INFLATION REPORT

December 2019

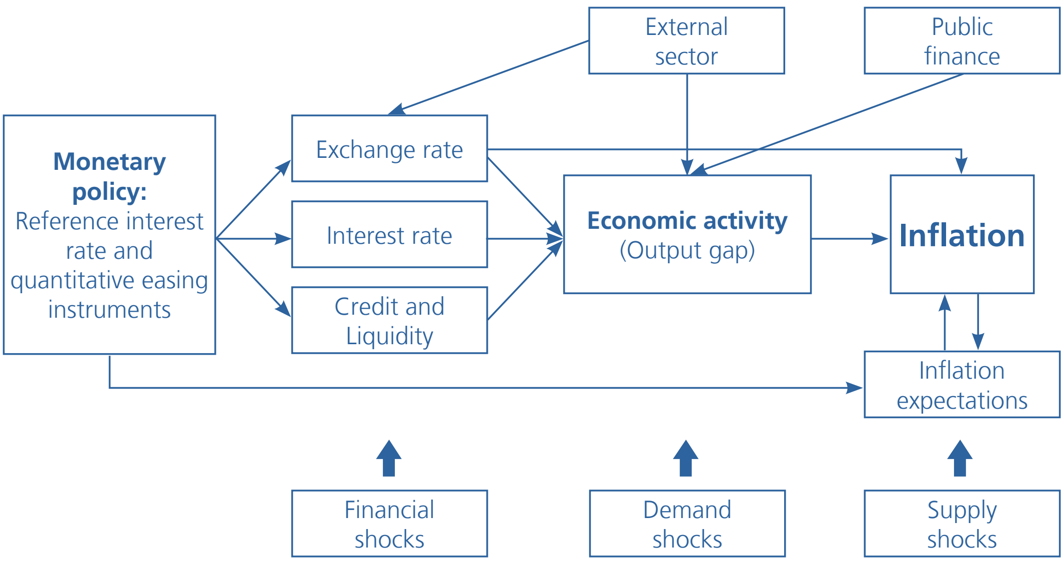
Recent trends and macroeconomic forecasts 2019-2021

CENTRAL RESERVE BANK OF PERU

INFLATION REPORT

Recent Trends and Macroeconomic Forecasts 2019 - 2021

December 2019



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INFLATION REPORT
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INFLATION REPORT:

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BOXES

This ***Inflation Report*** was prepared using data on the balance of payments and the gross domestic product as of the third quarter of 2019, and data on monetary accounts, the operations of the non-financial public sector, inflation, financial markets, and the exchange rate as of November 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 and 3 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 those originating in climate factors. It should 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. Thus, through reserve requirements and interventions in the foreign exchange market, the Central Bank reduces excessive volatility in the exchange rate and prevents excessive variations in the volume and composition, by currencies and terms, of credit in the financial system.

- This Report includes the macroeconomic forecasts that support the monetary policy decisions of BCRP as well as an analysis of the risk factors that can modify such forecasts.

- This Inflation Report was approved by the Board of Directors of BCRP on December 12, 2019.

- The following Inflation Report will be published on Friday, March 20, 2020.

Summary

i. The growth of **global GDP** in 2019 has been revised in this Report from 3.1 to 3.0 percent, this rate being the lowest growth rate observed since the global financial crisis of 2008. A recovery of growth is expected for 2020 and 2021 (3.2 and 3.4 percent, respectively), in line with the maintenance of monetary stimuli in the main developed economies and with the expansionary fiscal policies adopted in some countries, such as Germany and China. This scenario assumes that commercial tensions weaken in the forecast horizon.

ii. The **terms of trade** have shown a recovery, increasing since July due to the depreciation of the dollar and to some progress achieved in the trade negotiations between the United States and China that have favored higher prices in some metals. As a result of this, the terms of trade forecast for 2019 has been revised on the upside, from -2.6 percent to -1.4 percent, a zero variation is expected in 2020, and a slight change is expected in 2021 (-0.9 percent).

iii. The lower growth of imports has implied a downward revision of the previously estimated **deficit in the current account of the balance of payments** to a deficit of 1.6 percent of GDP in the period 2019-2021. This level of current account deficit would be financed with **long-term capital**, in a scenario in which the central banks of the developed economies maintain expansionary monetary policies.

iv. In January-October 2019, **economic activity** grew 2.2 percent, a rate below the 3.8 percent observed in the same period of 2018. This lower GDP growth is explained by lower exports –mainly mining and fishing exports–, by transitory supply shocks, as well as by the decline in public investment and the slowdown in private consumption. As a result, the projection of GDP growth in 2019 has been revised down from 2.7 to 2.3 percent. In 2020 and 2021, GDP would grow at a rate of 3.8 percent each year, supported mainly by the recovery of exports, by the reversal of the supply shocks that affected the primary sectors, and by the onset of operations of new mines, as well as by a greater impulse of public investment, in a context of more favorable external conditions.

v. The **fiscal deficit** projected for 2019 has been revised down from 2.0 to 1.7 percent of GDP in this report, due to the higher primary balance registered by the State-owned enterprises as well as due to lower public investment. The fiscal impulse would have been negative this year, while a positive impulse is expected for 2020 and a neutral fiscal impulse is estimated for 2021. The increase in public investment (6.0 percent) and the higher tax revenues anticipated would result in a fiscal deficit of 1.7 percent of GDP in 2020, a similar deficit to that projected for this year. In 2021, on the other hand, the fiscal deficit is estimated to decline to 1.6 percent of GDP, which considers the continuity of the Reconstruction with Changes projects.

vi. Year-on-year **inflation** fell from 2.0 percent in August to 1.9 percent in November 2019, remaining close to the center of the target range. Inflation expectations, which remain within the inflation target range since March 2017, registered 2.2 percent in November and are estimated to decrease gradually, in a context in which inflation is expected to show levels of around 2 percent in the forecast horizon.

vii. Considering the moderate downward bias observed in the inflation forecast due to a lower than potential economic growth, the Board of BCRP preventively lowered the **benchmark interest rate** by 25 basis points in November to 2.25 percent and maintained this level in December. With this, BCRP expands monetary stimulus, with a real interest rate close to zero.

viii. In line with the expansionary monetary stance, **credit to the private sector** grew 8.0 percent year-on-year in November, this result reflecting mainly the growth of lending in the segment of personal loans, which grew 11.4 percent. In the forecast horizon, credit to the private sector as a percentage of GDP would increase from 42 percent in 2018 to 45 and 46 percent in 2020 and 2021, respectively. This projection considers flexible monetary conditions and the recovery of the pace of growth of economic activity.

ix. The balance of the **inflation risk factors** considered in this Report –domestic demand shocks, external demand shocks, and international financial shocks–

maintains a downward bias in the inflation forecast as in the last two Reports, although it is more moderate than that estimated in September. The impact of a possible lower inflation associated with a lower-than-projected pace of growth in the domestic demand has declined.

SUMMARY OF INFLATION REPORT FORECAST

	2018	2019 1/		2020 1/		2021 1/
		IR Sep.19	IR Dec.19	IR Sep.19	IR Dec.19	IR Dec.19
Real % change						
1. Gross Domestic Product	4.0	2.7	2.3	3.8	3.8	3.8
2. Domestic demand	4.2	3.0	2.5	3.7	3.7	3.8
a. Private consumption	3.8	3.0	3.0	3.7	3.5	3.7
b. Public consumption	0.8	2.0	2.0	2.5	2.5	2.5
c. Fixed private investment	4.2	4.4	4.2	4.5	3.8	4.0
d. Public investment	6.8	0.5	-0.5	5.0	6.0	4.0
3. Exports (good and services)	2.7	0.9	0.1	5.6	4.5	4.8
4. Imports (good and services)	3.2	1.8	0.5	5.6	4.0	4.8
5. Economic growth in main trading partners	3.7	3.1	3.0	3.2	3.1	3.3
Memo:						
Output gap 2/ (%)	-0.1	-1.4 ; -0.9	-1.4 ; -0.9	-1.3 ; -0.4	-1.3 ; -0.4	-0.9 ; 0.0
% change						
6. Inflation	2.2	2.0	1.9	2.0	2.0	2.0
7. Expected inflation 3/	2.1	2.2	2.0	2.4	2.2	2.4
8. Expected depreciation 3/	4.2	0.3	0.0	-0.3	0.1	-0.4
9. Terms of trade	-0.4	-2.6	-1.4	-1.1	0.0	-0.9
a. Export prices	6.3	-3.6	-3.1	-0.2	0.7	0.2
b. Import prices	6.7	-1.1	-1.7	0.9	0.7	1.1
Nominal % change						
10. Currency in circulation	7.9	5.7	5.2	6.0	6.0	6.0
11. Credit to the private sector	8.7	7.3	7.9	8.5	8.5	8.5
% GDP						
12. Gross fixed investment	22.4	22.6	22.5	22.8	22.5	22.7
13. Current account of the balance of payments	-1.6	-1.9	-1.6	-2.1	-1.6	-1.6
14. Trade balance	3.2	2.5	2.8	2.4	2.9	2.8
15. Long-term external financing of the private sector 4/	2.0	2.7	2.8	2.1	2.1	1.8
16. Current revenue of the general government	19.3	19.7	19.7	19.7	20.0	19.9
17. Non-financial expenditure of the general government	20.2	20.2	20.1	20.1	20.3	20.3
18. Overall balance of the non-financial public sector	-2.3	-2.0	-1.7	-2.0	-1.7	-1.6
19. Balance of total public debt	25.8	26.5	26.7	27.1	27.3	27.3
20. Balance of net public debt	11.3	13.0	12.6	14.4	13.7	14.6

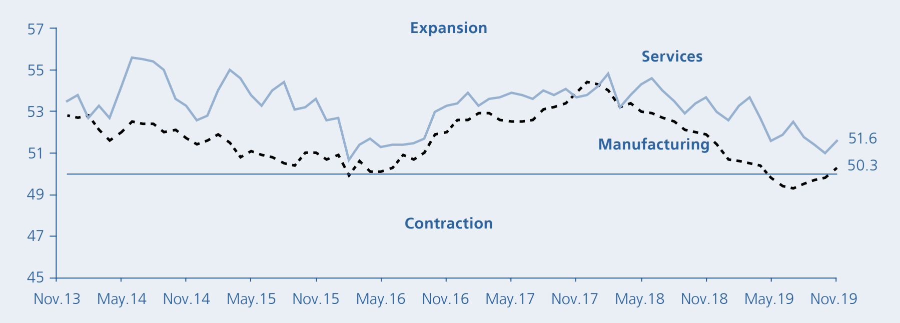
IR: Inflation Report.
1/ Forecast.
2/ Differential between GDP and potential GDP (%).
3/ Survey on expectations to the analysts and financial entities.
4/ Includes net direct investment, portfolio investment and private sector's long term disbursement.

I. External Sector

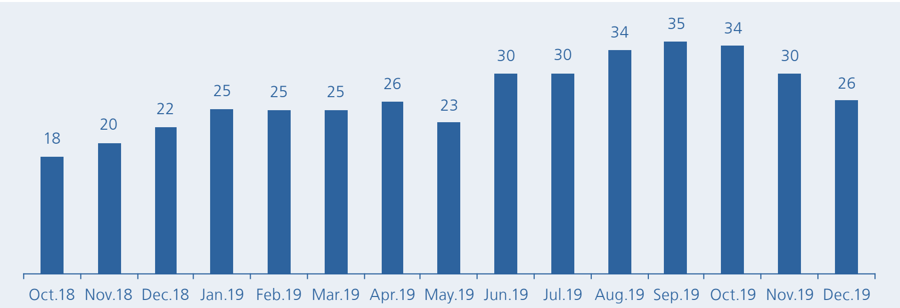
Global Economy

1. At the close of this Report, trade tensions between China and the United States have moderated after the agreement reached between these two countries and uncertainty regarding Brexit has decreased after the results of the parliamentary elections in the United Kingdom. These events are expected to reverse the deterioration observed in consumers and investors' confidence. Thus, better indicators of activity in the United States and the progress made in trade negotiations with China have reflected in a lower probability of recession in the United States.

Graph 1
PMI GLOBAL MANUFACTURING AND SERVICES



Graph 2
UNITED STATES: PROBABILITY OF RECESSION
(%)

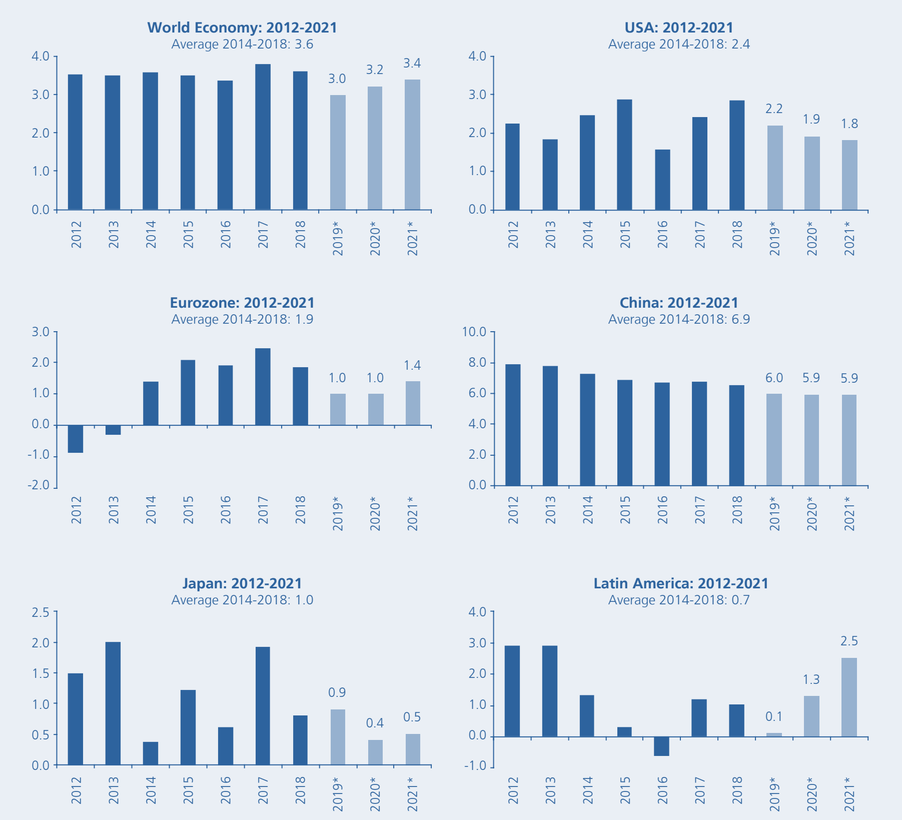


Source: Wall Street Journal Survey, December 2019

2. Since the publication of our last Inflation Report, economic indicators have confirmed a lower dynamism in global economic activity this year as a result of the persistence of negative shocks: commercial tensions, geopolitical factors, and idiosyncratic events. In line with these data, the global growth projection has been revised down from 3.1 to 3.0 percent.

   However, higher growth rates are expected in 2020 and 2021, in line with the expansionary monetary policies of the main developed economies, fiscal impulses (in China and Germany), a recovery of growth in the emerging economies, and a lower degree of uncertainty vis-à-vis possible protectionist tendencies.

Graph 3
GDP GROWTH
(Real % change)



* Forecast.
Source: IMF and Consensus Forecast.

Table 1
GLOBAL GDP GROWTH
(Annual % change)

	PPP %[1/]	Trading Peru %[1/]	2018	2019* IR Sep.19	2019* IR Dec.19	2020* IR Sep.19	2020* IR Dec.19	2021* IR Dec.19
Developed economies	**40.8**	**44.1**	**2.2**	**1.6**	**1.4**	**1.5**	**1.5**	**1.6**
Of which:								
1. USA	15.2	21.3	2.9	2.2	2.2	1.8	1.9	1.8
2. Eurozone	11.4	10.8	1.9	1.1	1.0	1.2	1.0	1.4
Germany	3.2	2.8	1.5	0.6	0.5	1.2	0.9	1.2
France	2.2	0.7	1.5	1.2	1.2	1.2	1.2	1.3
Italy	1.8	1.7	0.9	0.1	0.1	0.5	0.4	0.7
Spain	1.4	3.5	2.5	2.2	2.0	1.8	1.6	1.7
3. Japan	4.1	4.1	0.8	0.9	0.9	0.4	0.4	0.5
4. United Kingdom	2.2	1.2	1.4	1.2	1.2	1.2	1.2	1.4
5. Canada	1.4	2.0	1.8	1.4	1.4	1.7	1.7	1.8
Developing economies	**59.2**	**55.9**	**4.6**	**4.2**	**4.2**	**4.6**	**4.5**	**4.7**
Of which:								
1. Emerging and developing Asia	33.3	31.4	6.4	6.0	5.9	6.1	6.0	6.1
China	18.7	29.4	6.6	6.0	6.0	6.0	5.9	5.9
India	7.8	4.3	7.1	6.9	6.3	7.2	7.0	7.0
2. Commonwealth of Independent States	4.4	0.7	2.8	1.8	1.7	2.0	2.1	2.4
Russia	3.1	0.6	2.3	1.1	1.0	1.3	1.5	2.0
3. Latin America and the Caribbean	7.7	21.6	1.0	0.3	0.1	1.5	1.3	2.5
Brazil	2.5	5.1	1.1	0.9	1.1	2.0	2.2	2.4
Chile	0.4	3.4	4.0	2.5	1.0	3.1	1.0	3.0
Colombia	0.6	3.0	2.7	3.1	3.2	3.1	3.2	3.3
Mexico	1.9	3.0	2.0	0.5	0.1	1.3	1.1	1.8
Argentina	0.7	1.5	-2.5	-2.7	-2.7	-1.2	-1.8	1.4
Peru	0.3	-	4.0	2.7	2.3	3.8	3.8	3.8
World Economy	**100.0**	**100.0**	**3.6**	**3.1**	**3.0**	**3.3**	**3.2**	**3.4**
Memo:								
Peru's trading partners [1/ 2/]	65.9		3.7	3.1	3.0	3.2	3.1	3.3

1/ 2018
2/ Basket of Peru's 20 main trading partners.
* Forecast.
Source: IMF and Consensus Forecast.

3. In the **United States**, economic activity grew 2.1 percent in the third quarter, showing a slightly higher rate than in the previous quarter and higher than the rate expected by the market.

Table 2
USA: GDP
(Annualized seasonally adjusted % change)

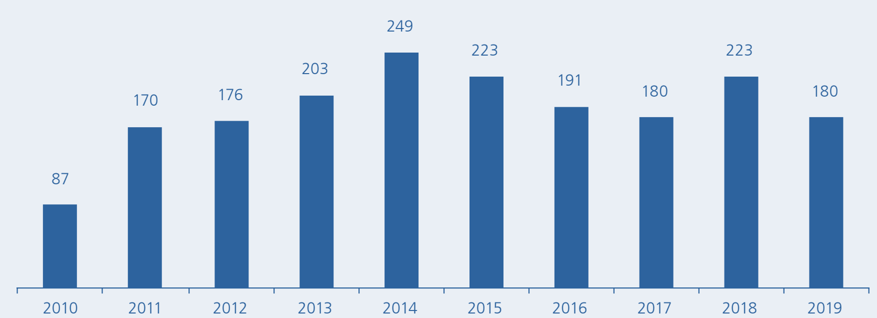
	Q1.18	Q2.18	Q3.18	Q4.18	Q1.19	Q2.19 3a rev.	Q3.19 2a rev.
GDP	**2.5**	**3.5**	**2.9**	**1.1**	**3.1**	**2.0**	**2.1**
Personal consumption	1.7	4.0	3.5	1.4	1.1	4.6	2.9
Durable	2.3	8.0	3.6	1.3	0.3	13.0	8.3
Non-durable	0.7	4.1	3.6	1.7	2.2	6.5	4.3
Services	1.9	3.4	3.4	1.4	1.0	2.8	1.7
Gross investment	6.2	-1.8	13.7	3.0	6.2	-6.3	-0.1
Fixed investment	5.5	5.2	0.7	2.7	3.2	-1.4	-1.0
Non-residencial	8.8	7.9	2.1	4.8	4.4	-1.0	-2.7
Residencial	-5.3	-3.7	-4.0	-4.7	-1.0	-3.0	5.1
Exports	0.8	5.8	-6.2	1.5	4.1	-5.7	0.9
Imports	0.6	0.3	8.6	3.5	-1.5	0.0	1.5
Government expenditure	1.9	2.6	2.1	-0.4	2.9	4.8	1.6
Memo							
Contribution on inventories	0.1	-1.2	2.1	0.1	0.5	-0.9	0.2

Source: BEA.

At the component level, economic growth continued to be driven by consumption, which was fueled by the soundness of the labor market and by favorable financial conditions.

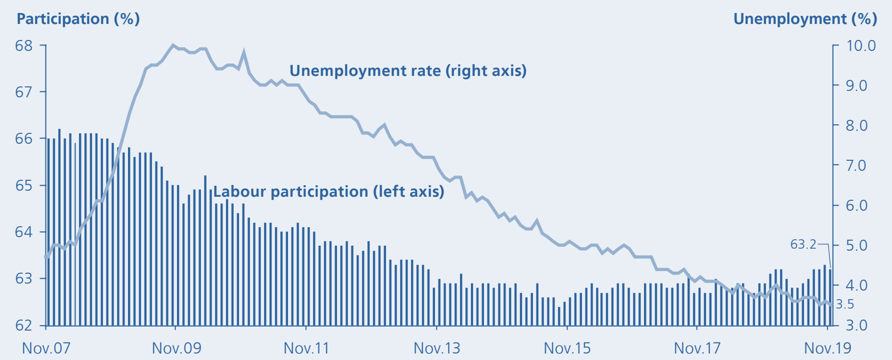
The labor market has remained strong. In November, the nonfarm payroll grew above expectations as well as above the rate registered in the previous month. The sector of services showed the greatest dynamism in job creation, together with the manufacturing sector after the long strike observed in the automotive sector. In addition, the unemployment rate fell from 3.7 to 3.5 percent between August and November.

Graph 4
USA: JOB CREATION
(Thousand jobs, monthly average January-November period)



Source: Bureau of Labor Statistics (BLS).

Graph 5
USA: LABOUR PARTICIPATION AND UNEMPLOYMENT RATE



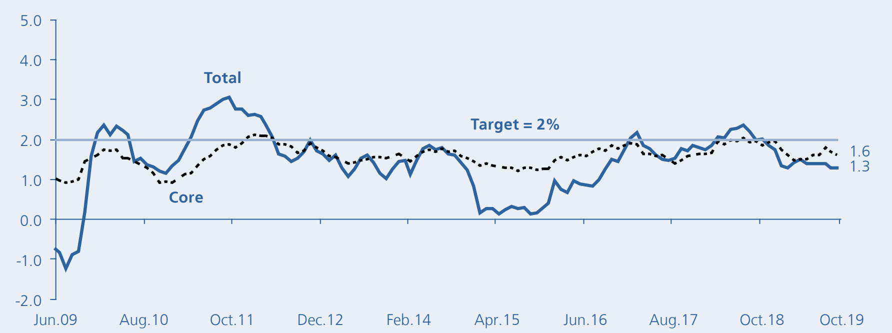
Source: Bureau of Labor Statistics (BLS).

There has also been a recovery in residential investment, whereas the components of expenditure linked to non-residential investment and net exports, on the other hand, have registered a negative contribution to growth.

The improvement observed in economic activity indicators in the United States and the progress made in the trade negotiations with China have reflected in a lower probability of recession in this country.

Moreover, inflation has remained low. In October, total inflation and core inflation showed rates of 1.8 and 2.3 percent, respectively, while inflation associated with personal consumption expenditure (PCE) registered 1.3 percent in the total index and 1.6 percent in the core inflation one, the latter being the variable used by the Fed to determine its 2 percent inflation target.

Graph 6
USA: PCE PRICE INDEX
(12-month % change)



Source: Fed.

In such a context, the Fed cut its policy rate by 25 bps to a range of 1.50-1.75 percent in its October meeting, maintaining this rate in December. After raising its rate by 100 bps in 2018, the Fed has cut it by 75 bps this year. Moreover, in its December statement, it reiterated that consumption continues to show a solid pace of growth, that the labor market remains strong, and that the current monetary policy position is appropriate to sustain economic growth, a strong labor market, and the trajectory of inflation near the symmetric target of 2 percent. In December, the Fed also revised down its projections of the rates of unemployment and core PCE inflation for 2019, but maintained the monetary policy position for 2020.

Table 3
FED: FORECASTS*

	2019		2020		2021		2022		Long-term	
	Sep.19	Dec.19	Sep.19	Dec.19	Sep.19	Dec.19	Sep.19	Dec.19	Sep.19	Di c.19
GDP growth	2.2	2.2	2.0	2.0	1.9	1.9	1.8	1.8	1.9	1.9
Unemployment rate	3.7	3.6	3.7	3.5	3.8	3.6	3.9	3.7	4.2	4.1
PCE price index	1.5	1.5	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0
Core Inflation (Core PCE)	1.8	1.6	1.9	1.9	2.0	2.0	2.0	2.0	-	-
Memo: Core PCE excluding food and energy.										
Interest rate (%)	1.9	1.6	1.9	1.6	2.1	1.9	2.4	2.1	2.5	2.5

* Adds data from 17 individual projections of the FOMC Board members at the end of period.
Source: Fed.

In line with these developments, the pace of growth in the US economy is estimated to slow down in 2019 (2.2 percent) and to converge thereafter towards its potential growth level in 2020.

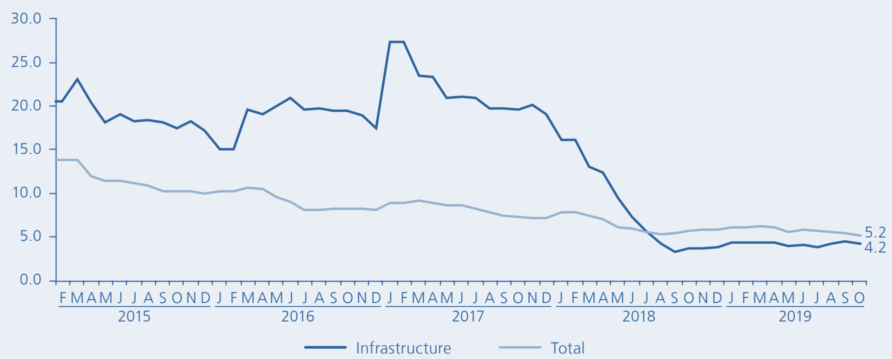
4. Economic activity in the **Eurozone** shows little dynamism: GDP in the third quarter grew only 0.2 percent, a rate similar to that observed in the previous quarter. In line with this, the growth projection for 2019 has been revised down from 1.1 to 1.0 percent and the projection for 2020 has been revised down from 1.2 to 1.0 percent. By countries, Germany shows the greatest downward revision. On the other hand, growth in the region is expected to recover in 2021 (1.4 percent).

   It should be pointed out that some recent indicators (October and November), such as retail sales, the manufacturing and industrial production indices, among other indicators, have shown a slight recovery.

   Moreover, inflation remains low, showing rates of around 1 percent, influenced by the evolution of energy prices. Core inflation shows an upward trend (it rose from 1.0 percent in September to 1.3 percent in November) due to the evolution of private consumption and public spending, but remains below the target of the European Central Bank (ECB). In this context, the ECB implemented measures to ease financial conditions in September to favor public spending. It is expected that these measures, together with those previously implemented, will boost growth in the region and favor inflation's convergence towards its target.

5. Amidst commercial tensions with the US, **China**'s GDP growth fell to 6.0 percent during the third quarter of 2019, the lowest growth rate the country has recorded since 1992. In November, however, a recovery was observed in the manufacturing sector, with the PMI index leaving the contraction zone after six consecutive months and showing a level of 50.2, while the PMI services rebounded at the same time. These indicators suggest that growth could show a more stable pace as a result of the stimulus measures adopted (looser financial conditions and greater public spending) and the likely end of the escalation of the commercial war. In line with these developments, a growth rate of 5.9 percent is expected for 2020 and 2021.

Graph 7
CHINA: INVESTMENT IN FIXED ASSETS
(12 month % change)



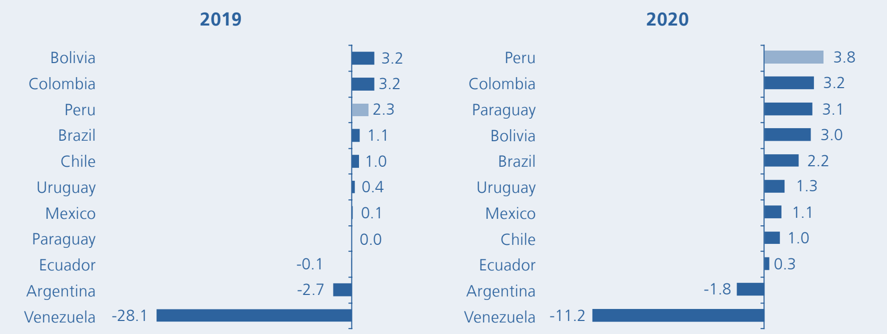
Source: National Bureau of Statistics of China.

As regards the stimulus measures, it is worth mentioning that, in November, the Central Bank of China cut the rate of medium-term loan facilities by 5 basis points for the first time since the beginning of 2016, which reduced the cost of commercial banks' funding. However, this easing in monetary policy is constrained by the increase of inflation in recent months (as a result of the swine fever) as well as by concerns about the high level of private debt. In this context, the main stimulus is expected to come through fiscal policy, particularly through higher spending in infrastructure.

6. The growth projection for **Latin America** has also been revised down, from 0.3 to 0.1 percent in 2019 and from 1.5 to 1.3 percent in 2020. On the other hand, growth in the region is expected to recover to 2.5 percent in 2021. The revision of growth projections on the downside reflects the impact of external conditions (trade tensions, lower global growth, and the decline of trade) as well as the impact of idiosyncratic shocks linked, mainly, to political and social events.

   At the country level, the downward revision of the growth rates estimated for Chile and Mexico stands out. In Chile, social disruption for two months has significantly affected investment and consumer confidence. In addition to this, the process of modifying the constitution –which would start with the referendum scheduled for April 2020 until this decision is ratified, also by referendum– would take about two years, which would keep risk aversion at relatively high levels during the whole period. In this context, the government has announced several fiscal stimulus measures while the Central Bank of Chile has reduced the interest rate and announced a massive foreign exchange intervention program to prevent a further depreciation of the peso. On the other hand, the Mexican economy registered zero growth in the third quarter of 2019 after showing negative growth rates for three consecutive quarters. The negative effects of trade tensions and the fiscal consolidation process have led to the revision of growth projections for 2019 and 2020 on the downside.

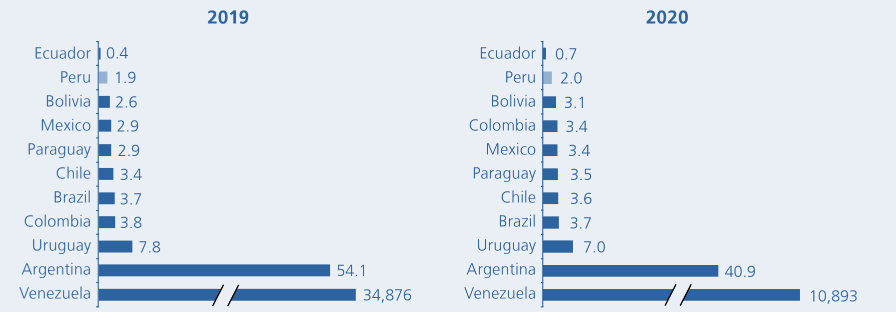
Graph 8
GDP GROWTH
(% change)



Fuente: Latin American Consensus Forecast (December 2019), BCCh (Chile) and BCRP (Peru).

   This economic slowdown is observed together with low inflation rates. In this context, most economies in the region with inflation targeting schemes (Chile, Mexico, Brazil and Peru) lowered their interest rates in the months of October and November.

Graph 9
INFLATION
(% change, Dec./Dec.)

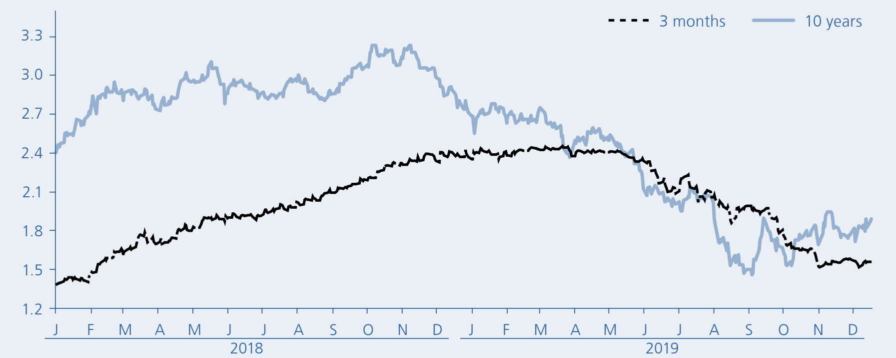


Fuente: Latin American Consensus Forecast (December 2019), BCCh (Chile) and BCRP (Peru).

International Financial Markets

7. In **fixed-income markets**, the yield of the US 10-year bond registered an increase in a context of strong local economic data and less uncertainty in trade negotiations. In contrast, the 3-month yield decreased, in line with the Fed's rate cut decided in the October policy meeting. As a result of this, the spread between the 10-year yield and the 3-month yield went from -15 basis points (at the end of September) to +21 basis points. The yield curve ceased to be inverted since October 10 and fears of recession in the United States declined.

Graph 10
YIELDS ON US TREASURY BONDS
(2018-2019)



Source: Reuters.

On the other hand, yields In the Eurozone rose, influenced by the developments in the elections of the United Kingdom and by expectations of fiscal stimuli in Germany. In the emerging economies, yields increased in most countries despite the idiosyncratic events and economic slowdown observed. The rises in the returns of Colombia and Chile –affected by social conflicts– stand out within Latin American countries, although the rises reversed only in part the falls of the previous months.

Table 4
YIELDS ON 10-YEAR SOVEREIGN BONDS

	Dec.18	Sep.19	Dec.19	Accumulated change 2019 (bps.)	Change Dec.2019/ Sep.2019 (bps.)
USA	2.69	1.67	1.87	-81	21
Germany	0.24	-0.57	-0.28	-52	30
France	0.71	-0.28	0.02	-69	29
Italy	2.74	0.82	1.29	-145	47
Spain	1.41	0.14	0.42	-99	28
Greece	4.35	1.33	1.33	-302	0
United Kingdom	1.28	0.48	0.82	-46	34
Japan	-0.01	-0.22	-0.02	-2	20
Brazil	9.24	7.05	6.88	-236	-17
Colombia	6.75	5.99	6.24	-51	25
Chile	4.79	2.80	3.21	-158	41
Mexico	8.64	6.88	6.80	-184	-8
Peru	5.35	3.70	3.56	-178	-13
South Africa	8.70	9.00	9.12	42	12
India	7.37	6.70	6.80	-57	10
Turkey	15.87	13.15	12.12	-375	-103
Russia	8.70	7.01	6.40	-230	-61
China	3.31	3.14	3.20	-11	6
South Korea	1.96	1.46	1.60	-36	14
Indonesia	7.98	7.26	7.25	-73	-1
Thailand	2.48	1.47	1.58	-90	11
Malaysia	4.08	3.33	3.43	-65	11
Philippines	7.01	4.63	4.38	-263	-25

Made on December 16.
Source: Reuters.

8. In **equity markets**, most stock exchange markets benefited from lower commercial tensions as well as from fiscal and monetary stimuli and from corporate results, although this was offset by the geopolitical noise of Hong Kong and by the global economic slowdown.

In the emerging economies, most stock exchange markets showed gains during the period.

Table 5
STOCK EXCHANGE

		Dec.18	Sep.19	Dec.19	Accumulated change (%) 2019	Change Dec.2019/ Sep.2019 (%)
VIX*	S&P 500	25.42	16.24	12.14	-13.3	-4.1
USA	Dow Jones	23,327	26,917	28,236	21.0	4.9
Germany	DAX	10,559	12,428	13,408	27.0	7.9
France	CAC 40	4,731	5,678	5,992	26.7	5.5
Italy	FTSE MIB	18,324	22,108	23,525	28.4	6.4
Spain	IBEX 35	8,540	9,245	9,681	13.4	4.7
Greece	ASE	613	868	881	43.6	1.4
United Kingdom	FTSE 100	6,728	7,408	7,519	11.8	1.5
Japan	Nikkei 225	20,015	21,756	23,952	19.7	10.1
Brazil	Ibovespa	87,887	104,745	111,896	27.3	6.8
Colombia	IGBC	11,144	12,832	13,291	19.3	3.6
Chile	IGPA	25,950	25,455	24,316	-6.3	-4.5
Mexico	IPC	41,640	43,011	44,356	6.5	3.1
Argentina	Merval	30,293	29,067	37,620	24.2	29.4
Peru	Ind. Gral.	19,350	19,603	20,011	3.4	2.1
South Africa	JSE	52,737	54,825	56,749	7.6	3.5
India	Nifty 50	10,863	11,474	12,054	11.0	5.1
Turkey	XU100	91,270	105,033	111,126	21.8	5.8
Russia	RTS	1,066	1,334	1,517	42.3	13.7
China	Shangai C.	2,494	2,905	2,984	19.7	2.7
South Korea	KOSPI	2,041	2,063	2,168	6.2	5.1
Indonesia	JCI	6,194	6,169	6,212	0.3	0.7
Thailand	SET	1,564	1,637	1,550	-0.9	-5.3
Malaysia	FTSE KLCI	1,691	1,584	1,569	-7.2	-0.9
Philippines	Psei	7,466	7,779	7,702	3.2	-1.0

* Variation in basis points.
Made on December 16.
Source: Reuters.

9. As for the **foreign exchange markets**, the dollar depreciated against the basket of major currencies since the end of September amid lower commercial tensions, appetite for global risk, expectation of fiscal stimulus in Germany, and a dovish position in the Fed.

In Latin America, however, the currencies of the region appreciated against the dollar, with the exceptions of the Chilean peso and the Argentine peso. Lower commercial tensions also favored the appreciation of Asian currencies against the dollar.

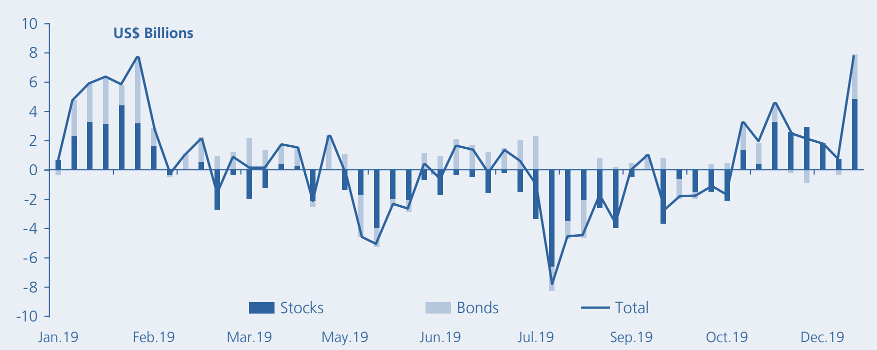
Table 6
EXCHANGE RATES

		Dec.18	Sep.19	Dec.19	Accumulated change (%) 2019*	Change Dec.2019/ Sep.2019 (%)*
Dollar Index**	US Dollar Index	96.17	99.38	97.35	1.2	-2.0
Euro	Euro	1.144	1.090	1.115	-2.5	2.3
United Kingdom	Pound sterling	1.281	1.229	1.294	1.0	5.3
Japan	Yen	109.93	108.06	108.02	-1.7	0.0
Brazil	Real	3.880	4.155	4.017	3.5	-3.3
Colombia	Peso	3,245	3,477	3,377	4.1	-2.9
Chile	Peso	693	728	741	6.9	1.7
Mexico	Peso	19.65	19.73	19.23	-2.2	-2.5
Argentina	Peso	37.65	57.59	59.56	58.2	3.4
Peru	Sol	3.372	3.369	3.344	-0.8	-0.7
South Africa	Rand	14.38	15.13	15.09	5.0	-0.3
India	Ruppe	69.77	70.64	70.98	1.7	0.5
Turkey	Lira	5.29	5.65	5.71	7.9	1.0
Russia	Ruble	69.68	64.81	64.15	-7.9	-1.0
China	Yuan (onshore)	6.876	7.148	7.038	2.4	-1.5
South Korea	Won	1,114	1,198	1,169	5.0	-2.4
Indonesia	Rupee	14,375	14,190	14,032	-2.4	-1.1
Thailand	Bath	32.33	30.59	30.18	-6.7	-1.3
Malaysia	Ringgit	4.130	4.185	4.178	1.2	-0.2
Philippines	Peso	52.49	51.80	50.76	-3.3	-2.0

* An increase (fall) in the index means an appreciation (depreciation) of the US dollar, except in the euro and pound.
** An increase (fall) in the index means an appreciation (depreciation) of the US dollar against currency basket (euro, yen, pound, canadian dollar, Sweeden krone, Switzerland franc).
Made on December 16.
Source: Reuters.

10. The probability that the Fed will raise its monetary policy interest rate in 2020 has decreased, which has generated greater interest in investments in emerging economies' assets. As a result, capital flows oriented to the purchase of emerging bonds and stocks have been observed in the fourth quarter of 2019.

Graph 11
CAPITAL FLOWS TO SPECIALIZED FUNDS (BONDS AND STOCKS) IN EMERGING MARKETS



Source: Barclays.

11. On the other hand, most **commodity prices** were favored by the progress achieved in the trade negotiations (between October and mid-November) and by the depreciation of the dollar, this trend being offset by the economic slowdown and by the lower dynamism of world trade.

a. Copper

In the first half of December, the price of **copper** reached a monthly average of US$ 2.73 the pound (up 4 percent from the price in September 2019), and continued to show a rising trend since then (US$ 2.80 the pound as of December 17). The price of copper has increased in recent months due to the resumption of trade negotiations between the United States and China –which has culminated in a partial agreement between the two countries– and due to some supply shocks (social protests in Chile and lower production of copper concentrate in Indonesia). The relative copper shortage is reflected in the drop of inventories, which register their lowest level in almost eight years. In line with this, the International Copper Study Group[1] reported a higher global supply deficit than that observed in the same period of 2018.

Table 7
SUPPLY AND DEMAND FOR REFINED COPPER
(Thousand metric ton)

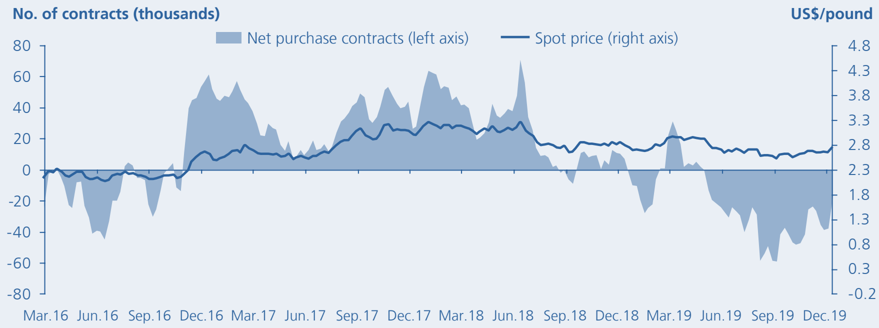
	2016	2017	2018/2	2019/2	2020/2	Jan.18. Aug.18	Jan.19 Aug.19	% chg.
Global Mining Production	20,402	20,082	20,575	20,483	20,921	13,482	13,435	-0.3%
Global Refining Production (Primary + Secondary)	23,357	23,538	24,098	24,250	25,281	15,915	15,924	0.1%
Global Use of Refined Copper	23,505	23,723	24,502	24,570	25,000	16,184	16,254	0.4%
Refined Balance 1/	-149	-184	-404	-320	281	-268	-330	

1/ Balance calculated using the total production of refined products minus the use of refining.
2/ November 2019 report and October 2019 projections.
Source: The International Copper Study Group (ICSG).

However, this recovery in the price of copper was limited by the weakness of global manufacturing production and by lower investment in electricity networks in China (after eight months of falls, investment in electricity networks increased only 0.8 percent annually in September). In addition to this, despite the price correction observed in September and October, non-commercial copper positions continue to be negative.

1 Copper: Preliminary Data for August 2019 (November 20, 2019)

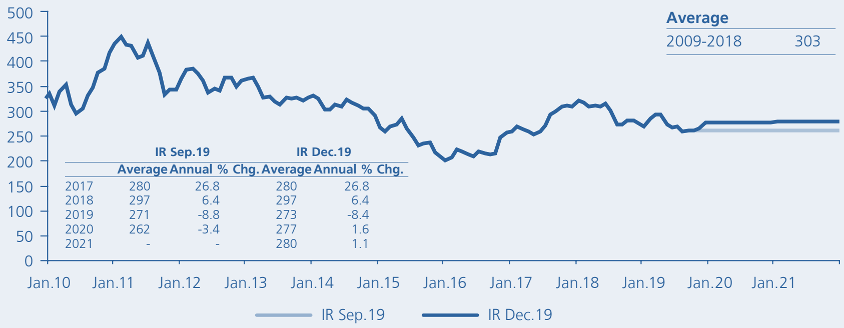
Graph 12
COPPER: NON-COMMERCIAL CONTRACTS



Note: The Copper Speculative Net Positions of the Commodities Futures Trading Commission are reported weekly and reflect the difference between the total volume of the long position (or purchase) and short position (or sale) in the market and opened by non-commercial operators (speculative). This report only includes the future markets in the USA (Chicago and New York Stock Exchanges).
Source: Bloomberg.

In line with these developments, the average price of copper estimated for 2020 has been revised up and are now expected to be slightly above the levels estimated in the September Inflation Report.

Graph 13
COPPER: JANUARY 2010 - DECEMBER 2021
(US$ cents/pd.)



	IR Sep.19		IR Dec.19	
	Average	Annual % Chg.	Average	Annual % Chg.
2017	280	26.8	280	26.8
2018	297	6.4	297	6.4
2019	271	-8.8	273	-8.4
2020	262	-3.4	277	1.6
2021	-	-	280	1.1

Source: Reuters and BCRP.

b. Zinc

The international price of **zinc** dropped 4 percent between September and mid-December 2019, reaching an average level of US$ 1.02 a pound in the first half of December. With this, the price of zinc accumulates a decline of 14 percent compared to December 2018.

After recording a deficit for three years, the zinc market will start to show a surplus due to the increase observed in the global mine supply, the higher utilization rate of smelters, and the entry of new refining capacity. It should be pointed out that this will take place in a context of lower global zinc consumption associated mainly with the evolution of the global car market.

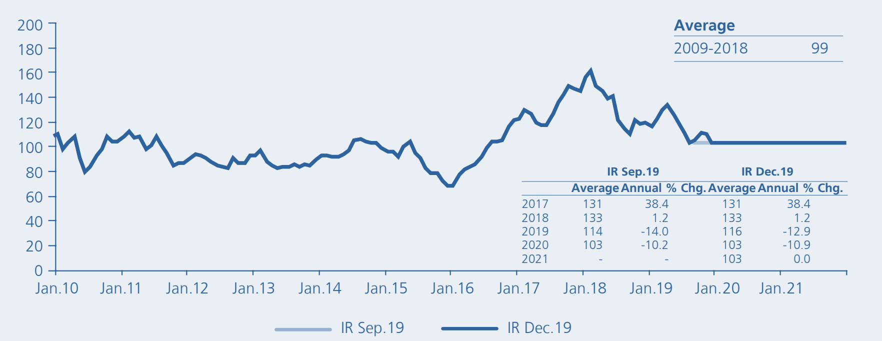
Table 8
SUPPLY AND DEMAND FOR REFINED ZINC
(Thousand metric tons)

	2016	2017	2018	Jan.-Oct. 2018	Jan.-Oct. 2019	% chg.
Global Mining Production	12.60	12.74	12.79	10.57	10.80	2.2%
Global Refining Production (Primary + Secondary)	13.56	13.39	13.27	10.95	11.18	2.1%
Global Use of Refined Zinc	13.67	13.86	13.79	11.29	11.33	0.3%
Refined Balance (in thousands)	-101	-472	-523	-342	-152	

Source: ILZSG. Reports on May and November 2019.

In line with these developments, the price of zinc is expected to decrease in 2020, but showing the levels estimated in the September Inflation Report.

Graph 14
ZINC: JANUARY 2010 - DECEMBER 2021
(US$ cents/pd.)



Source: Reuters and BCRP.

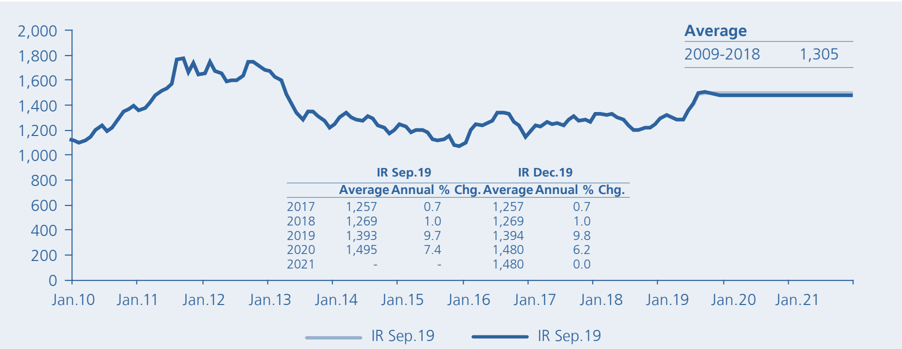
c. *Gold*

In November, the price of **gold** registered an average of US$ 1,470 the troy ounce, which represents a 3 percent price fall compared to September. Despite this, the price of gold shows an increase of 17 percent compared to December 2018 as well as records levels not observed since 2013.

The downward correction reflects expectations that the Fed will not make additional interest rate cuts in 2020.

In line with these developments, the projection of the price of gold has been revised slightly down compared to the Inflation Report of September.

Graph 15
GOLD: JANUARY 2010 - DECEMBER 2021
(US$/tr. ounce)



	IR Sep.19		IR Dec.19	
	Average Annual	% Chg.	Average Annual	% Chg.
2017	1,257	0.7	1,257	0.7
2018	1,269	1.0	1,269	1.0
2019	1,393	9.7	1,394	9.8
2020	1,495	7.4	1,480	6.2
2021	-	-	1,480	0.0

Source: Reuters and BCRP.

d. *Crude Oil*

In the first half of December 2019, the average price of **WTI oil** increased to US$ 59 a barrel (up 21 percent from December 2018). Thus, the price of oil has increased 3 percent since the last Inflation Report (September 2019).

Graph 16
WTI OIL: JANUARY 2010 - DECEMBER 2021
(US$/bl.)

	IR Sep.19		IR Dec.19	
	Average Annual	% Chg.	Average Annual	% Chg.
2017	51	18.0	51	18.0
2018	65	27.2	65	27.2
2019	58	-10.3	57	-12.7
2020	56	-2.9	56	-0.6
2021	-	-	53	-5.8

Source: Reuters and BCRP.

The oil market remains relatively balanced. It is worth mentioning that the factors that have pushed the price up include the oil production cuts of OPEC and other countries, some supply shocks (Saudi Arabia, Nigeria, Venezuela, Iran, and Canada) and expectations regarding trade negotiations. However, the effect of these factors has been offset by lower global growth and by higher oil production in the United States, which in November reached a new record level.

The estimated price of oil in the forecast horizon has been revised up compared to the September Inflation Report based on the decision of OPEC and its allies to make additional production cuts in the first quarter of 2020. Another factor taken into account is the better prospects for demand after the partial trade agreement reached between China and the United States.

e. *Imported Food*

The price of **maize** increased 4 percent in the last three months, reaching an average price of US$ 144 the ton in the first half of December. With this, the average international price of maize accumulated an increase of 5 percent compared to December 2018.

Graph 17
MAIZE: JANUARY 2010 - DECEMBER 2021
(US$/Ton)

	IR Sep.19		IR Dec.19	
	Average	Annual % Chg.	Average	Annual % Chg.
2017	131	-2.3	131	-2.3
2018	132	0.7	132	0.7
2019	146	10.3	145	9.9
2020	146	0.4	150	3.2
2021	-	-	159	6.3

Source: Reuters and BCRP.

The price of maize has increased significantly in recent months because the market has continued to adjust. Although they are still at historically high levels, global inventories have recorded their third consecutive annual decline and would reach their lowest level in four years. The world demand for maize has been higher than expected, particularly for livestock feed. Moreover, the US production registered a greater fall than the one foreseen in the previous Report: in November the United States Department of Agriculture (USDA) estimated that the production of maize in the United States will be the lowest since the 2015/2016 season due to the weather conditions that affected planting in the middle of the year.

In line with these developments, the average price of maize estimated for 2020 has been revised upwards. The outlook for this crop has changed due to the commitment of the Chinese government to increase purchases of food from the United States as part of the partial trade agreement reached in December.

In the first half of December 2019, the average price of wheat increased 9 percent compared to September 2019, reaching a monthly average of US$ 159 a ton. With this, the price of wheat accumulates a decline of 16 percent compared to December 2018.

The price of wheat increased in recent months due to changes in the outlook for global supply. Production was affected by adverse weather conditions for growing winter wheat (European Union and Russia), by the impact of droughts (Australia), and by a deterioration of crop quality in the United States. However, despite these supply shocks, the world market continues to show a high oversupply that accounts for the fall observed in the price of wheat so far this year.

In this context of adverse weather forecasts, it is estimated that the price of wheat will show levels slightly above those estimated in the previous Inflation Report. It should be pointed out, however, the risks associated with this projection are high given that the main risk is the impact of weather conditions on the sowing of winter wheat in the northern hemisphere.

Graph 18
WHEAT: JANUARY 2010 - DECEMBER 2021
(US$/Ton)

Source: Reuters and BCRP.

In the first half of December, the average monthly price of **soybean oil** was US$ 673 the ton, 6 percent higher than in September 2019. With this, the price of soybean oil accumulated an increase of 9 percent so far in 2019.

The price of soybean oil increased steadily due to prospects of a strong growth of demand in the United States and a significant drop in soybean oil inventories in the 2019/20 season. In addition to this, there is a strong demand for soybean oil in China and India as well as a significant growth in the demand for biofuels in Indonesia and Malaysia which, together with a lower supply of palm oil, favors soybean oil prices.

Considering these recent developments and the outlook for the growth of the demand for soybean oil in the United States in the 2019/20 season, the prices of soybean oil are projected to be higher than those estimated in the previous Inflation Report. The main risks for this projection would be variations in the price of oil and the magnitude of the global deficit of palm oil. Moreover, it is anticipated that the global demand for vegetable oils could increase if the trade conflict between the United States and China is resolved.

Graph 19
SOYBEAN OIL: JANUARY 2010 - DECEMBER 2021
(US$/Ton)

Source: Reuters and BCRP.

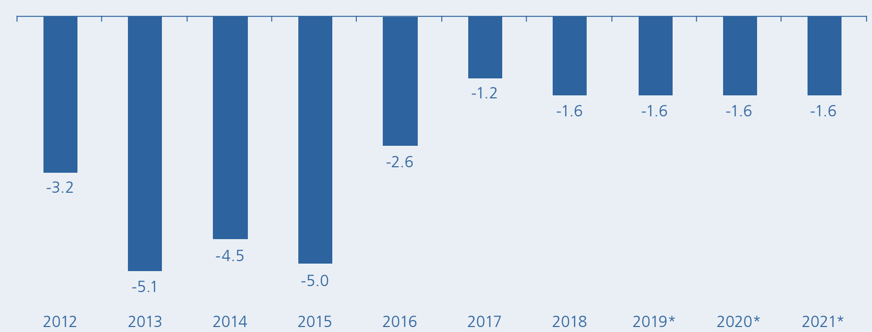
II. Balance of Payments

Current Account

12. The current account deficit estimated for 2019 has been revised down due to a greater trade surplus of US$ 838 million, explained mainly by lower imports of goods –particularly imports of goods associated with industrial inputs– in a context marked by a less dynamic domestic demand and the reduction of the price of crude.

    A scenario of lower growth in consumption and private investment is expected in 2020, which would lead to a lower demand for imports than that foreseen in the previous Report. Exports would also grow at a slower pace due to a lower recovery of activity in the mining and hydrocarbons sector. Because of this, in 2020 the current account deficit is estimated to be 1.6 percent of GDP –2.1 percent was estimated in the previous Report– and a similar level would be recorded in 2021. It is worth mentioning that this deficit level is below the average level observed over the past 8 years (3.1 percent).

Graph 20
CURRENT ACCOUNT: 2012-2021
(% GDP)



* Forecast.

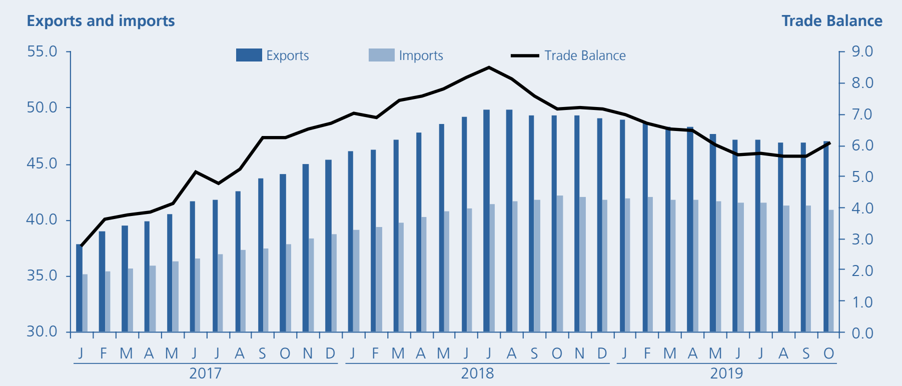
Table 9
BALANCE OF PAYMENTS
(Million US$)

	2018	2019*		2020*		2021*
		IR Sep.19	IR Dec.19	IR Sep.19	IR Dec.19	IR Dec.19
I. CURRENT ACCOUNT BALANCE	**-3,594**	**-4,347**	**-3,756**	**-4,960**	**-3,845**	**-4,092**
% GDP	*-1.6*	*-1.9*	*-1.6*	*-2.1*	*-1.6*	*-1.6*
1. Trade Balance	7,197	5,722	6,560	5,784	7,040	7,086
a. Exports	49,066	47,450	47,422	50,148	49,761	52,149
Of which:						
i) Traditional	*35,638*	*33,473*	*33,469*	*34,731*	*34,658*	*35,615*
ii) Non-traditional	*13,240*	*13,813*	*13,786*	*15,258*	*14,945*	*16,378*
b. Imports	-41,870	-41,728	-40,862	-44,364	-42,721	-45,063
2. Services	-2,532	-2,521	-2,653	-2,935	-2,809	-3,186
3. Investment income	-11,814	-11,322	-11,403	-11,685	-11,914	-11,984
4. Current transfers	3,556	3,774	3,739	3,876	3,838	3,992
Of which: Remittances	3,225	3,382	3,347	3,551	3,514	3,690
II. FINANCIAL ACCOUNT	**94**	**12,882**	**11,791**	**6,644**	**6,186**	**5,152**
1. Private Sector	-2,028	6,916	7,340	3,655	2,802	3,180
a. Long-term	917	6,612	5,075	3,633	2,752	3,180
b. Short-term 1/	-2,946	304	2,266	22	50	0
2. Public sector 2/	2,122	5,966	4,451	2,989	3,385	1,972
III. CHANGE ON NIRs	**-3,500**	**8,535**	**8,035**	**1,684**	**2,341**	**1,060**

1/ Includes net errors and omissions, and NIR's effect valuation.
2/ Includes portfolio investment in sovereign bonds by non-residents.
* Forecast.
IR: Inflation Report.

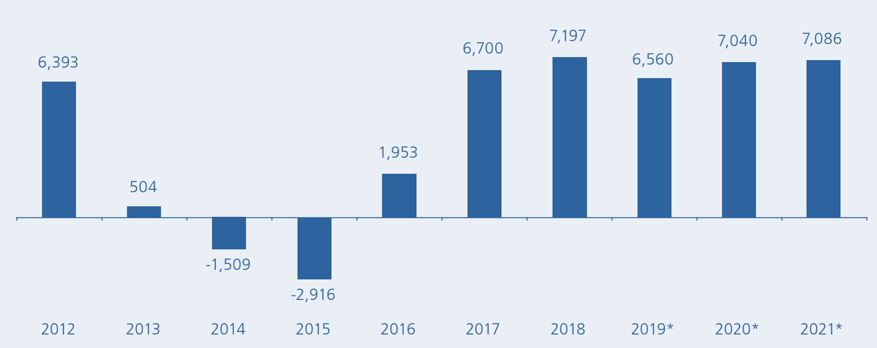
13. From January to October 2019, the **trade balance** accumulated a surplus of US$ 4.13 billion –a balance US$ 1.13 billion lower than that registered in the same period of the previous year–, reflecting the downward trend shown by exports since August 2018 due in part to the lower production of primary sectors, but also due to lower non-traditional exports (textiles and metallurgical products) as a result of the impact of a less favorable international scenario.

Graph 21
TRADE BALANCE, EXPORTS, AND IMPORTS
(Accumulated last 12 months - Billion US$)



The trade balance data as of October show that imports have been slowing down. Since this evolution is expected to continue throughout the fourth quarter of the year, it is projected that the trade balance would reach a surplus of US$ 6.56 billion in 2019.

Graph 22
TRADE BALANCE: 2012-2021
(Billion US$)



* Forecast.

14. **Exports** in the period of January-October 2019 totaled US$ 38.5 billion, 5.0 percent less than in the same period of the previous year, which is explained by lower shipments of traditional mining and hydrocarbon products. At end 2019, exports would amount to US$ 47.42 billion, a figure lower than the one projected in the previous Report which would reflect lower mining activity.

    In 2020 and 2021, exports are expected to show positive growth rates due to the recovery of mining production, although this recovery would be more gradual than anticipated in September.

    Imports, on the other hand, totaled US$ 34.42 billion in the period of January-October, which represents a decline of 2.5 percent compared to the value of imports recorded in the same period of 2018. This decline, explained by the lower prices of fuels and industrial inputs, along with lower volumes of imports of goods in the last quarter, would result in a 2.4 percent contraction of total nominal imports compared to 2018 (0.7 percent in real terms).

    In 2020 and 2021, the growth of imports would be in line with the expected evolution of domestic demand.

Table 10
TRADE BALANCE
(% change)

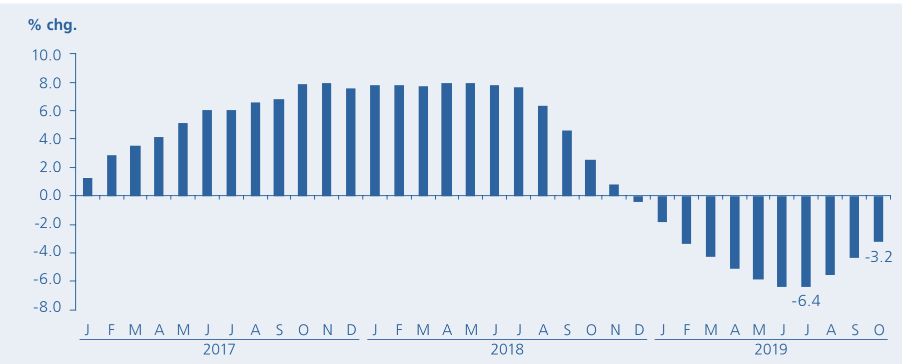
	2018	2019*		2020*		2021*
		IR Sep.19	IR Dec.19	IR Sep.19	IR Dec.19	IR Dec.19
1. Value:						
Exports	8.0	-3.3	-3.4	5.7	4.9	4.8
Traditional products	*6.2*	*-6.1*	*-6.1*	*3.8*	*3.6*	*2.8*
Non-traditional products	*12.9*	*4.3*	*4.1*	*10.5*	*8.4*	*9.6*
Imports	8.1	-0.3	-2.4	6.3	4.5	5.5
2. Volume:						
Exports	1.6	0.3	-0.2	5.9	4.2	4.6
Traditional products	*-1.5*	*-2.1*	*-2.7*	*5.4*	*3.3*	*2.7*
Non-traditional products	*11.0*	*6.9*	*6.2*	*7.2*	*7.2*	*7.4*
Imports	1.6	0.8	-0.7	5.4	3.8	4.3
3. Price:						
Exports	6.3	-3.6	-3.1	-0.2	0.7	0.2
Traditional products	*7.8*	*-4.1*	*-3.5*	*-1.6*	*0.3*	*0.1*
Non-traditional products	*1.8*	*-2.4*	*-1.9*	*3.0*	*1.1*	*2.0*
Imports	6.5	-1.1	-1.7	0.9	0.7	1.1

* Forecast.
IR: Inflation Report.

Terms of Trade

15. The trade tensions between the United States and China and expectations of lower global growth have been affecting the prices of the main commodities since mid-2018. However, since July this year there has been a reversal in the prices of exports after the recovery of the prices of gold and silver, coupled with a decline in the average prices of imported goods, especially in the price of oil. Thus, as of October 2019, the **terms of trade** have fallen 3.2 percent in year-on-year terms (versus the 6.4 percent drop observed in July).

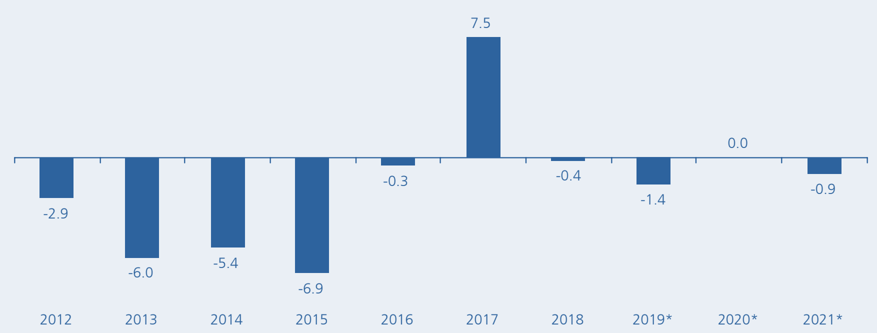
Graph 23
TERMS OF TRADE
(Accumulated 12 month % change)



The projection of the terms of trade in 2019 has been revised up from -2.6 percent in the previous report to -1.4 percent in this report because of the lower prices of oil and the slight rise recorded in the prices of some metals. The average annual price of exports would decrease 3.1 percent, while import prices would fall 1.7 percent.

Moreover, the terms of trade would show no change in 2020, while in 2021 they would fall 0.9 percent, reflecting the recovery in the price of imports.

Graph 24
TERMS OF TRADE: 2012 - 2021
(Annual average % change)



* Forecast.

Table 11
TERMS OF TRADE: 2018 - 2021

	2018	2019*		2020*		2021*
		IR Sep.19	IR Dec.19	IR Sep.19	IR Dec.19	IR Dec.19
Terms of Trade						
Annual average % chg.	**-0.4**	**-2.6**	**-1.4**	**-1.1**	**0.0**	**-0.9**
Price of exports						
Annual average % chg.	**6.3**	**-3.6**	**-3.1**	**-0.2**	**0.7**	**0.2**
Copper (US$ cents per pound)	297	271	273	262	277	280
Zinc (US$ cents per pound)	133	114	116	103	103	103
Lead (US$ cents per pound)	102	91	91	94	88	88
Gold (US$ per troy ounce)	1,269	1,393	1,394	1,495	1,480	1,480
Price of imports						
Annual average % chg.	**6.7**	**-1.1**	**-1.7**	**0.9**	**0.7**	**1.1**
Oil (US$ per barrel)	65	58	57	56	56	53
Wheat (US$ per ton)	186	165	167	162	165	181
Maize (US$ per ton)	132	146	145	146	150	159
Soybean oil (US$ per ton)	637	628	636	642	697	724

* Forecast.
IR: Inflation Report.

External Financing

16. The Report forecast considers a scenario in which the central banks of both the developed economies and the emerging economies maintain expansionary policies in response to the slower pace of growth of global trade and uncertainty about trade negotiations.

    Long-term capital is expected to continue to be the main source of financing the balance of payments in the forecast horizon.

    In addition, **foreign direct investment (FDI)** will continue to be the main component of the private financial account, although its contribution in 2019 will be lower than expected in September, in line with the lower reinvestment of profits observed. In the following years, FDI would evolve in line with the growth of private investment. Among the main investment projects expected to be implemented in the forecast horizon, it is worth highlighting the mega projects of Quellaveco, Mina Justa, and the Expansion of Toromocho. Other mining projects expected to be implemented in the following years would include Corani and Coroccohuayco.

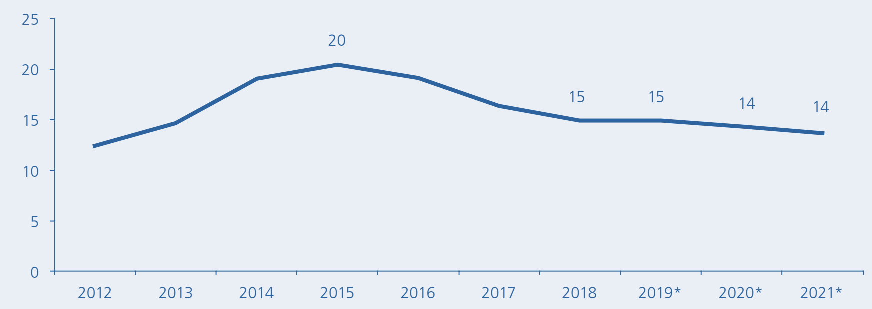
Table 12
FINANCIAL ACCOUNT OF THE PRIVATE SECTOR
(Million US$)

	2018	2019*		2020*		2021*
		IR Sep.19	IR Dec.19	IR Sep.19	IR Dec.19	IR Dec.19
PRIVATE SECTOR (A + B)	**-2,028**	**6,916**	**7,340**	**3,655**	**2,802**	**3,180**
% GDP	*-0.9*	*3.0*	*3.2*	*1.5*	*1.2*	*1.2*
A. LONG-TERM	**917**	**6,612**	**5,075**	**3,633**	**2,752**	**3,180**
1. ASSETS	**-3,558**	**-2,314**	**-2,527**	**-2,021**	**-2,752**	**-2,038**
2. LIABILITIES	**4,476**	**8,926**	**7,601**	**5,654**	**5,504**	**5,219**
Foreign direct investment in the country	6,488	8,164	7,057	5,255	5,292	4,979
Long-term loans	-1,601	-1,197	-1,594	-238	-425	14
Portfolio investment	-411	1,959	2,138	637	637	226
B. SHORT-TERM [1/]	**-2,946**	**304**	**2,266**	**22**	**50**	**0**

1/ Includes net errors and omissions, and NIR's effect valuation.
* Forecast.

On the other hand, the greater preference for domestic financing and in local currency has been reflected in the early repayment of loans, so external borrowing, which shows a declining trend during the forecast horizon, would represent 13.6 percent of GDP in 2021. The increase observed in issuances of private sector bonds in local currency in the international market –for the equivalent of US$ 1.85 billion– stands out so far this year.

Graph 25
BALANCE OF MEDIUM- AND LONG-TERM PRIVATE EXTERNAL DEBT: 2012-2021
(% GDP)



* Forecast.

17. The 2019 **public financial account** has been revised to the downside due to the lower demand of non-residents for our sovereign bonds in comparison to the estimates of the previous Report, in a context of greater global risk aversion. However, non-residents' net purchases of our securities are still US$ 2.36 billion higher than in 2018, which includes the recent debt management operation carried out with the issuance of the new BTP 2040 at a rate of 5.35 percent. The current projection also considers a reallocation of the disbursements (from 2019 to 2020) associated with financing the Talara Refinery project.

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

	2018	2019*		2020*		2021*
		IR Sep.19	IR Dec.19	IR Sep.19	IR Dec.19	IR Dec.19
I. Disbursements [1/]	**1,800**	**2,025**	**1,847**	**1,851**	**2,126**	**1,005**
II. Amortization	**-1,614**	**-1,963**	**-2,199**	**-335**	**-254**	**-531**
III. Net external assets	**-201**	**308**	**252**	**-240**	**-140**	**-140**
IV. Other transactions with Treasury bonds (IV=a-b)	**2,137**	**5,597**	**4,551**	**1,714**	**1,652**	**1,638**
a. Sovereign Bonds held by non-residentes	1,822	5,327	4,181	1,714	1,652	1,638
b. Global Bonds held by residentes	-315	-270	-370	0	0	0
V. TOTAL (V = I+II+III+IV)	**2,122**	**5,966**	**4,451**	**2,989**	**3,385**	**1,972**

1/ Includes bonds.
* Forecast.

18. 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 Peruvian economy shows high-levels

in these indicators in comparison with other emerging economies, thanks to the preventive accumulation of international reserves.

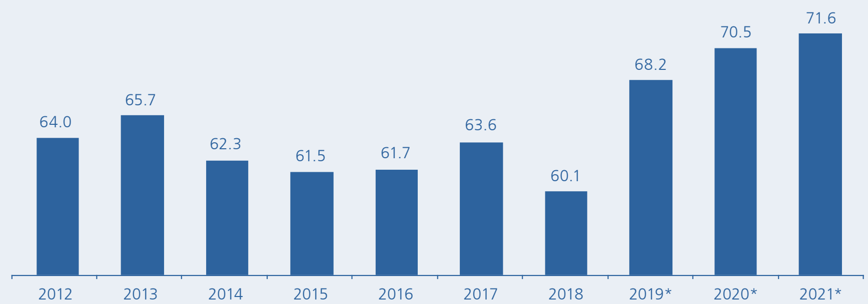
Table 14
NIR INDICATORS

	2017	2018	2019*	2020*	2021*
NIR as a % of:					
a. GDP	29.7	26.7	29.5	29.1	28.1
b. Short-term external debt [1/]	405	361	549	564	573
c. Short-term external debt plus current account deficit	346	297	421	431	431

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

As of December 9, Peru's net international reserves have increased by US$ 8.21 billion compared to the end of 2018. On the one hand, the foreign exchange position of BCRP has increased by US$ 2.63 billion and banks' deposits in foreign currency at BCRP have increased US$ 5.05 billion, and, on the other hand, public sector deposits have increased US$ 602 million.

Graph 26
NET INTERNATIONAL RESERVES: 2012-2021
(Billion US$)



* Forecast.

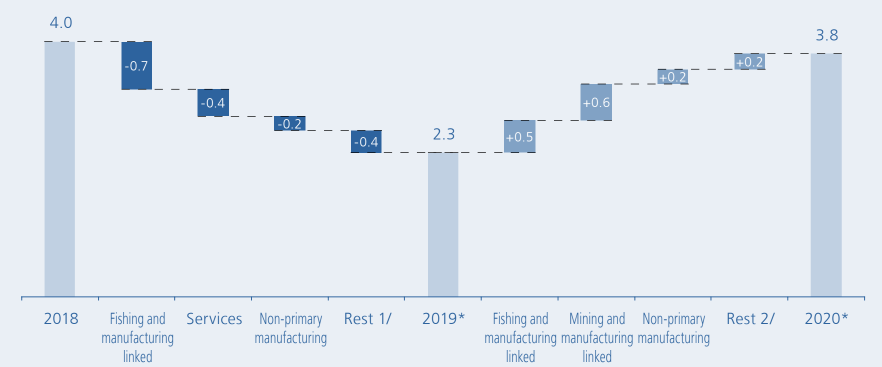
III. Economic Activity

Sector GDP

19. In January-October, economic activity accumulated a growth rate of 2.2 percent. The contraction observed in some primary sectors –i.e. fishing and mining–, especially during the first semester, together with a slowdown of growth in the non-primary sectors, account mostly for lower-than-expected growth so far this year.

20. Because of this, the GDP growth rate projected for 2019 has been revised down from 2.7 to 2.3 percent. This reflects the longer-than-anticipated negative impact of shocks on mining and fishing activity and, to a lesser extent, a lower growth rate in non-primary activities (mainly in construction and manufacturing).

Graph 27
GDP GROWTH BY SECTOR : 2018- 2020*
(% change and contribution to the growth)



1/ Includes mining, agriculture, rest of primary manufacturing, construction, commerce, and electricty and water sectors.
1/ Includes agriculture, rest of primary manufacturing, construction, commerce, and electricty and water sectors.
* Forecast.

A higher GDP growth rate is expected for the next two years. This faster pace of growth would be associated mostly with the reversal of the supply shocks that affected fishing and mining, and also with a greater dynamism in primary industries in response to greater growth in domestic demand. The growth projection for 2020 remains at 3.8 percent, with the projected greater fishing quota and the greater production of Las Bambas, Cerro Verde and Toquepala, respectively, supporting this projection. This pace of growth would extend to 2021, in a context of normalization of anchovy capture and the onset of operations in new mines (Mina Justa and Ariana) and in the expansion of Toromocho, in addition to the normalization of gold production in Buenaventura

Table 15
GDP BY PRODUCTION SECTOR
(Real % change)

	2018	2019*		2020*		2021*
		IR Sep.19	IR Dec.19	IR Sep.19	IR Dec.19	IR Dec.19
Primary GDP	**3.5**	**-0.2**	**-0.6**	**3.6**	**4.7**	**3.7**
Agriculture and livestock	8.0	4.1	3.7	4.1	4.0	3.6
Fishing	39.7	-13.6	-18.6	9.6	23.0	-3.9
Metallic mining	-1.7	-0.8	-1.3	3.9	3.6	5.5
Hydrocarbons	0.0	3.4	5.1	0.3	0.9	0.2
Based on raw materials	12.9	-5.7	-5.5	2.2	9.3	0.9
Non-Primary GDP	**4.2**	**3.5**	**3.2**	**3.8**	**3.6**	**3.8**
Non-primary industries	3.3	2.2	0.8	3.8	2.7	3.5
Electricity and water	4.4	4.3	4.1	4.0	4.0	4.5
Construction	5.3	5.4	2.9	5.8	5.3	5.1
Commerce	2.6	3.0	3.0	3.5	3.5	3.7
Services	4.5	3.7	3.6	3.6	3.6	3.7
GDP	**4.0**	**2.7**	**2.3**	**3.8**	**3.8**	**3.8**

* Forecast.
IR: Inflation Report.

a) The **agriculture output** accumulated a growth rate of 2.8 percent as of October 2019, due to the dynamism of agro-exports (blueberries, cocoa, grapes, avocados, and mangos) and poultry activity (poultry and eggs). As a result of this greater dynamism and of the increased production of some fruits (i.e. blueberries, grapes, and mangos) in the fourth quarter, the agriculture sector is expected to grow 3.7 percent in 2019.

Moreover, growth rates of 4.0 and 3.6 percent are projected for 2020 and 2021, respectively, considering the higher production of blueberries and avocados anticipated for these years in line with plantations today. This pace of growth of the sector would be offset in 2021 due to the slower rate of expansion of the agricultural frontier, the Olmos irrigation project being the last project to incorporate large areas (approximately 38 thousand hectares since 2014).

b) Activity in the **fishing sector** registered a drop of 18.5 percent in January-October, due to the lower availability of anchovy during the first fishing season in the North-Central Zone. In 2019, the fishing output is projected to show a greater fall than the one estimated in the previous Report due to the evolution observed in the second fishing season in the North-Central Zone as a result of the high presence of young fish.

A growth rate of 23.0 percent is projected for 2020, in line with the greater fish catch estimated at the end of the second 2019 fishing season in the North-Central Zone (in January 2020), as well as with the subsequent expected normalization of the fishing quota for the 2020 first fishing season in the same Zone (the quota in this area was low in 2019 due to warnings about the probable occurrence of El Niño Costero). In 2021, the output in this sector would show a reduction of 3.9 percent associated with the normalization of anchovy capture.

c) GDP in the **metal mining sector** fell 1.6 percent in January-October, the fall being explained by: i) gold, due to lower output in Barrick and Buenaventura; ii) zinc, due to the lower metal grades in Antamina; and iii) iron, due to lower metal grades in Shougang. In 2019, mining is expected to show a 1.3 percent decline, which implies that activity registered a slight recovery (0.3 percent) during the fourth quarter.

On the other hand, the higher growth rate projected for 2020 (3.6 percent) is explained by the normalization of mining production (once the transitory problems in Las Bambas and Cerro Verde are overcome) and by the greater production of Toquepala. In 2021, the sector would grow 5.5 percent, driven by the entry into operation of Mina Justa, mine Ariana, and the expansion of Toromocho, as well as by the normalization of Buenaventura's gold production.

In 2019, the **hydrocarbons sector** is expected to grow 5.1 percent. During the January-October period, the sector grew 4.9 percent, with growth being driven by the higher production of lot 95, which began operations in December 2018, and by a recovery of production in lot 192. In 2020, this subsector is expected to grow 0.9 percent, which would also be explained by the higher production of lot 95. Finally, in 2021 the production level is expected to be similar to that of 2020.

d) Production in the **primary manufacturing** subsector dropped 7.8 percent in the January-October period due to lower production of fishmeal and fish oil, as well as lower output in copper and oil refining. This subsector is expected to register a fall of 5.5 percent in 2019, lower than the one registered so far this year, as a result of a greater refining of non-ferrous metals.

In 2020, primary manufacturing is expected to grow 9.3 percent due to the recovery of fishing production and the refining of non-ferrous metals, offset by Petroperú's lower refining of crude oil. The latter is explained by the fact that the company announced that it would temporarily stop producing at the current Talara refinery in 2020 to interconnect the refinery with the production units that are part of the new refinery project. In 2021, an increase of 0.9 percent is expected due to the recovery of oil refining.

e) **Non-primary manufacturing** grew 0.8 percent in January-October due to the greater production of investment goods (metal products for structural uses, transport material, and cement) and mass consumption goods (alcoholic beverages, furniture, and dairy products). These factors would remain in the rest of the year, so a growth rate of 0.8 percent is expected in 2019, whereas higher growth is projected for the coming years: 2.7 percent in 2020 and 3.5 percent in 2021. This pace of growth would be mainly explained by investment-oriented goods, mass consumption goods, and inputs, in line with the growth of domestic demand.

f) Output in the **construction sector** grew 3.8 percent in January-October 2019 due to greater private investment. Despite this, a growth rate of 2.9 percent is expected in the year due to the sector's lower dynamism in recent months. In 2020 and 2021, construction is expected to grow 5.3 and 5.1 percent, respectively, driven by a recovery in public investment and by the growth of private investment.

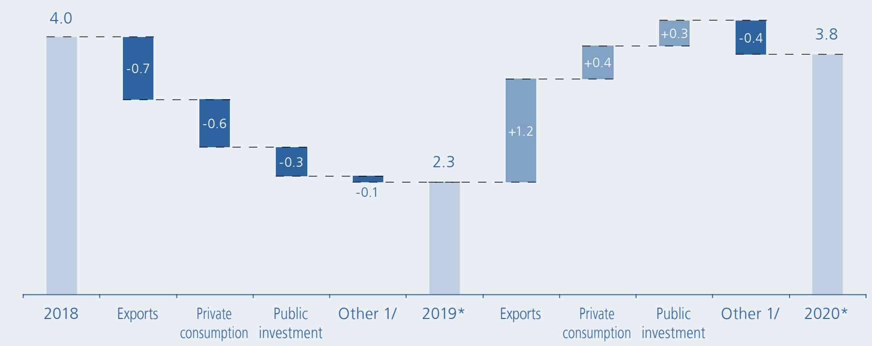
Expenditure-side GDP

21. In terms of expenditure components, the lower GDP growth observed in the first ten months of the year compared to the same period of 2018 (1.6 percentage points) is explained by a lower contribution of exports (0.7 percentage points) and private consumption (0.6 percentage points). Exports were affected by the impact of mining and fishing shocks, while the evolution of private consumption reflected the slowdown of growth of formal employment.

There has been a significant recovery in private spending (consumption and investment) since the third quarter of the year, but the evolution of economic activity in the first semester and the longer-than-anticipated impact of the mining and fishing shocks have implied the downward revision of the GDP growth projection in 2019 from 2.7 to 2.3 percent.

The GDP growth projection for 2020 remains at 3.8 percent and the same growth rate is expected in 2021 due to the positive evolution foreseen in private consumption, in a context characterized by the absence of supply shocks, slack monetary conditions, a recovery of public investment, and more favorable external conditions.

Graph 28
GDP GROWTH BY SECTOR: 2018- 2020*
(% change and contribution to the growth)



1/ Includes the effect of private investment, public consumption, imports, and change on inventories over GDP growth.
* Forecast.

Table 16
DOMESTIC DEMAND AND GDP
(Real % change)

	2018	2019*		2020*		2021*
		IR Sep.19	IR Dec.19	IR Sep.19	IR Dec.19	IR Dec.19
Domestic demand	**4.2**	**3.0**	**2.5**	**3.7**	**3.7**	**3.8**
Private consumption	3.8	3.0	3.0	3.7	3.5	3.7
Public consumption	0.8	2.0	2.0	2.5	2.5	2.5
Private investment	4.2	4.4	4.2	4.5	3.8	4.0
Public investment	6.8	0.5	-0.5	5.0	6.0	4.0
Change on inventories (contribution)	0.4	0.0	-0.4	0.0	0.0	0.0
Exports	**2.7**	**0.9**	**0.1**	**5.6**	**4.5**	**4.8**
Imports	**3.2**	**1.8**	**0.5**	**5.6**	**4.0**	**4.8**
Gross Domestic Product	**4.0**	**2.7**	**2.3**	**3.8**	**3.8**	**3.8**
Memo:						
Public expenditure	2.5	1.6	1.2	3.2	3.5	3.0
Domestic demand excluding inventories	3.7	3.0	2.9	3.7	3.6	3.7

* Forecast.
IR: Inflation Report.

22. Expectations about GDP growth have shown a downward correction, influenced by the evolution of activity in September and by uncertainty about global economic growth. According to the latest Survey on Macroeconomic Expectations, GDP is estimated to grow between 2.5 and 2.8 percent in 2019 and between 3.0 and 3.2 percent in 2020. On the other hand, expectations for 2021 are higher, the growth rate being estimated in a range between 3.3 and 3.5 percent.

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

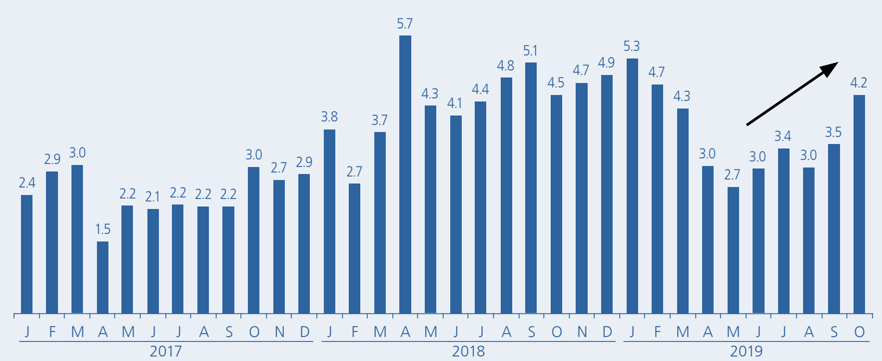
	IR Jun.19	IR Sep.19	IR Dec.19*
Financial entities			
2019	3.3	2.8	2.5
2020	3.6	3.3	3.0
2021	-.-	-.-	3.3
Economic analysts			
2019	3.2	2.5	2.5
2020	3.7	3.3	3.0
2021	-.-	-.-	3.5
Non-financial firms			
2019	3.5	3.0	2.8
2020	3.8	3.5	3.2
2021	-.-	-.-	3.5

* Survey conducted on November 30.
Source: BCRP.

23. As pointed out in the previous Report, labor market indicators –an important determinant of **private consumption**– continue to show a recovery, although these indicators still show levels below the average ones reached in 2018. On the other hand, consumer confidence has followed the same trend in the last three months and consumer credit reached a growth rate close to 11 percent:

    a) The labor market has continued showing the recovery observed in the previous report. According to Sunat's electronic payroll data, formal jobs in the private sector grew 4.2 percent per annum in October of this year.

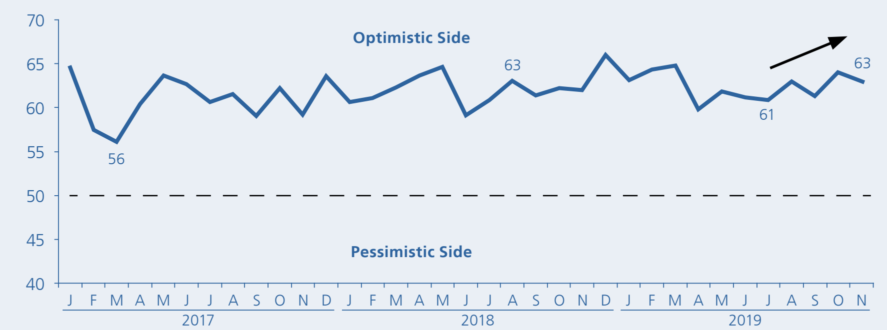
Graph 29
FORMAL JOBS IN THE PRIVATE SECTOR
(12 month % change)



Source: SUNAT-Electronic payroll.

b) Consumer confidence, measured as expectations about the future economic situation of households, registered a level of 63 points in November.

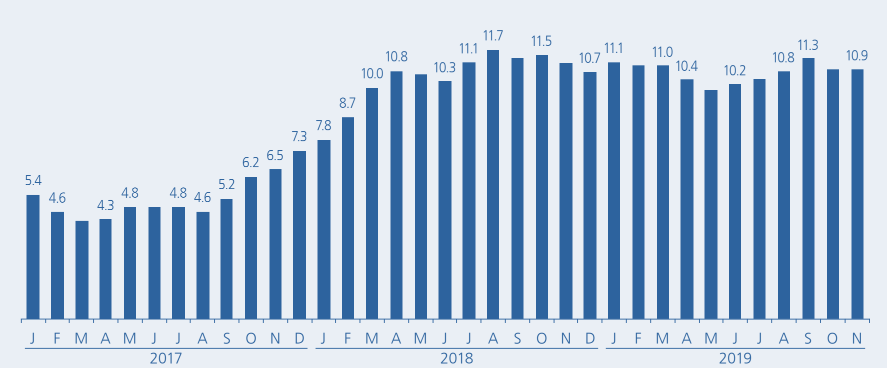
Graph 30
EXPECTATION ABOUT ECONOMIC SITUATION OF THE HOUSEHOLD IN 12 MONTHS
(INDICCA. Lima Metropolitana)



Source: Apoyo.

c) Consumer credit continued to show a positive trend recording a growth rate close to 11 percent.

Graph 31
REAL CONSUMER LOANS
(12 month % change)

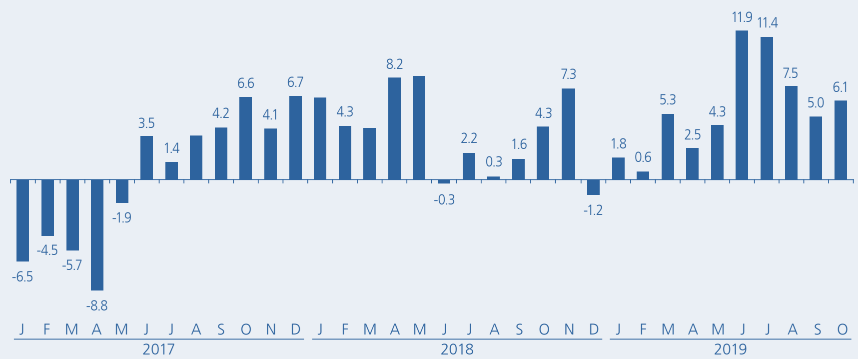


Based on the evolution of recent consumption indicators, this variable is expected to grow 3.0 percent this year, as projected in the September Report. In 2020 and 2021, consumption would grow 3.5 and 3.7 percent.

24. In contrast with the consumption data, the current and projected indicators of **private investment** point to a positive, albeit less favorable evolution:

    a) The domestic consumption of cement –indicator related to investment in construction– showed a recovery in October with a rate of 6.1 percent after three months of slowdown. Thus, in January-October, this indicator increased by 5.6 percent compared to 2018.

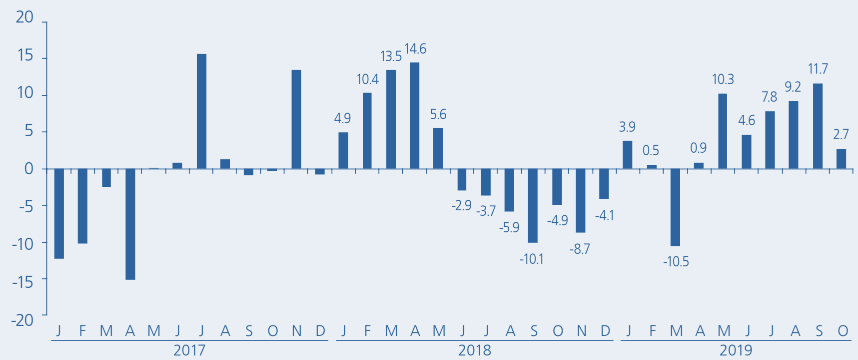
Graph 32
DOMESTIC CEMENT CONSUMPTION
(12 month % change)



Source: INEI.

    b) The volume of imports of capital goods (excluding construction material) increased 2.7 percent in October after recording a rate of 11.7 in September.

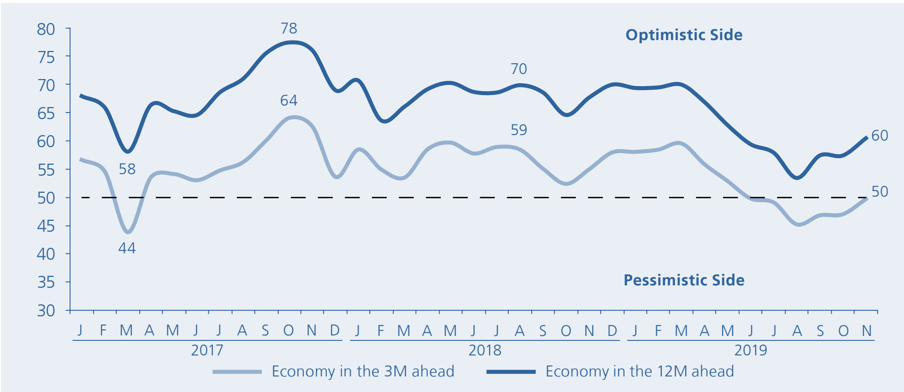
Graph 33
VOLUME OF IMPORTS OF CAPITAL GOODS*
(12 month % change)



* Excluding materials of construction and mobile phones.
Source: SUNAT-Aduanas.

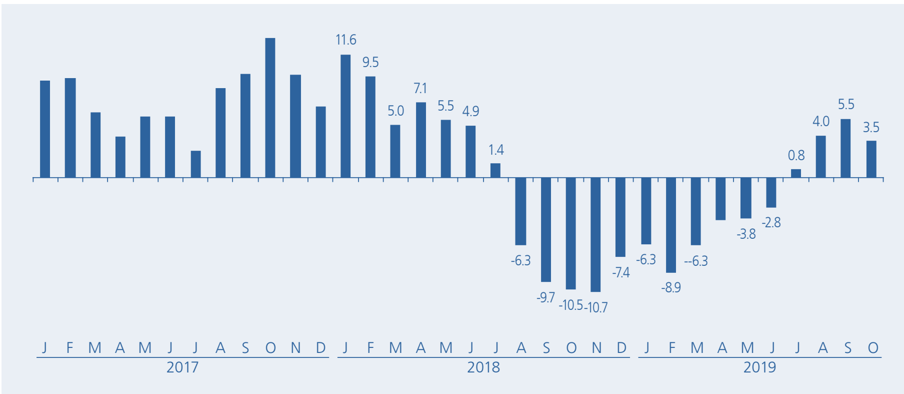
c) In November, business expectations about the situation of the economy in 3 months and in 12 months' time rose slightly to 50 and 60 points, respectively, after having fallen to 45 and 53 points in August.

Graph 34
EXPECTATIONS ABOUT THE ECONOMY IN 3 AND 12 MONTHS AHEAD



d) The terms of trade increased 3.5 percent in October 2019 due to the fall in oil prices, which implied a reduction in import prices.

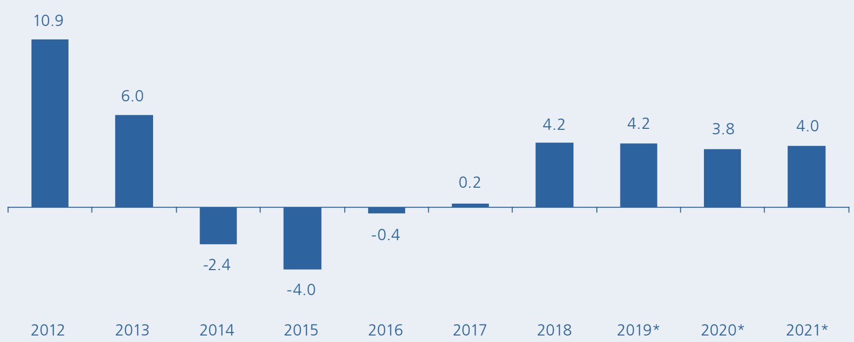
Graph 35
TERMS OF TRADE
(12 month % change)



25. The growth rate of private investment projected for this year in September has been revised slightly down, from 4.4 to 4.2 percent, due to the results observed

in the period January-September and due to the projected indicators mentioned above. In the forecast horizon, private investment would reflect the evolution of non-mining investment (given the downward trend observed in mining investment), so it is expected to show a growth rate of 3.8 percent in 2020 (versus 4.5 percent projected in the previous Report) and to rise thereafter to 4.0 percent in 2021.

Graph 36
PRIVATE INVESTMENT: 2012 - 2021
(Real annual % change)



* Forecast.

The 115 main **private investment projects announced** to be carried out in 2020-2021 amount to US$ 17 billion, mining and infrastructure being the main sectors attracting private investment.

Table 18
PRIVATE INVESTMENT PROJECTS ANNOUNCED: 2020-2021
(Billions US$)

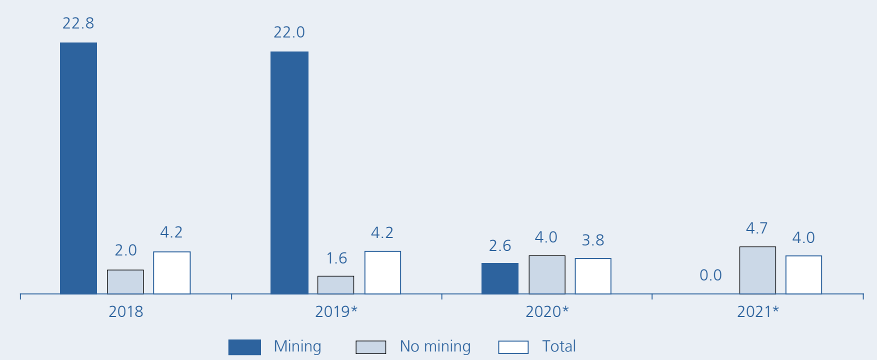
	Total investment	Number of projects
Mining	8.3	27
Hydrocarbons	1.6	15
Energy	1.0	9
Industry	0.3	7
Infraestructure	3.7	20
Other sectors	2.0	37
Total	**17.0**	**115**

Source: Media and information of companies.

a. In terms of **mining investment**, the projection considers investment in large projects such as Quellaveco (US$ 5.3 billion in total investment), Mina Justa (US$ 1.6 billion), and the Toromocho Expansion (US$ 1.3 billion), which would boost mining activity in the coming years. In addition, projects such as Corani and Coroccohuayco (each of which represents an investment of US$ 0.6 billion) are expected to begin construction in 2020. However, the lower prices of basic metals have continued to affect investment in mining exploration. In 2021, mining investment would maintain these levels with the completion of the construction stage of the aforementioned large projects.

According to the Ministry of Energy and Mines, mining investment amounted to US$ 4.7 billion in January-October, which represents a growth rate of 24.8 percent compared to the same period of the previous year.

Graph 37
PRIVATE INVESTMENT
(Real % change)



* Forecast.

b. In **infrastructure**, a greater momentum is expected in 2020, with Line 2 of the Lima Metro standing out. According to OSITRAN, 27.8 percent of this project has already been executed as of October. On the other hand, Lima Airport Partners (LAP) announced that the second phase of the expansion of Jorge Chavez International Airport will be carried out by the New Lima Tambo Consortium. This consortium, which has been developing the works of the first phase, would start earthworks at the end of 2019. The expansion project will be carried out in three stages: (i) preparatory work, (ii) construction of the second runway and the new control tower, and (iii) the construction of a new terminal.

Table 19 MAIN ANNOUNCEMENTS OF PRIVATE INVESTMENT PROJECTS: 2020-2021		
SECTOR	**INVESTOR**	**PROJECTS**
MINING	Angloamerican Grupo Breca Aluminium Corp. of China (Chinalco) Antapaccay Bear Creek	Quellaveco Mina Justa Expansion of Toromocho Mine Coroccohuayco Corani
HYDROCARBONS	Calidda Gas Natural del Perú Karoon Gas Perenco	Massive use of gas Exploration Lot Z-38 Exploration Lot 39
ENERGY	Interconexión Eléctrica GAZ Energie	Mantaro-Nueva Yanango-Carapongo Connection and Substations Thermal plant in Ica
INDUSTRY	Corporación Aceros Arequipa Precor	Expansion of Pisco Plant Mega factory in Chilca
INFRASTRUCTURE	Grupo Volcan Consorcio Nuevo Metro de Lima Lima Airport Partners Grupo Romero APM Terminals Consorcio Paracas	Chancay Port Terminal Line 2 of the Metro network of Lima and Callao Expansion of International Airport (Jorge Chavez) Salaverry Port Terminal Modernization Muelle Norte San Martin Port Terminal
OTHER SECTORS	Grupo Intercorp Grupo Ripley Inversiones Centenario Imagina Grupo Inmobiliario Armas Domo Grupo Falabella Edifica	Expansion of new shopping centers Expansion of new shopping centers Real Estate investments and expansion of shopping centers Real Estate investments Real Estate investments Expansion of new shopping centers Real Estate projects

Source: Information on companies, newspaper and specialized media.

c. For 2020-2021, **Proinversión** reports a project portfolio of US$ 7.2 billion. In April, the consortium integrated by Fypasa Construcciones S.A. of C.V. and Operadora de Ecosistemas S.A. of C.V., of Mexican capitals, was awarded the concession contract to develop the Wastewater Treatment System project of the Lake Titicaca Basin. The works would start in 2020 and be completed between 2022 and 2023. In addition, the concessions of three electrical link projects that will benefit the population of Tumbes, Piura, Huánuco, and Ucayali, were awarded to Cobra Instalaciones y Servicios S.A. in October.

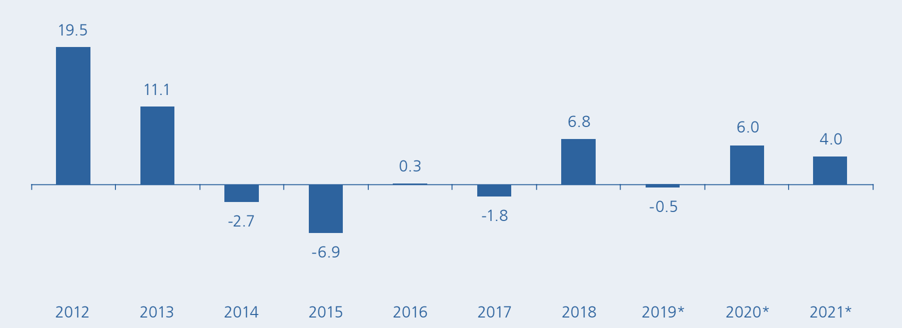
Table 20
MAIN PROJECTS TO BE IMPLEMENTED THROUGH CONCESSION ARRANGEMENTS IN 2019-2021
(Million US$)

	Estimated investment
A. Awarded	**414**
Treatment system for wastewater from the basin of Lake Titicaca	270
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	144
B. To be called	**7,231**
Peripheral Ring Road	2,049
Headworks and Conduction for the Drinking Water Supply in Lima	720
New San Juan de Marcona Port Terminal	540
Ancon Industrial Park	500
Longitudinal of the Sierra road project, Section 4:	464
Algarrobo Mining Project	350
Two hospitals of high complexity	254
Hipolito Unanue National Hospital	250
Huancayo - Huancavelica Railway	227
Improvement of tourism services in Choquequirao Archaeological Park, Apurimac and Cusco regions	221
Wide-Scale Use of Natural Gas in Central ad South Region	200
Wastewater Treatment for effluent dumping or reuse, Trujillo	130
Huaycan Hospital	120
New Military Hospital	116
500 kV Piura Nueva - Frontera Substations transmission line	112
Modernization of regional electriciy company Electronoroeste	105
Treatment system for wastewater Huancayo	90
Schools in risk: Ate and San Juan de Lurigancho districts	85
Schools in risk: Metropolitan Lima	80
Improvement and expansion of the Sewage System in the city of Cajamarca	72
Schools in risk: Comas and San Martin de Porres districts	61
Schools of high performance: COAR centro	59
Wastewater Treatment for effluent dumping or reuse in the city of Cajamarca	56
Wastewater Treatment System for a sustainable Chiclayo	48
Wastewater Treatment for effluent dumping or reuse, Cusco province	42
Solid waste management in health centres of Minsa	35
Wastewater treatment for effluent dumping or reuse, Cañete province	35
Wastewater Treatment for effluent dumping or reuse, Chincha province, Ica, Peru	35
220/60 kV Chincha Nueva Substation and 220/60 kV Nazca Nueva Substation	30
Wastewater Treatment Plant for the city of Tarapoto	27
Wastewater Treatment Plant and additional infrastructure for the city of Huaraz	27
138 Kv Puerto Maldonado-Iberia Transmission Line and 220/60/23 Kv-100 MVAR Valle del Chira Substation	24
Treatment plant for wastewater of the city of Puerto Maldonado	20
Infrastructure, Equipment, and Maintenance of schools in Cusco	19
Schools in risk: Villa Maria del Triunfo district	17
Tourism project Cable ways: Centro Histórico de Lima - Cerro San Cristobal	13

Source: Proinversión.

26. The growth of **public investment** projected for 2019 has been revised down due to the lower-than-expected progress of works, this projection being explained mostly by the change of subnational authorities that took place at the beginning of the year. In 2020 and 2021 public investment is expected to recover reaching a growth rate of 6.0 percent and 4.0 percent, respectively, considering greater investment execution by regional and local governments.

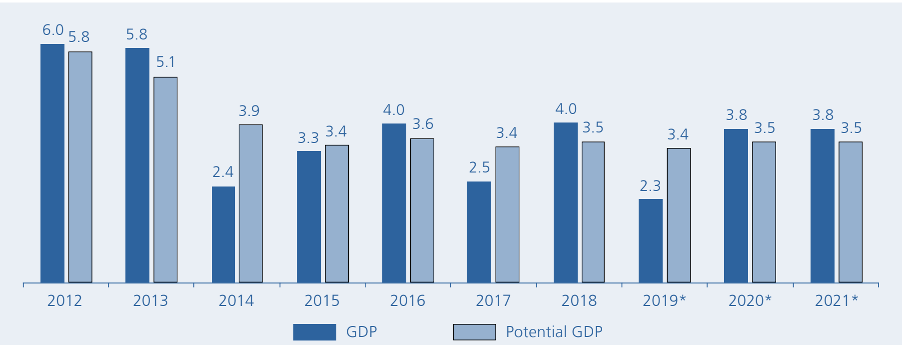
Graph 38
PUBLIC INVESTMENT: 2012-2021
(Real % change)



* Forecast.

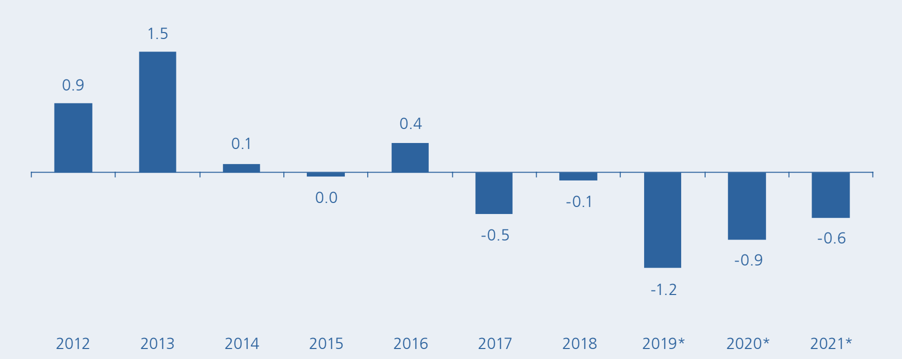
27. Considering the downward revision in the projection of GDP growth for this year, the output gap –the percentage margin between the GDP level and its potential– is expected to show a gradual reduction in the forecast horizon. This estimation incorporates a potential GDP growth of 3.5 percent in 2020 and 2021. Potential growth in 2019 is estimated at 3.4 percent due to the impact of transitory supply shocks observed during the year.

Graph 39
GDP AND POTENTIAL GDP: 2012-2021
(% change)



* Forecast.

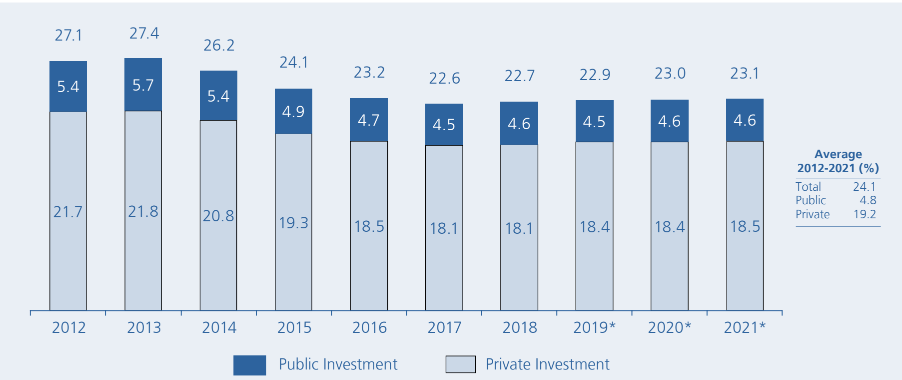
Graph 40
OUTPUT GAP: 2012-2021
(% Potential GDP)



* Forecast.

28. Fixed gross investment in 2019 will reach 22.9 percent of the output as a percentage of real GDP, and will remain around such level in the forecast horizon.

Graph 41
GROSS FIXED INVESTMENT: PRIVATE AND PUBLIC SECTORS: 2012-2021
(% of real GDP)



* Forecast.

29. As regards the savings-investment gap, in 2019-2021 requirements of external savings as a percentage of GDP will remain at the levels observed in 2018, the fiscal deficit accounting mainly for this gap.

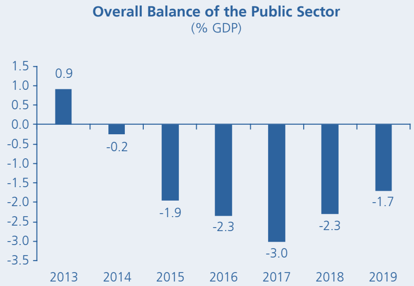
Table 21
SAVINGS-INVESTMENT GAP
(% of nominal GDP)

		2018	2019*		2020*		2021*
			IR Sep.19	IR Dec.19	IR Sep.19	IR Dec.19	RI. Dec.,19
1	Gross Domestic Investment [1/]	21.5	21.6	21.2	21.8	21.3	21.5
2	Domestic Savings	19.9	19.7	19.5	19.7	19.7	19.8
	External Gap (=2-1)	-1.6	-1.9	-1.6	-2.1	-1.6	-1.6
1.1	Gross Domestic Private Investment [1/]	16.6	16.9	16.5	17.1	16.5	16.7
1.2	Private Savings	17.3	17.0	16.6	17.0	16.7	16.7
	Private Gap (=1.2-1.1)	0.7	0.1	0.0	-0.1	0.2	0.0
2.1	Public Investment	4.8	4.7	4.6	4.7	4.7	4.7
2.2	Public Savings	2.5	2.7	3.0	2.7	3.0	3.1
	Public Gap (=2.2-2.1)	-2.3	-2.0	-1.7	-2.0	-1.7	-1.6

1/ Includes change on inventories.
* Forecast.
Source: BCRP.

Box 1
RECENT MEASURES TO INVIGORATE PUBLIC INVESTMENT

In recent years, public investment has shown little growth. After reaching a peak of 5.8 percent of GDP in 2013, it dropped to 4.6 percent of GDP in 2017. This year, it is expected to be equivalent to 4.7 percent of GDP, a level below its historical average (5.1 percent of GDP in 1980-2018).



* Forecast.

Recurring execution problems have affected public investment during this period, as reflected in investment levels consistently below the amounts expected at the time of formulating the annual budget (represented by the forecast of the Multiannual Macroeconomic Framework of the previous year).

Because of this, the Executive has approved a series of measures aimed at stimulating the general execution of public investment projects (Emergency Decrees 004, 008, and 011-2019), as well as specific measures to promote the execution of the projects included in the National Infrastructure Plan for Competitiveness - NICP (Emergency Decree 011-2019).

These measures are associated with the reallocation of budget resources, the reactivation of disrupted public projects, and incentives to improve subnational governments' capacity to execute projects under their responsibility.

Reallocation of Budget Resources (E.D. 004-2019)

Through this regulation, the Executive authorizes government entities to transfer S/ 965 million from their ordinary resources to the MEF contingency reserve. In turn, S/ 1.01 billion of this contingency reserve will be transferred to different agencies of the National Government and to regional governments to finance, among other things, the execution of investment and maintenance of school and hospital premises as well as the acquisition of goods. Therefore, this regulation serves to reallocate the budget of entities and projects with low execution levels to projects carried out by ministries or agencies that have not had budget execution problems, thus raising the budget execution rate.

Reactivation of Disrupted Public Works (E.D. 008-2019)

The regulation defines paralyzed or disrupted public works as projects that register a degree of physical progress or implementation equal to or greater than 50 percent, and for which no physical progress of works has been reported in at least 3 months despite the fact that the project contract is still valid; or also works carried out within the framework of project contracts terminated or declared void.

In order to reactivate the execution of these projects, an accelerated procedure has been established to determine the number of paralyzed works, together with the changes required to be able to complete the execution of projects through situational reports of each work. In addition, the corresponding government entities may sign all the necessary contracts to complete the works by direct contracting (i.e. consultants to carry out the situational reports, the contractors to make the balance of the works, consultants to prepare technical files of the balance of work to be completed, and the supervision of the balance of works). Concurrent control by the Comptroller agency, financed with up to 2 percent of the investment balance to be executed, will be applied throughout this process.

According to the MEF and the Comptroller's Office, a total of 867 projects involving a total contract amount of S/ 16.87 billion, have been identified at the national and regional levels, of which 528 projects –with a contract amount of S/ 6.50 billion– register a physical progress of works of more than 50 percent. It is estimated that the restart of these works should occur in the second quarter of 2020.

Incentives and Flexibility for Investment Execution at Subnational Levels (E.D. 011-2019)

The aim of this measure is to improve investment execution in 2019 and 2020 through the following actions:

During 2020, provide sub-national governments with a budget incentive to increase their capacity to execute investments. To do so, the MEF is authorized to make budget modifications and to use the contingency reserve resources for up to S/ 200 million, following the verification of compliance with the budget performance established by direct resolution of the General Directorate of Public Budget.

During 2019, re-direct budget resources to finance subnational governments' investments, using the resources transferred by the national government this year (S/ 4. 24 billion) that have not been spent:

- The budget credit for investments will be canceled in the cases in which a verifiable impediment has made their execution unfeasible in 2019, but in which the necessary resources are available to ensure their execution in 2020 as part of the Draft Budget Law for FY 2020. Other project budgets that will be canceled include those with a terminated status in the Investment Bank, those that have PIM resources of FY 2019 exceeding the amount required to complete the budget execution this year, and those with resources assigned in the 2020 Draft Budget Law.

- The budget ceiling will be increased in the case of projects that require resources for updating their technical files, the preparation of the technical file of the work balance, the execution of works and/or work completion (these projects are required to have a technical file, a budget execution of over 30 percent of the total investment amount, resources provided for in the 2020 Draft Budget Law, and be included in the Investment portfolio of the 2019 – 2021 Multi-Annual Programmed Investment).

With these measures, the investment budget of subnational governments is re-oriented to projects with a higher probability of execution during 2020.

Extraordinary Measures to Promote the Execution of Projects of the National Infrastructure Plan for Competitiveness - NIPC (E.D. 018-2019)

The aim of this regulation is to speed up the execution of the projects contained in the NIPC by exonerating them from some administrative requirements (urban and construction permits), facilitating the access to land (compulsory easement, priority over other projects for the use of land, direct appraisal of the value of the land to be expropriated), reduce interferences (entities may execute and finance the necessary interventions to decrease interference), and guarantee the efficiency, speed, and predictability in environmental processes (environmental impact study) and archaeological processes (Certificate of Absence of Archaeological Remains and report from the agency in charge of the Archaeological Monitoring Plan).

This regulation also authorizes all National Government entities to sign agreements with the corresponding subnational governments to finance, contract, and execute the complementary projects that are essential for the proper implementation of NIPC projects. Therefore, the contracting of works and services for the acquisition of areas and reduction of interference in the NIPC and its complementary projects are exempted from the State Contracting Law. This exemption is applicable to works valued at up to S/ 15.1 million or services amounting to up to S/ 0.4 million. A special procedure is established for these contracts.

The implementation of this regulation is financed with the institutional budget of the entities involved. In addition, the 2020 Public Budget allows transfers of up to S/ 13.2 million to various public entities responsible for supporting the development of the project baseline of 16 projects prioritized in the NIPC.

All of these measures seek to ensure a high level of budget execution in 2019 and 2020 to underpin the growth of public investment and therefore, the growth of domestic demand and economic activity.

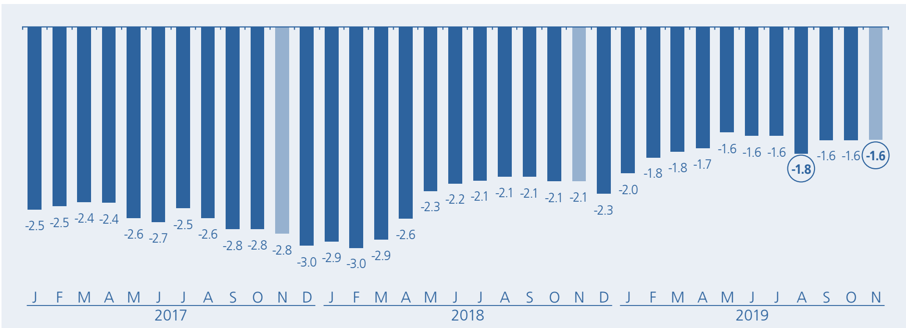
In order to ensure that the measures have the desired impact, it is necessary to reinforce the periodic monitoring of investment at all levels of government so that any inconvenience that may delays the project schedule is properly identified and dealt with.

IV. Public Finances

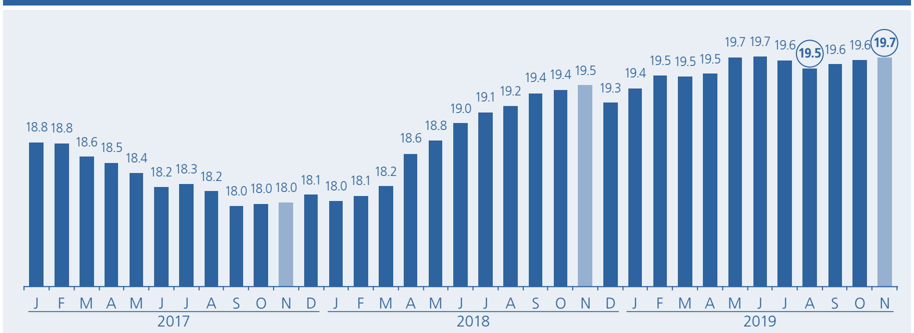
Recent Evolution

30. Since the publication of our Inflation Report in September, the fiscal deficit accumulated in the last twelve months continued to decline, falling from 1.8 percent of GDP in August to 1.6 percent of GDP in November 2019. This deficit reduction is due to both higher revenues (0.2 percentage points of GDP) and lower expenditure (0.1 percentage point of GDP).

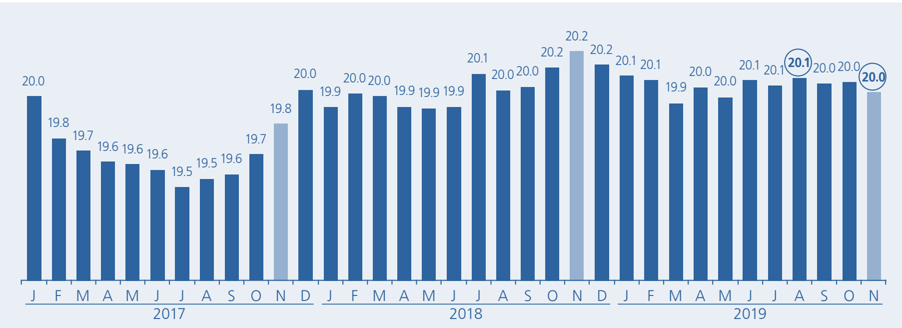
Graph 42
ECONOMIC BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2017 - 2019
(Accumulated last 12 months - % GDP)



Graph 43
CURRENT REVENUES OF THE GENERAL GOVERNMENT: 2017 - 2019
(Accumulated last 12 months - % GDP)



Graph 44
NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT: 2017 - 2019
(Accumulated last 12 months - % GDP)



Forecasts

31. The **fiscal deficit** projected for 2019 has been revised down, from 2.0 of GDP in the previous report to 1.7 percent of GDP in this report, due to a higher primary balance in non-financial public enterprises and to the lower execution of non-financial expenditure observed year-to-day.

    In 2020 the deficit is estimated to remain at the same level as in 2019 (1.7 percent of GDP) despite the higher expected growth of public spending as a result of higher extraordinary current income, associated with tax revenue from capital gains obtained from the sale of an electricity company. Considering the continuity of public projects carried out under the Reconstruction with Changes program, in 2021 the deficit is estimated to decline to 1.6 percent of GDP. The growth of the general government expenditure (3.8 percent in real terms) is consistent with a neutral fiscal position in a context in which the output gap is still not expected to close in the year.

Table 22
RECONSTRUCTION WITH CHANGES: PUBLIC INVESTMENT
(Million S/)

	Original Plan 1/	2007		2018		2019		2020	2021
		MIB	Executed	MIB	Executed	MIB	Forecast	Forecast	Forecast
National	12,122	170	1	637	224	2,138	500	2,000	3,000
Regional	3,521	225	60	812	274	1,483	450	1,000	1,000
Local	3,627	85	42	1,266	365	2,724	1,550	1,000	670
TOTAL	**19,270**	**479**	**103**	**2,715**	**863**	**6,345**	**2,500**	**4,000**	**4,670**

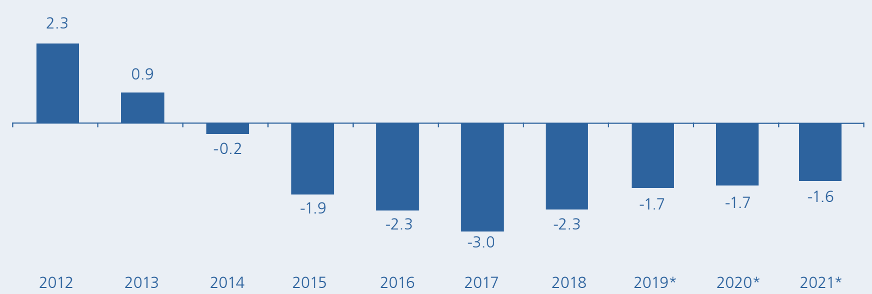
1/ Original plan revised at the end of December 2018.
Source: MEF-SIAF and MEF-FONDES.

Table 23
NON-FINANCIAL PUBLIC SECTOR
(% GDP)

	2018	2019*		2020*		2021*
		IR Sep.19	IR Dec.19	IR Sep.19	IR Dec.19	IR Dec.19
1. General government current revenues	**19.3**	**19.7**	**19.7**	**19.7**	**20.0**	**19.9**
Real % change	*11.2%*	*4.4%*	*4.4%*	*3.6%*	*5.3%*	*3.4%*
2. General government non-financial expenditure	**20.2**	**20.2**	**20.1**	**20.1**	**20.3**	**20.3**
Real % change	*5.3%*	*2.5%*	*1.5%*	*3.1%*	*4.8%*	*3.8%*
Of which						
Current expenditure	*15.3*	*15.6*	*15.5*	*15.4*	*15.5*	*15.5*
Real % change	*4.5%*	*4.2%*	*3.2%*	*2.5%*	*4.4%*	*3.2%*
Gross capital formation	*4.3*	*4.1*	*4.1*	*4.2*	*4.2*	*4.3*
Real % change	*10.6%*	*-1.9%*	*-3.7%*	*4.9%*	*5.9%*	*6.4%*
3. Other	**0.0**	**0.0**	**0.1**	**-0.1**	**-0.1**	**0.2**
4. Primary balance (1-2+3)	**-0.9**	**-0.6**	**-0.3**	**-0.5**	**-0.3**	**-0.2**
5. Interests	**1.4**	**1.4**	**1.4**	**1.5**	**1.4**	**1.5**
6. Overall Balance	**-2.3**	**-2.0**	**-1.7**	**-2.0**	**-1.7**	**-1.6**
Flow of gross debt	*2.0*	*1.8*	*1.9*	*2.1*	*2.1*	*1.5*
Flow of public deposits	*0.3*	*0.4*	*-0.1*	*0.0*	*-0.3*	*0.2*
Other	*0.0*	*-0.2*	*-0.1*	*-0.1*	*0.0*	*0.0*

Memo: The sum of the partial quantities may not exactly match the total due to rounding up.
* Forecast.
IR: Inflation Report.

Graph 45
ECONOMIC BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2012 - 2021
(% GDP)



* Forecast.

32. The **current revenue** projection for 2019 is maintained at 19.7 percent of GDP. The projection considers higher extraordinary income as a result of the fiscal actions and decisions of the Fiscal Court taken so far this year.

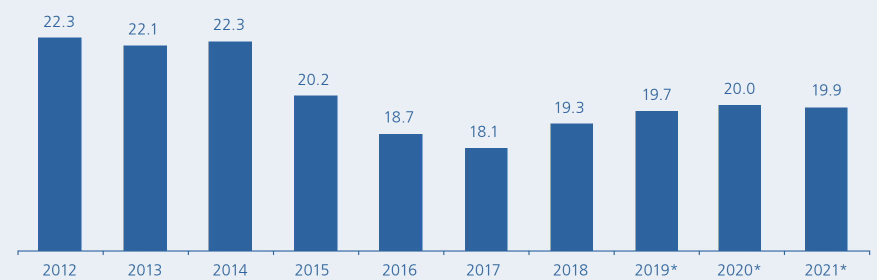
In 2020, revenues would be equal to 20.0 percent of GDP, 0.3 percentage points more than projected in the previous Report. This increase is explained by the extraordinary income related to the sale of an electricity company. In 2021, current revenues are projected to fall 0.1 percentage points to 19.9 percent of GDP, reflecting the normalization of revenue from the income tax. The evolution of revenues is consistent with the recovery of economic activity in the forecast horizon and with the impact of improvements in the control mechanisms of tax administration.

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

	2018	2019*		2020*		2021*
		IR Sep.19	IR Dec.19	IR Sep.19	IR Dec.19	IR Dec.19
TAX REVENUES	**14.5**	**14.6**	**14.8**	**14.8**	**15.1**	**15.1**
Income tax 1/	5.6	5.6	5.8	5.5	5.9	5.7
Value Added Tax	8.2	8.3	8.2	8.4	8.4	8.6
Excise tax	0.9	1.1	1.1	1.1	1.1	1.0
Import duties	0.2	0.2	0.2	0.2	0.2	0.2
Other tax revenues	1.8	1.8	1.9	1.8	1.8	1.8
Tax returns	-2.2	-2.3	-2.3	-2.2	-2.2	-2.1
NON-TAX REVENUES	**4.8**	**5.0**	**5.0**	**4.8**	**4.9**	**4.8**
Contributions to social security	2.2	2.2	2.2	2.2	2.2	2.3
Own resources and transfers	1.5	1.8	1.7	1.7	1.7	1.6
Royalties and likely	0.7	0.6	0.6	0.6	0.6	0.6
Other	0.3	0.4	0.5	0.4	0.4	0.4
TOTAL	**19.3**	**19.7**	**19.7**	**19.7**	**20.0**	**19.9**

Memo: The sum of the partial quantities may not exactly match the total due to rounding up.
1/ Includes revenues by repatriation of capital.
* Forecast.
IR: Inflation Report.

Graph 46
CURRENT REVENUES OF THE GENERAL GOVERNMENT: 2012 - 2021
(% GDP)



* Forecast.

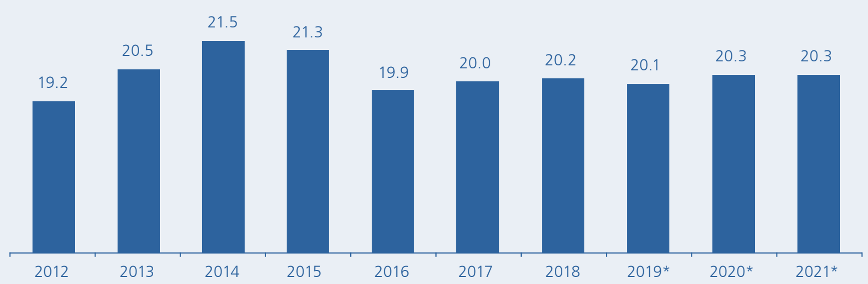
33. The reduction of **non-financial expenditure** in 2019 compared to the September Report reflects the lower expenditure of local governments, while the 0.2 percent increase in expenditure estimated for 2020 reflects mainly the salary increases granted during 2019 as well as those announced for 2020 in the education and health sectors. In 2021, expenditure would remain at 20.3 percent of GDP.

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

	2018	2019*		2020*		2021*
		IR Sep.19	IR Dec.19	IR Sep.19	IR Dec.19	IR Dec.19
CURRENT EXPENDITURE	**15.3**	**15.6**	**15.5**	**15.4**	**15.5**	**15.5**
National Government	10.3	10.5	10.5	10.4	10.6	10.6
Regional Governments	3.4	3.5	3.4	3.3	3.4	3.4
Local Governments	1.6	1.6	1.6	1.7	1.5	1.5
CAPITAL EXPENDITURE	**4.9**	**4.6**	**4.6**	**4.7**	**4.7**	**4.8**
Gross capital formation	**4.3**	**4.1**	**4.1**	**4.2**	**4.2**	**4.3**
National Government	1.5	1.5	1.6	1.6	1.6	1.6
Regional Governments	0.9	0.8	0.8	0.8	0.8	0.8
Local Governments	1.9	1.8	1.7	1.8	1.7	1.8
Other	**0.6**	**0.5**	**0.5**	**0.5**	**0.6**	**0.6**
TOTAL	**20.2**	**20.2**	**20.1**	**20.1**	**20.3**	**20.3**
National Government	12.3	12.5	12.6	12.5	12.7	12.7
Regional Governments	4.2	4.3	4.3	4.1	4.2	4.2
Local Governments	3.6	3.5	3.2	3.5	3.3	3.4

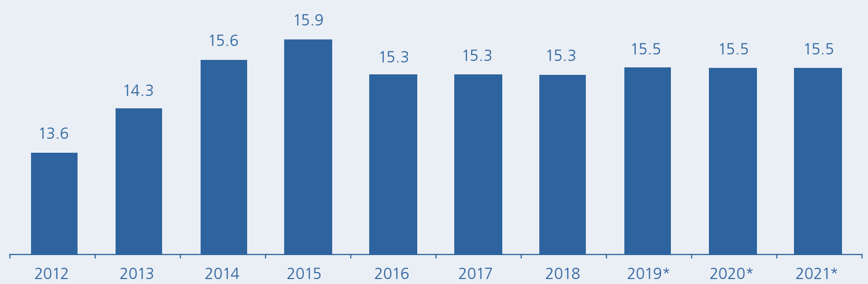
Memo: The sum of the partial quantities may not exactly match the total due to rounding up.
* Forecast.
RI: Inflation Report.

Graph 47
NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT: 2012 - 2021
(% GDP)



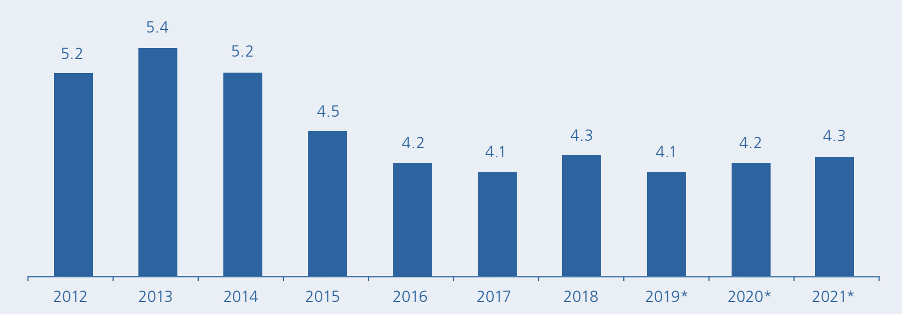
* Forecast.

Graph 48
CURRENT EXPENDITURE OF THE GENERAL GOVERNMENT: 2012 - 2021
(% GDP)



* Forecast.

Graph 49
GROSS CAPITAL FORMATION OF THE GENERAL GOVERNMENT: 2012 - 2021
(% GDP)

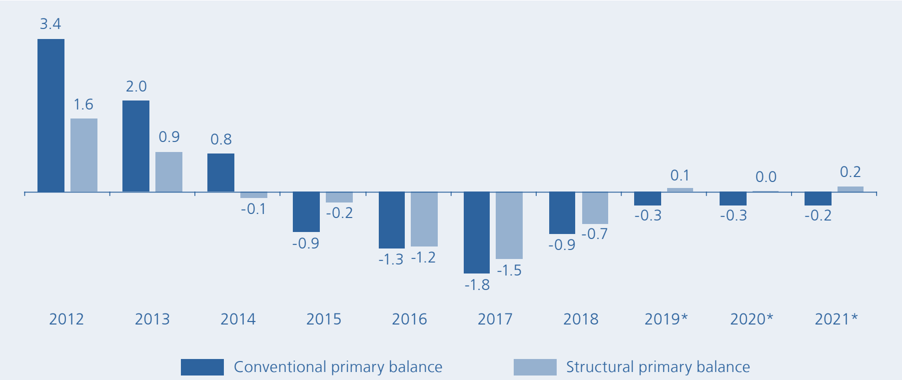


* Forecast.

34. The **primary structural balance** would be positive in 2019 (0.1 percent of the potential output), equal to zero in 2020, and equal to 0.2 percent of the potential output in 2021. This indicator seeks to identify the effects of fiscal policy decisions beyond the effects of factors that are not within government control, such as export prices or the stage of the business cycle and its effect on tax revenue.

    The change observed in a year's structural balance compared to the previous year shows to what extent fiscal policy has been expansionary or contractionary. Between 2018 and 2019, the structural balance increased by 0.8 points of the potential output, as a result of which fiscal policy in 2019 may be characterized as contractionary. In 2020, however, fiscal policy would be expansionary by 0.1 points of GDP, while in 2021 fiscal policy would be contractionary by 0.2 points of GDP.

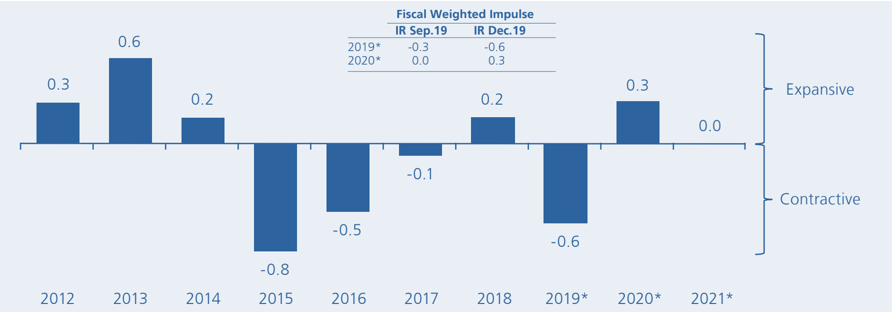
Graph 50
CONVENTIONAL AND STRUCTUTRAL PRIMARY BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2012 - 2021
(% GDP and % Potential GDP)



* Forecast.

35. An alternative method to assess whether fiscal policy is contractionary or expansionary is to weigh changes in the structural income, and current and capital expenditures in terms of their respective expenditure multipliers. The conclusion in this case is the same: that fiscal policy was contractionary in 2019 and will be expansionary in 2020 (0.3 percent of potential GDP), but will be rather neutral in 2021 due to the dynamism of public investment.

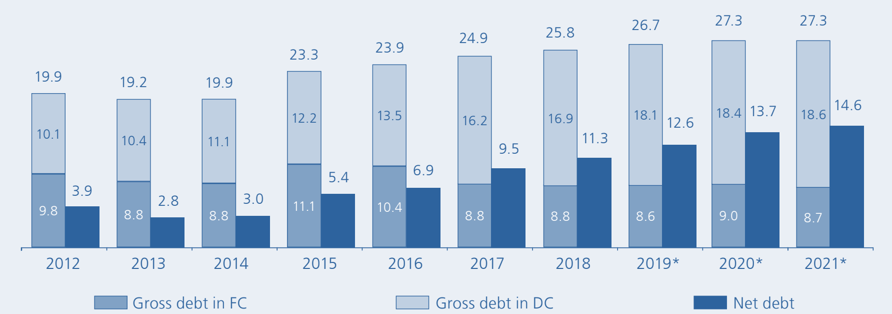
Graph 51
FISCAL WEIGHTED IMPULSE [1/]
(% Potential GDP)



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

36. The **net public debt** would increase from 12.6 percent of GDP in 2019 to 14.6 percent of GDP in 2021. In gross terms, however, the debt would increase at a slower pace, from 26.7 to 27.3 percent, due to the reduction of assets in GDP terms in these period. The increase in the debt is explained by the debt management operation (DMO) carried out in November 2019 (S/ 10.1 billion).

Graph 52
NON-FINANCIAL PUBLIC SECTOR DEBT: 2012 - 2021
(% GDP)

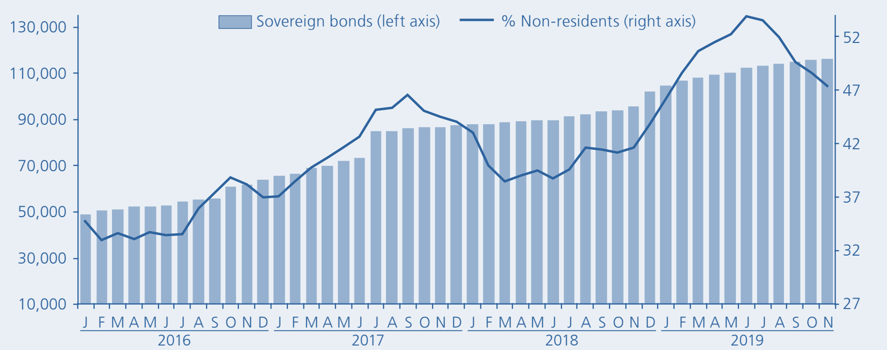


* Forecast.

The debt management operation involved the issuance of the new BTP 2040 bond (for a total of S/ 8.26 billion at a rate of 5.35 percent) and the reopening of BTP 2034 bond (for a total of S/ 1.84 billion at a rate of 4.9 percent). The rate of the BTP 2040 bond was the lowest rate in an issuance of 20-year bonds.

The balance of **sovereign bonds** as of November 2019 was S/ 116.21 billion, S/ 1.11 billion higher than the balance recorded at the end of the third quarter of 2019. On the demand side, the share of non-resident investors was 47 percent of the balance of bonds, non-residents' holdings having declined from S/ 59.32 billion in August 2019 to S/ 55.11 billion in November.

Graph 53
BALANCE OF SOVEREIGN BONDS AND SHARE OF NON-RESIDENT INVESTORS
(Amounts in million S/ and shares in %)



Source: MEF.

Table 26
FINANCIAL REQUIREMENTS OF THE NON-FINANCIAL PUBLIC SECTOR AND ITS FUNDING
(Million S/)

	2018	2019*		2020*		2021*
		IR Sep.19	IR Dec.19	IR Sep.19	IR Dec.19	IR Dec.19
I. USES	**28,425**	**28,971**	**32,521**	**19,345**	**16,976**	**16,913**
1. Amortization	11,488	13,548	19,672	2,949	2,752	2,788
a. External	4,222	3,707	4,506	1,010	744	1,690
b. Domestic	7,266	9,841	15,165	1,939	2,008	1,098
Of which: Recognition bonds	*1,171*	*806*	*892*	*550*	*550*	*550*
2. Overall balance	16,938	15,423	12,849	16,396	14,224	14,125
(Negative sign indicates surplus)						
II. SOURCES	**28,425**	**28,971**	**32,521**	**19,345**	**16,976**	**16,913**
1. Disbursements and other	25,630	29,378	36,918	18,456	19,018	14,935
a. External	5,896	4,256	3,662	6,171	7,204	3,421
b. Bonds	19,734	25,122	33,256	12,285	11,813	11,513
2. Change on deposits and other [1/]	2,795	-407	-4,397	889	-2,042	1,979
Memo:						
% GDP						
Gross public debt balance	25.8	26.5	26.7	27.1	27.3	27.3
Net public debt balance	11.3	13.0	12.6	14.4	13.7	14.6

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

Box 2
DEBT MANAGEMENT OPERATIONS

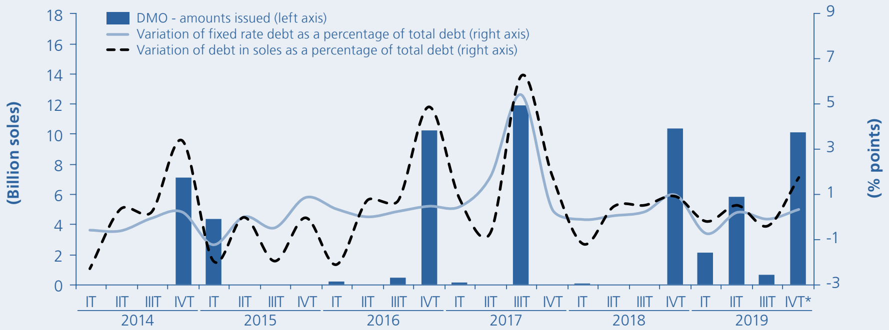
The National Indebtedness System Act of June 2005 defines a debt management operation (DMO) as "the operation carried out with the aim of renegotiating the public debt conditions". In 2013, the MEF established the Strategy for Global Asset and Liability Management (EGIAP in Spanish), which promotes guidelines on the financial strategy to follow in order to develop the public debt securities market and contribute to the responsible and sustainable management of public finances.

Under the EGIAP, an agreement was signed with Euroclear International Securities Depository Center in 2015 to diversify the participation of investors and increase liquidity and the depth of the debt securities market in soles. The agreement has made it easier for non-resident investors to access debt instruments in soles in the international market through transactions in their own currencies.

Several DMOs have been carried out in recent years, with the ones carried out in the international market in 2017 and 2018 for amounts of about S/ 10 billion standing out. Through these operations, which consisted of the issuance of Sovereign Bonds (BTP) to prepay external loans or to exchange and/or buy back BTP and Global Bonds (GB), both the term-to-maturity of the debt of the Non-Financial Public Sector (NFPS) and its composition by currencies and rates have been restructured. At the same time, this has generated new long-term benchmarks in the yield curve of these securities, although the outstanding size of the bonds with benchmarks of 5 years or less has decreased.

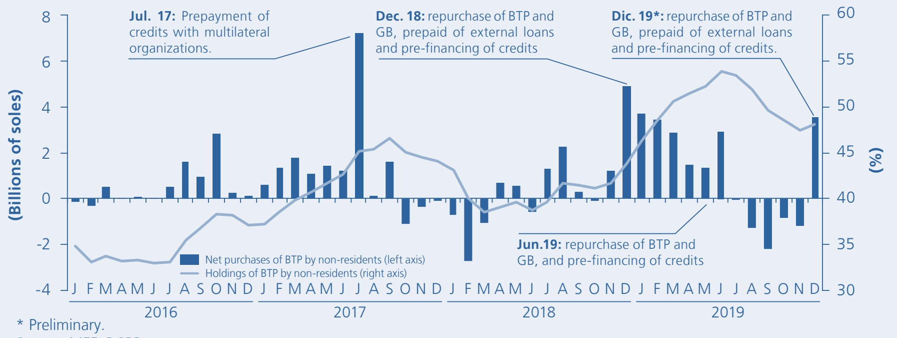
In addition to this, refinancing DMO are carried out with Banco de la Nación each year. Through these DMO, the loans with this entity are repaid in exchange of BTP that are awarded in off-market operations. These credits have been assigned mainly to finance projects of the Ministry of Defense (MINDEF) and, to a lesser extent, projects of the subnational governments.

INDICATORS OF PUBLIC DEBT AND AMOUNTS ISSUED IN DEBT MANAGEMENT OPERATIONS



* Preliminary.
Source: MEF, BCRP.

BTP NON-RESIDENTS AND NET NON-RESIDENT PURCHASES



* Preliminary.
Source: MEF, BCRP.

Six DMOs were carried out during 2019: two with Banco de la Nación, two in the domestic market, and two in the Euroclear platform.

DEBT MANAGEMENT OPERATIONS: 2019 (*)

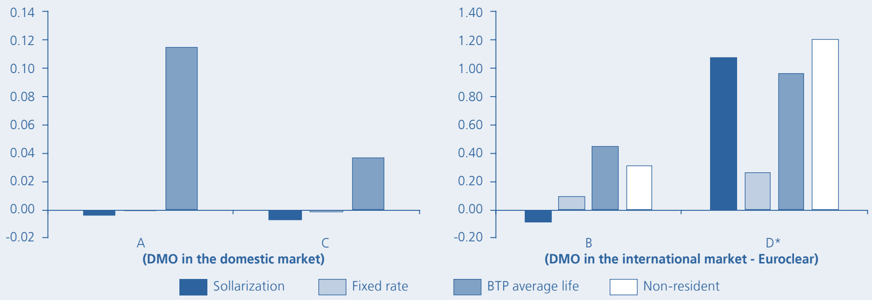
DMO	Issuances[1/]	Withdrawal of debt[1/]	Payments	Debt effect
A. March: Exchange and/ or repurchase of BTP	**Exchange** BTP 2029E S/ 216.6 **Repurchase** BTP 2029E S/ 253.9 BTP 2037 S/ 572.0 **Total S/ 1,042.5**	**Exchange** BTP 2020 S/ 215.2 **Repurchase** BTP 2020 S/ 714.8 BTP 2029 S/ 134.3 **Total S/ 1,064.3**	- Repurchase of BTP: S/ 849,1 millions - Accrued interests S/ 10,1 millions - Fraction of Bonds [2/]	**Reduction of S / 21.8 million in the debt balance, due to:** - Differential market prices between bonds delivered and bonds withdrawn
B. June: Exchange and/ or repurchase of BTP and GB, and pre-financing (Euroclear)	**Exchange** BTP 2040 S/ 4,772.0 **Repurchase** GB 2030 US$ 392.0 **Pre-financing [3/]** BTP 2040 S/ 1,055.5 GB 2030 US$ 358.0 **Total** BTP 2034 S/ 5,827.5 GB 2030 US$ 750.0	**Exchange** BTP 2023 S/ 4,109.6 GB 2025 US$ 36.2 GB 2027 US$ 16.2 GB 2033 US$ 9.7 GB 2037 US$ 25.5 **Repurchase** GB 2025 US$ 110.1 GB 2027 US$ 172.2 GB 2033 US$ 26.7 GB 2037 US$ 9.1 GB 2026 €,2.7 GB 2030 €,1.6 **Total** BTP S/ 4,109.6 GB in US$ US$ 405.7 GB in € €,4.3	- Repurchase of GB in US$ and €: US$ 392 millions - Accrued Interests of GB in US$ and €: U$ 7,8 millions	**Increase of S/ 2.8 billions in the balance of debt, due to:** - Increase in the BTP balance of S / 1.7 billions: S / 662.4 million for the exchange operation and S / 1.1 billion for pre-financing. - Increase in the balance of GB of US$ 339.6 million: US $ 358.0 million for pre-financing and US $ 69.1 million for the repurchase operation, offset by the withdrawal of BG with the issuance of BTP from US $ 87.6 million.
C. July: Exchange and/ or repurchase of BTP and GB	**Exchange** BTP 2029E S/ 62.8 **Repurchase** BTP 2031 S/ 155.0 BTP 2037 S/ 152.4 **Total S/ 370.2**	**Exchange** BTP 2020 S/ 67.2 **Repurchase** BTP 2020 S/ 345.2 **Total S/ 412.4**	- Repurchase of BTP: S/ 345,2 million. - Accrued Interests: S/ 13,3 million. - Fraction of Bonds [4/]	Reduction of S / 42.2 million in the debt balance, due to: - Market price differential between delivered bonds and withdrawn bonds.
D. November-December: Exchange and/ or repurchase of BTP and GB, pre-payment of external credits and pre-financing (Euroclear)	**Exchange** BTP 2040 S/ 6,268.4 **Repurchase** BTP 2034 S/ 222.9 **Pre-payment of external credits** BTP 2034 S/ 265.7 **Pre-financing [3/]** BTP 2034 S/ 1,353.6 BTP 2040 S/ 1,992.3 **Total** BTP S/ 10,102.9	**Exchange** BTP 2023 S/ 467.5 BTP 2024 S/ 4,804.5 GB 2025 US$ 82.9 GB 2027 US$ 11.9 **Repurchase** BTP 2024 S/ 0.3 GB 2025 US$ 21.9 GB 2027 US$ 36.6 **Pre-payment of external credits** CAF US$ 82.0 **Total** BTP S/ 5,272.3 GB US$ 153.3 CAF US$ 82.0	- Repurchase of BTP: S/ 333,8 mil. - Accrued Interest of BTP: S/ 89,9 million. - Repurchase of GB: US$ 68,7 million. - Accrued Interest of GB: US$ 3,4 million. - Prepayment of credits with CAF: US$ 82 million.	Increase of S/ 4.0 billion in the debt balance, due to: - Increase in the BTP balance by S/ 4.8 billion: S/ 3.3 billion for pre-financing, S/ 996.3 million for the exchange operation, S / 265.7 million for the pre-payment of external loans and S / 222.9 million for the repurchase operation; offset by the withdrawal of the bond BTP 2020 of 74.3 million. - Reduction in the balance of GB for S/ 519.1 million and in the balance of external credits by S / 277.7 million.
	Domestic issuance of BTP [5/]	**Repurchase of BTP 2020 [5/]** BTP 2020 S/ 74.3	- Repurchase of BTP 2020: S/ 77,4 million.	

1/ The amounts are expressed in millions and in nominal value.
2/ The amount of S/ 1 585 was paid per fraction of bonds. For each bond unit that is exchanged, an equivalent amount of the new bond is delivered taking into account the market prices of both bonds (for the bond to be delivered, the acrrued interests are considered in the price). Therefore, If a fraction is generated, it is canceled in cash on the settlement date.
3/ The amounts are nominal and the cash flow of the June operation was approximately S/ 2 250 million, while that of December was approximately S/ 3 404 million.
4/ The amount of S/ 3 874 was paid per fraction of bonds.
5/ The repurchase of BTP 2020 was carried out in another DMO temporarily financed with resources from the Public Treasury, which were returned with the domestic issuance of the BTP 2029E.
* Does not include debt management operations with Banco de la Nación.
Source: MEF, BVL, BCRP.

Among the impacts of DMOs on the debt structure of the Non-Financial Public Sector (NFPS), it is worth highlighting that DMOs contribute to improve the term-to-maturity profile –which is reflected in the average life of the debt–; they contribute to the de-dollarization of the NFPS debt –which is reflected in the ratio of debt in domestic currency with respect to the total debt–, and that they contribute to increase the participation of the debt at a fixed rate with respect to the total debt.

Thus, in 2019, the average impact of DMOs (excluding the refinancing operations with Banco de la Nación) was an increase of 0.39 years in the mean life of BTP, an increase of 0.24 percentage points in the de-dollarization ratio, and an increase of 0.09 percentage points in the fixed-rate debt ratio. All of these improvements are reflected in a reduction in the refinancing, foreign exchange, and interest rate risks. On the other hand, in the case of DMO carried out in the international market, the average effect on the participation ratio of BTP tenure of non-residents was 0.83 percentage points.

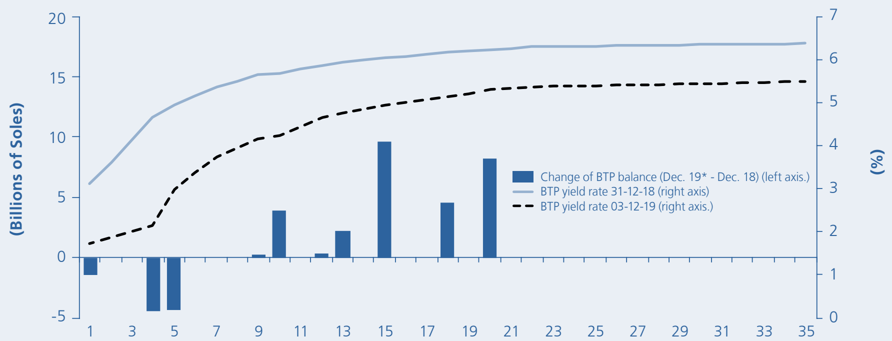
EFFECTS ON DEBT INDICATORS
(% points)



* Preliminary.
Source: Own estimation.

Moreover, as regards the development of the public debt securities market, new benchmarks have been created in the BTP yield curve, so the private sector has a benchmark for its placements, although the depth of the short term BTP market has been reduced. This is reflected in the fact that the amount of BTP with a maturity of less than 5 years as a percentage of the total BTP amount has decreased from 19 percent at the end of December 2018 to 12 percent at the end of November 2019.

YIELD CURVE AND CHANGES IN BALANCE ACCORDING TO MATURITY



* As of Dec 16th, 2019.
Source: MEF.

V. Monetary Policy and Financial Conditions

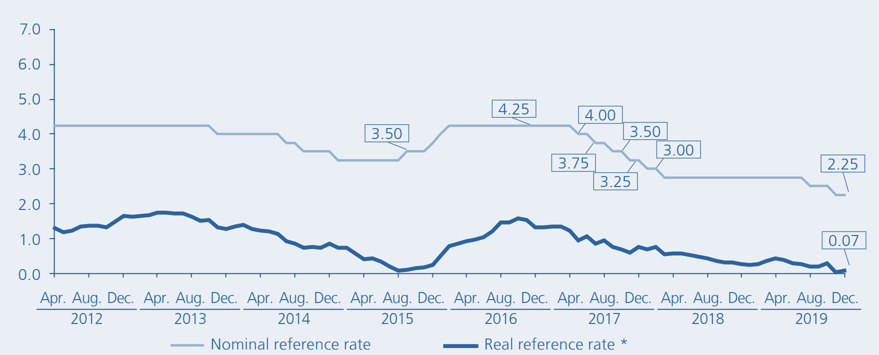
Monetary Policy Actions

37. Between September and December 2019, BCRP **monetary policy** actions continued to be aimed at maintaining an expansionary monetary stance, taking into account the downward bias in the inflation forecast in a context in which economic growth continued to be below its potential.

    Because of this, the Board of BCRP decided to lower the **benchmark interest rate** from 2.50 to 2.25 percent in November, emphasizing in its policy statement that "*This decision does not necessarily imply additional interest rate cuts*". In December, the Board maintained this rate at 2.25 percent. Moreover, the Board's policy statements in both November and December reiterated that "*the Board pays close attention to new information on inflation and its determinants in assessing future changes in the monetary policy stance*".

    As a result of these monetary policy actions, the real interest rate stood at 0.07 percent in December, below its neutral level which is estimated at 1.50 percent. With this decision, BCRP has expanded its monetary stimulus stance in the fourth quarter of the year, thus contributing to ease monetary and credit conditions further, as has been reflected in lower interest rates in all of the credit segments.

Graph 54
NOMINAL AND REAL* REFERENCE INTEREST RATE
(%)



* Exante real rate with expectation of inflation.

38. The Board decided to expand monetary stimulus in the fourth quarter in light of the following factors:

i. Year-on-year inflation is forecast to be around 2.0 percent in the forecast horizon, with a downward bias due to the possibility of a lower-than-expected growth in domestic demand.

ii. Between September and December 2019, the year-on-year inflation rate and trend inflation indicators were within the target range and most of them were below the midpoint of the target range.

iii. **Inflation expectations** remained within the target range, very close to the midpoint of the target range (2.0 percent).

iv. **Economic activity** in the primary industries and public investment showed a weak performance in January-October, offset by activity in the non-primary industries. Business expectations show a slight recovery and indicators of economic activity point to a more gradual closing of the output gap.

v. **Global growth risks** associated with trade tensions have declined.

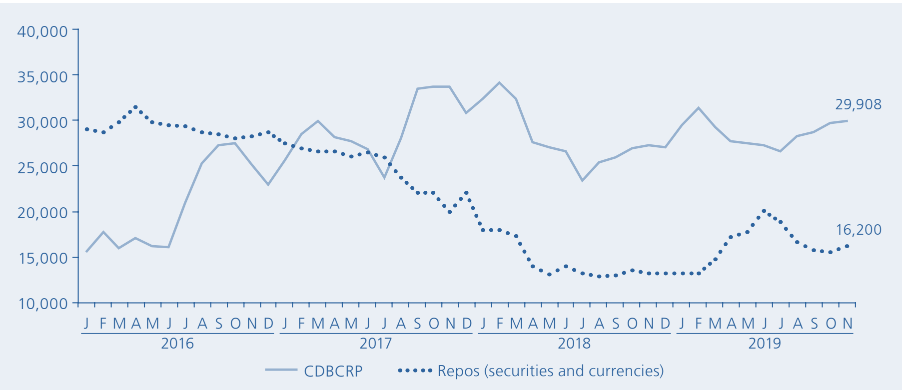
Monetary Operations

39. The **monetary operations of the Central Bank** were oriented to maintaining appropriate levels of liquidity between September and November to reinforce the transmission of the policy interest rate cut into the rest of interest rates in the financial system. To do so, the Central Bank injected liquidity through the net placement of security repos with up to 6-month maturity terms, as well as through the reduction of the balances of term deposits and overnight deposits and through the reduction of public sector deposits at BCRP. These operations were in part offset by the net placement of BCRP Certificates of Deposit. As a result, the balance of repo operations increased from S/ 15.75 billion in September to S/ 16.20 billion at the end of November 2019, while the balance of CDBCRP went from S/ 28.69 billion in September to S/ 29.91 billion in November.

Table 27
BALANCE OF BCRP MONETARY OPERATIONS

	Balance (Mill. S/)			Average interest rate (%)		
	Dec.18	Sep.19	Nov.19	Dec.18	Sep.19	Nov.19
Monetary Sterlization						
1. CDBCRP	27,061	28,691	29,908	2.70	2.62	2.52
2. Overnight deposits	1,802	2,373	1,572	1.50	1.25	1.00
Monetary Injection						
3. Currency repos	7,358	11,450	11,250	3.80	3.88	3.86
4. Security repos	5,950	4,300	4,950	3.95	3.84	3.57
5. Auctions of Treasury funds	4,000	4,100	4,100	4.22	4.31	4.06

Graph 55
BALANCE OF REPO OPERATIONS AND CDBCRP
(Balance in mill. S/)



The balance of repos operations increased to 6.7 percent of the BCRP net assets, from 6.4 percent in September. On the side of the BCRP liabilities, on the other hand, the balance of BCRP certificates of deposit increased their ratio in terms of the BCRP net liabilities to 13.0 percent, from 12.8 percent in September 2019, while the ratio of public sector deposits decreased to 30.1 percent, from 30.4 percent in September 2019, remaining as the most important liability of BCRP.

Table 28
SIMPLIFIED BALANCE SHEET OF THE BCRP*
(As % of Net Assets)

	Dec.18	Sep.19	Nov.19
I. Net assets	**100%**	**100%**	**100%**
Net International Reserves	93.8%	93.6%	93.3%
	(US$ 60,121 mills.)	(US$ 67,986 mills.)	(US$ 66,771 mills.)
Repos	6.2%	6.4%	6.7%
II. Net liabilities	**100%**	**100%**	**100%**
1. Total public sector deposits	**31.3%**	**30.4%**	**30.1%**
In domestic currency	18.5%	18.9%	19.0%
In foreign currency	12.8%	11.5%	11.1%
2. Total financial system deposits	**25.6%**	**29.9%**	**29.0%**
In domestic currency	5.3%	4.9%	4.8%
In foreign currency	20.3%	25.0%	24.3%
3. BCRP instruments	**13.4%**	**12.8%**	**13.0%**
CD BCRP	12.6%	12.2%	12.4%
Overnight and Term deposits	0.8%	0.6%	0.6%
4. Currency	**22.9%**	**19.8%**	**20.0%**
5. Others*	**6.8%**	**7.1%**	**7.9%**

* Includes assets and other accounts.

Interest Rates

40. The rate cut of 25 basis points in the BCRP reference rate was immediately reflected in lower interest rates in the money market. Thus, the interbank interest rate converged quickly to its new reference level of 2.25 percent and the prime rates for overnight to 12 month loans and deposits decreased by 21 and 15 basis points, respectively, on average. Similarly, the rates on deposits and credit decreased by 13 and 15 basis points on average.

The rapid pass-through of the rate cut to the rest of rates reflects in part that financial agents had already anticipated in their expectations a reduction of the reference rate in the fourth quarter of 2019.

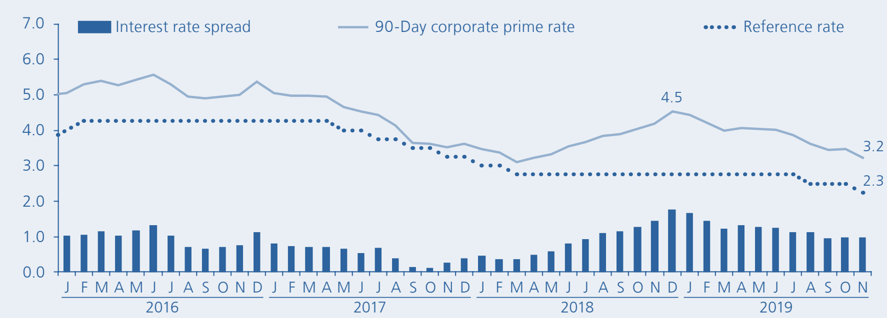
Table 29
INTEREST RATE IN DOMESTIC CURRENCY
(%)

		Dec.18	Mar.19	Jun.19	Sep.19	Nov.19
Pasive	Deposits up to 30-day	3.1	2.6	2.9	2.3	2.2
	On 31 to 180-day term deposits	4.0	3.6	3.4	2.9	2.8
	On 181 to 360-day term deposits	4.2	4.1	3.9	3.4	3.3
Active	90-day corporate prime	4.5	4.0	4.0	3.5	3.2
	Corporates	4.9	4.7	4.5	3.6	3.9
	Large companies	6.4	6.5	6.3	6.2	5.9
	Medium-sized enterprises	9.8	10.3	9.9	9.9	9.7
	Small businesses	18.5	18.5	18.8	18.8	18.3
	Consumer	44.9	40.8	41.1	39.8	39.6
	Mortgage	7.6	7.9	7.7	7.2	7.1

Memo: Annual rates for operations in the last 30 working days.
* As of November 29.
Source: SBS.

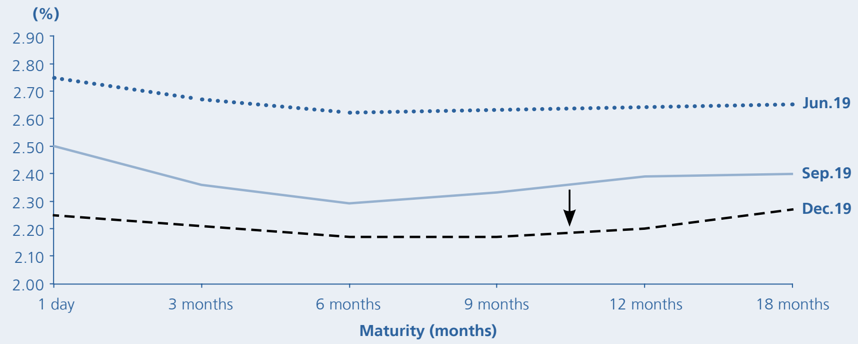
It is worth mentioning that the 90-day corporate prime rate, which shows a declining trend since January 2019, has fallen from its maximum level of 4.52 percent in December 2018 to its current level of 3.22 percent. This conduct is explained mainly by the increase in the balance of BCRP liquidity injection operations and by the greater availability of liquid assets.

Graph 56
INTEREST RATE IN S/: 90-DAY CORPORATE PRIME AND REFERENCE RATE
(%)



41. Between September and December 2019, the **yield curve of CDBCRP** for 3 to 18 month-terms decreased by 15 basis points on average, mainly due to the reduction in the BCRP benchmark interest rate. It is worth highlighting that the structure of BCRP securities in maturity terms of up to 6 months shows an inverted shape, which is explained by expectations of additional cuts in the monetary policy interest rate and by the maturities of CDBCRP concentrated in such maturity terms.

Graph 57
YIELD CURVE OF CENTRAL BANK SECURITIES [1/]



1/ Yield rate in the primary and secondary market.

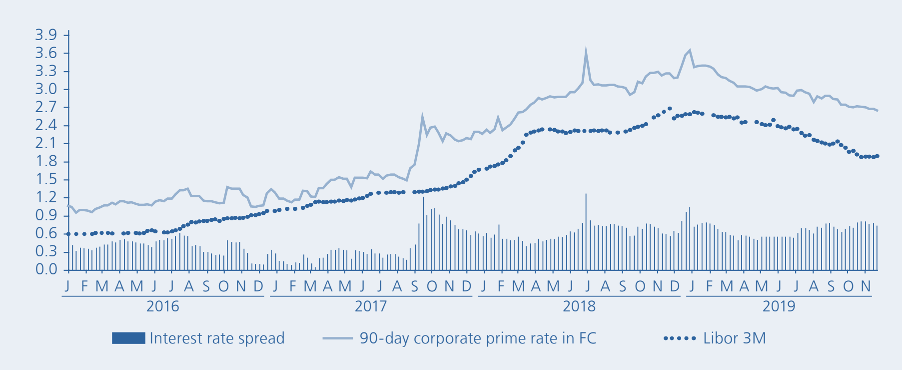
42. Interest rates in dollars also declined, influenced mostly by interest rates in the international money market. The local interbank rate in dollars decreased from 2.00 to 1.75 percent between September and November 2019, showing the same levels as that of the Federal Reserve interest rate. On the other hand, the corporate prime rates for 30-day to 180-day loans and deposits decreased by 10 and 12 basis points, respectively. Moreover, by credit segments, the interest rates showed mixed conducts, the decline in the mortgage rate to its minimum historical level (5.5 percent) standing out, together with the decline in the rates on mortgage loans in domestic currency (7.1 percent).

Table 30
INTEREST RATES IN FOREIGN CURRENCY
(%)

		Dec.18	Mar.19	Jun.19	Sep.19	Nov.19
	Deposits up to 30-day	1.9	1.9	1.7	1.6	1.5
Pasive	On 31 to 180-day term deposits	2.0	2.1	2.0	1.7	1.4
	On 181 to 360-day term deposits	1.9	2.1	1.9	1.5	1.5
	90-day corporate prime	3.6	3.1	2.9	2.8	2.7
	Corporates	4.0	3.7	3.6	3.1	2.9
	Large companies	5.5	5.4	5.6	5.4	5.3
Active	Medium-sized enterprises	6.9	7.4	6.8	7.3	6.7
	Small businesses	9.9	10.1	9.9	8.0	8.6
	Consumer	36.1	35.4	35.2	35.8	36.4
	Mortgage	6.1	6.3	5.9	5.8	5.5

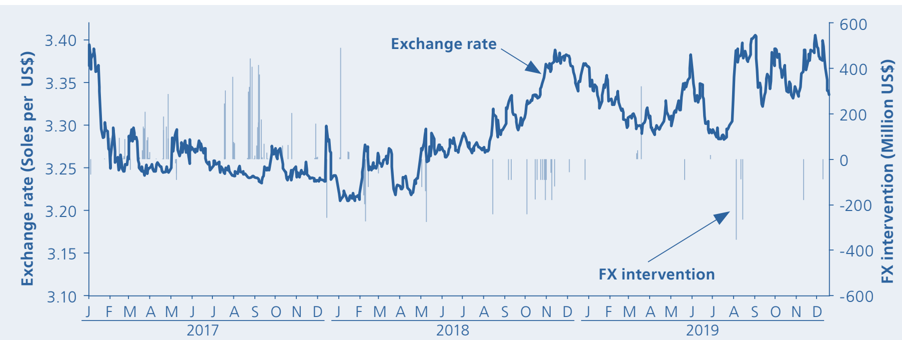
Memo: Annual rates for operations in the last 30 working days.
Source: SBS.

Graph 58
INTEREST RATE IN US$: 90-DAY CORPORATE PRIME AND LIBOR 3-MONTH
(%)



43. Between September and December 2019, the sol appreciated 1.0 percent against the dollar, bringing the exchange rate from S/ 3.370 to S/ 3.336 per dollar as a result of lower risk aversion associated with the reduction of trade tensions between the U.S. and China. Thus, the Peruvian currency shows an accumulated appreciation of 1.0 percent so far this year, while, reflecting a negative performance due to the political and social crises affecting several countries in the region, the average currency depreciation in the region is 11.6 percent. In this context, the Central Bank intervened in the foreign exchange market placing FOREX swaps-sell for a total of US$ 266 million in the fourth quarter of 2019. Year-to-date, the balance of Forex swaps corresponds to these operations (US$ 266 million), which will mature in January and February 2020.

Graph 59
EXCHANGE RATE AND FX INTERVENTION [1/]



1/ Includes Net purchases of US$ in the sopt market and placement of CDLD BCRP, CDR BCRP, and FX swaps.

Table 31
FOREIGN EXCHANGE INTERVENTION

	Trading days	Number of intervention days						SD of the Exchange rate (Annual % chg.)
		Spot Market	Placement of derivatives and indexed instruments	Total (*spot* and/or placement)	% of days with intervention			
					Spot	Instruments	Total	
2015	248	150	203	208	60%	82%	84%	3.9%
2016	250	50	119	134	20%	48%	54%	7.3%
2017	249	55	23	63	22%	10%	26%	4.5%
2018	245	4	27	30	2%	11%	12%	3.4%
2019*	242	4	6	10	2%	2%	4%	4.4%

* As of December 19.

44. Moreover, different behaviors were observed in capital flows in the local exchange market the periods of January-July and August-December 2019. On the one hand, non-resident investors stood out as dollar suppliers in the spot market until July 2019, but showed a demand position for dollars in August-September. So far in 2019, banks' net demand for dollars (US$ 770 million) was offset by the supply of the non-financial sector (US$ 1.41 billion) and by BCRP's net intervention in the foreign exchange market (US$ 640 million). Non-resident investors stood out as suppliers in the spot market and in terms of the demand in the derivatives market to cover their purchases of sovereign bonds, while the AFPs stood out in terms of the demand for dollars in the spot market.

Table 32
FLOWS OF FX MARKET *
(Million US$)

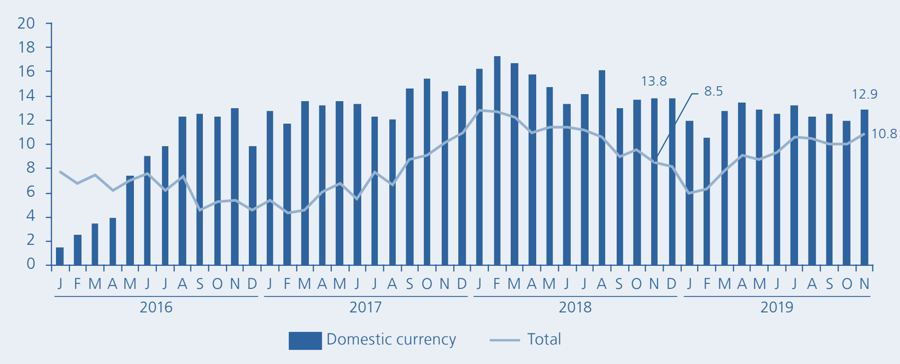
	January-July 2019			August-December 2019**		
	Spot	Derivatives	Total	Spot	Derivatives	Total
Financial Sector (1)	**910**	**-1,280**	**-370**	**-33**	**-367**	**-400**
1. AFP	-2,213	282	-1,931	1,483	837	2,320
2. Non-residents	3,276	-1,562	1,714	-1,296	-1,204	-2,500
3. Financial institutions	-153	0	-153	-220	0	-220
FX intervention of BCRP (2)	**-405**	**-501**	**-906**	**0**	**266**	**266**
Non-financial Sector (3)	**1,912**	**-636**	**1,276**	**631**	**-497**	**134**
Net flow (1)+(2)+(3)	**2,417**	**-2,417**	**0**	**598**	**-598**	**0**

* Positive (negative) means supply (demand).
** As of December 19.

Liquidity

45. Private sector deposits registered a year-on-year growth rate of 12.9 percent in November. By currencies, deposits in soles grew at a year-on-year rate of 10.8 percent, while deposits in dollars grew 7.3 percent, which reflected people's greater preference for saving in domestic currency.

Graph 60
DEPOSITS OF THE PRIVATE SECTOR BY CURRENCY
(Annual % change)



The dollarization ratio of deposits fell from 37.3 percent in September to 36.6 percent in November. This is explained by a decrease in the dollarization ratio of both personal deposits (from 31.5 to 30.8 percent) and business deposits (from 47.7 to 46.7 percent).

In 2020 and 2021, deposits would continue to grow at a higher rate than credit to the private sector, in line with the trend of banks' preference for using local funding observed in recent years.

Table 33
MONETARY AND CREDIT ACCOUNTS OF THE DEPOSITORY CORPORATIONS (END-OF-PERIOD) 1/
(Annual % change)

	Mar.18	Jun.18	Sep.18	Dec.18	Mar.19	Jun.19	Sep.19	Nov.19	Dec.19*	Dec.20*	Dec.21*
Currency in circulation (End-of-period)	10.8	10.3	8.5	7.9	5.3	4.8	5.4	7.0	5.2	6.0	6.0
Deposits in domestic currency	16.7	13.3	13.0	14.1	12.7	12.5	12.5	12.9	11.5	11.1	12.4
Total deposits 1/	12.2	11.5	9.0	8.3	7.8	9.3	10.0	10.8	10.0	10.0	11.0
Broad money in domestic currency	14.9	12.5	11.8	12.1	11.3	10.7	10.8	11.3	10.0	10.0	11.0
Total broad money 1/	12.2	11.4	9.2	8.1	7.4	8.5	9.3	10.4	8.9	8.5	9.5
Credit to the private sector in domestic currency	7.4	9.3	10.1	11.6	11.7	10.7	10.4	10.5	10.5	10.5	10.5
Credit to the private sector 1/	**7.8**	**9.1**	**8.9**	**8.7**	**8.4**	**7.6**	**7.5**	**8.0**	**7.9**	**8.5**	**8.5**

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

Credit to the Private Sector

46. **Credit to the private sector** grew at a year-on-year rate of 8.0 percent in November. By segments, credit to businesses grew 5.9 percent, while credit to individuals grew 11.4 percent. In the segment of personal loans, consumer loans and mortgage loans continued to show higher growth rates (13.0 and 9.0 percent,

respectively), while in the segment of loans to businesses, the types of loans with the higher growth rates were loans to corporations and large companies, as well as loans to small and micro businesses (7.8 and 7.1 percent, respectively). On the other hand, credit to medium-sized companies has shown a slower pace of growth. One of the reasons explaining this is that, with the aim of improving the quality of new loans –which has also reflected in lower credit growth rates in the short term–, banks have been more selective in the process of granting loans in this segment.

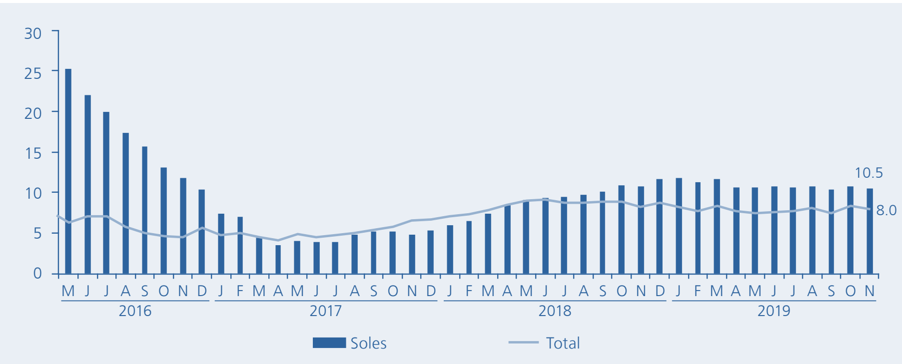
Table 34
TOTAL CREDIT TO THE PRIVATE SECTOR 1/
(Annual growth rate)

	Mar.18	Jun.18	Sep.18	Dec.18	Mar.19	Jun.19	Sep.19	Nov.19
Businesses	**6.7**	**8.0**	**7.4**	**7.1**	**6.4**	**5.3**	**4.9**	**5.9**
Corporate and large companies	8.1	10.6	9.9	9.1	7.2	6.2	6.3	7.8
Medium-sized enterprises	1.9	2.4	2.7	3.8	3.9	1.6	0.1	0.5
Small business and Microbusinesses	8.8	8.5	6.9	5.9	7.0	7.1	6.6	7.1
Individuals	**9.7**	**10.9**	**11.4**	**11.4**	**11.7**	**11.4**	**11.6**	**11.4**
Consumer	10.4	11.9	12.8	13.1	13.5	12.9	13.4	13.0
Car loans	-0.8	-2.9	-1.8	-3.7	2.6	6.9	8.5	10.8
Credit cards	3.8	6.0	8.5	11.9	14.7	14.8	16.0	13.7
Rest	14.8	16.1	15.9	14.7	13.4	12.3	12.3	12.8
Mortgage	8.6	9.4	9.5	9.0	9.1	9.1	9.1	9.0
TOTAL	**7.8**	**9.1**	**8.9**	**8.7**	**8.4**	**7.6**	**7.5**	**8.0**

1/ Balances are valuated at constant exchange rate on December 2018.

47. Credit in soles continues to grow at two-digit rates, while the pace of growth of credit in dollars has moderated due to the greater preference for local funding and due to the fact that interest rates in soles have remained below their historical average levels. Thus, credit in soles grew 10.5 percent, while credit in dollars grew 1.6 percent in November.

Graph 61
CREDIT TO THE PRIVATE SECTOR
(Annual % change)



48. Furthermore, the balance of total credit to the private sector continued to evolve in line with its long-term trend, in line with easing conditions for credit provision.

Graph 62
UNSEASONALLY CREDIT TO THE PRIVATE SECTOR AND TREND

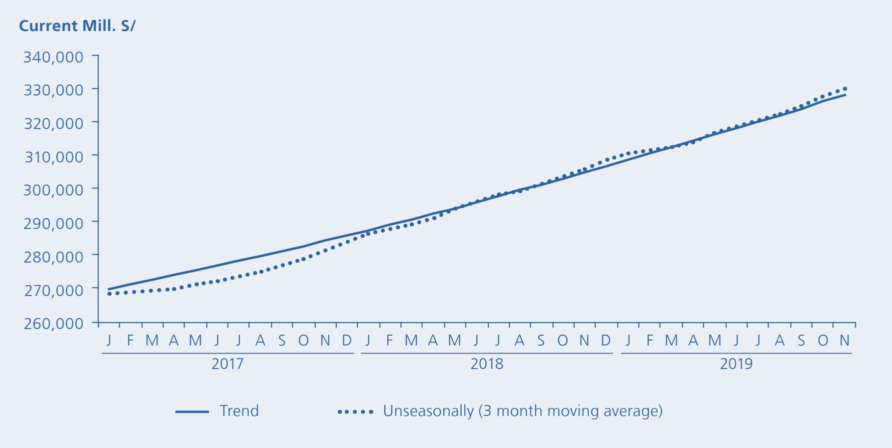


Table 35
CREDIT TO THE PRIVATE SECTOR
(Annual % change)

	Mar.18	Jun.18	Sep.18	Dec.18	Mar.19	Jun.19	Sep.19	Nov.19
Domestic currency	7.4	9.3	10.1	11.6	11.7	10.7	10.4	10.5
Foreign currency	8.6	8.7	6.0	1.9	0.6	0.2	0.3	1.6
Total	**7.8**	**9.1**	**8.9**	**8.7**	**8.4**	**7.6**	**7.5**	**8.0**

1/ Balances are valuated at constant exchange rate on December 2018.

49. As of November 2019, depository institutions' credit to the private sector in domestic currency increased by S/ 23.26 billion in year-on-year terms. This increase has been financed mainly by the increase registered in private sector deposits (S/ 20.03 billion).

Banks increased their deposits at the Central Bank (S/ 531 million in reserve funds and S/ 3.56 billion in other deposits) and acquired more BCRP securities (S/ 1.59 billion). This was offset by means of repo operations amounting to S/ 2.67 billion and by the BCRP auctions of Public Treasury deposits (S/ 900 million). In addition to this, the rest of the operations of depository institutions contributed with S/ 4.38 billion to the funding of credit in domestic currency.

Table 36
SOURCES EXPANSION OF CREDIT TO THE PRIVATE SECTOR IN SOLES [1/]
(Million S/)

	Balance	Flows		
	Nov.19	**2018**	**Acum.2019**	**Nov.19/Nov.18**
Credit to the private sector	**244,171**	**23,382**	**19,912**	**23,259**
1.- Total liabilities	**224,968**	**17,812**	**14,884**	**19,785**
a.- Non-financial Private sector	177,778	19,105	15,266	18,942
Deposits	*175,528*	*19,386*	*15,780*	*20,031*
Other securities	*2,250*	*-281*	*-514*	*-1,089*
b.- Non-financial Public sector 2/	21,253	-141	-164	1,036
c.- Other financial institutions 3/	20,613	-3,133	115	-96
d.- Non-residents	5,324	1,980	-333	-97
2.- BCRP operations	**-27,253**	**-1,265**	**-388**	**-2,111**
a.- Reserve requirements	-10,865	-491	502	-531
b.- Other deposits 4/	-9,951	64	-1,846	-3,564
c.- Securities	-26,406	4,773	-1,767	-1,589
d.- Repos	15,868	-8,412	2,622	2,672
Securities	*4,950*	*530*	*-1,000*	*-1,150*
Currency	*10,918*	*-8,942*	*3,622*	*3,822*
e.- Deposits auctions of Public sector	4,100	2,800	100	900
3.- Public sector financing	**-25,760**	**-3,055**	**881**	**1,203**
4.- Rest 5/	**72,216**	**9,889**	**4,535**	**4,383**

Credit to the private sector = (1)+(2)+(3)+(4).
1/ Balance with positive signs means liabilities, flows with positive signs means source of expansion of credit to the private sector.
2/ Excludes auctions of Public Treasury deposits and Banco de la Nación in charge of the BCRP.
3/ Includes liabilities with mutual funds, AFPs, COFIDE, and Mivivienda.
4/ Includes term, overnight, and special deposits.
5/ Includes capital, provisions, exchange position, equity and other liabilities with positive sign and other assets with negative sign.

Dollarization of Credit and Liquidity

50. The ratio of dollarization of credit measured at a constant exchange rate was 26.7 percent as of November 2019, lower than in December 2018 (28.2 percent). This reduction reflects mainly the lower dollarization ratio of credit to households, which fell from 10.5 to 9.2 percent in the same period. Moreover, the ratio of dollarization

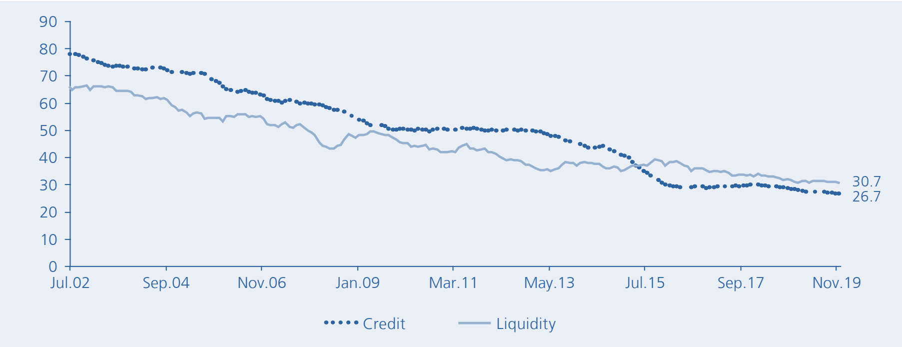
also continued to show a downward trend in the segment of mortgage loans (declining from 16.6 percent to 13.9 percent in November), in line with the trend observed in recent years after the implementation of the credit de-dollarization program.

Table 37
RATIO OF DOLLARIZATION OF CREDIT TO THE PRIVATE SECTOR 1/
(%)

	Mar.18	Jun.18	Sep.18	Dec.18	Mar.19	Jun.19	Sep.19	Nov.19
Businesses	**40.5**	**40.5**	**40.0**	**39.1**	**38.7**	**38.8**	**38.5**	**38.1**
Corporate and large companies	54.5	54.4	53.7	52.3	51.7	52.3	51.8	51.4
Medium-sized enterprises	41.2	41.4	40.5	40.6	40.4	40.2	39.8	39.2
Small business and Microbusinesses	6.7	6.6	6.6	6.3	6.0	5.8	5.8	5.8
Individuals	**11.8**	**11.4**	**11.1**	**10.5**	**10.1**	**9.8**	**9.5**	**9.2**
Consumer	6.8	6.8	6.7	6.5	6.4	6.4	6.3	6.2
Car loans	18.1	16.4	15.1	14.2	13.6	14.4	15.0	14.7
Credit cards	7.3	7.4	7.5	7.3	7.3	7.5	7.6	7.7
Rest	6.0	6.0	5.9	5.7	5.5	5.4	5.2	5.1
Mortgage	19.1	18.3	17.5	16.6	15.8	15.1	14.4	13.9
TOTAL	**29.7**	**29.5**	**29.0**	**28.2**	**27.6**	**27.4**	**27.0**	**26.7**

1/ Balances are valuated at constant exchange rate on December 2018.

Graph 63
RATIO OF DOLLARIZATION OF CREDIT AND LIQUIDITY: 2002 - 2019
(%)



Delinquency Rate

51. The ratio of non-performing loans was 3.45 percent in November, 0.04 percentage points lower than in June 2019. It should be pointed out that the ratio of non-performing loans in credit to businesses has fallen by 0.07 percentage points compared to December 2018, while the ratio of non-performing loans in personal loans has increased by 0.03 percentage points.

Table 38
NON-PERFORMING LOANS INDEX
(%)

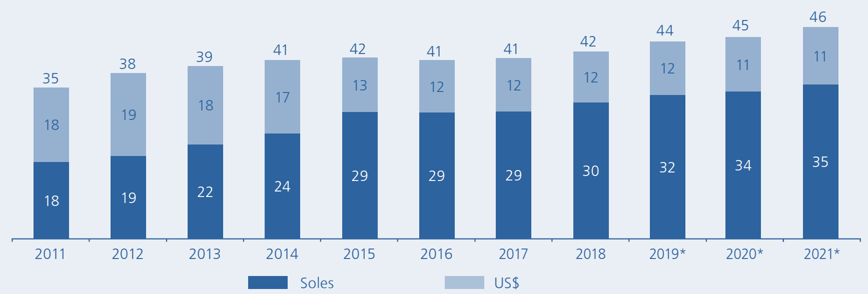
	Mar.18	Jun.18	Sep.18	Dec.18	Mar.19	Jun.19	Sep.19	Nov.19
Businesses	**3.48**	**3.54**	**3.62**	**3.42**	**3.60**	**3.69**	**3.70**	**3.62**
Corporate and large companies	0.54	0.57	0.60	0.55	0.61	0.64	0.57	0.57
Medium-sized enterprises	7.38	7.46	7.75	7.53	8.02	8.28	8.67	8.45
Micro and Small businesses	7.53	7.75	7.83	7.35	7.44	7.50	7.52	7.37
Individuals	**3.27**	**3.28**	**3.15**	**3.13**	**3.07**	**3.15**	**3.17**	**3.18**
Consumer	3.60	3.59	3.32	3.21	3.16	3.26	3.28	3.31
Credit cards	4.89	4.84	4.16	3.88	3.87	4.09	4.16	4.19
Vehicular	6.14	5.59	5.30	4.45	3.92	3.97	3.97	3.90
Rest	2.60	2.68	2.68	2.70	2.66	2.69	2.68	2.72
Mortgage	2.86	2.89	2.92	3.03	2.96	2.99	3.02	2.99
Average	**3.40**	**3.45**	**3.45**	**3.32**	**3.41**	**3.49**	**3.50**	**3.45**

Forecast for Private Sector Credit Growth

52. In the forecast horizon, **credit to the private sector** is expected to grow at higher rates than the nominal GDP and, therefore, the credit-to-GDP ratio would increase from 42 percent in 2018 to 46 percent in 2021. This forecast takes into account loose monetary and financial conditions as well as a recovery in the pace of growth of domestic demand in the same period.

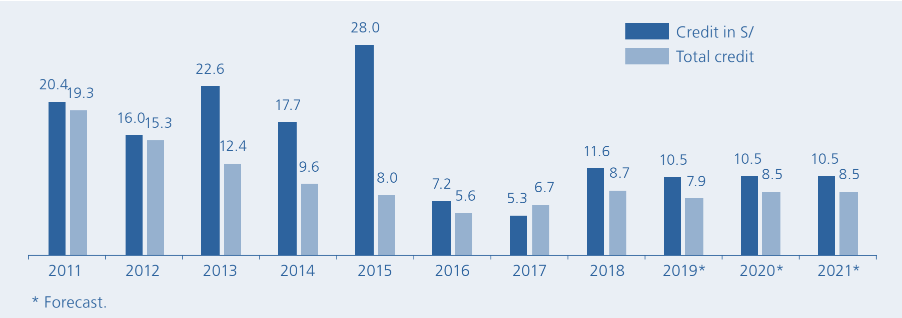
    Moreover, credit to the private sector in domestic currency is projected to grow 10.5 percent in 2019, 2020, and 2021. Thus, total credit would grow 7.9 percent in 2019 and 8.5 percent in 2020 and 2021. As a result, the credit dollarization ratio would continue to decline, reaching a level of 24 percent by the end of 2021. This growth is explained by a boost in consumption and domestic demand as a result of the acceleration of economic activity in the coming years.

Graph 64
RATIO CREDIT/GDP
(%)



* Forecast.

Graph 65
CREDIT TO THE PRIVATE SECTOR
(% change)



Global Financing

53. Even though activity in the private sector is financed mainly through credit granted by depository institutions, there are other financing alternatives executed mainly through institutional investors and the capital market. All of these elements as a whole are called total financing to the private sector or global financing.

Table 39
GLOBAL FINANCING OF PRIVATE SECTOR [1/]

	Balance (Mill. S/)				Change (%)				
	Nov.19 [2/]	2019*	2020*	2021*	2018	Nov.19/Nov.18	2019*	2020*	2021*
Credit of Depository Corporations	**333,041**	**337,061**	**365,752**	**396,794**	**8.7**	**8.0**	**7.9**	**8.5**	**8.5**
Soles	244,171	247,716	273,726	302,467	11.6	11.6	10.5	10.5	10.5
US dollars (Mill. US$)	26,371	26,512	27,307	27,990	1.9	2.4	1.5	3.0	2.5
Dolarization (%)	*26.7*	*26.5*	*25.2*	*23.8*					
Credit of the other financial institutions and other [3/]	**43,390**	**42,366**	**45,350**	**48,366**	**0.2**	**10.9**	**7.0**	**7.0**	**6.7**
Soles	26,844	26,267	28,026	29,068	6.8	18.8	13.4	6.7	3.7
US dollars (Mill. US$)	4,910	4,777	5,141	5,726	-7.8	0.1	-1.9	7.6	11.4
Dolarization (%)	*38.1*	*38.0*	*38.2*	*39.9*					
Private indebtedness debt	**93,323**	**92,268**	**93,026**	**93,160**	**-5.2**	**0.2**	**-0.9**	**0.8**	**0.1**
(Mill. US$)	27,692	27,379	27,604	27,644	-5.2	0.2	-0.9	0.8	0.1
Short-term (Mill. US$)	3,826	3,826	3,826	3,826	-3.2	-6.2	-6.2	-	-
Medium- and long-term (Mill. US$)	23,867	23,554	23,779	23,818	-5.5	1.3	-0.0	1.0	0.2
TOTAL	**469,754**	**471,695**	**504,128**	**538,321**	**4.7**	**7.3**	**6.0**	**6.9**	**6.8**
Soles	276,124	279,052	306,870	336,662	11.4	13.7	12.1	10.0	9.7
US dollars (Mill. US$)	57,457	57,164	58,534	59,839	-2.8	-0.7	-1.8	2.4	2.2
Dolarization (%)	*41.2*	*40.8*	*39.1*	*37.5*					

1/ Balances are valuated at constant exchange rate on December 2018.
2/ Preliminary data for private external indebtedness.
3/ Comprises financing of AFP, mutual funds, insurances financial leasing companies (85.1 percent), and other financial societies as COFIDE and Edpymes (14.9 percent).
* Forecast.

As of November 2019, total financing to the private sector grew 7.3 percent, a higher growth rate than that registered in 2018 (4.7 percent). The major component of this expanded financing was the credit granted by deposit-making companies, with a balance of S / 333.04 billion in that month. The second largest component was direct financing from companies abroad, with a balance of US$ 27.69 billion (S/ 93.32 billion) in the month.

Total financing to the non-financial private sector (credit from financial intermediaries, funding from the local capital market, and foreign debt) is expected to accelerate its annual growth rate from 4.7 percent in 2018 to 6.0 percent in 2019, to 6.9 percent in 2020, and to 6.8 percent in 2021. In relative terms, credit from depository institutions would continue to be the most dynamic source of credit, showing growth rates of 7.9, 8.5, and 8.5 percent in 2019, 2020, and 2021, respectively. Credit from institutional investors would grow at an annual rate of about 7 and 6.7 percent in 2020 and 2021, mainly due to AFPs and insurance companies.

Box 3
CREDIT CONDITIONS AND RISK SCENARIOS FOR GDP GROWTH

Value at Risk (VaR) is a financial indicator used to measure the risk of extreme losses for an investment, given market conditions over a set period of time. This metric serves as a risk tolerance guide for investors and as a guide for regulators to determine how much to provision to cover potential losses.

This method has also been adapted to calculate losses in GDP growth, which has been denominated Growth at Risk (GaR)[2]. The results obtained through this method can serve as a reference for economic authorities to make decisions that reduce the probability of falling into risk or recession scenarios due to financial shocks. The application of this methodology to the Peruvian case[3] is discussed in this box.

GaR Estimation for Peru

The GaR method estimates the role of the GDP growth distribution in a t horizon through different percentiles α. Regressions by percentiles[4] are estimated to find the link between different percentiles of economic growth in h quarters onwards with the current values of observed growth and with financial risk measures. A sample of quarterly data from 1997 to date is used to have a large sample of episodes with high and low growth rates and with a variety of scenarios in terms of financial conditions.

In line with the theoretical literature on the subject that says that financial restrictions have a non-linear impact on the evolution of the real sector, the GaR considers the effect of financial factors on cyclical fluctuations. Thus, during normal situations, economic agents are not constrained by access to financing, and investment and production decisions are in line with each company's productivity. However, in times when there are restrictions on access to financing, the link between financial conditions and real variables such as investment and output is stronger, since only the companies with better financial health can increase their production and investment.

The graph below shows the distribution of GDP growth. In line with the VaR literature, we can find different risk scenarios with different probabilities of occurrence. We can also estimate the probability that the economy will register a negative growth rate, which is below 5 percent.

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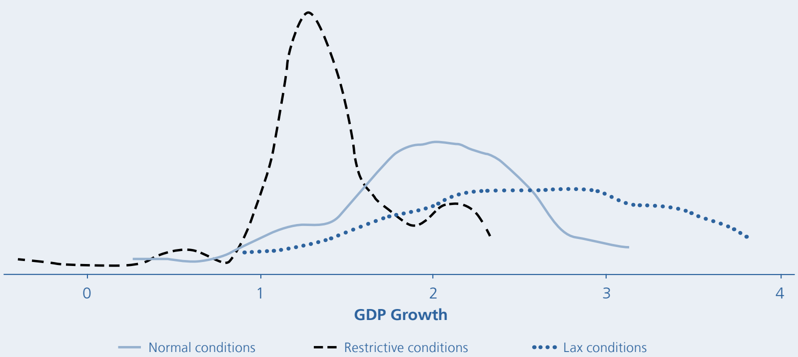
2 See Adrian, Boyarchenko, and Giannone (2019).

3 For further detail, see Gondo (2019).

4 See Koenker and Hallock (2001).

In line with the results obtained for the United States, financial conditions also affect the risk scenarios in the tail of the distribution of Peru's GDP. The graph shows how the distribution of GDP growth changes when slack and restrictive financial conditions are considered. The most noticeable changes are observed at the extremes of the distribution; that is, in the probability of falling into low growth scenarios. Scenarios of excessively loose credit growth (see dashed line) could generate an accumulation of financial vulnerability and increase the probability of a fall in GDP growth. However, if credit is channeled productively, the probability of occurrence of scenarios corresponding to the positive tail of the distribution increases.

ESTIMATED DISTRIBUTION OF GDP GROWTH
(Scenarios of financial conditions)

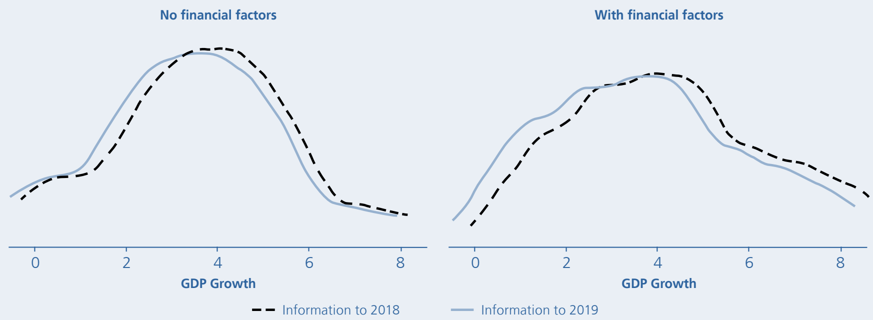


Recent Evolution of the Risk Scenarios that Could Affect the Projection

The following graphs compare the estimated annual GDP growth distribution in 2020 using available information for two different periods: late 2018 and mid-2019. The left panel shows the distributions without considering financial risks, while the right panel shows the distributions that do consider financial factors as potential sources of risk for growth. Risk factors include the growth of total credit, prices, and the returns of domestic financial assets, among others. We find that there is not much difference between both panels, since Peru is currently in a neutral financial position, with an aggregate growth of sustainable credit. Moreover, if we compare the two different periods, the distribution with updated information shows a shift in the distribution towards lower growth values and a downward bias, in line with a lower dynamism of economic activity in the first half of the year as well as a downside risk balance for inflation and the output gap in the forecast horizon.

The extreme risk scenarios with low probability of occurrence (5 percent) also show a downward revision of GDP growth rates, in line with recent developments. Thus, it is estimated that with a probability of 5 percent, GDP would grow 0.9 percent in an extreme risk scenario.

DISTRIBUTION OF GDP GROWTH IN 2020

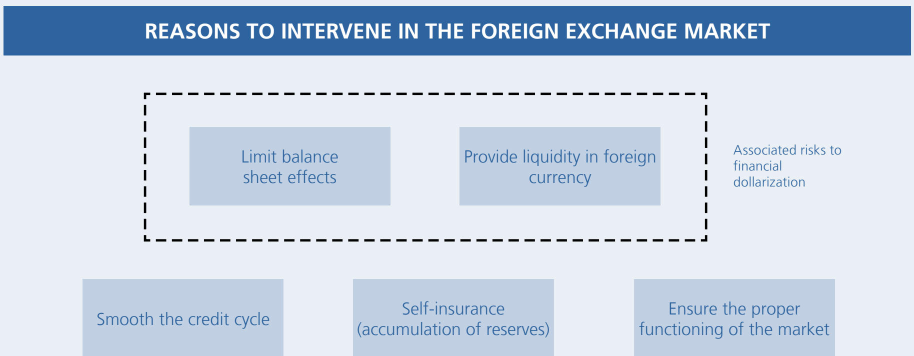


Box 4

FOREIGN EXCHANGE INTERVENTION AND INFLATION TARGETING

The potential benefits of foreign exchange intervention in countries with inflation targeting schemes are discussed in this box on the basis of the recent research carried out by the International Monetary Fund (IMF) and the Bank for International Settlements (BIS). The IMF is developing an Integrated Policy Framework[5] that includes foreign exchange intervention as a key instrument to increase the autonomy of monetary policy in fairly deep currency markets.

Likewise, the BIS[6] recognizes the importance that the use of foreign exchange intervention has had in the emerging economies to deal with the challenges arising from excessive capital flow fluctuations and the exchange rate volatility associated with them. These challenges have increased in recent years due to near-zero monetary policy rates in the developed countries and to the large-scale purchases of assets in the major advanced economies, as well as due to the normalization of monetary policy and the subsequent rise of interest rates in some of them.



In Peru, foreign exchange intervention has been a key monetary policy tool used by BCRP to offset the risks associated with financial dollarization, limit the impact of capital flows on domestic monetary and credit conditions, and moderate the credit cycle. Thus, foreign exchange intervention has been used with the aim of reducing the excessive volatility of the exchange rate that could have negative effects on the economy. Through this monetary policy framework, BCRP has been able to make inflation in the country one of the lowest and least volatile in the region. Moreover, in periods of high volatility of capital flows, foreign exchange intervention has allowed BCRP to:

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5 Gopinath, Gita (2019), "A Case for an Integrated Policy Framework". Speech prepared to be delivered at the Jackson Hole Economic Policy Symposium, available at: https://www.kansascityfed.org/~/media/files/publicat/sympos/2019/jackson%20hole%20manuscript_final.pdf?la=en

6 BIS (2019), "Annual Economic Report", Chapter II. Available at: https://www.bis.org/publ/arpdf/ar2019e.htm

1) Limit balance sheet effects: Reducing the volatility of the exchange limits the effects that an abrupt increase in the exchange rate can have on the solvency of firms with high debts in dollars. This may generate a domino effect in the chain of payments and affect people in general.

2) Provide liquidity in foreign currency to the financial system in episodes of stress.

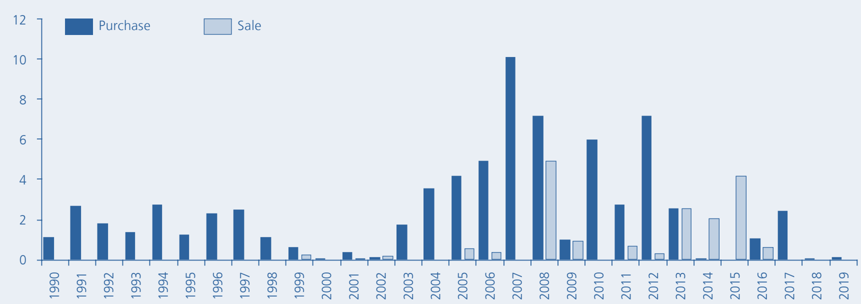
3) Smooth the credit cycle: in periods of capital inflows, currency appreciation generates looser financial conditions, which encourages the growth of credit and asset prices, such as property prices. Forex intervention reduces the sensitivity of the economy to capital flows and associated exchange rate fluctuations, thereby mitigating the creation of financial vulnerabilities.

4) Generate a self-insurance through the preventive accumulation of international reserves, which ensures the economy's access to international financing and reduces its cost.

5) Ensure the proper functioning of the market: In some situations, the speculative behavior of some economic agents causes the exchange rate to move away from its fundamentals.

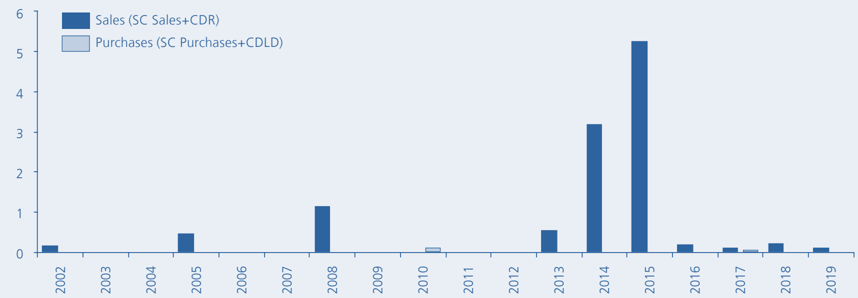
BCRP has traditionally intervened in the forex market through purchases and sales of dollars in the spot market, which has allowed it to accumulate international reserves during periods of boom in commodity prices and capital inflows (2004-2007 and 2010-2012). These reserves were then used to offset the impact of the global financial crisis and international uncertainty on local financial conditions (2008-2009 and 2013-2015).

FOREIGN EXCHANGE INTERVENTION OF BCRP
(%)



Additionally, by increasing the use of foreign exchange derivatives by non-resident investors, exchange intervention instruments other than net purchases of dollars in the spot market have also been used as from 2002 to reduce exchange rate pressures. These indirect intervention instruments include the *Certificados de Depósito Reajustables* (CDR) –Certificates of Deposit Indexed-to-the Exchange rate) since 2002, *Certificados de Depósito Liquidables en Dólares* (CDLD) –Certificates of Deposit Payable in Dollars– since 2010, and the forex swaps since 2014.

BALANCE OF BCRP EXCHANGE INSTRUMENTS
(% GDP)



Empirical evidence shows that foreign exchange intervention has been effective in smoothing movements in the exchange rate and have thus reduced excessive foreign exchange volatility. For example, by means of a Bayesian estimation of a state-space model for the exchange rate returns, Castillo, Montoro, Morán and Pérez (2019)[7] assess the effectiveness of the BCRP intervention empirically for the 2005-2016 period. The results show that forex intervention, both in the spot market and through other instruments, has had a statistically significant effect and with the expected signs, so it has been effective. In addition, forex intervention also generates the expected effects of reducing exchange rate volatility[8].

The role that forex intervention can play in monetary policy management in the emerging economies is not only being recognized by multilateral organizations such as the IMF and the BIS, but also by the Academia, which in recent years has produced a large number of investigations that show that when financial markets are imperfect and no too developed, forex intervention is an unconventional and macro-prudential monetary policy instrument, which has significant effects on financial stability and on the effectiveness of monetary policy. For more information on this subject, see, for example, Céspedes, Chang, and Velasco (2017)[9] and Xavier Gabaix and Matteo Maggiori (2015)[10].

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7 Castillo, Montoro, Morán y Pérez (2019): "Estimación de la efectividad de la intervención cambiaria en el Perú: Un enfoque bayesiano" BCRP, published manuscript

8 See also other empirical studies on the Peruvian case, such as Arena and Tuesta (1999): "El objetivo de la intervención del banco central: el nivel del tipo de cambio, la reducción de la volatilidad cambiaria o ambos?: Un análisis de la experiencia peruana 1991-1998. Revista de Estudios Económicos, 3."; Shiva (2003): "Intervención cambiaria y determinación del tipo de cambio en el corto plazo: la evidencia peruana, Universidad del Pacífico, Apuntes 52-53."; Humala and Rodríguez (2009), "Foreign exchange intervention and exchange rate volatility in Peru, BCRP, Documento de Trabajo No 2009-008."; Mundaca (2011): "How does public information on central bank intervention strategies affect exchange rate volatility?, the World Bank - Policy Research Working Paper 5579."; Rossini et al. (2013): "Flujo de capitales, política monetaria e intervención cambiaria en el perú. Revista de Estudios Económicos, 25, 39-50."; Rossini and Serrano (2013): "Foreign exchange interventions in Peru, BCRP, Documento de Trabajo No 2013-016.".

9 Financial Intermediation, real exchange rates and Unconventional policies in an Open Economy, In Journal of International Economics 109 (2017), S76-S86.

10 International Liquidity and Exchange rate Dynamics, in The Quarterly Journal of Economics (2015), 1369–1420.

Box 5
EFFECT OF EXPANSIONARY MONETARY POLICY ON INTEREST RATES IN THE FINANCIAL SYSTEM

In order to implement an expansionary monetary policy, from April 2017 to November 2019 BCRP reduced its benchmark interest rate from 4.25 to 2.25 percent. Thus, as of November, the real interest rate is 0.07 percent, a rate level well below the natural equilibrium rate estimated at 1.50 percent. This measure is consistent today with a year-on-year inflation rate of around 2 percent –within the target range (1 to 3 percent)–, as well as with one-year ahead inflation expectations within the target range and with a negative output gap that is expected to close gradually in the forecast horizon.

The expansionary monetary policy implemented through the reduction of the policy rate is transmitted in the same direction to the rest of nominal interest rates, which implies looser financial conditions. This box quantifies the monetary policy rate pass-through to the other rates in the financial system.

First, the table below shows the evolution of the most relevant interest rates on loans since April 2017. As we can see, all of these rates also follow a downward trajectory, in line with the easing of monetary conditions in soles. This is a first indication of the reduction in the cost of credit in different market segments.

INTEREST RATES ON LOANS IN DOMESTIC CURRENCY 1/
(%)

	Apr.17	Dec.17	Dec.18	Mar.19	Jun.19	Oct.19	Nov.19	Average Hist.*	Variation Acum. Nov. 19 (Basic Points)			
									Month	Dec.18	Dec.17	Apr.17
Monetary												
Legal Interest Rate	4.25	3.25	2.75	2.75	2.75	2.50	2.25	3.7	-25	-50	-100	-200
Interbank	4.26	3.26	2.76	2.75	2.77	2.51	2.25	3.7	-19	-44	-94	-201
Corporate Prime												
3 Months	5.0	3.6	4.5	4.0	4.0	3.5	3.2	4.5	-26	-130	-41	-174
Credit												
Corporate	5.9	4.0	4.9	4.7	4.5	3.6	3.9	5.4	36	-96	-9	-197
Big Companies	7.4	6.2	6.4	6.5	6.3	6.1	5.9	7.0	-15	-50	-31	-151
Medium-sized enterprises	10.4	9.7	9.8	10.3	9.9	9.9	9.7	10.4	-18	-14	2	-69
Small businesses	20.3	19.8	18.5	18.5	18.8	18.3	18.3	21.2	-2	-24	-150	-206
Micro enterprises	36.8	36.3	32.7	33.3	33.2	32.8	32.3	33.6	-54	-42	-401	-450
Consumer	45.8	48.6	44.9	40.8	41.1	39.5	39.6	41.8	16	-533	-895	-620
Mortgage	8.7	7.7	7.6	7.9	7.7	7.1	7.1	8.7	2	-50	-55	-160

1/ Lending rates in annual terms of the operations carried out in the last 30 working days.
* Monthly average since September 2010.
Source: SBS and BCRP.

However, we should remember that interest rates reflect a market equilibrium, and that this can also be determined by other factors besides the monetary policy decisions, such as market conditions, external conditions, and other relevant financial and macroeconomic shocks. Therefore, it is convenient to separate the effect of monetary policy actions from other factors that may also affect the evolution of these interest rates. We estimate a model of Factor-Increased Autoregressive Vectors (FAVAR) using a wide variety of interest rates of the financial system[11]. This method allows us to represent all of these interest rates in a small set of variables, identifying the factors behind their joint behavior.

The results of the empirical exercise are shown in the following table. A high pass-through effect is observed after one year (greater than a ratio of 0.5[12]) for an extensive set of loan and deposit interest rates of the financial system. The monetary pass-through begins through the rates of the yield curve; that is, through the rates of the BCRP Certificates of Deposit and Public Treasury bonds, and monetary policy actions modify thereafter the medium-term expectations of economic agents –consumers, businessmen, and depositors. Thus, the rest of loan and deposit interest rates are also affected by such monetary policy actions.

TRANSFER EFFECT OF THE INTERBANK INTEREST RATE TO THE FINANCIAL SYSTEM INTEREST RATES ONE YEAR LATER [1/]
(Median value and 20 percent range most likely)

CDBCRP 3 months	(0.7-0.8-0.9)	Small enterprises	(0.2-0.6-1)
CDBCRP 6 months	(0.7-0.8-0.9)	Mortgages	(0.5-0.6-0.8)
CDBCRP 12 months	(0.5-0.7-0.8)	FTAMN	(0.5-1-1.5)
CDBCRP 18 months	(0.6-0.8-0.9)	Corporate prime to 90 days	(0.6-0.8-1)
Public Treasury Bonds to 1 year	(0.8-1-1.3)	Savings of less than one year	(0.4-0.5-0.5)
Public Treasury Bonds to 2 years	(0.5-0.7-1)	FTIPMN	(0.8-0.9-0.9)
Corporates	(0.6-0.7-0.8)	Deposits to 1 month	(0.9-1-1.1)
Big enterprises	(0.6-0.7-0.7)	Deposits to 2 months	(0.7-0.8-0.9)
Medium-sized enterprises	(0.5-0.6-0.8)	Deposits to 3 months	(0.6-0.8-0.9)

1/ Orthogonal shock at the interbank interest rate in a FAVAR model for the Peruvian economy. Estimated factors through main components methodology. Monthly data include information from September 2010 to October 2019. The transfer effect comprises the relationship between the impulse response functions accumulated at 12 months of the FAVAR model. Estimated median value through a Bootstrapp simulation of 2000 replicas.

In sum, the exercise carried out shows that there is a significant and lasting impact of monetary policy actions on the rest of the financial system's interest rates. The estimated effect is homogeneous and significant for the different market segments under study. It is worth pointing out here that the loose monetary policy stance of BCRP, including the recent expansion of monetary stimulus, continues affecting credit conditions and allows them to be looser in the short and medium terms. In this way, monetary policy contributes to the recovery of the economic activity in a context in which inflation and inflation expectations are anchored to the target range (1 to 3 percent).

11 The factors are obtained via main components. Moreover, macroeconomic variables, such as GDP growth, annual inflation, inflation expectations, annual depreciation, the reserve requirements rate, and the interbank interest rate are also included in the VAR model.

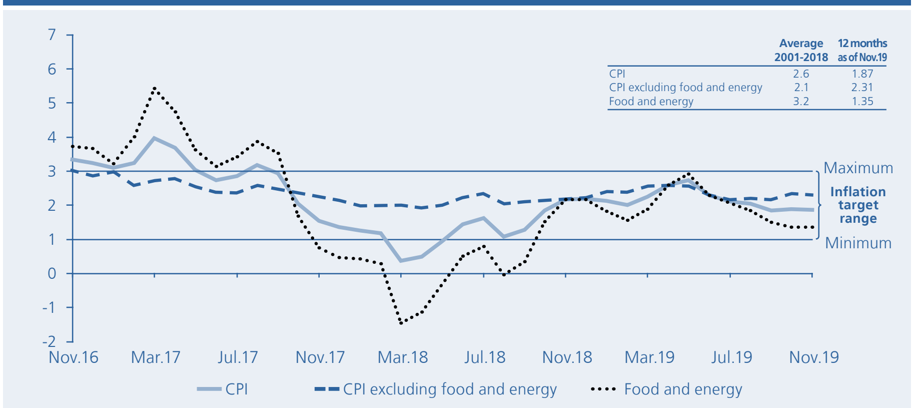
12 Each percentage point of variation in the policy rate leads the rest of rates to vary by more than a half.

VI. Inflation and Balance of Inflation Risks

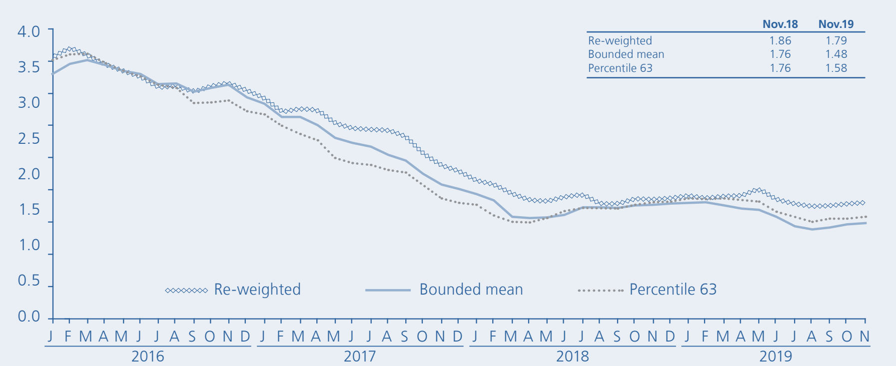
Recent Trends in Inflation

54. The annual rate of inflation as of November was 1.87 percent, within the Central Bank target range (1-3 percent), and the rate of core inflation (CPI excluding food and energy prices) was 2.31 percent, with increases in the Metropolitano bus fares (October) and in water rates (in September and October) accounting mostly for this result. In general, all of the indicators of trend inflation show levels within the inflation target range and most of them are below the midpoint of the target range.

Graph 66
INFLATION
(Last 12-month % change)



Graph 67
MEASUREMENTS OF THE INFLATIONARY TREND
(Last 12 months % change)



Memo:
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.

55. In January – November 2019, the general price level increased 1.68 percent, at an average monthly rate of 0.15 percent. The CPI excluding food and energy grew 1.96 percent, while food and energy prices grew at a lower rate (1.36 percent), the prices of food and beverages showing the lowest price variation (0.90 percent) due to the lower prices of items such as chicken meat, onions, lemons, and sugar.

Table 40
INFLATION
(% change)

	Weight	2018	2019	
			Jan.-Nov.	12 months
CPI	**100.0**	**2.19**	**1.68**	**1.87**
1. CPI excluding food and energy	**56.4**	**2.21**	**1.96**	**2.31**
a. Goods	21.7	2.25	1.36	1.44
b. Services	34.8	2.19	2.32	2.84
2. Food and energy	**43.6**	**2.17**	**1.36**	**1.35**
a. Food and beverages	37.8	1.95	0.90	0.92
b. Fuel and electricity	5.7	3.67	4.42	4.20
Fuel	2.8	5.35	0.20	-0.65
Electricity	2.9	2.39	7.76	8.08

56. The services that showed the higher price increases in the last twelve months were education services (5.2 percent), which showed a higher increase than the average annual variation in the last eight years (4.6 percent). With this increase, education expenses registered a higher variation than the annual average variation observed in the last eight years. Most of the other services, e.g. meals consumed outside the home and "other personal services" –which includes personal care– showed lower

rates than those recorded in 2010-2018, reflecting the lower labor costs associated with a greater availability of foreign labor.

Table 41
INFLATION
(Annual % change)

	Weight	2018	Aug.19	Nov.19	2010-18 Annual average
CPI	**100.0**	**2.19**	**2.04**	**1.87**	**2.97**
Education	**9.1**	**4.73**	**5.21**	**5.21**	**4.55**
Health	**1.1**	**1.76**	**1.45**	**1.53**	**3.42**
Meals outside the home	**11.7**	**2.19**	**1.81**	**1.78**	**4.71**
Other personal services	**3.3**	**1.29**	**1.37**	**1.28**	**1.85**
Of which:					
Toiletry services	0.6	2.21	2.12	2.41	3.94
Vehicle repair	0.2	1.97	1.89	1.44	1.81
Housekeeping	0.2	3.04	2.11	1.58	2.61

Moreover, in January-November the items with the higher positive contribution to inflation included education (tuition and fees), electricity rates, meals outside the home, and potatoes. The cost of education services rose 5.3 percent, mainly due to the increase in tuitions in private schools and universities at the beginning of the teaching year in March. Electricity rates increased 7.8 percent due to the price adjustments of energy generation and the update of several components of transmission costs, such as the rate for the security of the cold reserve supply and the unit cost for energy generation capacity in thermal power plants. On the other hand, the category *food consumed outside the home* increased 1.6 percent, a higher rate than the one observed in *food consumed at home* (0.5 percent). Moreover, the price of potatoes rose 12.7 percent, in a context of lower cultivation in the central region of the country and the impact of rains and mudslides that affected the marketing of this crop in the first four months of the year (especially in Huánuco).

Table 42
ITEM WITH THE HIGHEST WEIGHTED CONTRIBUTION TO INFLATION: JANUARY - NOVEMBER 2019

Positive	Weight	% chg.	Contribution	Negative	Weight	% chg.	Contribution
Education costs (tuition and fees)	8.8	5.3	0.54	Chicken meat	3.0	-9.0	-0.25
Electricity rates	2.9	7.8	0.26	Onion	0.4	-29.0	-0.13
Meals outside the home	11.7	1.6	0.22	National transportation	0.3	-17.8	-0.07
Potato	0.9	12.7	0.12	Papaya	0.2	-17.4	-0.04
Beers	0.8	11.5	0.10	Sugar	0.5	-6.6	-0.04
Water consumption	1.6	5.0	0.09	Telephone rates	2.9	-1.3	-0.02
Urban fare	8.5	1.0	0.08	Carrot	0.1	-13.5	-0.02
Eggs	0.6	18.0	0.08	Gas	1.4	-1.4	-0.02
Show tickets	1.7	4.0	0.06	Lemon	0.2	-8.5	-0.02
Toiletries	4.9	1.2	0.05	Airplane fares	0.4	-3.8	-0.01
Total			**1.60**	**Total**			**-0.62**

The items with the higher negative contribution to inflation were chicken meat and onions. The price of chicken meat fell 9 percent in a context of a greater supply as well as of the greater availability of fish, its main substitute product. On the other hand, the price of onions dropped 29 percent in the January-November period. The rises observed in the last quarter of 2018 reversed in the first months of 2019 as a result of the entry of crops from valley El Cural in Arequipa and, as from June, of seasonal crops from other varieties grown in Arequipa.

Fuel Prices

57. Between September 2018 and November 2019, fuels showed an increase of 0.51 percent despite the 19 percent reduction in the price of WTI crude oil in that period. This divergence is mainly due to the fact that the domestic refinery price for gasohol fuels has not followed the same decreasing trend observed in various international price indicators, such as the theoretical indicators of Osinergmin and Sociedad Nacional de Minería, Petróleo y Energía (SNMPE), the CIF price of imports, and the refinery price in Chile.

For example, the local refinery increased the price of 90-octane gasohol –this type of fuel represents about 60 percent of fuel sales in Peru– by 3 percent in soles, whereas the parity prices of Osinergmin and SNMPE showed reductions of 11 and 10 percent, and the CIF price reported to SUNAT was lowered by 8 percent in that period.

On the other hand, while the Peruvian refinery increased prices (1 percent in dollars), the refinery price in Chile –measured in US$ per gallon– was reduced by 12 percent,

Moreover, it is worth pointing out that, during November, the margin of the local refinery price was lowered with respect to the theoretical parities published by OSINERGMIN and SNMPE.

Table 43
GASOHOL 90 OCTANES
(Comparison of refinery price)[1/]

	OSINERGMIN Price (S/ per gallon)			SNMPE Price (S/ per gallon)			CIF Price (S/ per gallon)			Country (US$ per gallon)		
	Refinery	Parity[2/]	Diff. %	Refinery	Parity	Diff. %	Refinery	CIF	Diff. %	Refinery	Chile[3/]	Diff. %
Sep. 2018 (a)	7.31	7.22	1%	7.31	7.97	-8%	7.31	6.53	12%	2.21	2.20	0%
Nov. 2019 (b)	7.52	6.41	17%	7.52	7.18	5%	7.52	6.02	25%	2.23	1.94	15%
% chg. (b)/(a)	**3%**	**-11%**		**3%**	**-10%**		**3%**	**-8%**		**1%**	**-12%**	

1/ Corresponds to the refinery price. Excludes VAT, excise tax, and road tax charged in sale price.
2/ Monthly average adds S/ 0.19 per gallon like trading margin.
3/ Corresponds to gasoline 93 octanes from ENAP-Chile.
Source: ENAP-Chile, Repsol, Osinergmin, and SUNAT.

Electricity Rates

58. The electricity rates of energy distributors Enel and Luz del Sur for the regulated residential users of Lima with a consumption between 30 kWh and 100 kWh increased 5.9 percent in 2019[13]. The participation of the generation segment in the rates is 51.8 percent, while the transmission segment has a participation of 24.6 percent and the distribution segment a participation of 23.6 percent. Moreover, within the transmission segment, there are also other charges that are not used to finance transmission lines and have a participation of 10.8 percent.

    Breaking down the variation of these rates, we find that the quarterly price revisions at the generation level carried out by OSINERGMIN contribute with 2.2 percentage points, while new infrastructure accounts for 1.8 percentage points and the foreign exchange rate accounts for 1.3 percentage points.

    As regards new infrastructure, the transmission segment increased given that it was used to finance units based on renewable energy resources (RER), such as Wayra I (126 MW of wind energy in Ica), Huaycoloro II (2.4 MW of biogas energy in Callao), Angel I, II and III (hydroelectric plants of 19.9 MW each, in Puno), Her 1 (0.7 MW, hydroelectric plant in Lima), and Carhuac (20 MW, hydroelectric plant in Lima). The increase also includes the hydroelectric plants of Chancay (19.2 MW) and Rucuy (20 MW), located in Lima, which had stopped operating in 2017 after being affected by El Niño event and which were only able to restart operations in June 2019.

Table 44
FACTORS ON THE VARIATION OF THE ELECTRIC RATES
(%)

COMPONENTS	2019
New Infrastructure	1.6
- Renewable Energy Resources (RER)	1.6
Existing Infrastructure*	0.2
- Lines of transmission	-0.1
- Cold reserves	-0.2
- Renewable Energy Resources (RER)	1.2
- Energy Node of the South	-0.7
- Other charges***	-0.1
Quarterly PNG Reviews	2.2
Value Added of Distribution (May)	-0.4
Value Added of Distribution (November)	-0.1
Exchange rate	1.3
Other***	0.9
TOTAL	**5.9**

* Changes on base values in May.
** The unit charge for compensation of reliability in the energy supply chain was eliminated. This was offset by the increase in the charge of the Social Energy Inclusion Fund.
***Engineering adjustment factors for the generation, transmission and distribution segments.

13 According to INEI data, energy rates would increase 7.8 percent in 2019. The difference is explained by the fact that rates in December 2018 were going to be lower, but the rate reduction was eliminated due to retroactive regulations issued in early 2019.

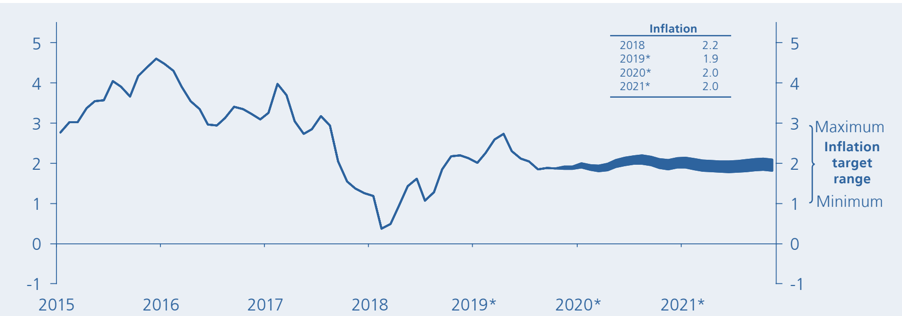
On the other hand, the exchange rate contributed to increase electricity rates since it is one of the factors based on which the cost of the generation, transmission, and distribution segments are updated each month, as well as a component of the adjustments in the transmission segment carried out each quarter.

Forecasts

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

Based on the information available, the inflation rate is expected to remain around the midpoint of the inflation target, mainly as a result of the convergence of inflation expectations, a moderate rate of imported inflation, and a negative output gap.

Graph 68
INFLATION FORECAST: 2015-2021
(Last 12-month % change)

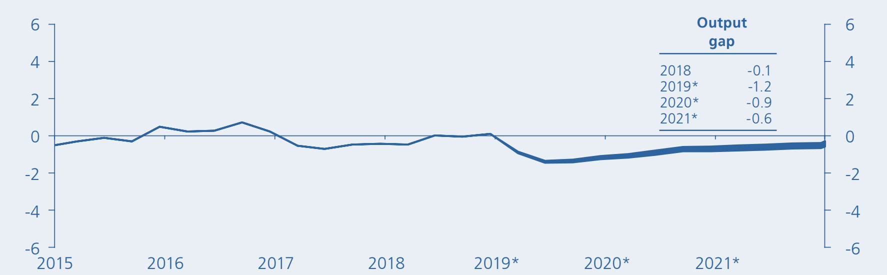


* Forecast.

60. A GDP growth rate lower than its potential growth level and a negative output gap are expected for 2019, which indicates a lack of inflationary pressures on the side of demand. This negative gap is explained by lower external demand (growth rates in our trading partners have been revised down), a more gradual recovery of business confidence, and lower fiscal impulse.

In 2020 and 2021 the output gap is foreseen to show a gradual recovery, in line with the gradual recovery of external demand and a positive fiscal impulse.

Graph 69
OUTPUT GAP: 2015-2021
(% Potential GDP)



* Forecast.

61. Inflation expectations estimated on the basis of surveys conducted with financial and non-financial firms and economic analysts reveal that inflation is expected to show rates between 2.0 and 2.2 percent in 2019, rates between 2.2 and 2.4 percent in 2020, and rates between 2.3 and 2.5 percent in 2021, within the target range. These inflation expectations are expected to continue declining as long as inflation remains around 2 percent.

Graph 70
EXPECTATIONS OF INFLATION FOR THE NEXT YEAR
(% points)

Table 45
SURVEY ON INFLATION EXPECTATIONS
(%)

	IR Jun.19	IR Sep.19	IR Dec.19*
Financial entities			
2019	2.40	2.20	2.00
2020	2.50	2.30	2.20
2021			2.30
Economic analysts			
2019	2.50	2.20	2.00
2020	2.50	2.40	2.20
2021			2.50
Non-financial firms			
2019	2.50	2.40	2.20
2020	2.50	2.50	2.40
2021			2.50

* Survey conducted during November 30.
IR: Inflation Report.

62. Another determinant of inflation is its imported component, which combines the effect of the international prices of goods we import –such as crude, wheat, soybean and maize, among other products– with the effect of exchange rate variations.

    Average import prices are projected to fall by 1.8 percent in 2019, mainly due to the lower prices of commodities such as crude, wheat, and soybean. On the other hand, they are expected to increase by 0.4 and 1.5 percent in 2020 and 2021, respectively.

    Moreover, the surveys on expectations about the US/PEN exchange rate show expected levels of between S/ 3.36 and S/ 3.38 per dollar at the end of 2019, between S/ 3.37 and S/ 3.40 per dollar for 2020, and between 3.35 and S/ 3.40 per dollar for 2021.

Table 46
SURVEY ON MACROECONOMIC EXPECTATIONS: EXCHANGE RATE
(S/ per US$)

	IR Jun.19	IR Sep.19	IR Dec.19*
Financial entities			
2019	3.35	3.37	3.38
2020	3.35	3.35	3.37
2021			3.35
Economic analysts			
2019	3.35	3.40	3.36
2020	3.37	3.40	3.38
2021			3.37
Non-financial firms			
2019	3.35	3.35	3.37
2020	3.37	3.38	3.40
2021			3.40

* Survey conducted during November 30.
IR: Inflation Report.

These effects would contribute to maintain inflation in the middle of the target range, in spite of the fact that the output gap continues to show negative values in the forecast horizon.

Balance of Inflation Risks

63. The balance of inflationary or deflationary risks in this Report continues to show a downward bias, although lower than the one considered in the September report. The expected impact of possible lower inflation due to weaker economic growth has decreased.

- **Domestic demand shocks**

  The risks of a decline in the execution of private spending and public investment persist in the forecast horizon. The impact of this would be lower economic growth and, consequently, a more negative output gap.

- **External demand shocks**

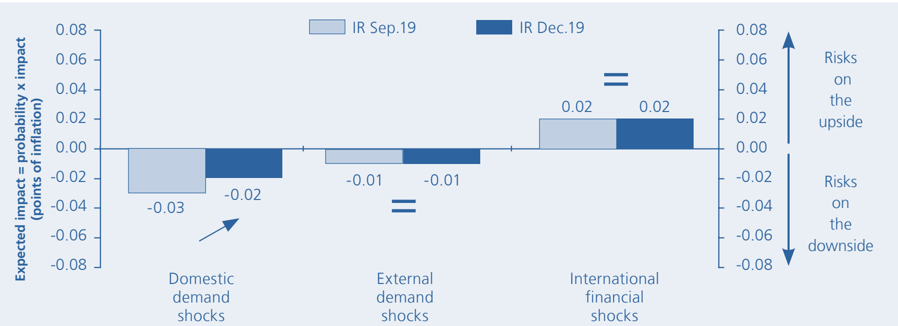
  The greater-than-expected escalation and duration of the commercial war could have a negative impact on economic growth, deteriorating the terms of trade and bringing about lower external demand for local products.

- **Financial shocks**

  Part of this risk has decreased due to the expansionary monetary policy response adopted in the developed countries, but the possibility of an abrupt correction in the price of U.S. assets persists, which would generate an increase in global financial risk that would be channeled in an increased demand for safe assets. This greater risk perception would also affect the emerging economies as it would generate capital outflows and the strengthening of the US dollar globally.

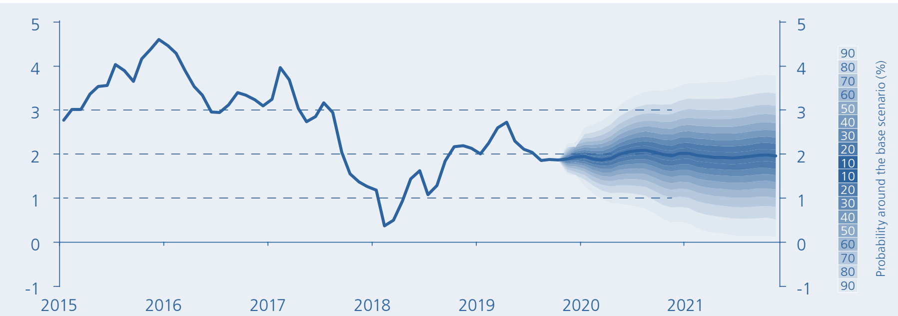
  This strengthening of the US dollar would push up inflation due to the effect of higher imported inflation.

Graph 71
BALANCE OF RISKS AGAINST THE BASE SCENARIO



IR: Inflation Report.

Graph 72
INFLATION FORECAST: 2015 - 2021
(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
THE SHORT-RUN RELATIONSHIP BETWEEN INFLATION AND ECONOMIC ACTIVITY

The short-run positive relationship between inflation and economic activity is known as the Phillips curve. This box reports an up-to-date estimation of this macroeconomic relationship for Peru by using several estimation methods. The magnitude of this relationship is measured by the slope of the Phillips curve, which describes the relationship between the extent of economic slack (which is usually measured by the output gap; that is, the deviation of the level of economic activity from its long-run level) and inflation. The empirical literature on the Phillips curve usually considers it a relationship between the wage inflation and the unemployment gap[14]. In advanced economies where the quality of the labor market data is high, estimates based on unemployment gaps are usually employed. On the other hand, in emerging market economies, where the labor market informality is high, estimates based on output gaps are more common. Because of this, getting to know about the magnitude of the slope of the Phillips curve is relevant for monetary policy-making since, during high-inflation periods that coincide with significant increases in aggregate demand, a central bank seeking to maintain inflation within the targeted range should adopt compensatory and preventive monetary policy actions, like raising the short-term interest (policy) rate in order to preserve the inflation stability and induce a sustained economic growth.

According to Carney[15] (2017), the adoption of a monetary policy that involves choosing an optimal inflation-output trade-off is in turn affected by the slope of the Phillips curve. Specifically, whenever the Phillips curve becomes "flatter" (that is, when the slope gets smaller), a change in the output gap leads to a lower reaction of inflation, such that the volatility of the aggregate demand has a lower effect on the volatility of inflation. On the other hand, the success of monetary policy itself can make it more difficult to identify this slope: when a central bank implements its optimal monetary policy, and therefore compensates potential inflation increases through a lower aggregate demand, the econometric estimates of the slope of the Phillips curve will be small. Because of this, several estimation methods to assess the robustness of the results are needed.

One of the first estimates of the slope of the Phillips curve for the Inflation-Targeting period in Peru was provided by Salas (2010)[16] who reports an elasticity of 0.10. On the other hand, Winkelried (2013)[17] reports an estimated slope of 0.16. Both estimates are based on the Quarterly Forecasting Model (QFM) of the Central Reserve Bank of Peru (BCRP), where the Philips curve represents a relationship between the output gap and a measure of inflation that excludes the food and energy components:

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14 Phillips, A. W., 1958.

15 Carney, M. (2017). Lambda. Bank of England; speech delivered at the London School of Economics on Monday, January 16, 2017, and available at https://www.bankofengland.co.uk/speech/2017/lambda.

16 Salas, J., (2010), 'Bayesian Estimation of a simple macroeconomic model for a small open economy and partially dollarized economy'. Serie Documentos de Trabajo, DT. 2010-007. BCRP.

17 Winkelried, D., (2013), Modelo de Proyección Trimestral del BCRP: Actualización y Novedades. Revista de Estudios Económicos, 26, 9-60.

Phillips curve

$$\pi_t^{sae} = b_m[(c_m \pi 4_{t-1}^m + (1-c_m)(\Delta s4_{t-1} + \pi 4_{t-1}^* - \pi 4_{t-1}^m)] + (1-b_m)\left[b_{sae}\pi_{t-1}^{sae} + (1-b_{sae})\pi_{t,t+4}^e\right] + b_y\hat{y}_t + \xi_t^{sae}$$

where π_t^{sae} is the inflation rate that excludes the food and energy components (the annualized quarterly rate), $\pi_{t,t+4}^e$ represents a measure of the expected annual inflation rate, $\pi 4_{t-1}^m$ is the imported inflation (measured in soles, the local Peruvian currency), $\Delta s4_{t-1}$ is the nominal depreciation, $\pi 4_{t-1}^*$ is the external inflation expressed in U.S. dollars[18], and $\hat{y}_t$ is the output gap. b_m, b_{sae}, b_y and c_m are coefficients. The coefficient of interest is b_y , the slope of the Phillips curve.

Additionally, Bigio and Salas (2006)[19] report some evidence on the convexity of the Phillips curve in Peru: the slope becomes higher whenever the output gap is extremely positive.

Such estimates have been recently revised again, given the apparent disconnect (since 2014) between the inflation rate and the short-term economic activity (as opposed to a stable relationship). In addition, by using several estimation methods, four studies report that the slope of the Phillips curve indeed remains positive: DMM BCRP (2019)[20], Aquino (2019)[21], Barrera (2019)[22], and Rojas (2019)[23].

DMM BCRP (2019) re-estimates the QFM by using a Bayesian approach, which combines information from: (i) the sample data and (ii) beliefs and opinions summarized by a *prior* distribution. As a result, a *posterior* distribution for each of the QFM parameters is obtained, which includes the coefficient associated with the slope of the Phillips curve (b_y). The re-estimation shows that the *posterior* mean of has decreased with respect to the one estimated by Winkelried (2013) to 0.13. This flattening of the Philips curve indicates that the inflation rate (excluding food and energy components) is less sensitive to the output gap.

Aquino (2019) extends the small open economy model of Galí and Monacelli (2005)[24] in order to allow for the use of monthly data. The resulting Phillips curve is formulated

18 In this specification, following Galí, J. and T. Monacelli (2005) and Winkelried (2013), $\Delta s4_t + \pi 4_t^* - \pi 4_t^m$ measures deviations from the law of one price (LOOP), that is, it reflects the change in import prices expressed in soles relative to the domestic price. Note that any variable with "4" corresponds to a year-on-year rate, or to the simple moving average of the last 4 quarters of annualized quarterly rates.

19 Bigio, S. y Salas, J. 2006, Efectos no lineales de choques de política monetaria y de tipo de cambio real en economías parcialmente dolarizadas: un análisis empírico para el Perú. Serie Documentos de Trabajo, DT. 2006-008. BCRP.

20 DMM BCRP (2019). Recent estimations of the MPT achieved by the Department of Macroeconomic Models of BCRP.

21 Aquino, J. C. (2019). The Small Open Economy New Keynesian Phillips Curve: Specification, Structural Change, and Robustness. Mimeo.

22 Barrera, C. (2019). ¿Existe un tramo horizontal en nuestra 'curva' de Phillips? Perú 2005-2017. Mimeo.

23 Rojas, Y. (2019). Una exploración de la estabilidad de la curva de Phillips en el Perú. Mimeo.

24 Galí, J. and T. Monacelli (2005). Monetary Policy and Exchange Rate Volatility in a Small Open Economy. Review of Economic Studies, vol. 72(3), pages 707-734.

in terms of the domestic inflation component and the output gap and also includes the effects of persistence and agents' expectations. It is estimated via the Generalized Method of Moments (GMM) with data for the Inflation-Targeting period (January 2002 - March 2019). The author reports a slope of 0.07 with a confidence interval from 0.02 to 0.12 at 10 percent significance level.

Barrera (2019) specifies a dynamic panel data model based on the work by Fitzgerald and Nicolini (2014)[25], which allows to identify the value of the slope parameter (and thus to eliminate the bias associated with the compensatory effect of the optimal monetary policy stance). The estimated slope is 1.56[26] with a confidence interval from 0.45 to 2.66 at 5 percent significance level. The linear model employs cross-regional data of CPI inflation and regional output-gap deviations from the aggregate gap and identifies a slope parameter value that is relatively higher to the one that does not eliminate the aforementioned bias.

Rojas (2019) considers a similar specification to the one used by Winkelried (2013), with the main difference being that the elasticities of inflation with respect to its determinants are time-varying parameters and modelled as highly persistent exogenous processes. The author reports that the slope has remained almost unaltered during the 2000 – 2018 period and remains close to a value of 0.18.

The quantitative differences among the estimates are partly explained by (i) the use of different levels of aggregation for the measures of inflation rate and the output gap, (ii) the different time frequencies of the variables, (iii) the heterogeneity of the estimation techniques, and (iv) the variables included in the Phillips curve specification. The following table shows that, after adjusting each estimate by a factor that captures the differences in the relative scales of inflation and output gap volatilities (and after taking the estimate by DMM BCRP (2019) as the benchmark), comparable estimates of the slope of the Phillips curve in a quarterly frequency would lie between 0.1 and 0.4.

RECENT ESTIMATES OF THE SLOPE OF THE PHILLIPS CURVE

Study	Period (Nobs)	Frecuency	Measure of inflation rate and output gap	Coefficient (output gap)	
				Estimation	Rescaled to DMM BCRP (2019) **
Aquino (2019) 2/	2002M1-2019M3 (189)	Monthly	Domestic GDP, HP Gap	0.074	0.33
DMM BCRP (2019) 1/	2002T1-2018T4 (68)	Quarterly	CPI SAE, NOB Gap	0.13	0.13
Rojas (2019) 4/	2000T1-2018T4 (76)	Quarterly	Core CPI, NOB Gap	0.18	0.35
Barrera (2019) 3/	2004A1-2017A1 (350)	Annual	CPI, FP Gap	1.56	0.08

** Each estimation is adjusted by a scale factor that depends on the relative volatilities of the different measures of inflation rates and output gap, in reference to the quarterly estimation of DMM BCRP (2019).
Estimation method: 1/ Bayesian 2/ Generalized Method of Moments. 3/ Dynamic Panel 4/ Kalman Filter.

25 Fitzgerald, T. and J.P. Nicolini (2014). Is There a Stable Relationship Between Unemployment and Future Inflation? Evidence from U.S. Cities, Federal Reserve Bank of Minneapolis, Working Paper 713 (May).

26 An estimated value greater than 1 can be explained in part by the method used to obtain the output gap: the Production Function. Levy (2019) and Eijffinger and Qian (2016) use this method to obtain estimations of the slope of the Phillips curve greater than 1.

Comparison with estimations for other countries

The following table reports some recent estimates for Peru and other major economies under an Inflation-Targeting regime. It is worth to mention that in the case of Brazil, the extent of economic slack is measured by the unemployment rate gap (with respect to its long-run level), and therefore a negative coefficient is expected.

COMPARISON OF ESTIMATES FOR PERU AND OTHER COUNTRIES

Study	Countries	Period (Nobs)	Measure of inflation rate and output gap 6/	Coefficient (Output gap)	Other determinants			
					Expect. infla.	Infla. lag.	Infla. import.	nom. deprec.
Monthly data								
Aquino (2019) 2/	Peru	2002M1-2019M3 (189)	Domestic CPI, HP Gap	0.0738*	X	X		
Ferreira et al. (2018) 2/	Brazil	2002M1-2012M12 (132)	CPI, HP Gap	0.160	X	X		
			CPI, HP Unemployment	-0.750***	X	X		
Medel (2015) 2/	Chile	2001M5-2013M12 (152)	CPI, HP Gap	0.265***		X	X	
		2000M5-2013M12 (164)	CPI seas adj, HP Gap	0.065**		X		
Ramos (2008) 2/	Mexico	1997M5-2007M7 (123)	CPI, HP Gap	0.008*	X	X		
Quarterly data								
Winkelried (2013) 1/	Peru	2002T1-2012T4 (44)	CPI, NOB Gap	0.160***	X	X	X	
Rojas (2019) 4/	Peru	2000T1-2018T4 (76)	Core CPI, NOB Gap	0.180 ,7/	X	X	X	
Lanau et al. (2018) 5/	Colombia	2002T1-2017T3 (63)	CPI, HP Gap	0.098	X	X	X	X
			Core CPI, HP Gap	0.044*	X	X	X	X
Annual data								
Barrera (2019) 3/	Peru	2004A1-2017A1 (350)	CPI, FP Gap	1.557***	X	X		X
Eijffinger et al. (2016) 5/	Australia	1977A1-2007A1 (31)	Core CPI, FP Gap	1.450***		X		
	Canada	1977A1-2007A1 (31)	Core CPI, FP Gap	1.210***		X		
	Sweden	1977A1-2007A1 (31)	Core CPI, FP Gap	1.460***		X	X	

*** significant to 1% ; ** significant to 5% ; and * significant to 10%.
Estimation method: 1/ Bayesian estimation 2/ Generalized Method of Moments. 3/ Dynamic Panel 4/ Kalman Filter 5/ Generalized Minimum Squares.
6/ Annualized growth rate. CPI: Consumer price index. Domestic CPI: domestic component of the CPI. CPI sae: CPI without food and energy.
6 / Gap: Difference between real GDP and a measure of potential GDP. NOB gap: potential GDP computed as an unobserved variable. HP Gap: potential GDP computed as a Hodrick-Prescott Filter trend. FP gap: potential GDP computed by the production function. HP Unemployment: Gap in the unemployment rate with respect to its Hodrick-Prescott trend.
7/ The average value of the estimates, which is modeled as a changing parameter over time, is reported throughout the sample period.

The estimates of the slope of the Phillips curve for other economies under an Inflation-Targeting regime are close to the estimates for Peru. This in turn implies that the costs of adjusting the inflation rate in Peru are not different from those in countries that, like Peru, have managed to maintain low inflation rates. In fact, Peru is the economy exhibiting one of the lowest and least volatile inflation rates since 2001.

AVERAGE INFLATION RATE % (2001-2018)
(%)

	Average	S.D.
Brazil	6.4	2.5
Chile	3.2	2.1
Colombia	4.7	1.9
Ecuador	4.8	5.0
El Salvador	2.5	2.0
Guatemala	5.6	2.7
Mexico	4.3	1.1
Panama	2.7	2.3
Paraguay	6.2	3.5
Peru	2.6	1.7
Uruguay	8.6	4.6

S.D.: Standard deviation.
Source: WEO Oct-2018 (IMF), BCRP.