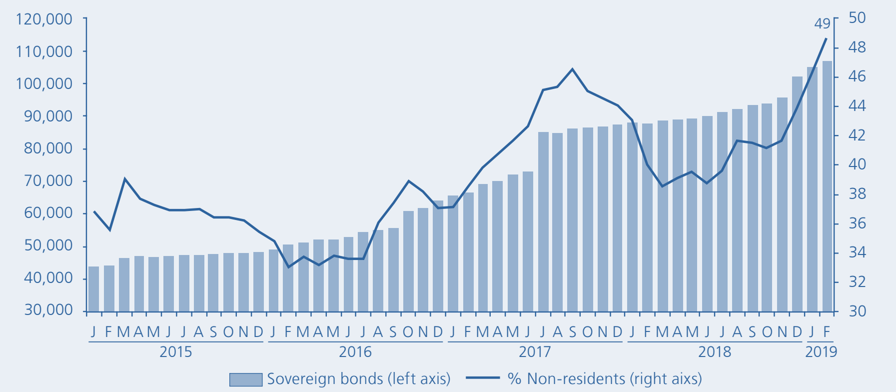
In February 2019, the balance of **sovereign bonds** was S/ 107.00 billion, S/ 4.99 billion higher than the balance recorded at the end of 2018. On the demand side, the share of non-resident investors was 49 percent of the balance of bonds, their holdings having increased from S/ 44.73 billion in December 2018 to S/ 52.03 billion in February of this year. This balance of bonds held by nonresidents represents 7 percent of GDP, a relatively low level compared to that observed in other economies.

Table 28
HOLDING OF SOVEREIGN BONDS BY NON RESIDENT INVESTORS
(In % GDP of each country)

Countries	%	Countries	%
Cyprus	99	Canada	23
Portugal	75	Australia	18
Belgium	64	New Zealand	18
Austria	60	Norway	18
France	59	Czech Republic	17
Spain	51	Mexico	15
Slovenia	51	Sweden	14
Finland	49	Denmark	13
Italy	48	Colombia	12
Ireland	47	Luxembourg	11
Lithuania	34	Brazil	9
USA	34	Iceland	9
Slovakia	33	Israel	9
United Kindgom	32	**Peru**	**7**
Germany	32	Estonia	7
Latvia	31	Malt	5
Netherland	25	South Korea	5
Japan	25	Switzerland	5

Source: Institute of International Finance (IIF); MEF and BCRP (Peru).

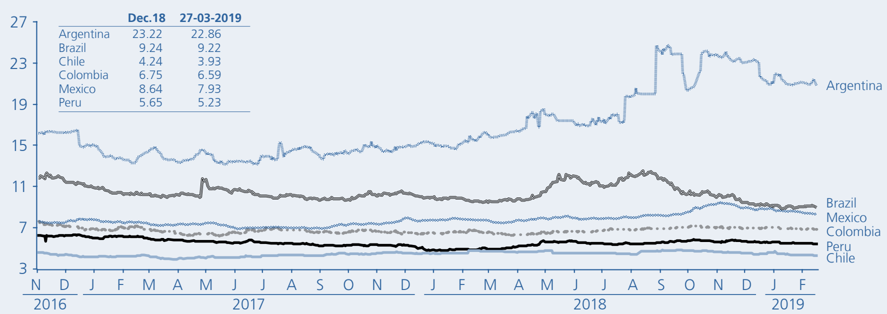
Graph 46
BALANCE OF SOVEREIGN BONDS AND SHARE OF NON-RESIDENT INVESTORS
(Amounts in million soles and shares in %)



Source: MEF.

Between December 2018 and February 2019, the yield on 10-year bonds in domestic currency in the region decreased by 25 basis points on average, mainly as a result of lower risk aversion to riskier assets and of the reduction of political risk in Argentina and Brazil. In Peru, the interest rate decreased from 5.65 to 5.48 percent in a context of a high demand for Peruvian sovereign bonds, especially from non-resident investors.

Graph 47
10-YEAR TREASURY BOND YIELDS IN DOMESTIC CURRENCY
(%)



	Dec.18	27-03-2019
Argentina	23.22	22.86
Brazil	9.24	9.22
Chile	4.24	3.93
Colombia	6.75	6.59
Mexico	8.64	7.93
Peru	5.65	5.23

Source: MEF and Bloomberg.

36. Continuing with the downward trend observed in financing requirements since 2017, the lower fiscal deficit projected in this report in comparison to that estimated in the December Report reduces the projection of the gross financing requirement

(GFR) for 2019 and 2020. Thus, GFR is estimated to decline from S/ 29.69 billion in 2018 to S/ 23.92 billion in 2019, and to S/ 21.15 billion in 2020.

On the other hand, an extraordinary increase was observed in the redemption of recognition bonds in 2018 (up from S/ 818 million in 2017 to S/ 1.17 billion). This increase, which is expected to decline and stabilize during 2019 and 2020, was associated with the modifications of Law No. 30425 (which allowed workers over 65 years old to withdraw 95.5 percent of their pension funds).

Table 29
FINANCIAL REQUIREMENTS OF THE NON-FINANCIAL PUBLIC SECTOR AND ITS FUNDING
(Million S/)

	2017	2018	2019*		2020*	
			IR Dec.18	IR Mar.19	IR Dec.18	IR Mar.19
I. USES	**39,428**	**29,687**	**24,921**	**23,918**	**21,953**	**21,148**
1. Amortization	17,695	11,503	4,390	5,382	4,043	3,715
a. External	13,566	4,211	3,012	2,293	1,319	992
b. Domestic	4,130	7,292	1,379	3,089	2,723	2,724
Of which: Recognition bonds	*818*	*1,172*	*650*	*695*	*550*	*550*
2. Overall Balance	21,733	18,184	20,531	18,535	17,910	17,433
(Negative sign indicates surplus)						
II. SOURCES	**39,428**	**29,687**	**24,921**	**23,918**	**21,953**	**21,148**
1. Disbursements and other	33,080	26,678	22,202	25,471	18,427	16,271
2. Change on deposits and others[1/]	6,348	3,009	2,719	-1,554	3,525	4,877

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

Box 3
EVOLUTION OF THE PROPERTY TAX

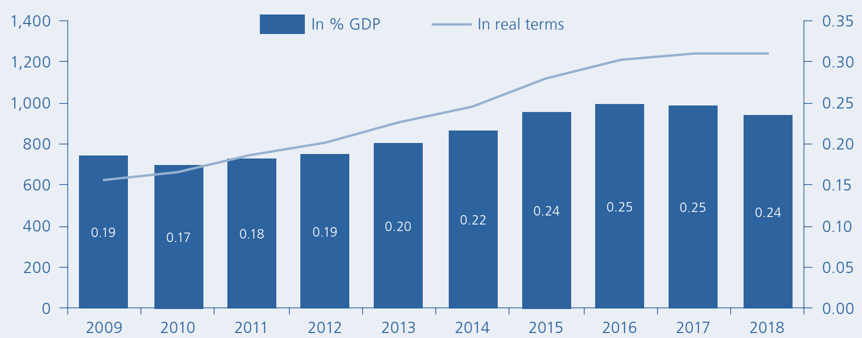
The property tax is an annual tax on the value of properties that is assigned to the local government of the jurisdiction where the property is located. The municipalities are responsible for the collection, administration, and control of the tax, but do not have the power to modify the tax determinants (tax base or rate).

The tax base –the value of the property set by the municipality– is calculated based on some tax parameters established for the land and the building and approved by the Ministry of Housing, Construction, and Sanitation (MVCS). It also includes a depreciation value associated with the age of the property. The property tax rate is set in the Municipal Tax Law, according to a progressive scale established on the basis of the tax unit[10].

Tax base tranche	Rate
Up to 15 UIT	0.2%
Between 15 and 60 UIT	0.6%
More than 60 UIT	1.0%

Revenue from the property tax in recent years has shown a positive evolution, increasing almost two-fold in real terms over the past 10 years. In 2018, it reached S/ 1.75 billion.

REVENUE FROM THE PROPERTY TAX



This positive evolution of revenue from the property tax can be explained by the following factors:

- **Update of the tax parameters**: In the period analyzed, the tax values of the land have been updated by around 5 percent per year, while the building values have been updated

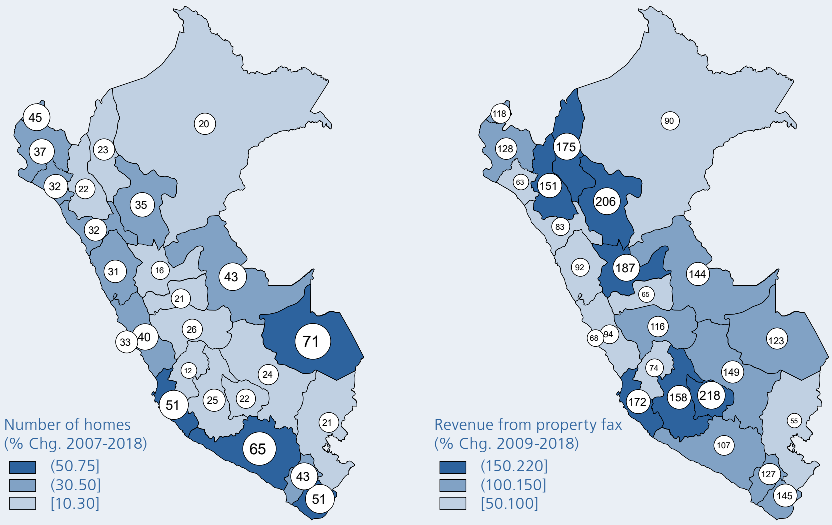
10 Tax unit (UIT, in Spanish). The tax unit for 2019 has been established at S/ 4,200.

between 3 and 6 percent on average. These two factors explain[11] around 45 percentage points of the growth observed in the property tax.

- **Management improvements**: A program of Incentives for the Improvement of Municipal Management was implemented in 2010 to offer benefits to municipalities that met certain goals, such as strengthening municipal administration and the management of the property tax.

  This has motivated municipalities to improve the collection and control of the property tax.

- **Increase in the number of houses**: According to the 2007 and 2017 Housing Censuses, the number of homes has increased by 34 percent between these years (2.9 percent in YoY terms). Moreover, considering this annual growth rate, the number of homes would have increased by 30 percent between 2009 and 2018. However, it should be pointed out that this growth has not been homogenous, that it shows a high dispersion, and that there is not a very strong link with the growth of the property tax.

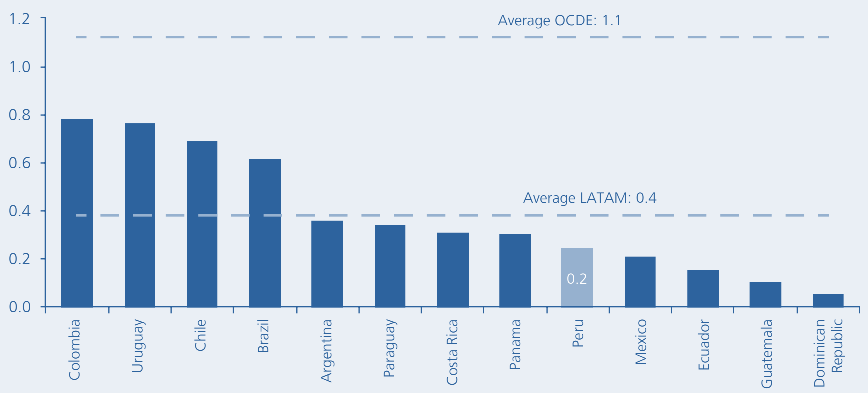


Source: Censos de Viviendas 2007 and 2017 – INEI.

Despite the improvement observed in recent years, revenue from the property tax is still quite low in comparison to the average level of this revenue in Latin American countries, where it reaches 0.4 percent of GDP on average. In Peru, municipal governments' revenues from the property tax represent only 0.2 percent of GDP. Furthermore, it would really take a great effort to reach an average collection equivalent to 1.1 percent of GDP, as in the OECD countries.

11 An exercise was carried out considering that the tax value of the land in urban areas grew at a fixed rate of 5 percent and that the tax value of the building represents 65 percent of the tax. The variation of the building values is determined from the Official Unit Buildings Values, published annually by the MVCS.

LATAM: REVENUE FROM THE PROPERTY TAX
(% GDP)



It is worth mentioning that countries with higher revenues, such as Colombia, Uruguay, Chile, and Brazil, have higher property taxes. Moreover, except for Chile, the sub-national governments in these countries have the power to determine the property tax rates.

On the other hand, it is also worth pointing out that although the property tax is the main source of revenues for municipal governments in Peru, the amount collected only covers about 15 percent of their current expenditure. In addition to this, these revenues are highly concentrated in Lima: on average, 58 percent of the property tax is collected in Peru's capital city.

Since there are indications of significant lags that affect revenues from the property tax, it is important to improve the update of the parameters used to determine the tax values of land and buildings in the future.

To have an idea of the degree of delay in these revenues, we did exercises[12] comparing the values used to estimate the property tax of several properties offered for sale in different districts of Metropolitan Lima against the sale value of these properties[13]. The results of the exercises carried out show that the tax parameters (used to determine the property tax) was between 200 and 300 percent behind the market value of the properties.

Furthermore, it is also necessary to continue improving the collection capacity of municipal governments, which is why the Incentives Program for the Improvement of Municipal Management should continue to be enhanced in terms of the collection of the property tax. In addition, municipal capacities should be strengthened providing local and regional governments with adequate equipment and technology, as well as with an adequate update of the cadaster.

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12 Information as of the second half of 2017 was used.

13 We used the prices of real estate projects whose price per square meter was in line with the value of the median in each district. The latter was obtained from data of Reporte de Indicadores on the sale price of apartments, published by BCRP. Information as of the second half of 2017 was used in this exercise.

Box 4
CHALLENGES TO BOOST PUBLIC INVESTMENT

There are some risk factors that could negatively affect the dynamism of public investment this year. First of all, the effect of the change of authorities at the level of subnational governments stands out. Other risk factors include the impact of corruption allegations on government capacity to hire private sector companies, and, finally, there are also problems in unlocking public investment projects which are currently halted.

Change of subnational authorities

As pointed out in previous Inflation Reports, the years in which there were elections at the level of subnational governments and authorities were changed, there was a reduction in the investment expenditure of local and regional governments which caused public investment to fall by 11.2 and 9.5 percent in 2011 and 2015 , respectively.

In order to face this risk, the government has recently approved to advance transfers of mining royalties (*canon minero*) to subnational governments. Supreme Decree 033-2019-EF establishes that 60 percent of the amount foreseen in the public budget for *canon minero* will be transferred in February instead of being transferred as usual in the month of July. With this, the new subnational authorities will already have funds to execute expenditure, instead of waiting until the second half of the year, which reduces the risk of budget underspending.

On the other hand, the Reconstruction with Changes Program is expected to show greater dynamism this year, in line with the greater facilities granted the previous year. In the first two months of this year, spending on investment projects amounted to S/ 161 million (vs. S/ 31 million in the previous year), this increase being observed mainly in local governments, which translated into higher capital spending in the municipalities of the north of the country.

Paralyzed Projects

As of July 31, 2018, the Comptroller's Office has reported[14] that public entities have reported 867 paralyzed public investment projects, the corresponding contracts representing a total of S/ 16.87 billion (2.3 percent of GDP).

If the paralyzed projects are classified according to their contract value, we find that 719 of them have a value of less than S/ 10 million and that only 25 of these contracts involve amounts of over S/ 100 million (but account for S/ 10.75 billion of the total value of contracts).

If the contracts are classified by the execution modality, we see that the projects that are more affected by disruptions are those implemented under the mechanisms of a contract awarded through a tender (607 projects) and those implemented by direct administration, that is, they are carried out directly by the corresponding entity (143 projects). There are also 83 projects

14 Reporte de Obras Paralizadas. Contraloría General de la República. March 2019.

that are carried out by executing units and 12 carried out through PPPs (with a total value of S/ 6.58 billion), among other projects.

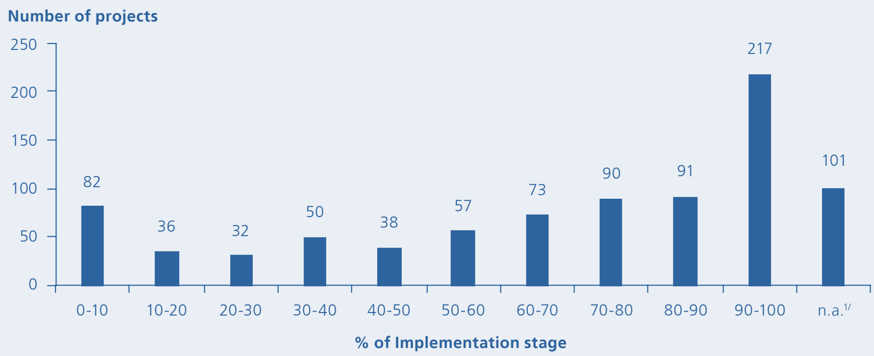
The main reasons for stopping the works include technical deficiency, breach of contract, arbitration, budget limitations, and lack of land.

Reasons for stopping the works	Number	%
Technical deficiency / Breach of contract	340	39
In arbitration	242	28
Budget limitations	126	15
Lack of land	27	3
Change of professionals	18	2
Other	11	1
Not information	103	12
TOTAL	**867**	**100**

Source: Reports.

Works are more frequently stopped (46 percent) when projects reach between 70 and 100 percent of their implementation stage.

NUMBER OF PROJECTS PARALYZED ACCORDING TO STAGE OF WORKS



1/ Non available.

As for how long a project is stopped, as of July 31, 2018, the reports include information about projects that had been paralyzed from 323 to 1,971 days.

In this context, the Comptroller's Office has recently submitted a legislative initiative[15] proposing the creation of a special regime applicable to projects with paralyzed works for a period of more than six months, for reasons not attributable to the State, and with a level of project implementation of at least 80 percent.

15 Bill 03928/2018-CGR submitted in February of this year.

According to the proposal, the entities will be able to terminate the contract and offer the remainder of the work to the bidders that were not awarded the contract in the selection process. If the latter have no interest, the entity is authorized to contract a new contractor directly to complete the project.

This proposal would expedite the completion of paralyzed works, since it facilitates and broadens the scope for applying similar mechanisms that already exist in the current Government Procurement Law, although adequate control is required in their application.

Actions to Mitigate the Impact of Cases Linked to Corruption

In the period 2017-2018, Provías Nacional awarded contracts for a total of S/ 5 billion for the execution of project works. The contracts awarded to companies of the so-called "Construction Club" (fourteen companies), including both individual companies and companies that participated as part of a consortium, represent 49 percent of this total. It is worth mentioning that the participation of these companies in the contracts awarded, which was 75 percent in 2017, decreased to 27 percent in 2018.

PROVÍAS NACIONAL: AWARDED CONTRACTS[1/]
(Million S/)

	Projects awarded				
	"Club de la Construcción"	**%**	**Rest of companies**	**%**	**Total**
2017	1,766	75	604	25	2,370
2018	695	27	1,923	73	2,618
Total	**2,461**	**49**	**2,527**	**51**	**4,988**

1/ Not includes VAT.
Source: MTC - Provías Nacional.

On the other hand, it is expected that the number of potential bidders will increase due to macroeconomic stability, the free trade agreements in force that regulate the participation of companies of trading partners under conditions of national treatment, the magnitude of projects, and changes in regulations that facilitate companies' participation in processes through the reduction of costs, among other factors.

It should be pointed out with regard to the latter factor that the Regulation of the Government Procurement Law has recently been modified in terms of the requirement of financial guarantees for companies engaging into contracts with the State. For example, performance bonds will be reduced from 10 to 5 percent of the value of the contract if the contractor consents that the State retain 5 percent of the contract amount agreed upon in at least half of the amounts agreed for each stage. In the case of guarantees for amounts for which the State gives an advanced payment to contractors, the regulation now allows that they be replaced by a trust fund that will administer the use of these resources.

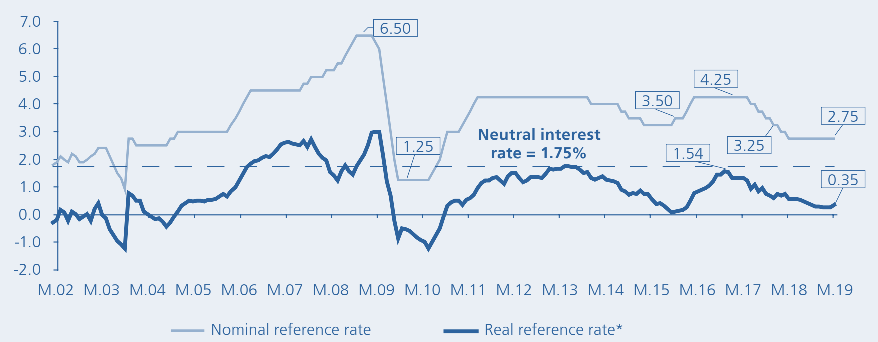
V. Monetary Policy and Financial Markets

Monetary Policy Actions

37. Between November 2018 and March 2019, the BCRP **monetary policy** actions continued to be aimed at maintaining an expansionary monetary stance. Thus, during this period, the Board of BCRP maintained the **benchmark interest rate** at 2.75 percent and reiterated in its policy communiqués that it considered *"appropriate to maintain an expansionary policy stance while inflation expectations remain anchored, in a context in which the level of economic activity is below its potential".*

    As a result, the real interest rate stood around 0.35 percent in March, below its neutral level which is estimated at 1.75 percent. This expansionary monetary policy stance is consistent with an inflation rate of around 2.0 percent and a negative output gap which is estimated to continue closing gradually in the forecast horizon.

Graph 48
NOMINAL AND REAL* REFERENCE INTEREST RATE
(%)



* Considers expectation of inflation.

38. The Board's decision of maintaining an expansionary monetary policy stance was based on the following factors:

    i. Between November 2018 and February 2019, the **year-on-year inflation rate and indicators of trend inflation** were within the target range. Inflation showed a rate of 2.00 percent and inflation excluding food and energy registered 2.39 percent.

    ii. **Inflation expectations** declined from 2.50 percent in December 2018 to 2.40 percent in February 2019.

    iii. **Indicators of economic activity** in the non-primary sectors continued showing signs of dynamism, even though the output is below its potential.

    iv. There are still risks in terms of **global economic activity**, although lower volatility is being observed in international financial markets.

Monetary Operations

39. The **monetary operations** of the Central Bank were oriented to maintaining appropriate levels of liquidity. To do so, and because of banks' increased demand for term funds, BCRP carried out security repos and currency repos with up to 1 year maturity terms. These operations contributed to reduce both lending and deposit short-term interest rates, which increased transitorily at the end of 2018 due to the higher demand for loans in soles.

Table 30
BALANCE OF BCRP MONETARY OPERATIONS

	Balance (Millions S/)			Average interest rate (%)		
	Dec.17	Dec.18	Feb.19	Dec.17	Dec.18	Feb.19
Monetary sterilization						
1. CDBCRP	30,747	27,061	31,394	3.96	2.70	2.73
2. Overnight deposits	1,592	1,802	1,176	2.00	1.50	1.50
Monetary injection						
3. Currency repos	16,680	7,358	8,353	4.88	3.80	3.88
a. Regular	8,900	5,408	7,053	5.27	3.81	3.93
b. Expansion	4,050	150	0	5.07	5.80	n.a.
c. Substitution	3,730	1,800	1,300	3.75	3.60	3.60
4. Secutity repos	5,420	5,950	4,850	3.79	3.95	4.02
5. Auctions of Treasury funds	1,200	4,000	4,500	4.49	4.22	4.25

40. As a result of these operations, the balance of repos operations represented 5.9 percent of the net assets of BCRP, while the balance of BCRP sterilization

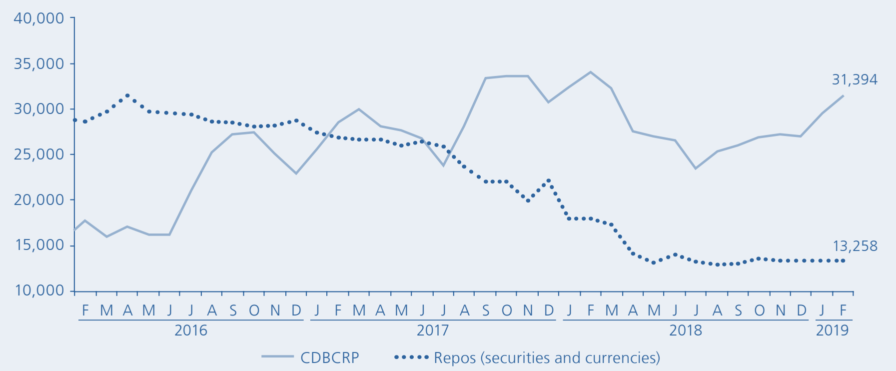
instruments represented 14.8 percent at the end of February. On the other hand, public sector deposits at the BCRP, which are still the most important liability of BCRP, decreased their ratio in terms of the net liabilities of BCRP to 30.3 percent.

Table 31
SIMPLIFIED BALANCE SHEET OF THE BCRP*
(As % of Net Assets)

	Dec.16	Dec.17	Nov.18	Dec.18	Feb.19
I. Net assets	**100%**	**100%**	**100%**	**100%**	**100%**
Net International Reserves	**87.8%**	**90.3%**	**93.8%**	**93.8%**	**94.1%**
In Million US$	*61,686*	*63,621*	*59,387*	*60,121*	*63,254*
Repos	**12.2%**	**9.7%**	**6.2%**	**6.2%**	**5.9%**
II. Net liabilities	**100%**	**100%**	**100%**	**100%**	**100%**
1. Total public sector deposits	**33.5%**	**31.7%**	**31.7%**	**31.3%**	**30.3%**
In domestic currency	12.1%	18.5%	19.3%	18.5%	18.1%
In foreign currency	21.4%	13.3%	12.4%	12.8%	12.2%
2. Total financial system deposits	**32.9%**	**29.6%**	**26.2%**	**25.6%**	**28.0%**
In domestic currency	4.5%	5.0%	5.0%	5.3%	4.8%
In foreign currency	28.4%	24.6%	21.2%	20.3%	23.2%
3. BCRP instruments	**11.0%**	**14.7%**	**13.6%**	**13.4%**	**14.8%**
CD BCRP	9.7%	13.5%	12.7%	12.6%	14.2%
CDLD BCRP	0.0%	0.2%	0.0%	0.0%	0.0%
CDR BCRP	0.3%	0.4%	0.0%	0.0%	0.0%
Term seposits	0.0%	0.0%	0.0%	0.0%	0.1%
Overnight deposits	0.9%	0.7%	0.9%	0.8%	0.5%
4. Currency	**18.1%**	**20.1%**	**21.7%**	**22.9%**	**21.1%**
5. Other*	**4.5%**	**3.9%**	**6.9%**	**6.8%**	**5.7%**

* Includes assets and other accounts of BCRP's balance.

Graph 49
REPO OPERATIONS AND PLACEMENT OF CDBCRP
(In millions S/)



Interest Rates

41. As a result of a higher demand for loans in soles, **interest rates** in the money market moderated the increase observed in the fourth quarter of 2018, the lending and deposit interest rates decreasing by an average of 35 and 51 basis points, respectively, between December 2018 and March 2019. Thus, the money market interest rates remain below their average levels, in line with the expansionary monetary policy position. The evolution of interest rates was also influenced by a change in market expectations about the future evolution of the benchmark interest rate, a more gradual reversal of monetary stimulus being now expected.

Table 32
INTEREST RATE IN DOMESTIC CURRENCY
(%)

		Dec.17	Mar.18	Jun.18	Sep.18	Dec.18	Mar.19*
Pasive	Deposits up to 30-day	3.0	2.7	2.9	2.7	3.1	2.6
	On 31 to 180-day term deposits	3.3	3.0	2.8	3.4	4.0	3.6
	On 181 to 360-day term deposits	3.6	3.2	3.3	3.6	4.2	4.1
Active	90-day corporate prime	3.6	3.1	3.6	3.9	4.5	4.0
	Corporates	4.0	3.8	4.3	4.3	4.9	4.7
	Large companies	6.2	6.4	6.3	6.2	6.4	6.6
	Medium-sized enterprises	9.7	9.8	9.3	10.3	9.8	10.3
	Small businesses	19.8	19.8	19.1	19.1	18.5	18.6
	Consumer	48.6	43.9	41.7	41.1	44.9	41.1
	Mortgage	7.7	7.4	7.3	7.5	7.6	8.0

* As of March 27.
Source: SBS.

Graph 50
INTEREST RATE IN S/: 90-DAY CORPORATE PRIME AND REFERENCE RATE
(%)

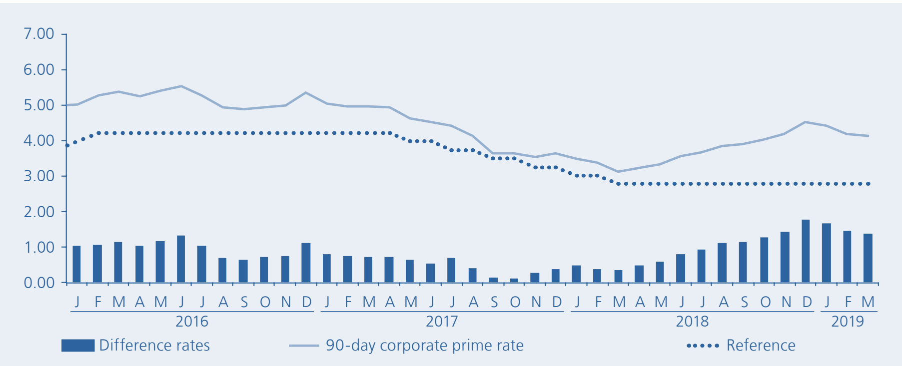
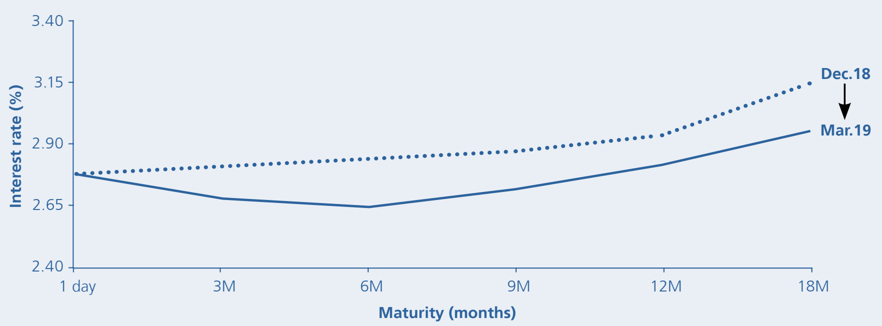


Table 33 SURVEY ON MACROECONOMIC EXPECTATIONS: REFERENCE RATE			
	31 Dec.	**31 Jan.**	**28 Feb.**
Financial entities			
2019	3.25	3.25	3.25
2020	3.50	3.50	3.25
Economic analysts			
2019	3.25	3.25	3.00
2020	3.50	3.50	3.25

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

42. The **yield curve** of **CDBCRP** for terms between 3 and 12 months decreased by an average of 17 basis points between December 2018 and March 2019, due to banks' increased demand for high quality securities and influenced by expectations of a more gradual withdrawal of monetary stimulus by BCRP.

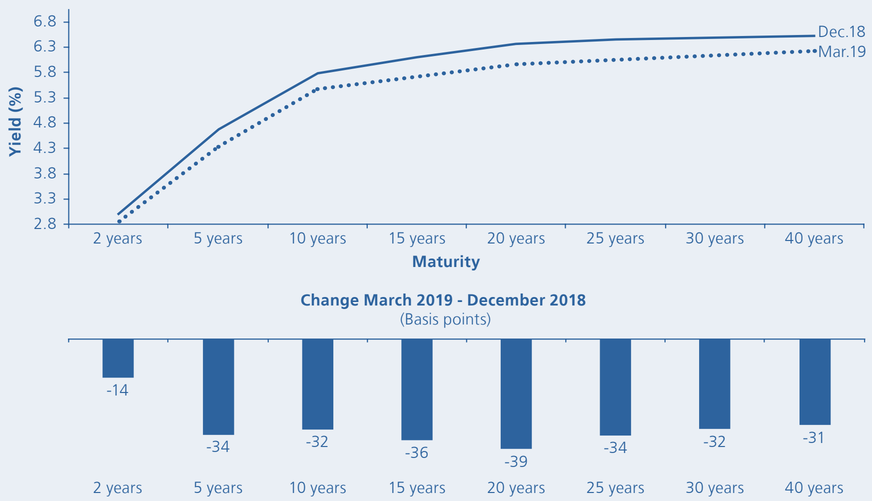
Graph 51
YIELD CURVE OF CENTRAL BANK SECURITIES[1/]



1/ Yield rate in the primary and secondary market. On March 27.

On the other hand, in March 2019, the average interest rates on **sovereign bonds** decreased 32 basis points on average compared to the fourth quarter of 2018, with lower risk aversion to emerging market bonds favoring the market of fixed-income government bonds in a context of lower probabilities that the trade tensions between the United States and China might scale up. It should be pointed out that the demand for sovereign bonds continues increasing since non-resident investors have purchased sovereign bonds for S/ 10.33 billion so far in the first quarter of 2019.

Graph 52
YIELD CURVE OF PERUVIAN SOVEREIGN BONDS
(%)



Source: MEF and Bloomberg.

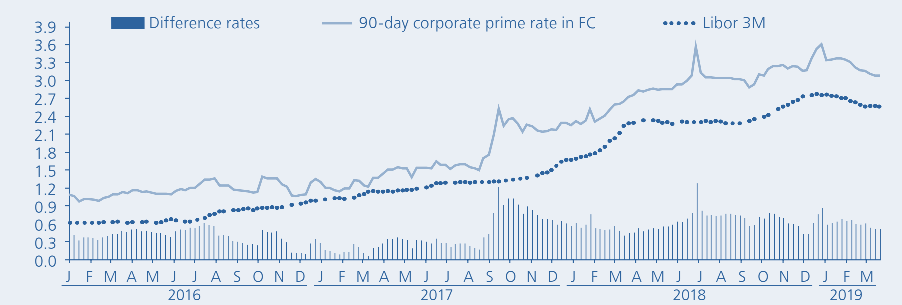
43. Interest rates in dollars showed a stable behavior, with some downward pressures associated with the change of tone of the Federal Reserve indicating a more gradual reversal of its monetary stimulus position in its January announcement. The interbank rate rose from 2.25 to 2.50 percent between December 2018 and March 2019, while the 90-day corporate prime rates for loans and deposits decreased by 46 and 22 basis points, respectively. Moreover, the interest rates in foreign currency in the credit market rose by an average of 3 basis points.

Table 34
INTEREST RATE IN FOREIGN CURRENCY
(%)

		Dec.17	Mar.18	Jun.18	Sep.18	Dec.18	Mar.19
	Deposits up to 30-day	1.1	1.2	1.3	1.4	1.9	1.9
Pasive	On 31 to 180-day term deposits	1.3	1.4	1.6	1.7	2.0	2.2
	On 181 to 360-day term deposits	1.1	1.1	1.5	1.3	1.9	2.0
	90-day corporate prime	2.3	2.8	3.1	3.0	3.6	3.1
	Corporates	3.2	3.0	3.4	3.7	4.0	3.6
	Large companies	5.3	5.1	5.1	5.4	5.5	5.4
Active	Medium-sized enterprises	6.4	6.7	7.1	7.3	6.9	7.5
	Small businesses	7.3	10.1	10.2	9.9	9.9	10.2
	Consumer	32.9	34.1	33.9	34.8	36.1	35.6
	Mortgage	5.9	5.9	5.8	6.1	6.1	6.3

* As of March 27.
Source: SBS.

Graph 53
INTEREST RATE IN US$: 90-DAY CORPORATE PRIME AND LIBOR 3-MONTH
(%)



Source: BCRP and Bloomberg.

Liquidity

44. Private sector deposits registered a YoY growth rate of 6.7 percent in February. By currencies, deposits in soles grew at a YoY rate of 10.9 percent in February, while deposits in dollars grew only 0.4 percent, reflecting people's greater preference for saving in soles. This was particularly noteworthy in the case of businesses.

Graph 54
DEPOSITS OF THE PRIVATE SECTOR BY CURRENCY
(Annual % change)

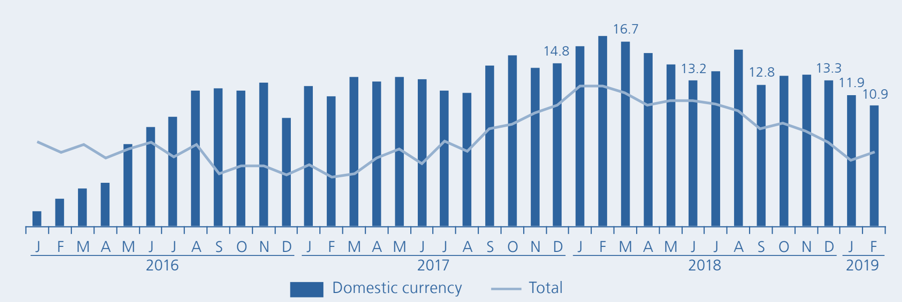


Table 35
MONETARY AND CREDIT ACCOUNTS OF THE DEPOSITORY CORPORATIONS (END-OF-PERIOD)
(Annual % change)

	Dec.16	Mar.17	Jun.17	Sep.17	Dec.17	Mar.18	Jun.18	Sep.18	Dec.18	Feb.19	Dec.19*	Dec.20*
Currency in circulation (end-of-period)	6.5	5.8	6.2	5.9	6.7	10.8	10.3	8.6	7.9	5.6	8.1	8.5
Deposits in domestic currency	9.8	13.6	13.3	14.6	14.8	16.7	13.2	12.8	13.3	10.9	13.7	14.9
Total deposits 1/	4.7	4.8	5.7	8.9	11.0	12.2	11.4	8.8	7.6	6.7	8.9	9.0
Broad money in domestic currency	9.0	11.5	10.7	11.8	12.5	14.9	12.4	11.7	12.1	9.9	12.4	13.5
Total broad money 1/	5.1	4.9	5.2	8.0	10.1	12.2	11.4	9.1	8.1	6.9	10.0	10.9
Credit to the private sector in domestic currency	7.2	4.4	3.9	5.2	5.3	7.4	9.2	9.9	11.3	11.2	11.0	11.2
Credit to the private sector 1/	5.6	4.5	4.5	5.4	6.7	7.8	9.0	8.7	8.3	7.6	9.0	9.0

1/ Balances in foreign currency are valuated at constant exchange rate on December 2018.
* Forecast.

The faster pace of growth of deposits in soles compared to that of deposits in dollars has continued to contribute to reduce the dollarization ratio of total deposits to 37.9 percent in February.

Table 36
DOLLARIZATION RATIO OF DEPOSITS
(%)

	Dec.17	Mar.18	Jun.18	Sep.18	Dec.18	Jan.19	Feb.19
Individuals	**35.4**	**34.9**	**34.2**	**33.6**	**32.4**	**33.1**	**33.4**
At current exchange rate	*34.6*	*33.9*	*33.6*	*33.1*	*32.4*	*32.9*	*33.0*
Demand deposits	48.0	46.6	48.3	45.9	43.9	45.0	47.6
Savings deposits	39.6	38.5	38.3	37.0	35.9	35.7	35.7
Term deposits	31.1	30.5	29.6	29.5	28.8	31.0	31.3
CTS	27.4	27.7	26.1	26.1	24.5	24.5	24.6
Business	**50.5**	**49.6**	**50.3**	**48.7**	**47.0**	**48.3**	**48.5**
At current exchange rate	*49.5*	*48.5*	*49.6*	*48.1*	*47.0*	*48.0*	*47.9*
Demand deposits	48.0	46.6	48.3	45.9	43.9	45.0	45.4
Savings deposits	53.6	60.9	55.5	73.3	45.5	50.9	52.7
Term deposits	59.9	57.9	57.5	55.9	62.2	72.9	83.3
TOTAL	**40.4**	**39.9**	**39.6**	**38.6**	**37.3**	**37.7**	**37.9**
At current exchange rate	*39.5*	*38.8*	*38.9*	*38.1*	*37.3*	*37.4*	*37.4*

Credit to the Private Sector

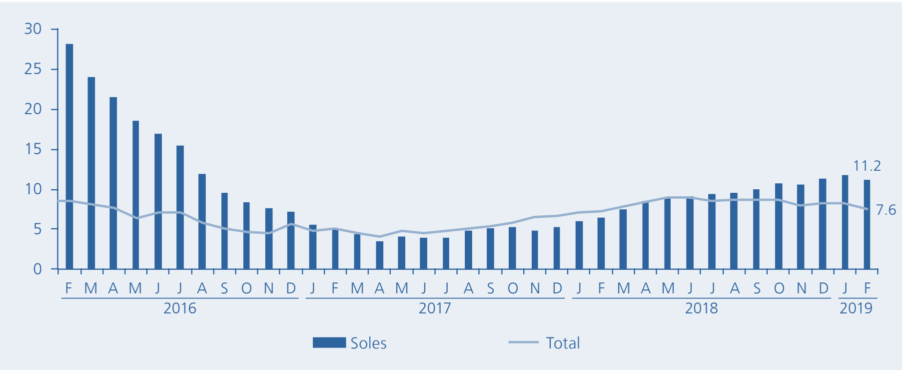
45. **Credit to the private sector** grew at a YoY rate of 7.6 percent in February. By segments, credit to businesses grew 5.4 percent, while loans to households grew 11.4 percent. In the case of personal loans, consumer loans and mortgage loans continue to show the higher growth rates (13.2 and 8.7 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 (5.4 and 6.7 percent, respectively).

Table 37
CREDIT TO THE PRIVATE SECTOR
(12-month % change)

	Dec.17	Mar.18	Jun.18	Sep.18	Dec.18	Feb.19
Businesses	**5.5**	**6.7**	**7.9**	**7.3**	**6.7**	**5.4**
Corporate and large companies	6.2	8.1	10.6	9.9	8.8	5.4
Medium-sized enterprises	0.6	1.9	2.4	2.7	3.8	4.2
Small business and Microbusinesses	9.5	8.8	8.1	6.3	5.0	6.7
Individuals	**8.6**	**9.7**	**10.7**	**11.1**	**11.0**	**11.4**
Consumer	8.8	10.4	11.6	12.3	12.5	13.2
Car loans	-4.4	-0.8	-2.9	-1.8	-3.7	-4.9
Credit cards	3.0	3.8	6.0	8.5	12.0	12.7
Rest	13.0	14.8	15.7	15.2	13.7	14.4
Mortgage	8.5	8.6	9.4	9.4	8.8	8.7
TOTAL	**6.7**	**7.8**	**9.0**	**8.7**	**8.3**	**7.6**

46. Credit in soles continues to grow at two-digit rates, while the pace of growth of credit in dollars has slowed down, which is consistent with the higher cost expected in credit in dollars and with interest rates in soles that remain below their historical levels. Thus, credit in soles went from a growth rate of 11.3 percent in December to a rate of 11.2 percent in February, whereas the growth rate of credit in dollars fell from 1.5 percent in December to 0.7 percent in February.

Graph 55
TOTAL CREDIT TO THE PRIVATE SECTOR AND IN DOMESTIC CURRENCY
(12-month % change)



47. The balance of total credit to the private sector continued to evolve in line with its trend, showing no signs of insufficient or excessive credit provision.

Graph 56
SEASONALLY -ADJUSTED TOTAL CREDIT TO THE PRIVATE SECTOR AND TREND
(Million current S/)

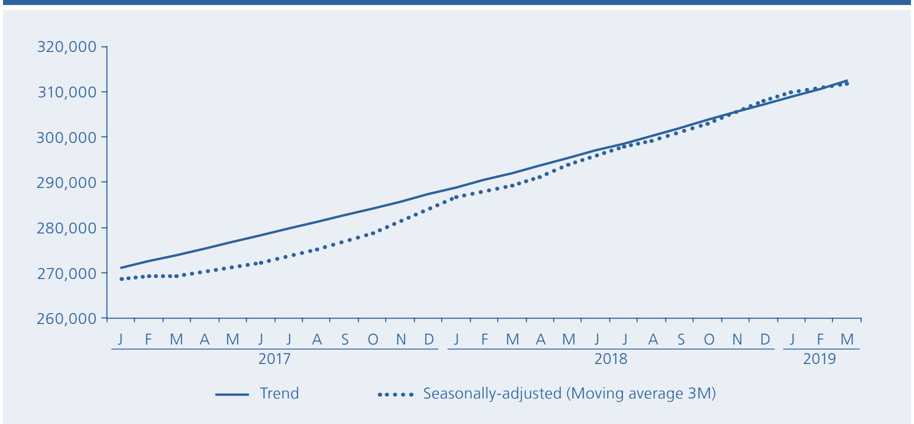


Table 38
CREDIT TO THE PRIVATE SECTOR
(Annual % change)

	Dec.17	Mar.18	Jun.18	Sep.18	Dec.18	Jan.19	Feb.19
Domestic currency	5.3	7.4	9.2	9.9	11.3	11.8	11.2
Foreign currency	9.9	8.6	8.5	5.8	1.5	0.1	-0.7
Total	**6.7**	**7.8**	**9.0**	**8.7**	**8.3**	**8.2**	**7.6**

48. As of February 2019, depository institutions' credit to the private sector in domestic currency increased by S/ 22.67 billion in YoY terms. This increase was mainly financed by the increase in both private sector deposits (S/ 16.17 billion) and public sector deposits (S/ 4.06 billion) and the net maturity of CDBCRP (S/ 2.72 billion). Although the BCRP operations withdrew liquidity (S/ 1.01 billion) in the period analyzed, it should be pointed out that liquidity in soles has been injected in recent months through currency repos and security repo operations. Therefore, the gap between credit and private deposits is expected to decrease gradually in the 2019-2020 forecast horizon.

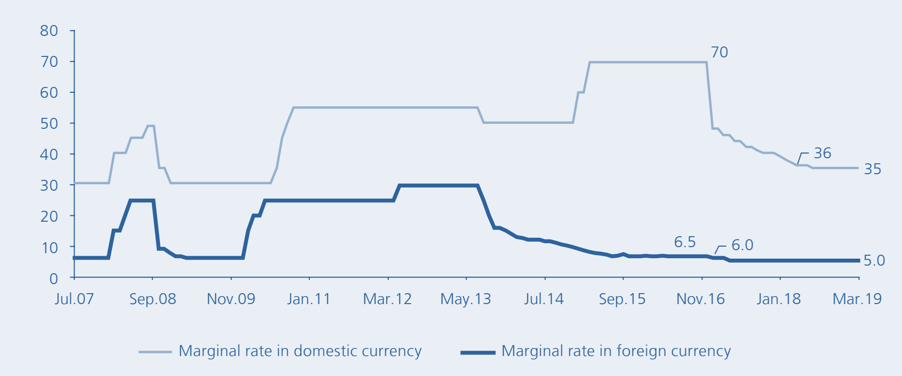
Table 39
SOURCES EXPANSION OF OF CREDIT TO THE PRIVATE SECTOR IN SOLES
(In million S/)

	Balance		Flows
	Feb.2018	Feb.2019	Feb.2019/Feb.2018
Credit to the private sector	**202,780**	**225,446**	**22,666**
1. Total liabilities[1/]	**184,987**	**207,483**	**22,496**
a. Non financial privates	146,144	162,309	16,165
b. Public sector	21,481	25,540	4,059
c. Other financial companies	14,029	15,147	1,118
d. Non-residents[1/]	3,332	4,486	1,154
2. BCRP operations	**-33,418**	**-34,430**	**-1,012**
a. Cash	-8,228	-8,623	-,395
b. Deposits[2/]	-8,065	-10,221	-2,156
c. Securities[3/]	-34,673	-28,727	5,946
d. Repos	17,548	13,141	-4,407
3. Public sector financing	**-24,150**	**-21,920**	**2,230**
4. Rest	**75,361**	**74,313**	**-1,048**

1/ Includes deposits and securities.
2/ Includes current account, term, overnight, and special deposits.
3/ Includes CDs, CDLDs, and CDRs.

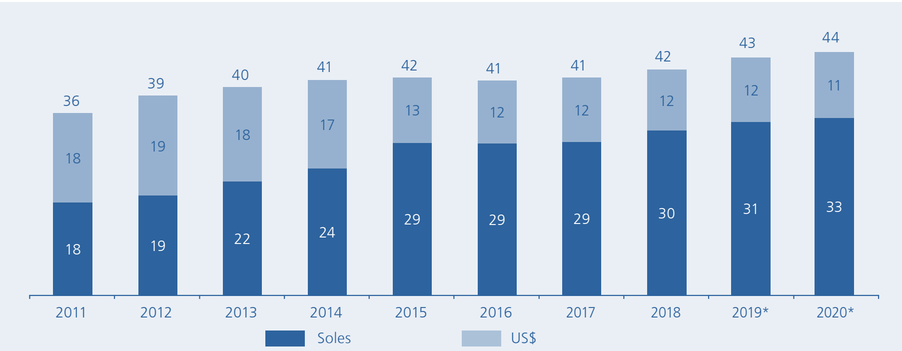
49. After having established successive reductions in the rates of reserve requirements in the two previous years as complementary measures to its expansionary monetary policy position, BCRP has maintained the rates of reserve requirements in soles and dollars at 5.0 percent and 35 percent, respectively. It is worth mentioning that the measures taken in the case of the reserve requirement in dollars have contributed to offset the effect of the rise in international rates in dollars on domestic credit conditions as a result of the normalization process of the Federal Reserve's monetary policy.

Graph 57
RESERVE REQUIEREMENTS RATE IN DOMESTIC AND FOREIGN CURRENCY
(As % of total deposits)



50. In the 2019-2020 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 in 2018 to 44 percent in 2020. This forecast takes into account loose monetary conditions and the recovery in the pace of growth of domestic demand foreseen for these years.

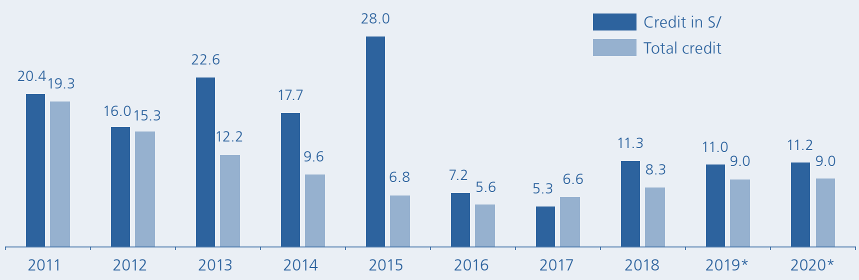
Graph 58
RATIO CREDIT/ GDP
(%)



* Forecast.

51. Credit to the private sector in domestic currency is projected to grow around 11 percent in 2019 and 2020, while the total growth rate would be around 9 percent. As a result, the dollarization ratio of credit would continue to decrease until it reaches a level of 25 percent by the end of 2020.

Graph 59
CREDIT TO THE PRIVATE SECTOR
(% change)



* Forecast.

52. Moreover, credit expansion is projected to be financed mainly through total obligations. During 2019, BCRP would continue to inject liquidity through currency repos, while in 2020 it would withdraw liquidity in domestic currency through the placement of CD BCRP and the maturity of repo operations.

Table 40
SOURCES OF EXPANSION OF CREDIT IN SOLES
(Million S/)

	Balance			Flows		
	2018	2019	2020	2018	2019*	2020*
Credit to the private sector	**223,513**	**247,998**	**275,754**	**22,636**	**24,485**	**27,757**
1. Total liabilities[1/]	203,513	226,714	256,915	19,394	23,201	30,202
2. BCRP operations	-30,883	-16,559	-19,188	-4,081	4,639	-2,629
3. Public sector financing	-26,731	-26,995	-29,611	-3,145	-264	-2,616
4. Rest	77,614	64,838	67,639	10,467	-3,092	2,801

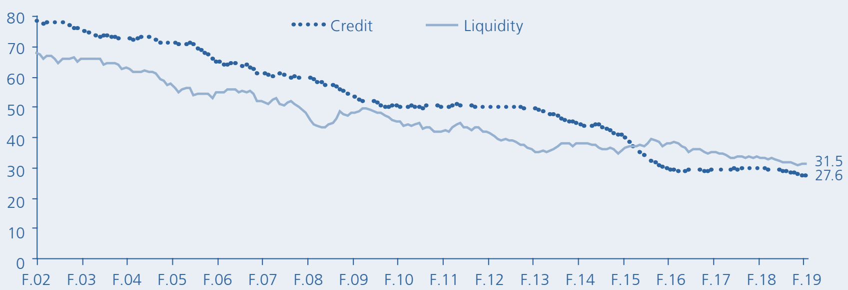
1/ Includes deposits and securities.
* Forecast.

53. The ratio of dollarization of credit at a constant exchange rate was 27.6 percent in February, lower than in December (28.2 percent). This reduction reflects both the lower dollarization ratio of credit to businesses, which fell from 39.2 percent in December to 38.6 percent in February, as well as the lower dollarization ratio of credit to households, which fell from 10.5 to 10.3 percent in the same period. The ratio of dollarization also continued to decline in the segments of mortgage and car loans, showing rates of 16.1 and 13.9 percent, respectively, in February.

Table 41
RATIO OF DOLLARIZATION OF CREDIT TO THE PRIVATE SECTOR
(%)

	Dec.17	Mar.18	Jun.18	Sep.18	Dec.18	Jan.19	Feb.19
Businesses	**40.7**	**40.5**	**40.5**	**40.0**	**39.2**	**38.7**	**38.6**
Corporate and large companies	54.9	54.5	54.4	53.8	52.3	51.5	51.6
Medium-sized enterprises	41.4	41.2	41.4	40.5	40.6	40.7	40.6
Small business and Microbusinesses	6.9	6.7	6.5	6.4	6.2	6.2	6.1
Individuals	**12.3**	**11.8**	**11.4**	**11.0**	**10.5**	**10.4**	**10.3**
Consumer	7.0	6.8	6.7	6.6	6.4	6.4	6.4
Car loans	20.8	18.1	16.4	15.1	14.2	14.2	13.9
Credit cards	7.1	7.3	7.4	7.5	7.3	7.3	7.3
Rest	6.2	6.0	5.8	5.7	5.6	5.6	5.6
Mortgage	19.9	19.1	18.2	17.5	16.6	16.3	16.1
TOTAL	**30.1**	**29.7**	**29.4**	**29.0**	**28.2**	**27.7**	**27.6**
At current exchange rate	*29.3*	*28.8*	*28.8*	*28.5*	*28.2*	*27.5*	*27.2*

Graph 60
RATIO OF DOLLARIZATION OF CREDIT AND LIQUIDITY: 2002 - 2019
(%)



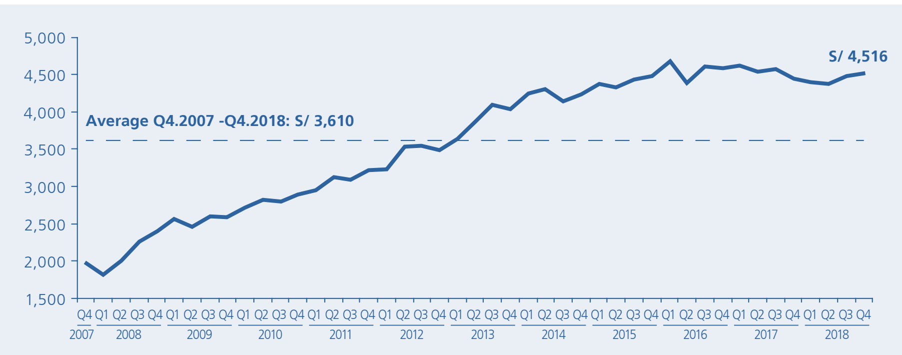
54. The ratio of non-performing loans was 3.45 percent in February, 0.12 percentage points higher than at the end of 2018 (3.33 percent). It is worth mentioning that the ratio of non-performing loans in credit to businesses has increased by 0.22 percentage points in the first months of the year, while the ratio of non-performing loans in credit to persons has fallen from 3.16 percent to 3.10 percent.

Table 42
NON-PERFORMING LOANS INDEX ON THE DEPOSITORY CORPORATIONS
(%)

	Dec.17	Mar.18	Jun.18	Sep.18	Dec.18	Jan.19	Feb.19
Businesses	**3.33**	**3.48**	**3.54**	**3.62**	**3.43**	**3.56**	**3.65**
Corporate and large companies	0.47	0.54	0.57	0.60	0.55	0.58	0.61
Medium-sized enterprises	7.02	7.38	7.46	7.75	7.53	7.86	8.07
Micro and Small businesses	7.12	7.53	7.74	7.83	7.39	7.44	7.50
Individuals	**3.29**	**3.27**	**3.28**	**3.15**	**3.14**	**3.16**	**3.10**
Consumer	3.70	3.60	3.59	3.32	3.24	3.23	3.20
Car loans	6.10	6.14	5.59	5.30	4.45	4.22	4.01
Credit cards	5.13	4.89	4.84	4.16	3.90	3.93	3.92
Mortgage	2.78	2.86	2.89	2.92	3.03	3.07	2.98
TOTAL	**3.31**	**3.40**	**3.45**	**3.45**	**3.33**	**3.42**	**3.45**

55. On the other hand, the indicators of property prices reflect the absence of macro-financial excesses. Thus, the sale prices of property per square meter in Metropolitan Lima showed a stable behavior. In the last quarter of 2018, the home price to annual income ratio registered a value of 17.6, higher than the level recorded in the fourth quarter 2017 (17.1) and lower than the one considered indicative of excessive growth in house prices (above 20).

Graph 61
WEIGHTED MEANS OF DEPARTMENT SALE PRICES
(Fixed prices of 2009 per m²)



Box 5

IMPACT OF THE BCRP DE-DOLLARIZATION PROGRAM

The results of three research projects that evaluate the results of the BCRP de-dollarization program are summarized in this box. It is worth highlighting that partial financial dollarization is a risk factor that is present in the Peruvian economy because abrupt exchange rate fluctuations in a context in which there is a currency mismatch can negatively affect the country's macroeconomic stability. Because of this, since 2013 BCRP has been implementing a program aimed at de-dollarizing the financial system. The program is based on additional reserve requirement measures according to the limits set for banks' balance of credit in foreign currency, both in the case of total credit and mortgage and vehicle loans. As a result of this program, the ratio of dollarization of credit to the private sector has decreased from 45.3 percent in 2013 to 28.2 percent at the end of 2018[16].

CREDIT TO THE PRIVATE SECTOR

	%					
	Dec.13	**Dec.14**	**Dec.15**	**Dec.16**	**Dec.17**	**Dec.18**
Businesses	**55.7**	**51.5**	**38.4**	**38.4**	**40.7**	**39.2**
Corporate and large companies	69.7	62.7	46.2	49.3	54.9	52.3
Medium-sized enterprises	66.5	62.2	47.3	43.0	41.4	40.6
Small business and Microbusinesses	14.4	12.8	8.7	7.0	6.9	6.2
Individuals	**25.3**	**22.0**	**15.7**	**13.3**	**12.3**	**10.5**
Consumer	11.7	10.6	7.9	6.9	7.0	6.4
Car loans	78.1	71.4	44.3	26.9	20.8	14.2
Credit cards	8.1	7.4	6.3	6.4	7.1	7.3
Rest	7.1	6.7	5.9	5.9	6.2	5.6
Mortgage	43.0	36.7	26.5	22.5	19.9	16.6
TOTAL	**45.3**	**41.2**	**30.2**	**29.2**	**30.1**	**28.2**
At current exchange rate	*40.7*	*38.2*	*30.5*	*29.1*	*29.3*	*28.2*

Several academic papers have evaluated and estimated the impact of the actions implemented by BCRP to reduce dollarization. To do so, the researchers have had to quantify and isolate the effects of changes in other factors that also affect the dollarization of credit, such as changes in the foreign exchange risk. These researches find that the de-dollarization program has been extremely successful and that this has increased the resilience of the financial system to face external shocks.

Castillo et al (2016)[17] quantify in a first paper the effect of the measures described above through a counter-factual exercise: taking into account the existing macroeconomic scenario, they estimate what the dollarization ratio would have been if the program had not been

16 For a detailed description of these de-dollarization measures, see Castillo, Vega, Cabello and Serrano (2015) "La conquista del sol: Resultados de las medidas del BCRP para acelerar la desdolarización de la economía". Revista Moneda, 164, 4-10.

17 Castillo, Vega, Serrano and Burga (2016): "La desdolarización del crédito en el Perú: el papel de los instrumentos no convencionales de política monetaria". BCRP, Documento de trabajo 2016-002.

implemented. In this case, the authors find that in 2015, 8 percentage points of the 13 percentage points observed in the reduction of dollarization (from 43 to 30 percent) are explained by the measures implemented by BCRP. The rest of the reduction is explained mainly by higher expectations of a depreciation.

Similarly, Infante (2018)[18] carried out an impact analysis study using control groups. To do so, he uses variables observed in another dollarized economy (Uruguay) in the period 1999-2018 as control variables, which allows him to identify the effects of the de-dollarization program in the economy in which the experiment is carried out (Peru). The author finds that this program reduced the dollarization of credit by 8 to 14 additional percentage points compared to the situation that would have been observed if the program had not been implemented.

Finally, Contreras et al. (2018) [19], using individual credit information at the level of banks and companies of the Central Credit Registry (RCC) in the period 2010-2017 and analyzing the data with Panel Data-type regressions, find that 6.3 percentages points of the reduction in the dollarization ratio observed between 2014 and 2017 (10.6 percentage points) is explained by the de-dollarization measures.

Authors	Methodology	Period of analysis	Impact on dollarization
Castillo, Vega, Serrano, and Burga (2015)	Counter-factual excercises (Pesaran and Smith, 2012)	2001-2015	-8 p.p. (as of 2015)
Infante (2018)	Impact using control groups	1999-2017	Between -8 y -14 p.p.(as of 2017)
Contreras, Gondo, Oré, and Pérez (2018)	Panel data (Individual information)	2010-2017	-6,3 p.p. (as of 2017)

These results show that the de-dollarization program has been effective in reducing the dollarization of credit, the result being robust to the analysis under different methodologies. Therefore, this program has contributed to enhance the soundness and stability of the financial system, as well as to strengthen in turn the transmission channel of BCRP monetary policy.

18 Infante, F. (2018): "Desdolarización del crédito en el Perú con políticas monetarias poco convencionales entre 2013 - 2017 ¿Funcionó?" This research paper won the 2018 BCRP research contest.

19 Contreras, Gondo, Oré and Pérez (2018): "Estimación del impacto de las medidas de desdolarización del crédito en el Perú", BCRP, Documento de trabajo 2018-009.

VI. Inflation and Balance of Inflation Risks

Recent Trends in Inflation and Inflation Expectations

56. The annual rate of inflation in all the CPI components was 2 percent in February, in the midpoint of the Central Bank target range (between 1 and 3 percent). On the other hand, the rate of core inflation (the CPI excluding food and energy prices) registered 2.39 percent in February.

Graph 62
INFLATION
(Last 12-month % change)

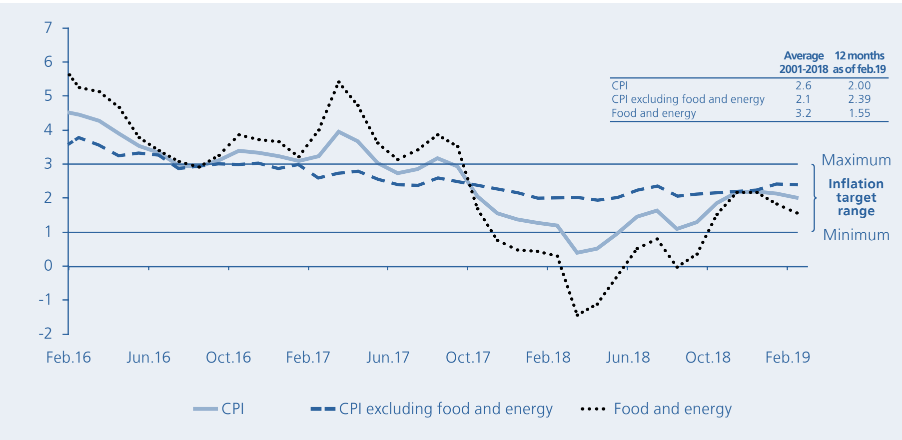


Table 43
INFLATION
(% change)

	Weight	2017	2018	2019	
				Jan.-Feb.	12 months
CPI	**100.0**	**1.36**	**2.19**	**0.19**	**2.00**
1. CPI excluding food and energy	**56.4**	**2.15**	**2.21**	**0.18**	**2.39**
a. Goods	21.7	1.24	2.25	0.23	2.31
b. Services	34.8	2.70	2.19	0.15	2.44
2. Food and energy	**43.6**	**0.46**	**2.17**	**0.21**	**1.55**
a. Food and beverages	37.8	0.31	1.95	-0.02	1.49
b. Fuel and electricity	5.7	1.55	3.67	1.70	2.00
Fuel	2.8	3.95	5.35	-1.67	1.43
Electricity	2.9	-0.21	2.39	4.37	2.43

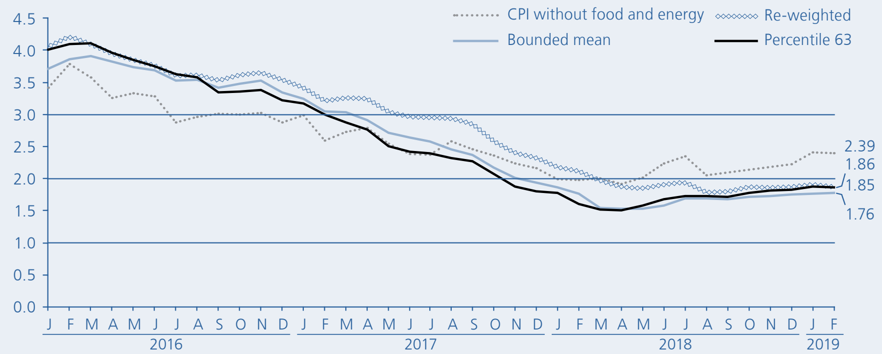
57. A slower pace of growth is observed in the price increases of some services, which could be reflecting a greater labor supply of immigrant workers. Services requiring less qualified workers, such as restaurants or personal care services (e.g. hairdressing and spa salons) have registered a slowdown in their prices in recent years. This could be explained in part by a reduction in wage pressures, despite the increase in the Minimum Wage in April 2018, due to the greater availability of labor and foreigners' willingness to receive lower salaries. Other services, such as household employees and repairs, also show last 12 months growth rates that are lower than the average rates in 2010-2018.

Table 44
INFLATION SERVICES
(% change)

	Weight	2015	2016	2017	2018	Jan.19	Feb.19	2010-18 Annual average
CPI	**100.0**	**4.40**	**3.23**	**1.36**	**2.19**	**2.13**	**2.00**	**2.97**
Education	**9.1**	**5.16**	**4.96**	**4.58**	**4.73**	**5.01**	**5.13**	**4.55**
Health	**1.1**	**5.53**	**5.00**	**1.83**	**1.76**	**1.58**	**1.74**	**3.42**
Meals outside home	**11.7**	**5.44**	**4.61**	**3.65**	**2.19**	**2.15**	**2.13**	**4.71**
Other personal services	**3.3**	**1.85**	**2.83**	**1.41**	**1.29**	**1.32**	**1.38**	**1.85**
Of which								
Household employees	2.1	0.42	1.72	0.26	0.66	0.66	0.75	0.78
Personal care service	0.6	4.54	4.70	4.43	2.21	2.22	2.22	3.94

58. Different methods are used to measure trend inflation. These methods allow us to verify that core inflation has remained within the target range.

Graph 63
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.

59. The items with the higher positive contribution to inflation in the period of January-February were electricity, education, water rates, potatoes, and other vegetables. Electricity rates increased after Osinergmin reconsidered the distribution rates and the adjustment of the transmission rates, while the adjustment of water rates was authorized by Sunass due to Sedapal's fulfillment of its investment goals in the expansion of the drinking water and sewage systems in Metropolitan Lima.

Table 45
ITEM WITH THE HIGHEST WEIGHTED CONTRIBUTION TO INFLATION: JANUARY - FEBRUARY 2019

Positive	Weight	% chg.	Contribution	Negative	Weight	% chg.	Contribution
Electricity	2.9	4.4	0.15	Chicken meat	3.0	-5.8	-0.16
Tuition and fees	8.8	0.6	0.06	Onion	0.4	-11.3	-0.05
Water consumption	1.6	3.0	0.05	Fresh and frozen fish	0.7	-7.1	-0.05
Potato	0.9	5.6	0.05	Gasoline and lubricants	1.3	-3.5	-0.04
Other vegetables	0.4	10.7	0.05	National transportation	0.3	-11.7	-0.04
Meals outside the home	11.7	0.4	0.05	Lemon	0.2	-18.4	-0.04
Tangerine	0.2	23.2	0.05	Urban fare	8.5	-0.4	-0.03
Zapallo	0.1	27.2	0.02	Avocado	0.1	-10.7	-0.02
Eggs	0.6	4.6	0.02	Sugar	0.5	-3.4	-0.02
Celery	0.0	43.7	0.02	Telephone rates	2.9	-0.8	-0.01
Total			**0.52**	**Total**			**-0.46**

On the other hand, the items with the higher negative contribution to inflation were chicken, onions, fish, gasoline, and national transportation. The price of chicken decreased due to lower demand after the year-end festivities and the higher supply of its main substitutes (horse mackerel and bonito), while the price of onions fell due to the higher seasonal supply of the production of valley El Cural, Arequipa.

Forecasts

60. 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 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).

    YoY inflation is expected to remain around 2.0 percent in 2019 and 2020 due mainly to lower imported inflation and to the convergence of inflation expectations toward the midpoint of the target range. Moreover, due to a base effect, YoY inflation would transitorily show levels closer to 2.5 percent between April and May, but would return thereafter to 2.0 percent as from the third quarter of the year.

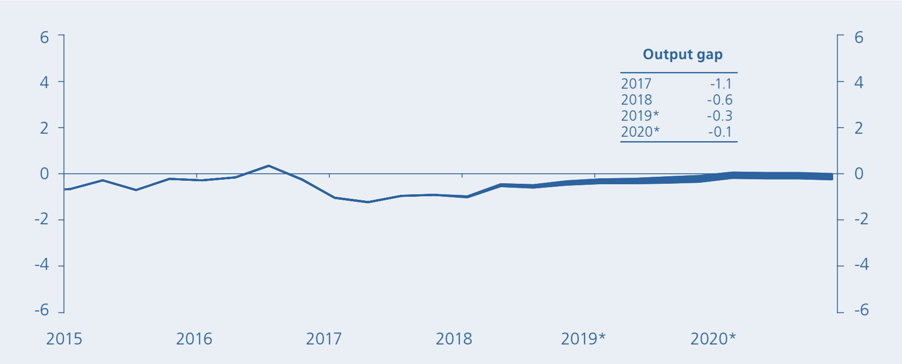
Graph 64
INFLATION FORECAST: 2015-2020
(Last 12-month % change)

* Forecast.

61. The forecasts for the forecast horizon consider a negative output gap, which indicates the absence of demand inflationary pressures. GDP is expected to

grow at a higher rate than its potential, so the output gap is foreseen to close by 2020.

Graph 65
OUTPUT GAP: 2015-2020
(% Potential GDP)



* Forecast.

62. Inflation expectations estimated on the basis of surveys applied to financial and non-financial firms and economic analysts reveal that inflation is expected to show a rate between 2.4 and 2.5 percent in 2019 and to remain around the center of the target range in 2020 with a rate of 2.5 percent. In recent months, inflation expectations have fallen to 2.4 percent. This trend is expected to continue in the following months given that economic agents see that inflation remains around 2.0 percent.

Graph 66
EXPECTATIONS OF INFLATION FOR THE NEXT YEAR
(% points)

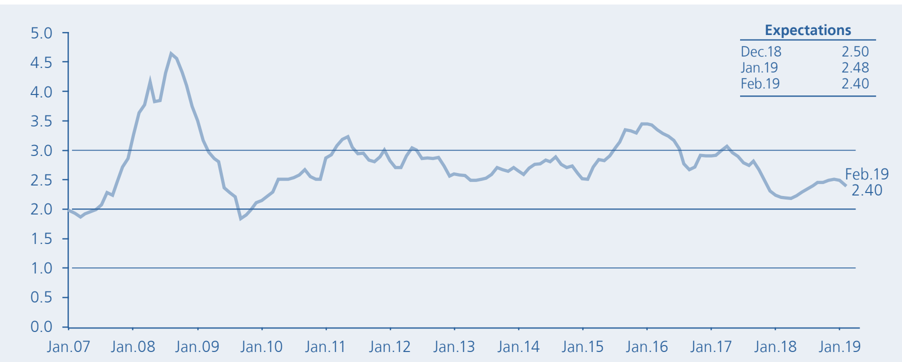


Table 46
SURVEY ON MACROECONOMIC EXPECTATIONS: INFLATION
(%)

	IR Mar.18	IR Jun.18	IR Sep.18	IR Dec.18	IR Mar.19*
Financial entities					
2019	2.50	2.40	2.50	2.50	2.40
2020				2.50	2.50
Economic analysts					
2019	2.50	2.50	2.50	2.50	2.35
2020				2.50	2.50
Non-financial firms					
2019	2.50	2.50	2.50	2.50	2.50
2020				2.50	2.50

* Survey conducted during February 28.

63. 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 average import prices will fall by 1.8 percent in 2019 –mainly due to the lower prices of commodities such as crude, wheat, and soybean– and that they will increase by 2.1 percent in 2020. Moreover, the surveys on expectations about the US/PEN exchange rate show that economic agents expect the exchange rate to be between S/ 3.30 and S/ 3.35 per dollar at the end of 2019 and between S/ 3.33 and S/ 3.38 at the end of 2020.

Table 47
SURVEY ON MACROECONOMIC EXPECTATIONS: END OF PERIOD EXCHANGE RATE
(S/ per US$)

	IR Mar.18	IR Jun.18	IR Sep.18	IR Dec.18	IR Mar.19*
Financial entities					
2019	3.25	3.27	3.30	3.35	3.30
2020				3.35	3.33
Economic analysts					
2019	3.35	3.33	3.35	3.41	3.33
2020				3.44	3.36
Non-financial firms					
2019	3.35	3.32	3.33	3.35	3.35
2020				3.40	3.38

* Survey conducted during February 28.

Balance of Inflation Risks

64. The balance of inflationary or deflationary risks shows a neutral bias in this Report because the expected impact of a possible higher imported inflation would be offset by a possible lower inflation due to lower economic growth.

- **External demand shocks**

So far this year, the progress achieved in the trade negotiations between the United States and China has influenced a slight recovery in the prices of raw materials as well as greater capital flows of institutional investors to the emerging economies as they are seeking higher returns. This has brought about a depreciation of the dollar. Because of this, the expected impact of this inflation risk scenario is revised down in comparison to the one estimated in the previous Inflation Report.

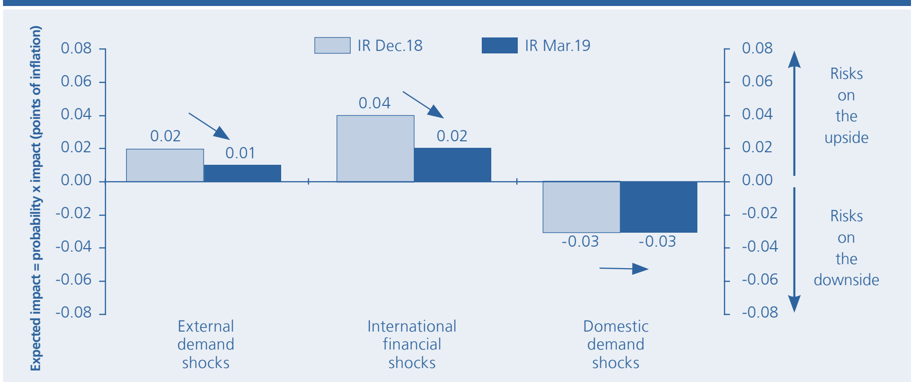
- **International financial shocks**

The expected impact of this scenario is lower than in the previous Inflation Report due to a lower strengthening of the dollar associated with lower expectations of an increase in the Fed interest rate.

- **Domestic demand shocks**

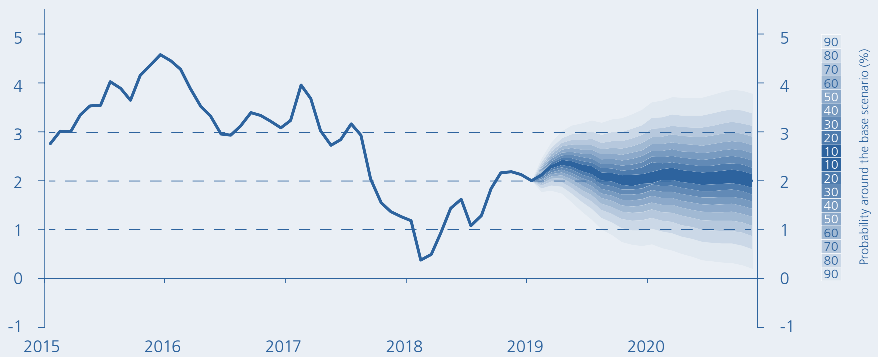
The growth of the output could be lower than the level foreseen in the central scenario if investment –both public and private investment– grew at lower rates than expected. Moreover, this could be exacerbated by lower-than-expected levels of growth in the primary sectors, which would imply a more negative output in the forecast horizon, as a result of which inflation would tend to fall below the baseline scenario.

Graph 67
BALANCE OF RISKS AGAINST THE BASE SCENARIO



The forecasts show a high probability that inflation will be within the inflation target range in the forecast horizon. The probability that inflation in 2019 will be above the upper band of the target range is 11 percent and the probability that it will be below the lower band of the target range is also 11 percent, which reflects the neutral bias in the inflation forecast.

Graph 68
INFLATION FORECAST: 2015 - 2020
(Last 12-month % change)



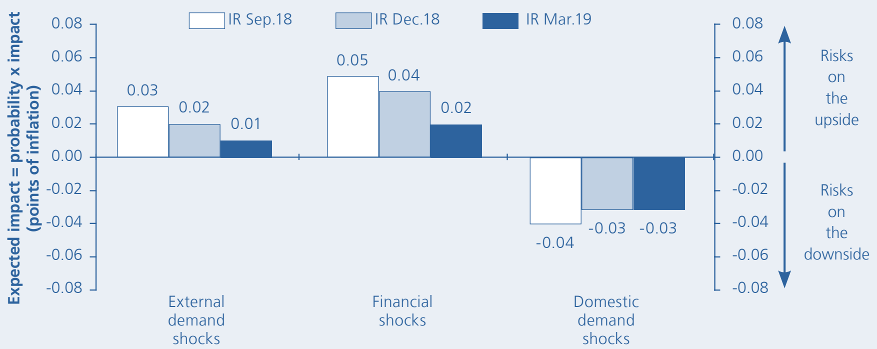
Memo: The graph shows the probability of occurrence of values of inflation in the future, according to the combination of the statistical analysis and the balance of risks. Each band concentrates 5% probability and the total bands cover 90% of probability. The darker bands contain the path of the base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

Box 6
MEASURING THE INFLATION FORECAST BIAS

The role of the balance of risks in the inflation forecast as an instrument of monetary policy communication is discussed in this box. The inflation forecast plays an important role in the decisions of the monetary policy interest rate. Inflation forecasts are estimated taking into account the expected evolution of different macroeconomic variables, both endogenous (the output gap, the exchange rate, among others) and exogenous (rate of growth of trading partners, the terms of trade, and the Fed rate, among others)). These projections are made on the basis of the elaboration of a central scenario and risk scenarios are assessed to capture uncertainty in the projection. These scenarios may generate biases in the inflation projection: for example, if inflation is more likely to be above the central scenario than below it in risk scenarios, then the projection is biased on the upside, and vice versa.

Thus, even when the most likely scenario for inflation does not change, the new information could indicate that the probability of deviations from this projection has changed, which is information that may be useful in the communication of monetary policy. For example, when the probability that inflation deviates below the inflation target level increases, the central bank can maintain an expansionary monetary policy for a longer period of time or reduce the rate of reversal of monetary stimulus. Therefore, if the most probable risks should materialize, they would have a lower impact on inflation. If they do not materialize, however, they could generate a deviation of inflation in the opposite direction, but this scenario would be the one with the lowest probability of occurrence.

CHANGES ON BALANCE OF RISKS IN THE INFLATION

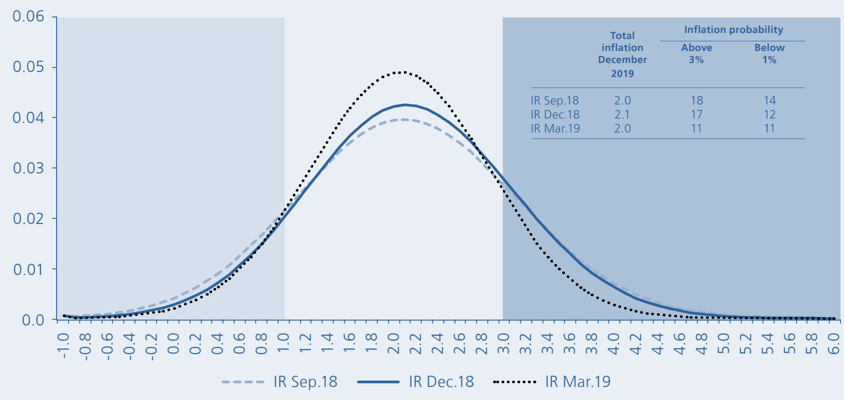


In the last semester the inflation forecast bias has changed from an upward bias (Inflation Reports (IR) of September 2018 and December 2018) to a neutral bias (IR of March 2019) given that the risks associated with external demand shocks have materialized in part and the risks associated with financial shocks have dissipated. Moreover, the inflation forecast has been revised from 2.1 percent to 2.0 percent in December 2019. The design of the balance of risks includes several referential scenarios and the net effect of the expected impact, where the expected impact is defined as the deviation of the weighted forecast due to the weight of the risk scenario.

$$\textit{Expected impact} = \textit{probability} \times \textit{impact (inflation points)}$$

The changes in the forecast bias are associated with the variation that the inflation probability distribution function has had for December 2019 (see the following graph). In this distribution, the modal value corresponds to the central forecast scenario and the risk scenarios generate its dispersion. Thus, when there is lower uncertainty, the distribution is concentrated around the central inflation forecast. The downward revision of the inflation bias is seen as a contraction of the right side of the distribution. Thus, between the IR of September 2018 and the IR of March 2019, the probability that inflation is above 3 percent has decreased (from 18 to 11 percent).

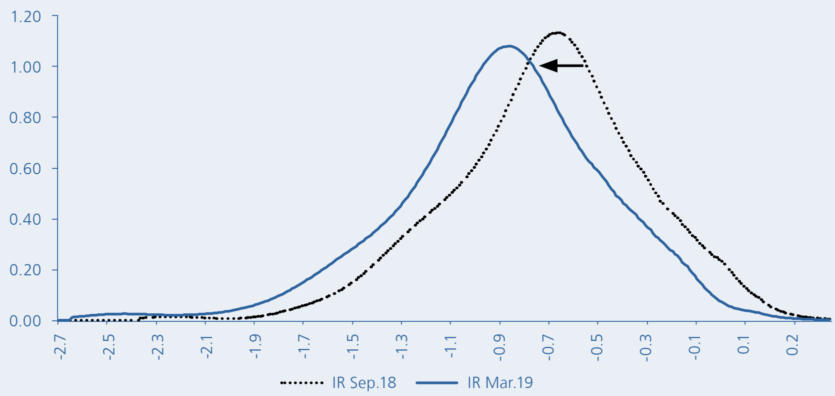
CHANGES ON INFLATION DISTRIBUTION ON DECEMBER 2019



	Total inflation December 2019	Inflation probability	
		Above 3%	Below 1%
IR Sep.18	2.0	18	14
IR Dec.18	2.1	17	12
IR Mar.19	2.0	11	11

These changes in the balance of risks can also be observed in the projection of the output gap. It should be pointed out that because the output gap is a non-observable variable that must be estimated, it is also necessary to take into account the degree of uncertainty arising from the different estimation methods used. A shift to the left of the distribution of the output gap is observed for the first quarter of 2019 in the estimation of the IR of March 2019 in comparison with the one estimated in the IR of September 2018. This result implies a downward bias in the initial point of the projection of the output gap, which is also reflected in a neutral bias of the inflation forecast.

CHANGES ON OUTPUT GAP DISTRIBUTION ON FIRST QUARTER 2019



The main changes of the exogenous factors considered in the risk scenarios are associated with the international scenario. Risk factors observed in the last six months include the partial materialization of trade tensions between the United States and China, a reduction in the terms of trade, and a lower-than-expected global growth rate projected for 2019 (in the scenario of external demand shocks). Additionally, the Fed's monetary policy position for both 2019 and 2020 has been revised (in the scenario of financial shocks), and, finally, there is a greater probability that public and private investment will grow at lower rates (in the scenario of internal demand shocks).

MAIN EXOGENOUS FACTORS CONSIDERED IN THE MACROECONOMIC ENVIRONMENT 2019

	IR Sep.18	IR Dec.18	IR Mar.19
Public investment (annual % change)	2.8%	2.8%	**1.0%**
External			
GDP Trading partners (annual % change)	3.6%	3.5%	**3.4%**
Terms of Trade (annual % change)	-2.9%	-0.7%	**1.3%**
Copper (ctv US$ per pound)	275	280	**286**
Fed interest rate, end of period	3.25%	3.00%	**2.50%**

This downward revision (from positive to neutral) in the inflation forecast bias is consistent with the recent communication of the Board of Directors of BCRP, which has emphasized that the Board considers it necessary to maintain the monetary stimulus position as long as inflation expectations remain anchored, in a context in which economic activity is below its potential.