INFLATION REPORT

September 2021

Recent trends and macroeconomic forecasts 2021-2022

CENTRAL RESERVE BANK OF PERU

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Recent Trends and Macroeconomic Forecasts 2021 - 2022

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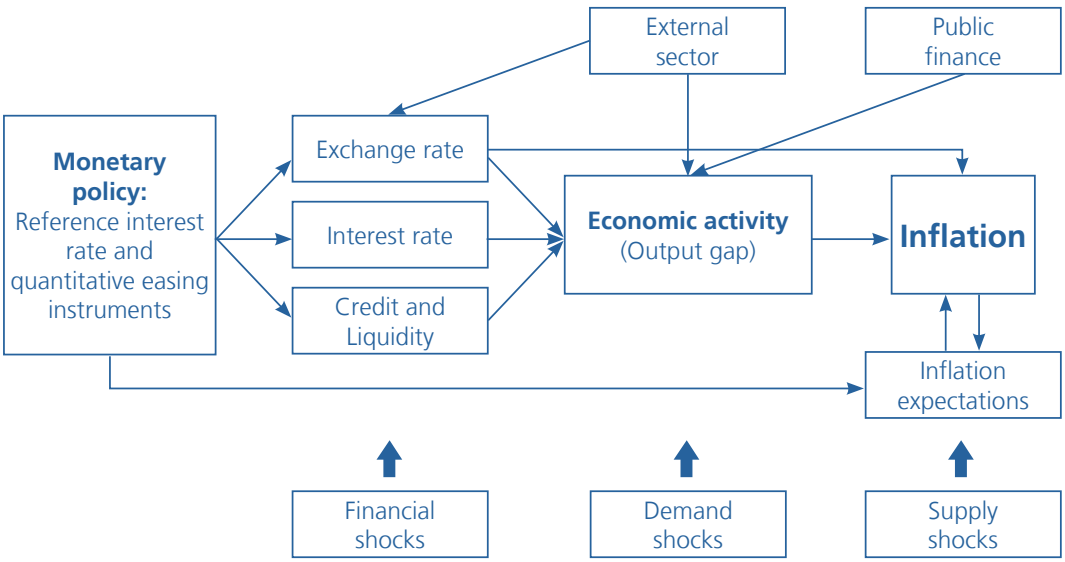

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INFLATION REPORT
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INFLATION REPORT:

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Boxes

This ***Inflation Report*** has been prepared using data on the balance of payments and the gross domestic product as of the second quarter of 2021, data on monthly GDP, the trade balance, and monetary accounts as of July 2021, and data on the operations of the non-financial public sector, inflation, financial markets and the exchange rate as of August 2021.

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. Its main functions are regulating the money supply and credit in the financial system, managing the country's international reserves, and 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.

- Since 2003, the Board of BCRP sets a benchmark rate for the interbank lending market each month, according to a previously announced schedule. In March and April of 2020, the benchmark rate was modified outside of this schedule due to the economic contraction generated by the confinement measures taken because of the COVID-19 pandemic. 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 inflation determinants.

- Inflation may transitorily deviate from the target range due to shocks that may temporarily affect the supply of goods and services. It should be pointed out that the effectiveness of monetary policy is assessed in terms of the success in maintaining inflation expectations within the target range and in returning them to this range within a reasonable timeframe if deviations are observed as a result of some economic shock.

- Additionally, the Central Bank implements preventive actions to preserve financial stability and monetary policy transmission mechanisms. Thus, the mechanism of the benchmark interest rate is complemented through other monetary policy instruments such as injection and sterilization operations, reserve requirements, and interventions in the foreign exchange market to ensure the proper operation of markets, reduce excessive volatility in the exchange rate, and prevent excessive variations in the volume and composition of credit in the financial system by currencies and terms.

- In the exceptional case of the economic crisis caused by COVID-19, the benchmark rate is close to zero and the use of repo operations with different types of collateral and at longer terms has been significantly expanded.

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

- This Inflation Report was approved by the Board of Directors of BCRP on September 9, 2021.

- The following Inflation Report will be published on Friday, December 17, 2021.

Summary

i. **Global growth** projections for 2021 have been revised slightly down, from 5.9 to 5.8 percent. While overall the economy is still recovering strongly, some recent indicators suggest a somewhat slower recovery given rising COVID-19 cases and the persistence of supply shocks mainly associated with the supply chain. At the country level, this revision is supported by slower growth in the United States and major emerging economies such as China and India. In contrast, the projection for 2022 has been revised up, from 4.2 to 4.4 percent, taking into account the increase in infrastructure spending in the United States starting in that year.

ii. The **terms of trade** increased by 19.5 percent in the first half of 2021, driven by the strong increase in copper prices following the rapid progress of the global vaccination process and the recovery of the world economy. However, the dynamism of mineral prices has moderated in recent months, so the projected growth of the terms of trade in 2021 has been revised downward from 13.0 percent in the previous Report to 11.7 percent. Terms of trade growth would continue in 2022 with an expansion rate of 3.3 percent (2.8 percent in the previous Report), mainly due to a reduction in import prices (-2.4 percent).

iii. The **current account** of the balance of payments registered a deficit of 3.3 percent of GDP in the first half of 2021. Factors accounting for this result included the increase in imports and the deficit in factor income, in line with the recovery of domestic demand, the rise in international freight rates, and the contraction in travel revenues due to the slow recovery of inbound tourism. As a result, the current account projection for 2021 and 2022 is revised downward: from a surplus of 0.2 percent to a deficit of 1.7 percent of GDP in 2021, and from a surplus of 1.8 percent to a surplus of 0.2 percent of GDP in 2022.

iv. **Economic activity** recorded a year-on-year growth rate of 19.7 percent in the period from January to July 2021, driven mainly by the dynamism of private expenditure and by a low comparative base (zero variation with respect to the same period of 2019). As a result, GDP would show a higher growth rate (11.9 percent) than that estimated in the previous Report (10.7 percent), explained by a better-than-expected result during the first half of the year following the higher execution of public spending and private investment. The projection for the 2021-2022 horizon assumes massive vaccination of the population during the second half of this year, an environment of political and social stability, recovery of business expectations, monetary and fiscal impulses, recovery of external demand, and highly favorable terms of trade. The projection also assumes a third wave of COVID-19 infections without significant economic impacts.

Under these conditions, the normalization of spending habits and the recovery of the service sector following the immunization of the population would boost employment and domestic demand. However, these boosts would be partially offset by the effect of lower business confidence in recent months, which would affect investment decisions and, consequently, future production plans. The economy would grow 3.4 percent in 2022, a lower rate than projected in the previous Report (4.5 percent). Economic activity is projected to reach sustained pre-pandemic levels in the first quarter of 2022.

v. The cumulative **fiscal deficit** over the last twelve months continued its downward trend and declined from 8.9 to 5.0 percent between December 2020 and August 2021. The fiscal deficit would continue declining during the rest of the year to reach 4.0 percent of GDP in 2021, favored mainly by the growth of current revenues as a result of a favorable international context, the recovery of economic activity, and the collection of extraordinary revenues. This decrease would be reinforced by a more moderate growth in non-financial expenditure compared to the increase in GDP and the recovery of public enterprises' results. Moreover, the fiscal consolidation process would continue in 2022, with a projected deficit of 3.4 percent of GDP.

In 2021, the **gross debt** of the Non-Financial Public Sector would be equivalent to 34.9 percent of GDP before declining to 34.7 percent in 2022, while net debt would increase to 24.3 percent of output in 2021 and 25.4 percent in 2022.

vi. From April 2020 to July 2021, BCRP maintained its **benchmark interest rate** at 0.25 percent –the lowest level of this rate since inflation targeting was implemented–, together with massive liquidity injection operations to expand monetary impulse. The BCRP Board of Directors decided to raise the benchmark interest rate by 25 basis points in August and by 50 basis points in September, this rate reaching a level of 1.0 percent in the context of recent increases in inflation expectations. These decisions imply maintaining an expansionary monetary policy stance, as the benchmark real interest rate remains at significantly negative levels (- 2.07 percent in September).

The balance of liquidity injection operations in domestic currency decreased from S/ 60.8 billion at the end of June to S/ 57.9 billion as of September 15. This balance is equivalent to 7.1 percent of GDP, of which S/ 44.5 billion corresponds to government-secured repos of credit portfolio (Reactiva Peru program). In comparative terms, the total balance of liquidity injection operations is 7.3 times higher than the balance of these operations during the 2008-2009 international financial crisis (S/ 7.9 billion) and 1.8 times the balance reached during the period of falling commodity prices (2013-2016) and the de-dollarization program (S/ 31.8 billion).

vii. The growth of **credit to the private sector** slowed from an expansion rate of 9.3 percent in April 2021 to a year-on-year rate of 3.9 percent in July 2021. After recording a significant increase in the credit-to-GDP ratio in 2020, private sector credit demand is expected to moderate its growth in the projection horizon and increase at a slower pace than nominal GDP: 3.0 percent in both 2021 and 2022. This would bring the ratio of private sector credit to GDP to 42 percent at the end of the forecast horizon.

viii. **Year-on-year inflation** increased from 2.45 percent in May to 4.95 percent in August due to supply factors such as higher international fuel and grain prices, higher import freight rates, and the depreciation of the sol. In this context, 12-month inflation expectations rose from 2.43 percent to 3.07 percent in the same period of time. Trend inflation indicators remain within the target range. In the remainder of 2021 and the first half of 2022, inflation is projected to be above the target range due to transitory supply effects (increases in fuel prices, some food items, and the exchange rate). This projection considers that inflation expectations will gradually decrease towards the target range in a context in which the output gap will close as the economy continues its recovery.

ix. The balance of **inflation risk factors** has been revised from neutral to risk skewed to the upside. Risks in the projection consider mainly the following contingencies: (i) a lower level of local activity if business and consumer confidence do not recover or due to a new wave of COVID-19 contagions with high economic impact, and (ii) upward pressures on the exchange rate due to higher international interest rates or delay in the normalization of recent volatility in local financial markets.

SUMMARY OF INFLATION REPORT FORECAST

	2019	2020	2021[1/]		2022[1/]	
			IR Jun.21	IR Sep.21	IR Jun.21	IR Sep.21
Real % change						
1. Gross Domestic Product	2.2	-11.0	10.7	11.9	4.5	3.4
2. Domestic demand	2.1	-9.4	10.3	12.5	4.0	3.0
a. Private consumption	3.0	-8.7	8.5	9.2	4.8	4.0
b. Public consumption	2.2	7.2	7.0	9.0	1.0	1.5
c. Fixed private investment	4.5	-16.5	15.5	24.5	2.5	0.0
d. Public investment	-1.5	-15.5	19.0	20.0	4.5	4.5
3. Exports (good and services)	1.6	-20.8	13.5	11.9	6.4	6.4
4. Imports (good and services)	1.2	-15.6	11.8	14.5	4.4	4.9
5. Global economic growth	2.8	-3.3	5.9	5.8	4.2	4.4
Memo:						
Output gap [2/] (%)	-0.7	-13.3	-11.0;-2.0	-9.0;-2.0	-9.0;0.0	-6.0;0.0
% change						
6. Inflation	1.9	2.0	3.0	4.9	2.0	2.6
7. Expected inflation [3/]	2.3	1.5	2.5	3.7	2.3	2.8
8. Expected depreciation [3/]	-0.3	7.4	-0.2	13.7	0.3	0.6
9. Terms of trade	-1.8	9.2	13.0	11.7	2.8	3.3
a. Export prices	-3.4	3.7	26.3	27.2	1.0	0.9
b. Import prices	-1.7	-5.0	11.8	13.9	-1.7	-2.4
% change						
10. Currency in circulation	4.7	37.3	10.0	12.5	3.0	3.0
11. Credit to the private sector	6.9	11.8	3.0	3.0	3.0	3.0
% GDP						
12. Gross fixed investment	22.7	21.1	21.8	23.2	21.2	22.3
13. Current account of the balance of payments	-0.9	0.8	0.2	-1.7	1.8	0.2
14. Trade balance	3.1	4.0	7.4	6.8	8.0	7.5
15. Long-term external financing of the private sector [4/]	1.7	-0.5	0.7	2.7	-1.4	-0.8
16. Current revenue of the general government	19.7	17.8	19.3	20.1	20.1	20.0
17. Non-financial expenditure of the general government	20.0	24.7	22.3	22.6	21.7	21.9
18. Overall balance of the non-financial public sector	-1.6	-8.9	-4.5	-4.0	-3.1	-3.4
19. Balance of total public debt	26.8	34.7	34.4	34.9	34.4	34.7
20. Balance of net public debt	13.0	22.3	24.3	24.3	25.4	25.4

IR: Inflation Report

1/ Forecast.

2/ Differential between GDP and trend GDP (in % of trend GDP).

3/ Expectations survey to analysts and financial entities carried out at the time of publication of the respective Report on Inflation. For 2019 and 2020, the information observed in the case of depreciation and the average of the expectations to throughout the year in the case of inflation.

4/ Includes net foreign direct investment, investment of foreign assets of residents (AFP), net foreign portfolio investment and long-term net disbursements of the sector private.

I. External Sector

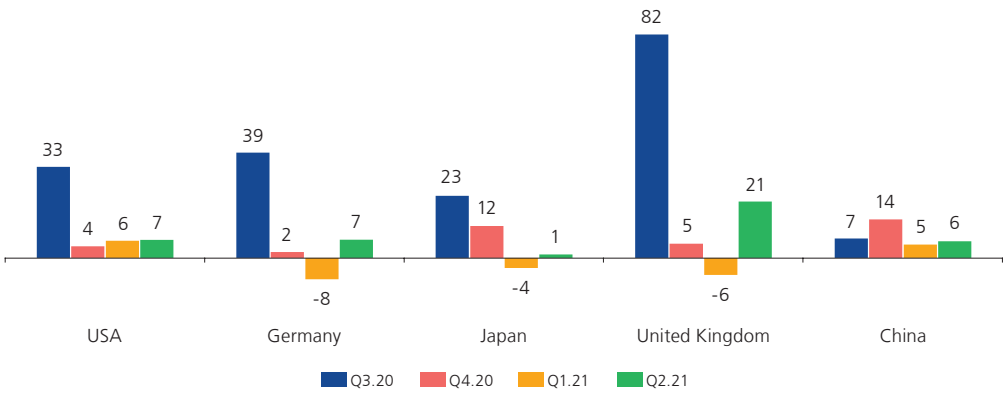
1. Global growth projections for 2021 have been revised slightly down, from 5.9 to 5.8 percent. While overall the economy is still recovering strongly, some recent indicators suggest a somewhat slower recovery given rising COVID-19 cases and the persistence of supply shocks mainly associated with the supply chain. At the country level, this revision is supported by slower growth in the United States and major emerging economies such as China and India. In contrast, the projection for 2022 has been revised up, from 4.2 to 4.4 percent, taking into account the increase in infrastructure spending in the United States starting in that year.

Recent developments in global economic activity

2. In the second quarter of 2021, economic activity continued to recover, although some recent indicators suggest a slower pace of growth.

During the second quarter, economic activity in developed countries was favored by expansionary fiscal and monetary policies, the lifting of restrictions on mobility, and progress in the vaccination process, particularly in developed economies. The recovery observed in the United Kingdom, the Eurozone and Japan stand out as activity in these countries was particularly affected by the restrictions reintroduced as a result of COVID-19 during the first quarter. In the United States, the economy grew at a similar rate to that of the previous quarter, supported by the dynamism of services consumption. This was partially offset by the evolution of the construction sector, where high costs of materials and problems in the supply chain have been observed.

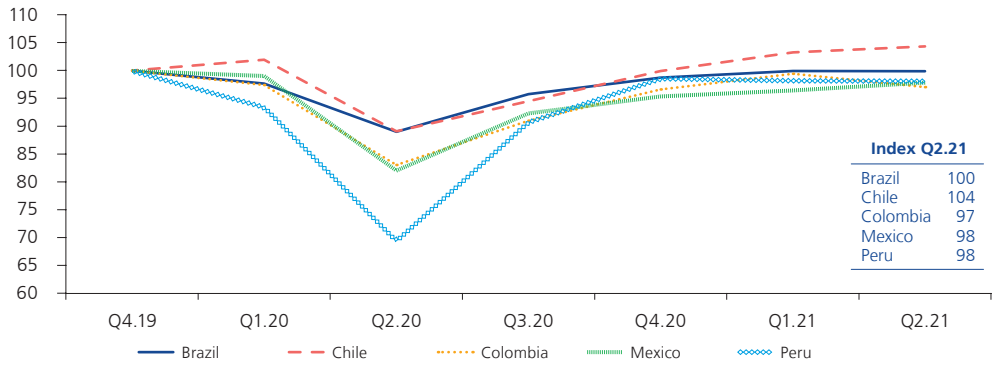
Graph 1
QUATERLY GDP: MAIN ECONOMIES
(Annualized quaterly variation)



Source: Trading Economics.

Among **emerging economies**, China grew in line with expectations. The dynamism of the export sector is noteworthy due to increased demand from developed economies. In contrast, India recorded a contraction due to the impact of the increase seen in COVID-19 cases. In Latin America, almost all countries experienced positive rates associated with reopening measures and an environment of high international commodity prices. In some cases, however, this favorable performance was limited by idiosyncratic shocks.

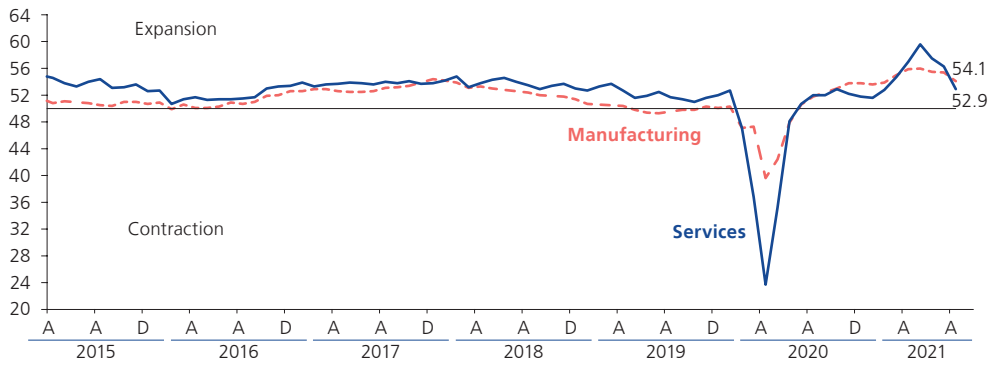
Graph 2
LATIN AMERICA: QUARTERLY GDP*
(Index 100 = Q4.19)



* Seasonally adjusted series.
Source: Statistical institutes and central banks.

3. **So far in the third quarter, global economic activity** has shown a slower pace of recovery. After reaching peak levels in July, global activity indicators for goods and services (PMI indices) have shown some deceleration in August. This slowdown is in part explained by the increase in COVID-19 cases and their impact on economic activity, particularly in those countries with lower vaccination levels. Moreover, supply shocks such as logistical problems, higher input prices, high transportation costs and supply chain difficulties persist.

Graph 3
PMI GLOBAL MANUFACTURING AND SERVICES
Dissemination Index

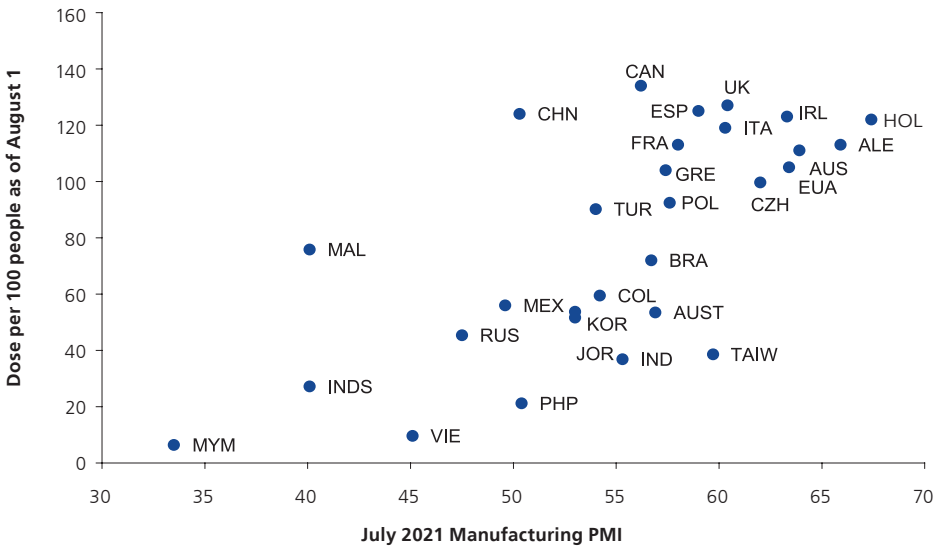


Source: JP Morgan.

Graph 4

PMI MANUFACTURING AND VACCINE DOSAGE

(Diffusion rate and dose applied per 100 people)



Source: JP Morgan.

At the level of the main developed economies, these indicators are in the expansion zone (above 50), except in the case of Japan's manufacturing activity. In the United States and Germany, the activity indices for the services sector reached record highs in July.

Table 1

JP MORGAN GLOBAL ACTIVITY INDEX: MAIN ECONOMIES

I. Services

	Mar.20	Jun.20	Sep.20	Dec.20	Jan.21	Feb.21	Mar.21	Apr.21	May.21	Jun.21	Jul.21	Aug.21
Global	36.8	48.1	52.0	51.8	51.6	52.8	54.7	57.0	59.6	57.5	56.3	52.9
EUA (ISM)	52.5	57.1	57.8	57.7	58.7	55.3	63.7	62.7	64.0	60.1	64.1	61.7
China (oficial)	52.3	54.4	55.9	55.7	52.4	51.4	56.3	54.9	55.2	53.5	53.3	47.5
Eurozone	26.4	48.3	48.0	46.4	45.4	45.7	49.6	50.5	55.2	58.3	59.8	59.0
United Kingdom	34.5	47.1	56.1	49.4	39.5	49.5	56.3	61.0	62.9	62.4	59.6	55.0
Japan	33.8	45.0	46.9	47.7	46.1	46.3	48.3	49.5	46.5	48.0	47.4	42.9
India	49.3	33.7	49.8	52.3	52.8	55.3	54.6	54.0	46.4	41.2	45.4	56.7

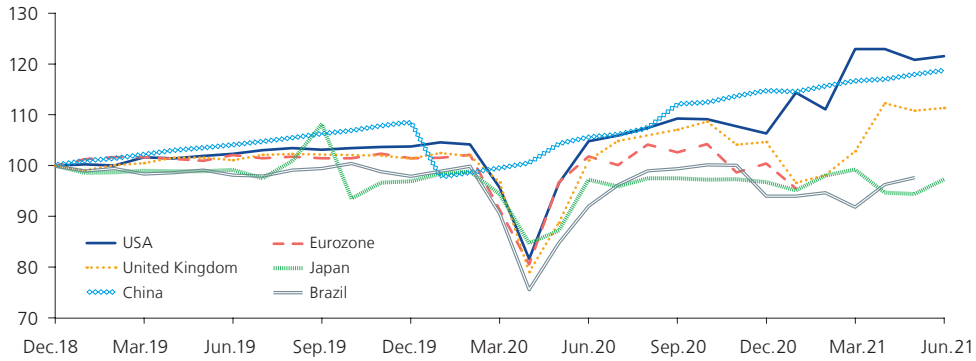
II. Manufacturing

	Mar.20	Jun.20	Sep.20	Dec.20	Jan.21	Feb.21	Mar.21	Apr.21	May.21	Jun.21	Jul.21	Aug.21
Global	47.3	47.9	52.4	53.8	53.6	53.9	55.0	55.9	56.0	55.5	55.4	54.1
EUA (ISM)	49.1	52.6	55.4	60.5	58.7	60.8	64.7	60.7	61.2	60.6	59.5	59.9
China (oficial)	52.0	50.9	51.5	51.9	51.3	50.6	51.9	51.1	51.0	50.9	50.4	50.1
Eurozone	44.5	47.4	53.7	55.2	54.8	57.9	62.5	62.9	63.1	63.4	62.8	61.4
United Kingdom	47.8	50.1	54.1	57.5	54.1	55.1	58.9	60.9	65.6	63.9	60.4	60.3
Japan	44.8	40.1	47.7	50.0	49.8	51.4	52.7	53.6	53.0	52.4	53.0	52.7
India	,51.8	47.2	56.8	56.4	57.7	57.5	55.4	55.5	50.8	48.1	55.3	52.3

Source: JP Morgan.

Other monthly frequency indicators, such as retail sales, also show less dynamism after the sustained improvement seen until July. However, with the exception of Japan, current levels in most cases are higher than those observed before the pandemic. Consumer confidence indicators also showed a decline in August, in line with the increase in COVID-19 cases that mainly deteriorated expectations about the future situation of households.

Graph 5
RETAIL SALES
(Index, December 2018 = 100)



Source: Investing and Trading Economics.

In the emerging economies, **so far in the third quarter**, economic activity in China has been affected by problems in the supply chain, by climatic factors (which affected the central part of the country), and by the containment measures adopted in a large part of the country in response to the emergence of new cases of COVID-19. Less dynamism was also seen in the export sector, whose previous expansion was supported by exports of medical supplies and other products in demand during the pandemic. In the third quarter, the government introduced a series of regulatory measures on several sectors, particularly on the technology sector.

In Latin America, monthly frequency indicators showed a better-than-expected evolution, but the outbreak of the Delta variant of COVID-19 has forced the reintroduction of some restrictions and has had an impact on recent economic activity. Prices of the region's main export products, such as copper, oil, maize, and soybeans, were also lower than those recorded in June. In addition, in a context of rising inflation, several economies with inflation targeting regimes have begun to reduce monetary stimulus through interest rate hikes.

4. **Inflationary pressures in the world continued to rise**, following the trend outlined in the previous Report.

As in previous months, inflation showed an upward trend in most economies, this evolution being explained by both demand and supply factors. Demand pressures,

particularly in developed economies, are explained by higher public expenditure and by the dynamism of private spending driven by progress in the vaccination process, excess private savings generated during the pandemic, and better financial conditions.

On the supply side, the factors explaining this include the high international oil and food prices and supply restrictions associated with supply chain problems in various activities, such as semiconductor demanding industries or construction activities, among others. Another factor is the low level of prices observed in the base period of comparison.

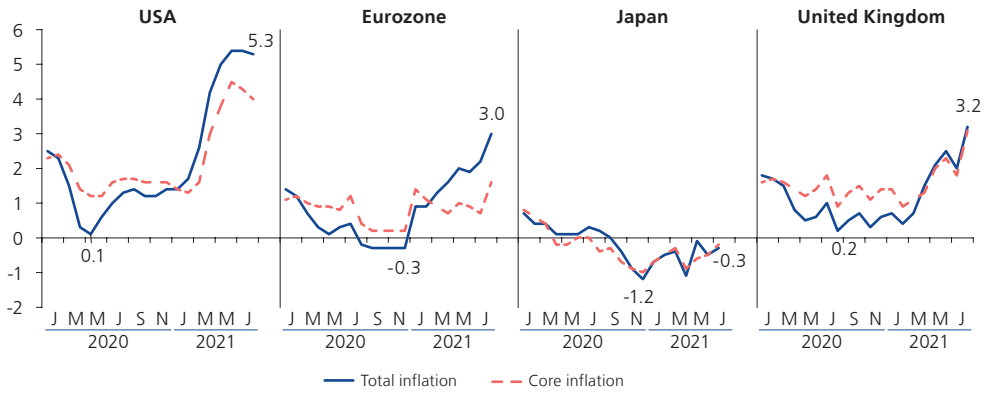
Table 2
INFLATION INDICATORS (%)

	TOTAL INFLATION				CORE INFLATION				FOOD				ENERGY			
	Dec. 2020	Jun. 2021	Jul. 2021	Aug. 2021	Dec. 2020	Jun. 2021	Jul. 2021	Aug. 2021	Dec. 2020	Jun. 2021	Jul. 2021	Aug. 2021	Dec. 2020	Jun. 2021	Jul. 2021	Aug. 2021
DEVELOPED																
USA	1.4	5.4	5.4	5.3	1.6	4.5	4.3	4.0	3.9	2.4	3.4	3.7	-7.0	24.5	23.8	25.0
Eurozone	-0.3	1.9	2.2	3.0	0.2	0.9	0.7	1.6	1.3	0.5	1.6	2.0	-6.9	12.6	14.3	15.4
United Kingdom	0.6	2.5	2.0	3.2	1.4	2.3	1.8	3.1	-1.4	-0.6	-0.6	--	-8.5	2.5	2.6	--
Japan	-1.2	0.2	-0.3	--	-1.0	0.2	-0.2	--	--	--	--	--	--	--	--	--
Canada	0.7	3.1	3.7	--	1.5	2.7	3.3	--	1.1	1.3	1.7	--	--	--	--	--
Norway	1.4	2.9	3.0	3.4	3.0	1.4	1.1	1.0	2.8	-1.7	-2.8	-2.9	--	--	--	--
Australia	0.9	1.8	--	--	1.2	1.6	--	--	--	--	--	--	--	--	--	--
New Zealand	1.9	3.3	--	--	1.4	3.3	3.3	--	2.9	2.8	--	--	--	--	--	--
EMERGING																
China	0.2	1.1	1.0	0.8	0.4	0.9	1.3	1.2	1.2	-1.3	-3.7	-4.1	--	--	--	--
India	4.6	6.3	5.6	5.3	--	--	--	--	3.4	5.2	4.0	3.1	3.0	12.7	12.4	13.0
Russia	4.9	6.5	6.5	--	4.2	6.6	6.8	--	--	--	--	--	--	--	--	--
Indonesia	1.7	1.3	1.5	--	1.6	1.5	1.4	--	--	--	--	--	--	--	--	--
Thailand	-0.3	1.3	0.5	0.0	0.2	0.5	0.1	0.1	1.4	0.3	-0.5	-1.5	-6.8	9.0	6.3	6.0
Malaysia	-1.4	3.4	2.2	--	0.7	0.8	0.8	--	1.4	1.3	1.3	--	0.6	3.2	0.7	--
Hungary	2.7	5.3	4.6	4.9	4.0	3.8	3.5	3.6	4.4	2.4	2.4	3.0	0.9	1.5	6.7	7.1
Poland	2.4	5.0	5.4	--	3.7	3.5	3.7	--	0.8	2.0	3.1	--	4.7	4.4	5.3	--
Brazil	4.5	8.4	9.0	9.7	2.8	4.7	5.4	6.1	14.1	12.6	13.3	14.0	--	--	--	--
Chile	3.0	3.8	4.5	4.8	2.6	3.1	3.6	3.8	7.6	4.6	5.0	4.9	-5.1	8.5	12.5	14.7
Colombia	1.6	3.6	4.0	4.4	1.9	3.4	3.6	3.9	4.8	8.5	9.8	11.5	-3.1	7.1	7.9	--
Mexico	3.2	5.9	5.8	5.6	3.8	4.6	4.7	4.8	6.8	5.9	6.1	6.5	-2.5	17.1	14.4	10.1
Peru	2.0	3.3	3.8	5.0	1.8	1.9	2.1	2.4	2.2	3.7	4.2	6.1	2.1	13.0	16.5	20.5

Source: Trading Economics.

In the United States, the inflation rate in July (5.4 percent) was the highest in 13 years (5.3 percent as of August 2021). Similarly, in Germany, the inflation rate increased from 2.3 percent in June to 3.9 percent in August, the highest rate since December 1993. It is worth mentioning that the sales tax reduction in force in Germany between July and December 2020 expired, which would explain part of the higher inflation. In the United Kingdom, inflation in August reached the highest level since March 2012 (3.2 percent). According to the Bank of England, inflation is expected to peak at 4 percent in the second half of this year before converging towards the 2 percent target.

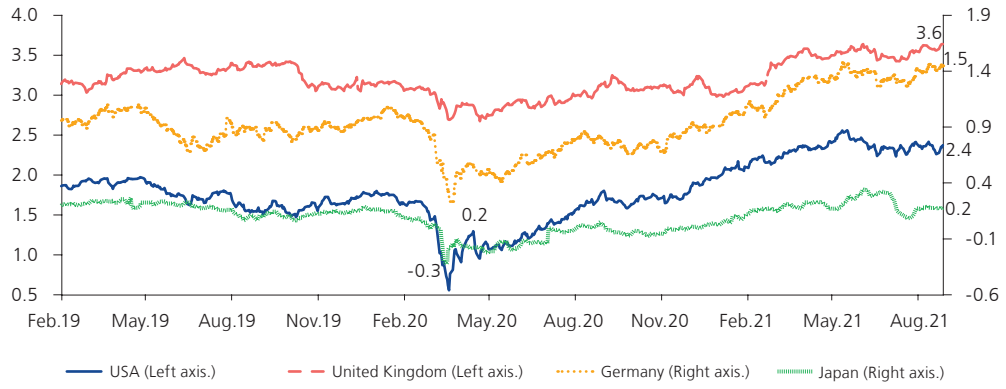
Graph 6
INFLATION IN DEVELOPED ECONOMIES 2020-2021
(%)



Source: Trading Economics.

Despite the upward trends observed in the executed data, inflation expectations have remained relatively stable. Break even inflation, estimated from the difference between nominal and inflation-indexed yields, showed a marginal decline in the cases of the United States and Japan and a slight upward trend in the cases of Germany and the United Kingdom.

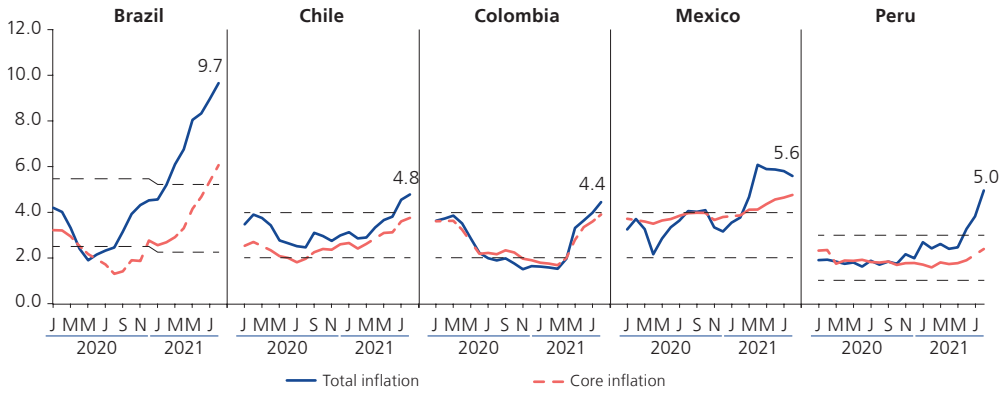
Graph 7
BREAKEVEN INFLATION (10 YEARS)



Source: Reuters.

Inflationary pressures in the emerging economies have also increased. In the particular case of Latin America, inflation has risen above the upper limit of the target range in Brazil, Mexico, and recently in Chile and Peru. In addition to the pressures mentioned above, there is also the impact of depreciation on the price of tradable goods. Core inflation –which excludes the prices of food and energy items– has been rising in these economies, but at lower rates than total inflation.

Graph 8
INFLATION IN LATIN AMERICA 2020-2021
(%)

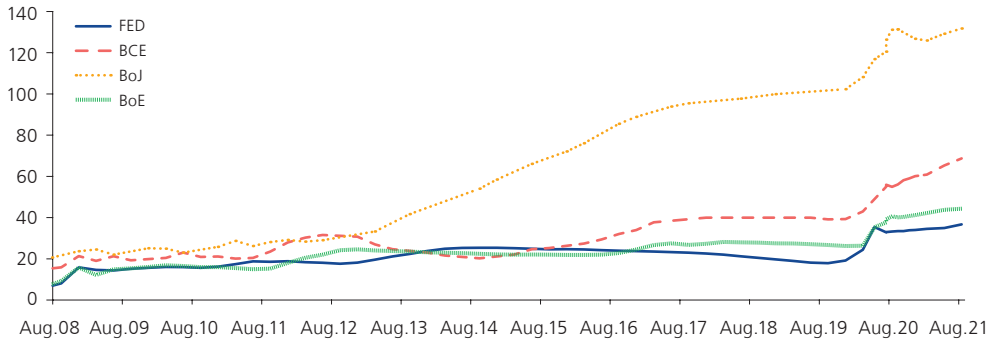


Source: Trading Economics.

5. Economic recovery and upward inflationary pressures have increased expectations of **less monetary stimulus** in some of the main developed economies. In the case of emerging economies, several central banks have raised their interest rates.

Since the last Report was published in June, expectations regarding the beginning of the withdrawal of monetary stimulus in the United States have increased, given the economic recovery and upward inflationary pressures. This process would begin with a reduction in the monthly amount of asset purchases (currently at US$ 120 billion) which, according to market expectations, could begin in the fourth quarter of this year. The announcements made by other central banks of major developed economies, such as the Eurozone and the United Kingdom, show that this issue has also been debated in recent monetary policy discussions.

Graph 9
CENTRAL BANKS: TOTAL ASSETS
(% GDP)



Source: Central Banks.

In emerging economies, several central banks have raised their interest rates between July and September in response to the persistence of the upward trend in inflation. In some cases, such as in Brazil, Russia, the Czech Republic, Hungary and Ukraine, central banks continued with the cycle of hikes initiated in previous months. In other cases, such as Korea, Chile, Mexico and Peru, the hike in the policy rate was the first one since low policy rates were adopted in the wake of the pandemic. In most cases, interest rate levels remain below those observed before the pandemic, with the exception of rates in Brazil, Russia, Turkey, and Hungary.

Table 3
MONETARY POLICY INTEREST RATES
(%)

	Interest rates				Change respect to:		
	Dec.19	Dec.20	Jun.21	Sep.21	Jun.21	Dec.20	Dec.19
Ukraine	13.50	6.00	7.50	8.50	100	250	-500
Brazil	4.50	2.00	4.25	5.25	100	325	75
Russia	6.25	4.25	5.50	6.75	125	250	50
Iceland	3.00	0.75	1.00	1.25	25	50	-175
Turkey	12.00	17.00	19.00	19.00	0	200	700
Serbia	2.25	1.00	1.00	1.00	0	0	-125
Pakistan	13.25	7.00	7.00	7.00	0	0	-625
South Africa	6.50	3.50	3.50	3.50	0	0	-300
Colombia	4.25	1.75	1.75	1.75	0	0	-250
Peru	2.25	0.25	0.25	1.00	75	75	-125
Philippines	4.00	2.00	2.00	2.00	0	0	-200
Czech Republic	2.00	0.25	0.50	0.75	25	50	-125
Canada	1.75	0.25	0.25	0.25	0	0	-150
Norway	1.50	0.00	0.00	0.00	0	0	-150
USA	1.75	0.25	0.25	0.25	0	0	-150
Poland	1.50	0.10	0.10	0.10	0	0	-140
Chile	1.75	0.50	0.50	1.50	100	100	-25
Malaysia	3.00	1.75	1.75	1.75	0	0	-125
India	5.15	4.00	4.00	4.00	0	0	-115
South Korea	1.25	0.50	0.50	0.75	25	25	-50
Thailand	1.25	0.50	0.50	0.50	0	0	-75
New Zealand	1.00	0.25	0.25	0.25	0	0	-75
United Kingdom	0.75	0.10	0.10	0.10	0	0	-65
Australia	0.75	0.10	0.10	0.10	0	0	-65
China	4.15	3.85	3.85	3.85	0	0	-30
Mexico	7.25	4.25	4.25	4.50	25	25	-275
Indonesia	5.00	3.75	3.50	3.50	0	-25	-150
Romania	2.50	1.50	1.25	1.25	0	-25	-125
Hungary	0.90	0.60	0.90	1.50	60	90	60
Taiwan	1.38	1.13	1.13	1.13	0	0	-25
Israel	0.25	0.10	0.10	0.10	0	0	-15
Eurozone	0.00	0.00	0.00	0.00	0	0	0
Japan	-0.10	-0.10	-0.10	-0.10	0	0	0
Sweden	0.00	0.00	0.00	0.00	0	0	0
Switzerland	-0.75	-0.75	-0.75	-0.75	0	0	0

Source: Central Banks, Reuters and others.

6. As for **fiscal policy**, the new measures announced by some developed economies are expected to have a greater impact as from 2022.

In recent months, some developed economies, such as the United States and the countries of the European Union, have made progress in implementing the stimulus measures outlined in the June Report. In the United States, at the close of this Report,

Congress had approved a plan of social measures for approximately US$ 3 trillion and another package for approximately US$ 1 trillion (of which close to half corresponds to infrastructure spending). On the other hand, the approval of individual investment plans for Eurozone countries was completed in the European Union, which facilitates the disbursement of resources foreseen in the Recovery and Resilience Plan (approved in July 2020) under which loans and subsidies for a total of 750 billion euros will be granted.

Global economic outlook

7. **World economic growth** is estimated at 5.8 percent for 2021, slightly lower than projected in the June Report. In contrast, the projection for 2022 has been revised upward, from 4.2 to 4.4 percent, in line with expectations of higher public and private spending in developed economies.

The slight downward revision of the growth projection for 2021 is associated with lower growth in the United States and major emerging economies (such as China and India). In line with recent indicators, a lower dynamism of real estate activity is expected in the former –compared to the estimation in the previous Report– and a lower fiscal impulse due to the delay in the negotiations in Congress. In the emerging economies, a slowdown is expected in China, in line with the shocks that affected production in the third quarter of the year and the expected slowdown in some export sectors. In the case of India, the revision is associated with the recent impact of the increase in COVID-19 cases on activity and expectations of less monetary stimulus due to rising inflation.

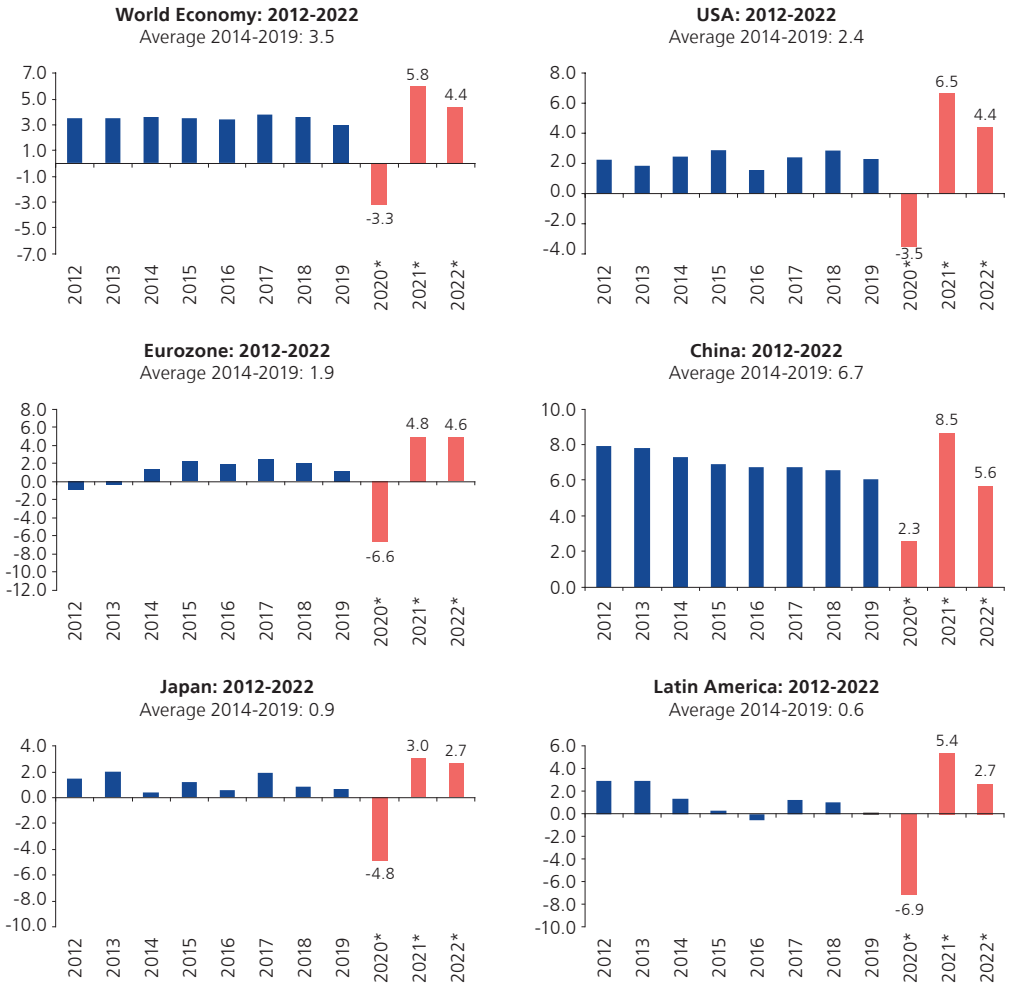
Table 4
GLOBAL GDP GROWTH
(Annual % change)

	PPP*	2020	2021		2022	
			IR Jun.	IR Sep.	IR Jun.	IR Sep.
Developed economies	**42.5**	**-4.7**	**5.4**	**5.4**	**3.9**	**4.1**
Of which						
1. USA	16.0	-3.5	6.7	6.5	4.2	4.4
2. Eurozone	12.0	-6.6	4.7	4.8	4.3	4.6
3. Japan	4.0	-4.8	3.0	3.0	2.5	2.7
4. United Kingdom	2.3	-9.9	6.0	6.6	4.9	5.2
5. Canada	1.4	-5.4	6.1	6.1	4.1	4.2
6. Other	6.8	-4.1	4.9	4.9	3.2	3.4
Developing economies	**57.5**	**-2.2**	**6.2**	**6.1**	**4.5**	**4.5**
Of which						
1. China	18.6	2.3	8.7	8.5	5.7	5.6
2. India	6.7	-8.0	10.5	9.5	6.5	6.5
3. Russia	3.1	-3.1	3.4	3.5	2.7	2.7
4. Latin America and the Caribbean	7.3	-6.9	4.3	5.4	2.8	2.7
Argentina	0.6	-9.9	5.1	5.8	2.2	2.2
Brazil	2.4	-4.1	3.5	5.0	2.1	2.1
Chile	0.4	-5.8	5.4	8.4	3.5	3.0
Colombia	0.6	-6.8	4.9	6.3	3.7	3.7
Mexico	1.9	-8.2	4.5	5.6	3.3	3.0
Peru	0.3	-11.0	10.7	11.9	4.5	3.4
5. Other	17.9	-4.0	4.9	4.9	4.5	4.5
Sub-Saharan Africa	3.1	-1.9	3.3	3.3	3.8	3.9
World Economy	**100.0**	**-3.3**	**5.9**	**5.8**	**4.2**	**4.4**

* Base 2020.
Source: IMF, Consensus Forecast and BCRP.

On the other hand, some developed countries –particularly the United Kingdom– would grow more than expected in the previous Report due to the better economic performance observed after the lifting of sanitary restrictions. In the case of Latin America, better-than-expected performance data in the second and third quarters would offset the downward revision in commodity prices and the temporary impact of the increase in COVID-19 cases.

Graph 10
GDP GROWTH
(Real % change)

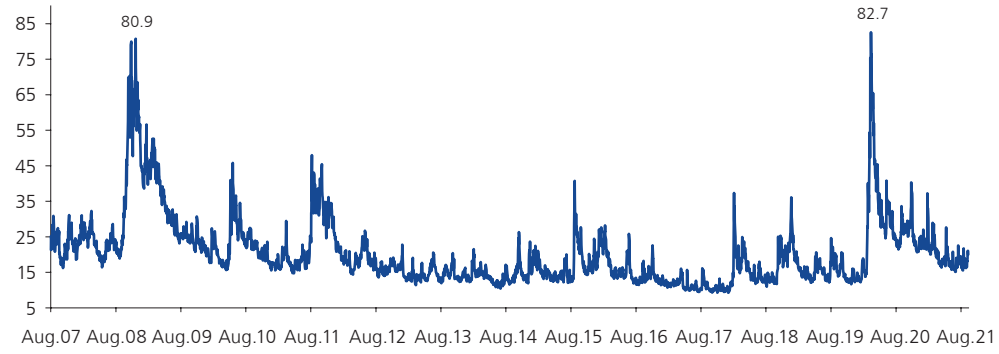


* Forecast.
Source: FMI and Consensus Forecast.

International financial markets

8. During July and August, financial markets were favored by the continuity of the global economic recovery, progress in the vaccination campaigns, negotiations for greater fiscal stimuli in the United States and better-than-expected corporate financial results. This was reflected in a high risk appetite that drove the main stock markets during most of the period.

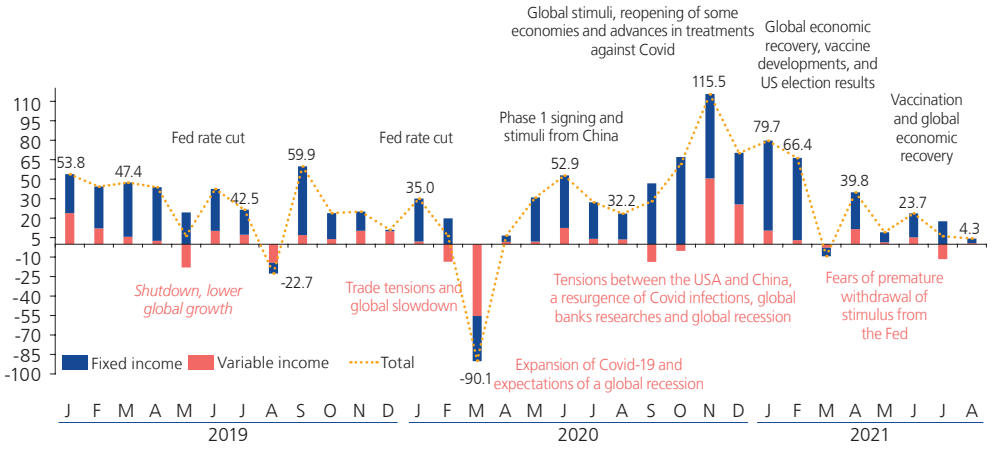
Graph 11
VIX INDEX
(Volatility of the US stock market)



Source: Reuters.

However, several factors limited this trend. On the epidemiological side, the increase in COVID-19 infections globally as a result of the expansion of the delta variant forced several countries to reinstate restrictions. On the monetary front, the Fed is expected to begin the withdrawal of stimulus earlier than anticipated in the previous Report. These factors also influenced lower capital inflows to emerging economies in July and August.

Graph 12
CAPITAL FLOWS FROM NON-RESIDENTS TO EMERGING MARKETS
(Billion US$)

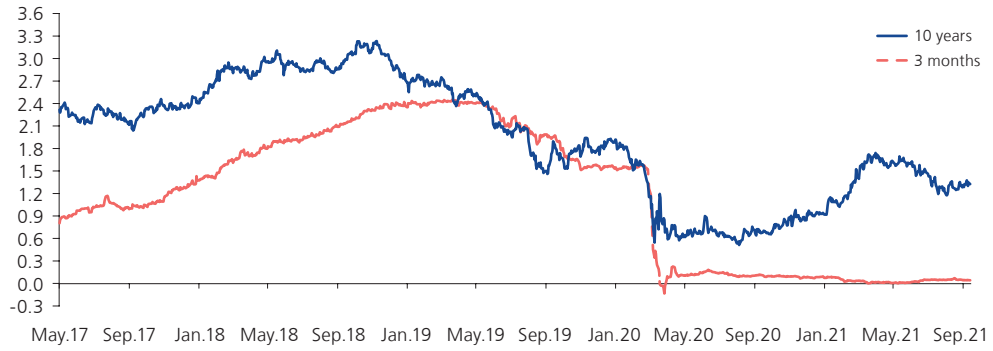


* The data of August 2021 is estimated until the 24th of August.
Source: IIF.

9. In **fixed-income markets**, long-term sovereign yields declined in the United States, this reduction being explained by the evolution observed in July when the expansion of the delta variant raised fears of an economic slowdown. In August, however, this trend was offset by progress in fiscal negotiations in the US Congress and by progress in the vaccination process. Growing expectations that the Fed will begin tapering asset purchases in the coming months also put upward pressure. In addition, short-term yields also declined slightly, reflecting excess liquidity in money markets.

In Europe, long-term sovereign yields fell as well, in line with the reimposition of pandemic control measures in several countries. In addition, the European Central Bank left its monetary policy unchanged throughout the period, although it began to have a less expansionary bias towards the end of August.

Graph 13
YIELD ON THE US SOVEREIGN BONDS
(2017-2021)



Source: Reuters.

In the emerging economies, most yields in Asia followed the global trend. In contrast, yields in several Latin American were pushed up by global shocks, such as the correction in commodity prices and expectations of tighter Fed monetary policy, as well as by idiosyncratic shocks associated with political or social events.

Table 5
YIELDS ON 10-YEAR SOVEREIGN BONDS

	Dec.20	Jun.21	Aug.21*	chg. Jun/Mar 2021 (bps.)	Accumulated chg. 2021 (bps.)
USA	0.92	1.47	1.31	-16	39
Germany	-0.57	-0.21	-0.39	-18	19
France	-0.34	0.13	-0.03	-16	31
Italy	0.54	0.82	0.71	-11	17
Spain	0.04	0.41	0.34	-7	29
Greece	0.62	0.82	0.76	-6	14
United Kingdom	0.19	0.72	0.71	0	52
Japan	0.02	0.05	0.02	-3	0
Brazil	6.90	9.09	10.50	141	361
Colombia	5.39	7.03	6.93	-11	154
Chile	2.65	4.75	4.91	15	226
Mexico	5.53	6.97	6.97	0	144
Peru	**3.51**	**5.35**	**6.08**	**74**	**257**
South Africa	8.74	9.25	9.10	-15	36
India	5.87	6.05	6.22	17	35
Turkey	12.54	17.00	16.74	-26	420
Russia	5.92	7.20	6.98	-23	106
China	3.15	3.09	2.85	-25	-30
South Korea	1.72	2.10	1.91	-18	19
Indonesia	5.86	6.57	6.05	-52	19
Thailand	1.32	1.75	1.57	-18	26
Malaysia	2.65	3.28	3.20	-8	55
Philippines	2.94	3.75	3.91	16	98

* Prepared on August 31, 2021.
Source: Reuters.

10. In the **equity markets**, most stock markets in the developed economies showed improvements and, in several cases, reached new highs. This stock market movement was mainly based on the continued recovery of global activity, progress in the vaccination process, better-than-expected corporate results for the second quarter, and progress in fiscal negotiations in the United States. In emerging economies, several stock markets also rose in line with the global trend, although some stock markets were particularly affected by idiosyncratic shocks.

Table 6
STOCK EXCHANGE

		Dec.20	Jun.21	Aug.21*	chg. Aug./Jun. 2021 (%)	Accumulated chg. 2021 (%)
VIX**	S&P 500	22.75	15.83	16.48	0.7	-6.3
USA	Dow Jones	28,538	34,935	34,748	-0.5	21.8
USA	S&P 500	3,756	4,298	4,523	5.2	20.4
Germany	DAX	13,719	15,531	15,835	2.0	15.4
France	CAC 40	5,551	6,508	6,680	2.6	20.3
Italy	FTSE MIB	22,233	25,102	26,009	3.6	17.0
Spain	IBEX 35	8,074	8,821	8,847	0.3	9.6
Greece	ASE	809	885	923	4.3	14.1
United Kingdom	FTSE 100	6,461	7,037	7,120	1.2	10.2
Japan	Nikkei 225	27,444	28,792	28,090	-2.4	2.4
Brazil	Ibovespa	119,017	126,802	118,781	-6.3	-0.2
Colombia	COLCAP	1,438	1,249	1,320	5.7	-8.2
Chile	IPSA	4,177	4,331	4,492	3.7	7.5
Mexico	IPC	44,067	50,290	53,305	6.0	21.0
Argentina	Merval	51,226	62,372	76,452	22.6	49.2
Peru	**Ind. Gral.**	**20,822**	**18,851**	**17,654**	**-6.4**	**-15.2**
South Africa	JSE	59,409	66,249	67,428	1.8	13.5
India	Nifty 50	13,982	15,722	17,132	9.0	22.5
Turkey	XU100	1,477	1,356	1,472	8.5	-0.3
Russia	RTS	1,387	1,654	1,684	1.8	21.4
China	Shangai C.	3,473	3,591	3,544	-1.3	2.0
South Korea	KOSPI	2,873	3,297	3,199	-3.0	11.3
Indonesia	JCI	5,979	5,985	6,150	2.8	2.9
Thailand	SET	1,449	1,588	1,639	3.2	13.1
Malaysia	KLCI	1,627	1,533	1,601	4.5	-1.6
Philippines	Psei	7,140	6,902	6,855	-0.7	-4.0

* Prepared on August 31, 2021.
** Data and changes are expressed in basis points.
Source: Reuters.

11. As for the **foreign exchange markets**, the dollar appreciated almost across the board on expectations that the Fed will begin to reduce asset purchases in the coming months. The dollar appreciated against the euro and the pound, but on the other hand, it depreciated against the yen due to the evolution observed during the second half of August, in a context of greater global uncertainty.

Most currencies depreciated in the emerging economies,. The greatest depreciation pressures were observed in August, in a context marked by commodity price corrections, lower capital inflows, and idiosyncratic shocks.

Table 7
EXCHANGE RATE

		Dec.20	Jun.21	Aug.21*	chg. Ago/Jun. 2021(%)**	Accumulated chg. 2021(%)**
Dollar Index***	US Dollar Index	89.94	92.44	92.63	0.2	3.0
Euro	Euro	1.221	1.186	1.181	-0.4	-3.3
United Kingdom	Pound sterling	1.367	1.383	1.375	-0.5	0.6
Japan	Yen	103.24	111.10	110.02	-1.0	6.6
Brazil	Real	5.194	4.969	5.149	3.6	-0.9
Colombia	Peso	3415	3747	3767	0.5	10.3
Chile	Peso	710	732	773	5.6	8.9
Mexico	Peso	19.87	19.93	20.06	0.7	1.0
Argentina	Peso	84.08	95.70	97.74	2.1	16.2
Peru	Sol	3.620	3.867	4.089	5.7	13.0
South Africa	Rand	14.69	14.27	14.51	1.7	-1.2
India	Ruppe	73.04	74.36	72.95	-1.9	-0.1
Turkey	Lira	7.43	8.70	8.30	-4.6	11.7
Russia	Ruble	73.79	72.98	73.12	0.2	-0.9
China	Yuan (onshore)	6.525	6.457	6.460	0.1	-1.0
South Korea	Won	1084	1130	1159	2.5	6.8
Indonesia	Rupee	14040	14495	14265	-1.6	1.6
Thailand	Bath	30.04	32.02	32.22	0.6	7.3
Malaysia	Ringgit	4.020	4.150	4.155	0.1	3.4
Philippines	Peso	48.01	48.84	49.63	1.6	3.4

* Prepared on August 31, 2021.
** An increase (fall) in the index means an appreciation (depreciation) of the US dollar, except in the euro and the pound.
*** An increase (fall) in the index means an appreciation (depreciation) of the US dollar against a currency basket (made up by the euro, yen, the pound, the Canadian dollar, Swedish krona and the Swiss franc).
Source: Reuters.

Commodity prices

12. After showing a significant rise in the first half of the year, the prices of most commodities fell slightly due to resports with economic indicators suggesting a less dynamic economic recovery as well as due to China's measures to stabilize the prices of the main raw materials. Despite this correction, most of these prices remain significantly above the levels observed at the end of 2020.

Copper

13. In August, the average price of copper was US$ 4.24 the pound, 3 percent lower than in June. Despite this, however, the copper price is 21 percent above the price recorded in December 2020.

The average price of copper decreased in the last two months, affected by prospects of a slowdown in China, by the various signals given by the Fed regarding the reduction of stimulus at the end of the year, and by the impact of the increase in COVID-19 cases in the main copper consuming countries.

On the supply side, factors influencing this decline included an increase in the production of refined products in China and prospects of recovery of production in Grasberg mine in Indonesia. In addition, since July, China sold part of its strategic copper reserves on three ocassions (on July 5 and 6 it auctioned 20 thousand tons, on July 29 it auctioned 30 thousand tons, and on September 1 it auctioned 30 thousand tons). The downward pressure on prices, derived from this higher supply, was offset by the lower activity

of some Chinese ports (particularly the port of Ningbo-Zhoushan, where most of the recycled copper imports enter) and by blockades in some of the main producing areas.

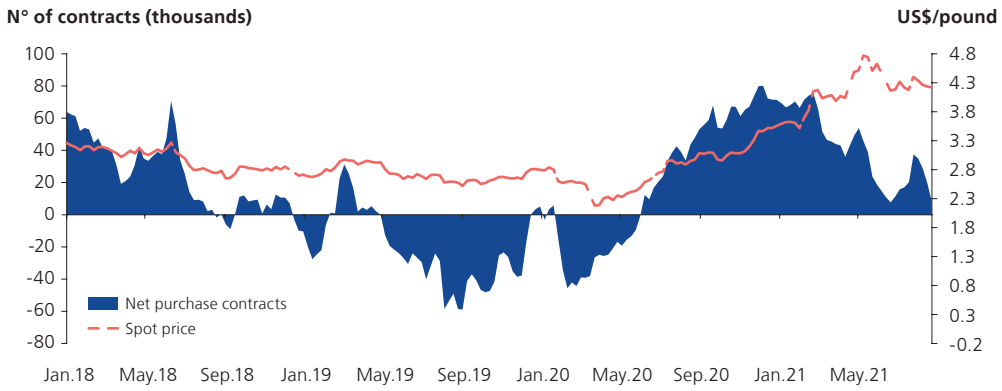
Table 8
SUPPLY AND DEMAND FOR REFINED COPPER
(Thousand metric tons)

	2017	2018	2019	2020 2/	2021 2/	2022 2/	chg.% 2021/2020	chg.% 2022/2021
Global Mining Production	20,067	20,579	20,571	20,575	21,321	22,100	3.6%	3.7%
Global Refining Production (Primary + Secondary)	23,557	24,075	24,028	24,454	25,167	25,937	2.9%	3.1%
Global Use of Refined Copper	23,705	24,484	24,429	24,987	25,088	25,829	0.4%	3.0%
Refined Balance 1/	-148	-409	-388	-532	79	109	--	--

1/ El balance calculado utilizando la producción total de refinados menos el uso del refinado.
2/ Reporte del ICSG de mayo de 2021 and la proyección de ICSG de abril de 2021.
Fuente: ICSG.

Another factor that has contributed to the recent correction of the copper price is lower non-commercial demand. Net non-commercial copper positions have decreased from the highs reached at the end of February, although they still remain in a net buying position.

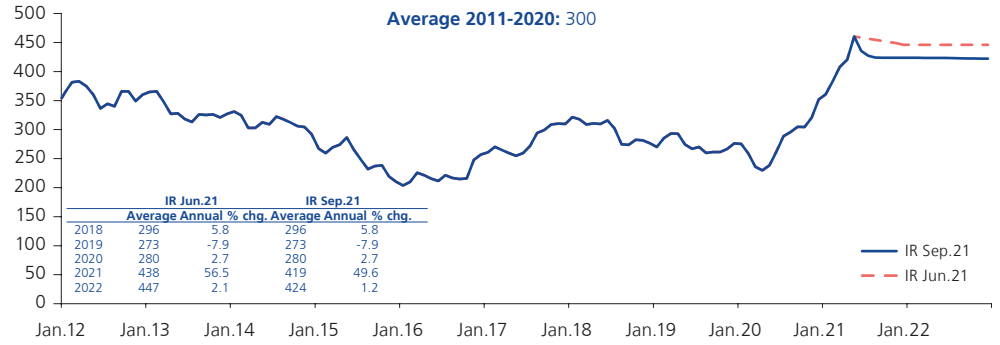
Graph 14
COPPER: NON-COMERCIAL CONTRACTS



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: Comex.

Because of this, the copper price projection has been revised down with respect to the estimate in the June Inflation Report. A slight moderation in demand is estimated, in line with recent developments in China and in some developed economies, together with an important increase in the supply of concentrates in the forecast horizon. As in the previous report, uncertainties remain regarding demand from the electric car industry, Chinese policies regarding recycled copper consumption, and the impact of the COVID-19 pandemic on global economic activity.

Graph 15
COPPER: JANUARY 2012 - DECEMBER 2022
(US$. cents/pd.)



	IR Jun.21		IR Sep.21	
	Average	Annual % chg.	Average	Annual % chg.
2018	296	5.8	296	5.8
2019	273	-7.9	273	-7.9
2020	280	2.7	280	2.7
2021	438	56.5	419	49.6
2022	447	2.1	424	1.2

Source: Reuters and BCRP.

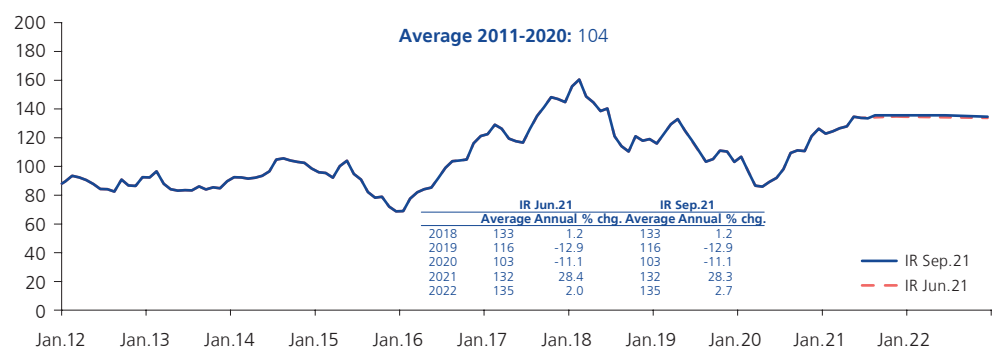
Zinc

14. The average international price of zinc reached US$ 1.36 the pound in August 2021, the highest quotation observed since June 2018 and higher by 1 percent than that recorded in June this year. With this, the price of zinc accumulates an increase of 7 percent so far this year.

The price of zinc reached three-year highs supported by supply shocks, including concentrate shortages, environmental restrictions, and, more recently, floods in China and Germany that affected refining activity. On the demand side, demand from the galvanized steel industry stands out.

Consistent with these developments, the average zinc price is expected to remain at levels similar to those forecast in the June Report. The higher demand that would come from increased infrastructure spending in the major developed economies –and which would favor zinc demand for the electroplating industry–would be offset by increased mine supply. In the medium term, demand associated with green and renewable energy projects remains a potential driver of higher prices.

Graph 16
ZINC: JANUARY 2012 - DECEMBER 2022
(US$. cents/pd.)



	IR Jun.21		IR Sep.21	
	Average	Annual % chg.	Average	Annual % chg.
2018	133	1.2	133	1.2
2019	116	-12.9	116	-12.9
2020	103	-11.1	103	-11.1
2021	132	28.4	132	28.3
2022	135	2.0	135	2.7

Source: Reuters and BCRP.

Gold

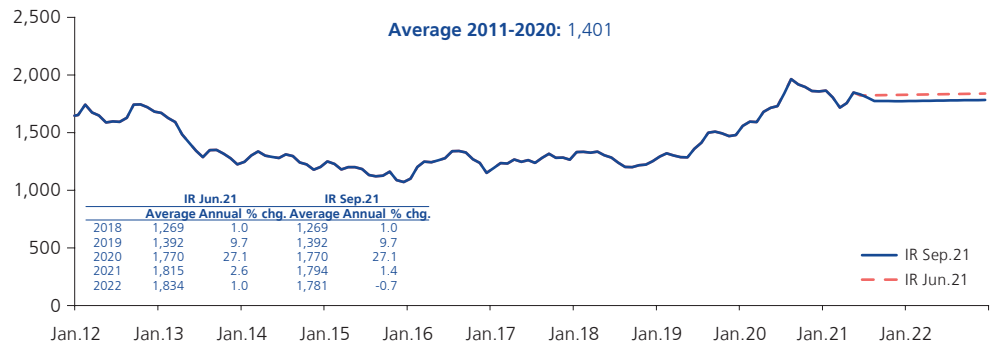
15. In the last two months, the average price of gold has been US$ 1,785 the troy ounce, 3 percent lower than in June, bringing the year's accumulated price decline to 4 percent.

Gold prices have declined in the last two months due to the appreciation of the dollar. This has influenced the demand for gold, which has been reflected in investors' lower purchases of gold through ETFs (Exchanged Traded Funds). However, the fall has been offset by the increase in risk aversion resulting from the rise in COVID-19 cases, the sustained increase in global inflation, and central banks' gold purchases in emerging economies so far this year. In line with these developments, the price projection of gold is revised down with respect to the June Report.

Graph 17

GOLD: JANUARY 2012 - DECEMBER 2022

(US$/tr. ounce)



	IR Jun.21		IR Sep.21	
	Average	Annual % chg.	Average	Annual % chg.
2018	1,269	1.0	1,269	1.0
2019	1,392	9.7	1,392	9.7
2020	1,770	27.1	1,770	27.1
2021	1,815	2.6	1,794	1.4
2022	1,834	1.0	1,781	-0.7

Source: Reuters and BCRP.

Crude Oil

16. In August 2021, the average price of **WTI oil** decreased 5 percent with respect to June 2021, reaching a monthly average of US$ 68 per barrel. The price decline in recent months only partially reverses the upward trend observed during the year (with a cumulative increase of 44 percent).

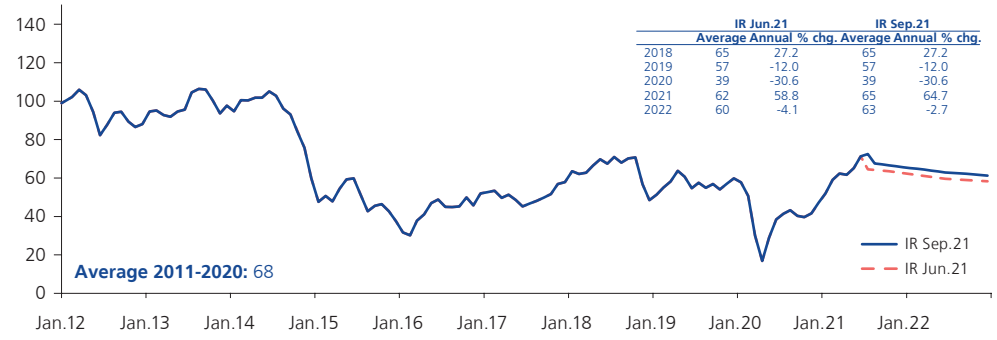
Oil prices declined due to growing concerns regarding the impact of the new outbreak of COVID-19 on economic activity and, in particular, on transportation activities. The agreement of OPEC+ members to partially normalize production also played a role. This agreement calls for monthly production increases of 400,000 barrels per day between August and December 2021, which would bring a total of 2 million barrels per day back to the market. This is equivalent to approximately 34 percent of the cut that is still in place to cope with the lower demand due to the pandemic (approximately 5.8 million barrels per day).

Prices are expected to correct slightly downwards in the projection horizon, although they would remain at a slightly higher level than estimated in the June Report. By

restoring normal production levels only partially, the OPEC+ agreement prevents that any slowdown in demand will be reflected in significant falls in prices. In addition, despite the high prices, the low response of shale oil production in the United States is another factor supporting the price.

The main factors of uncertainty are associated with the future development of COVID-19, the agreements to be adopted by OPEC by 2022, and the negotiations between the United States and Iran, which could mean the return of exports from that country.

Graph 18
WTI OIL: JANUARY 2012 - DECEMBER 2022
(US$/bl)



Source: Reuters and BCRP.

Food

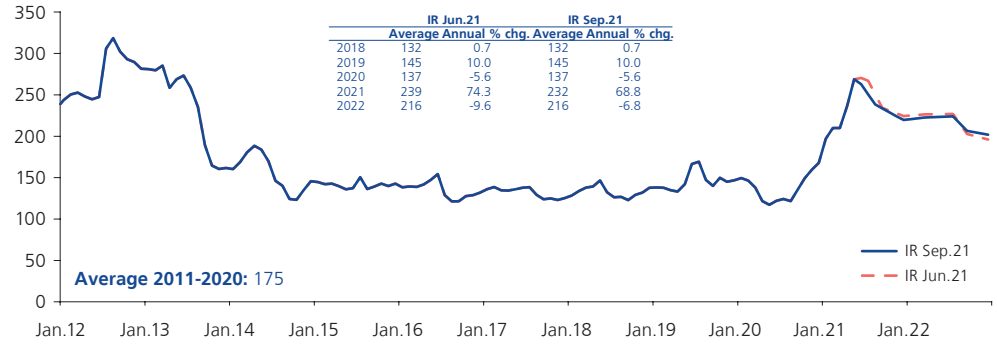
17. After reaching a 10-year high, world food prices corrected slightly downward in June and July. This correction was influenced by the normalization of supply, the slowdown in Chinese demand, the appreciation of the dollar, and shifts towards less use of maize to produce ethanol. However, in the event of an occurrence of a La Niña event in the following season, prices could be under upward pressure due to the impact of this event on plantings in the main producing countries (United States, Argentina, and Brazil).

(a) The price of **maize** fell 11 percent in the last two months, reaching a monthly average price of US$ 235 a ton in August. Despite this, however, maize prices have accumulated a 40 percent increase since December 2020.

The drop in maize prices over the last two months was associated with the seasonal inflow of the new crop from Brazil, the liquidation of inventories in the United States (in anticipation of the new crop), and with China's lower-than-expected purchases of maize. Also influential was the U.S. Environmental Protection Agency's (EPA) recommendation to reduce federal biofuels blending mandates for 2021 to levels even below those of 2020.

In line with these developments, the average price of maize projected for 2021 and 2022 has been revised slightly downward, although it would remain above the levels achieved in recent years. It should be pointed out that the market will remain tight: after four successive declines, late-season inventories are at their lowest level in six seasons.

Graph 19
MAIZE: JANUARY 2012 - DECEMBER 2022
(US$/ton)



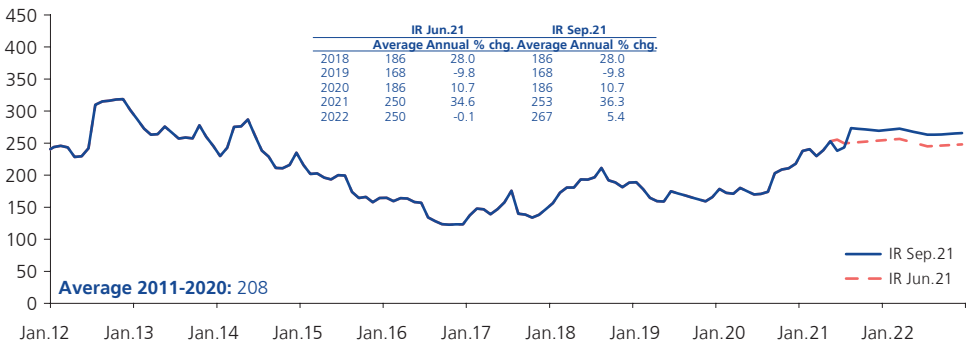
Source: Reuters and BCRP.

(b) Since the last Report, **wheat** prices have increased 15 percent and reached a monthly average price of US$ 273 the ton in August 2021, bringing the wheat price to show an accumulated increase of 25 percent compared to December 2020.

The increase in demand, in line with global economic recovery, has been accompanied by a series of supply restrictions. Thus, the price of wheat increased in the last two months, driven by the adverse weather conditions that affected crops in the northern hemisphere (North America, Europe, and Russia) and by a low production in the United States, where the planted area is the lowest in 100 years.

The price of wheat would continue to be affected by pressures due to tight inventories and the high prices of substitute grains (e.g. maize and soybeans) used as livestock feed. In line with this, the projection of the wheat price is revised upward from that estimated in the previous Inflation Report. A particular factor of uncertainty for wheat is Russia's future tax policy for wheat exports, as this country is the fourth largest wheat producer globally and the second largest exporter.

Graph 20
WHEAT: JANUARY 2012 - DECEMBER 2022
(US$/ton)



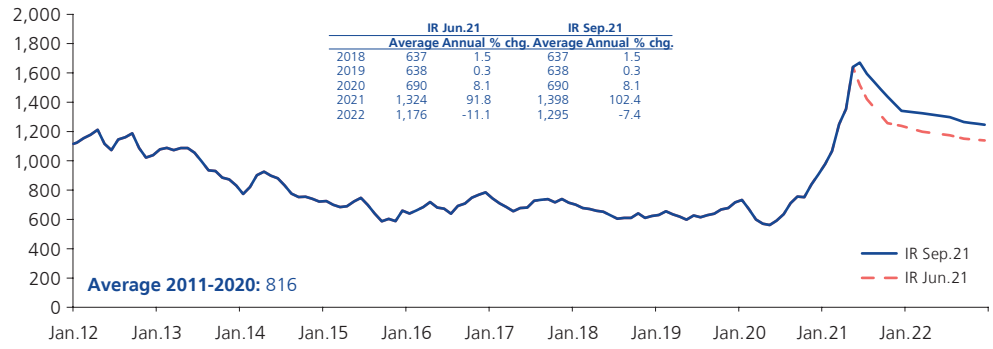
Source: Reuters and BCRP.

(c) In August, the average price of **soybean oil** was US$ 1535 the ton, 8 percent lower than in June 2021. However, the price of soybean oil accumulates an increase of 70 percent compared to December 2020.

After reaching record highs in the first half of the year, soybean oil prices declined due to the drop in oil prices and expectations that the U.S. Environmental Protection Agency (EPA) will recommend a reduction in oil refineries' use of biodiesel.

Despite this, however, the price is still at high levels due to the increase in biodiesel production capacity in the United States so far this year and to Asia's rapid economic recovery (particularly in China, India, and Bangladesh). In addition, shortages of other vegetable oils have prompted the substitution of a small portion of these oils with soybean oil. Considering these recent developments, prices are projected to be above those estimated in the previous report.

Graph 21
SOYBEAN OIL: JANUARY 2012 - DECEMBER 2022
(US$/ton)

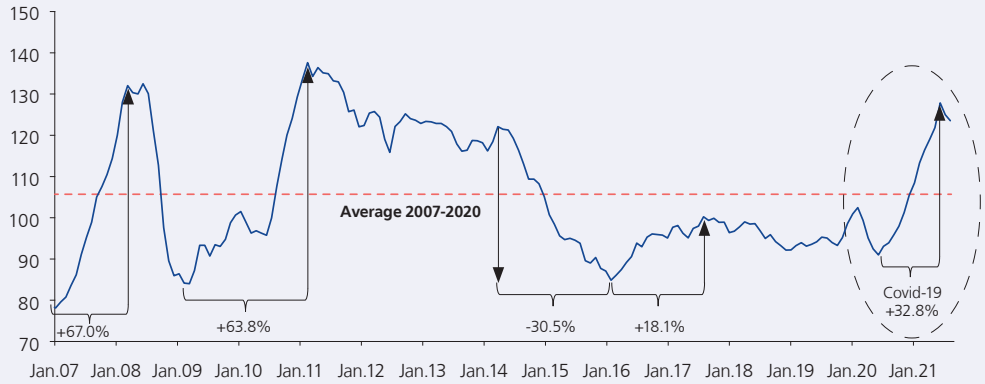


Source: Reuters and BCRP.

Box 1
EPISODES OF RISING INTERNATIONAL FOOD PRICES

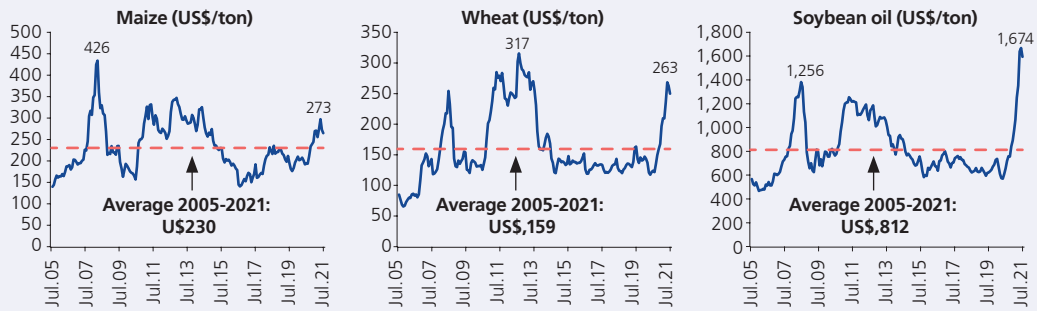
After the fall caused by the pandemic, international food prices rose steadily between June 2020 and May 2021. A similar evolution had not been seen in the last 10 years. The graph below shows how, for example, in the 2009-2011 period, the FAO aggregate food index rose at a similarly accelerated rate, reaching an all-time high in January 2011.

FAO NOMINAL FOOD PRICE INDEX *
(Base 2014 - 2016 = 100)



At the level of products, recent increases have also been significant. In the case of maize, the price rise has been slightly lower than that observed in the 2010-2011 episode, while in the case of soybean oil, the increase observed in recent months has been greater than in other episodes of increases and has led the price to reach an all-time high of US$ 1,674 the MT.

EPISODES OF RISING INTERNATIONAL PRICES OF MAIZE, WHEAT AND SOYBEAN OIL 2005-2021



	2007-2008	2010-2011	2016-2017	2020-2021
Maize				
Duration	11 months	10 months	21 months	11 months
Rise	116.5%	128.9%	20.5%	121.5%
Wheat				
Duration	12 months	11 months	24 months	11 months
Rise	125.0%	114.1%	69.5%	55.7%
Soybean oil				
Duration	22 months	11 months	5 months	13 months
Rise	173.1%	62.9%	26.3%	196.1%

The following table, which summarizes the determinants that normally influence food price increases, identifies three previous upward episodes: 2007-2008, 2009-2011, and 2016-2017. The current

upward cycle has elements common to these episodes, such as the significant rise in the price of oil. An increase in the price of oil raises the demand for substitute fuels such as ethanol or biodiesel (which use maize and soybean oil as inputs, respectively). In addition, as in previous episodes, supply shocks have also been important in this period. Apart from the unfavorable weather conditions that caused a reduction in supply, the COVID-19 pandemic also affected the normal development of the logistics chain and reduced the availability of labor for the activities of planting and harvesting.

DETERMINANTS OF THE RISE IN INTERNATIONAL PRICES OF FOOD

	2007-2008	2009-2011	2016-2017	2020-2021
Low initial price levels	√√√	√√√	√√√	√√
Supply shock	√√√	√√√	√	√√
Increased demand	√√√	√√	√√	√√
Low level of initial inventories	√√√	√√√	√	√√
Oil price increase	√√√	√√√	√√	√√
Dollar depreciation	√√√	√√	√√	√√√
Increase in non-trade positions	√√√	√√√	√	√√√

Memo: √ = slight factor, √√ = moderate factor, √√√ = important factor.

Another element also observed in this episode and in other episodes is that demand has been driven by the depreciation of the dollar and by the increase in non-commercial positions. Moreover, in the current episode, the Fed's expansionary stance has been greater and has led to a significant depreciation of the dollar, particularly against the yuan. Between May 2020 and May 2021, the yuan appreciated 9.5 percent, which increased China's demand, this country being the major consumer of food and other commodities. In addition, the expansion of global liquidity has boosted non-commercial positions significantly. While this increase in non-commercial positions was also present in the 2007-2008 and 2016-2017 periods, the increase to record levels in non-commercial positions of wheat stands out in the current episode.

There are also some important differences in the present episode. The dynamics of the COVID-19 crisis led to a sharp drop in consumption and trade. With the progress of the vaccination process, the opening up of developed economies and the rapid recovery of Chinese demand, the expansion of demand has been greater than in other episodes and has generated upward pressures. The latter are compounded by high transportation costs from grain producing countries –e.g. the United States and Argentina– to consuming countries such as China (See Box 4: Increase in global maritime transportation costs).

The downward correction registered in the last two months could mean a pause, or even a correction, in this upward trend, supported by the likely normalization of some supply shocks (the entry of the new harvest of maize in the United States and of wheat in the northern hemisphere would partially alleviate tight inventories). Downward pressures would also come from an early withdrawal of the Fed's monetary stimulus that would lead to an appreciation of the dollar and reduce demand from non-commercial investors. However, the probability that a La Niña event may occur in the following season in the Central Pacific zone –where it takes place– has increased. Should this probability materialize, it would put upward pressure on prices given the impact of La Niña on wheat crops in the United States and on maize and soybean crops in Argentina and Brazil. A factor of uncertainty, which has been absent in the other episodes, is the evolution of China's demand for grains in the context of trade tensions with the United States.

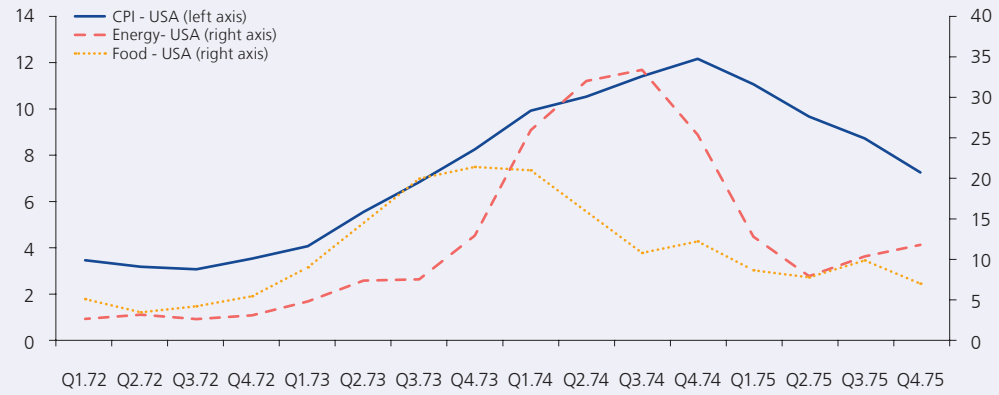
Box 2
THE EPISODE OF HIGH GLOBAL INFLATION DURING THE 1970S

In the 1970s, after decades of low inflation, developed economies experienced high inflation rates due to macroeconomic management and a significant rise in oil prices. The inflation trend during this decade, particularly in the United States, the monetary policy responses, their impact on some of the main macroeconomic variables and some of the lessons for subsequent monetary policy design are described in this box.

The first episode of high inflation in the U.S.: 1973-1974

After recording average inflation rates of less than 3 percent in the 1960s, inflation rose steadily in the United States and reached 12 percent at the end of 1974. Between February 1974 and April 1975, it permanently exceeded the 10 percent threshold (a level not seen since the 1940s).

UNITED STATES: EPISODE OF INFLATION FROM 1973-1974
(Year-on-year % change)



Source: OECD.

According to Vansteenkiste (2009)[1], the causes of the acceleration of inflation are to be found in a combination of policy errors, global shocks, and structural factors. Part of the inflationary pressures were a consequence of macroeconomic management such as expansionary fiscal policy (associated with high war spending), as well as the depreciation of the dollar against the major currencies (as a result of the abandonment of dollar convertibility and the collapse of the Bretton Woods agreements). In August 1971, President Richard Nixon announced a wage and price freeze to reduce inflation (Abrams and Butkiewicz 2017)[2]. Sowell (2014)[3] explains that this policy was "counterproductive" because artificially low prices caused lower supply while demand increased causing shortages of various products. According to Williamson (2012)[4], no government has attempted direct wage or price controls after 1979.

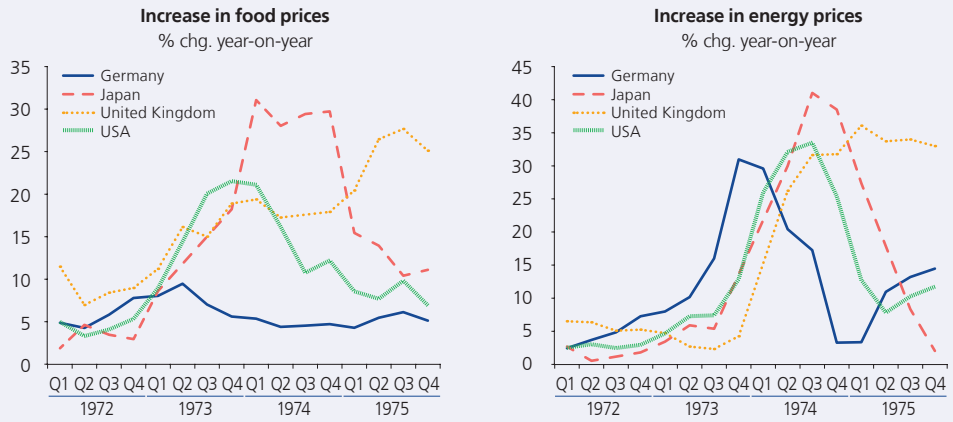
1 Vansteenkiste, Isabel. 2009. "What triggers prolonged inflation regimes? A historical analysis."

2 Abrams, Burton A. and James L. Butkiewicz. 2017. "The political economy of wage and price controls: evidence from the Nixon tapes." Public Choice 170, 67-78

3 Sowell, Thomas. 2014. Basic economics. Hachette UK.

4 Williamson, Adrian. 2012. "Farewell to prices and incomes policies: Conservative economic policy-making, 1974-79." Working Paper, Department of Economic and Social History at the University of Cambridge.

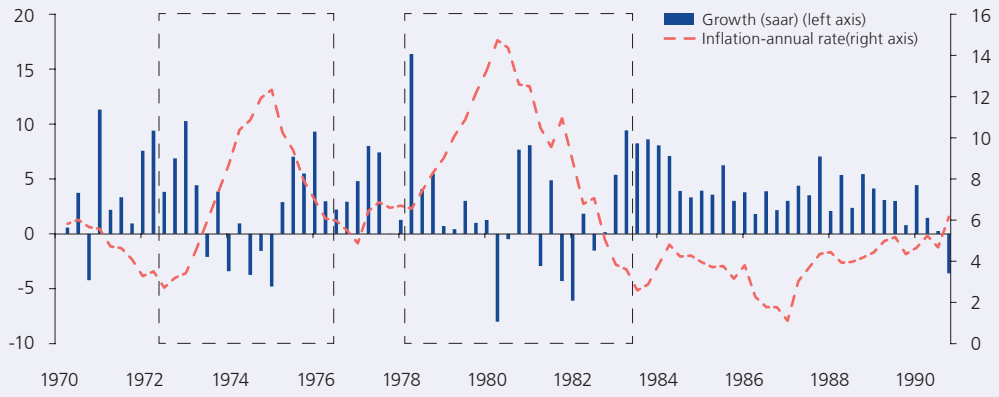
However, it is worth pointing out the presence of two important external shocks: the rise in food prices and the increase in oil prices as a result of the embargo that exporting countries established following the Arab-Israeli conflict. In this regard, Blanchard and Gali (2007)[5] point out that the price of oil is an important source of economic fluctuations, although its effect on the economy has declined over time due to factors such as lower wage rigidities, central banks' greater commitment to maintain low inflation, and the lower share of oil in the economy.



Source: OECD.

In the context of rising prices and economic slowdown, the Fed initially adopted an accommodative stance, and then adjusted its policy rate from 5 percent at the beginning of 1973 to 12 percent by the end of 1974. This response was not only taken later, but was also less restrictive than that of other developed countries, such as Germany, where the Bundesbank tightened monetary policy significantly from late 1972. Although inflation in the United States decreased, it remained above 5 percent, a level that was roughly twice the rate that had prevailed during the previous two decades.

USA: INFLATION AND GROWTH 1970-1990
(Percentage changes)



Source: FRED.

5 Blanchard, Olivier J., and Jordi Gali. 2007. "The Macroeconomic Effects of Oil Shocks: Why are the 2000s so different from the 1970s?"

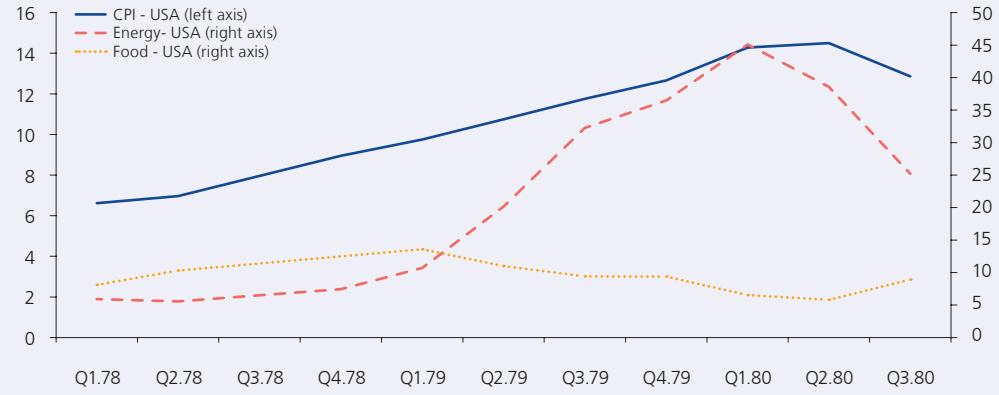
Authors such as Goodfriend (2007)[6] point out that this *go-stop* policy[7], together with the belief in the long-run Phillips curve, led central banks, such as the Fed, to be inclined to pursue more accommodative policies in search of low unemployment rates. In the same vein, Bryan (2013)[8] points out that the Fed sought to exploit the Phillips curve trade-off by seeking lower unemployment rates at the cost of higher inflation. Moreover, during the 1970s, the decline in productivity caused the Fed to overestimate non-inflationary potential output (Orphanides, 2003)[9], which also favored a more accommodative monetary policy.

The second episode in the United States: 1978-79

After the rate hikes and the economic slowdown, inflation declined in the second half of the decade, but to levels higher than those prevailing in the early 1970s. Many wage negotiation processes and contractual agreements showed, in those years, different degrees of indexation.

From 1979 onwards, inflation resumed its upward trend, driven by a new food shock (as a result of unfavorable weather conditions) and by a new rise in oil prices, this time associated with the fall of the Iranian regime and the conflict between this country and Iraq. Blinder (2009)[10] also points to the rise in mortgage interest rates as another important factor.

UNITED STATES: EPISODE OF INFLATION FROM 1978-1980
(Year-on-year % change)



Source: OECD.

In response to this resurgence of inflation, the Fed's action differed from the accommodative response of the previous episode. Under Paul Volcker's chairmanship, the Fed developed a strategy aimed at reinforcing its commitment to lower inflation and anchoring expectations. To this end, the Fed said that it was willing to let short-term rates rise sharply to bring inflation down. After letting the policy

6 Goodfriend, Marvin. 2007. "How the world achieved consensus on monetary policy." Journal of Economic Perspectives 21.4: 47-68.

7 In the go phase, central banks stimulate the economy until inflation concerns are generated.Then the stop phase begins, where the central bank's stance is contractionary in order to lower inflation while the unemployment rate rises with lags. (Goodfriend, 2007).

8 Bryan, Michael. 2013. "The great inflation." Federal Reserve History 22.

9 Orphanides, Athanasios 2003. "The quest for prosperity without inflation." Journal of Monetary Economics 50.3 (2003): 633-663.

10 Blinder, Alan and Rud, Jeremy. 2013. The Supply- Shock Explanation of the Great Stagflation Revisited, National Bureau of Economic Research.

rate rise by as much as 3 percentage points during 1979 and holding it steady for a few months, the Fed allowed a further increase of up to 3 percentage points (from 14 to 17 percent in 1980). An additional hike, which brought the rate to 19 percent, was made in early 1981. By estimating the Fed's interest rate reaction function (Taylor rules), Clarida, Galí and Gertler (2000)[11] find that the interest rate response to increases in expected inflation was larger in this period than in the 1974-1975 episode.

The monetary policy response had an impact on prices (inflation declined from 12.9 percent in early 1981 to less than 3 percent in 1983), on economic activity (GDP contracted by 4.3 and 6.1 percent in the first and second quarters of 1982). and on unemployment (which rose steadily from the second half of 1981 and peaked at 10.8 percent in late 1982). It also meant a rise in international interest rates which influenced the debt crisis in Latin American countries. With this action, the Fed contributed to anchoring inflation expectations and reinforcing its credibility, despite the fact that inflation expectations remained highly volatile during the 1980s.

US INFLATION RATES
(Decade average)*

Decade	Average inflation	Standard deviation
1950-1959	2.2	2.2
1960-1969	2.5	1.7
1970-1979	7.4	3.4
1980-1989	5.1	3.2
1991-1999	3.0	1.3

* Calculated from the annual inflations at the end of the period.

Experiences in other developed countries

High inflation episodes were not exclusive to the United States; other developed countries such as the United Kingdom, Japan and, to a lesser extent, Germany also experienced them. As in the United States, inflation in these countries began to rise in the second half of 1972. In the United Kingdom, inflation rose from 5.8 percent in July 1972 to 26.9 percent by August 1975, reaching a second peak of 21.9 percent in May 1980. In Japan, inflation rose from 5.0 to 24.8 percent in February 1974, while in its second peak in September 1980 the rate of inflation was only 8.7 percent. In comparison with the United States and the United Kingdom, Japan managed to reach single-digit inflation levels much earlier, in October 1975. In Germany, although inflation rose, it never exceeded two digits.

Moreover, as in the United States, high inflation was associated with increases in oil prices. Nelson and Nikolov (2004) [12] attribute this significant increase in inflation to: (1) an underestimation of excess demand (overly optimistic estimates of potential productivity) and (2) economic authorities attributing inflation to non-monetary factors and proposing the use of non-monetary measures for its control (price and wage control). As a result, there was a delay in recognizing the importance of monetary policy in controlling inflation. In general, inflation control was achieved due to the

11 Richard Clarida, Jordi Galí, Mark Gertler (2000), Monetary Policy Rules and Macroeconomic Stability: Evidence and Some Theory, The Quarterly Journal of Economics, Volume 115, Issue 1, February 2000, Pages 147–180.

12 Nelson, Edward and Klain Nikolov. 2004. "Monetary Policy and Stagflation in the UK." Journal of Money, Credit, and Banking. 36(3), 293-318.

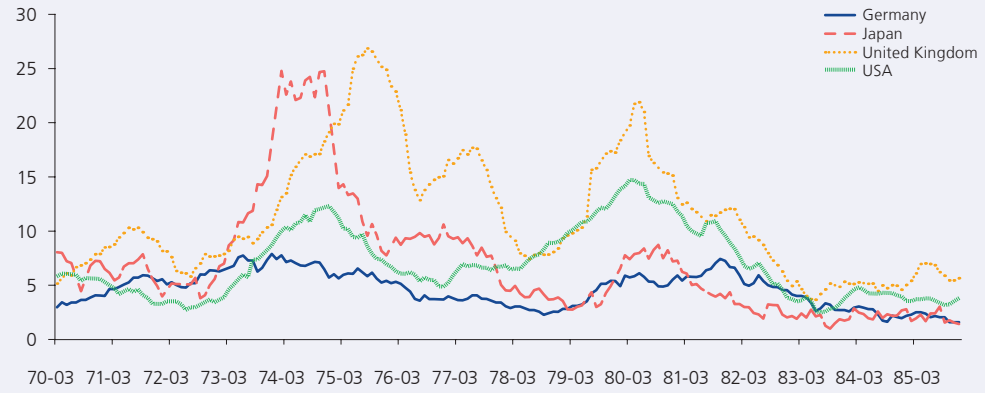
acceptance that inflation was a monetary phenomenon and due to the abandonment of these non-monetary positions (Nelson 2007)[13].

In the United Kingdom, high inflation was also related to wage increases granted by the Labor Party government. The authorities implemented price controls aimed at reducing inflation by affecting the prices of some products or production costs during 1966-1967 and 1972-1974 (Nelson and Nikolov 2004). Monetary policy responded more strongly to inflation after 1979, in comparison to the 1970s, in part due to the abandonment of a position that considered that inflation was a non-monetary phenomenon (Nelson 2004)[14].

In Japan, since July 1978, the Bank of Japan (BoJ) announced the projected growth of the money supply (M2) and certificates of deposit (CD). This projection served as an indicator of the monetary policy intention. M2+CD growth was reduced from 22.7 percent in 1973 to around 11 percent in 1978. In addition, restrictions on interest rates on deposits and bond issuance, which were given by the official discount rate plus a margin of 0.25 percent, were eliminated. This flexibility favored the transmission of monetary policy (Yoshio 1981)[15].

Similarly, in Germany, the transition to a flexible exchange rate system in March 1973 gave the Bundesbank greater control over domestic monetary conditions. In December 1974, the Bundesbank pioneered the pre-announcement of annual money growth targets (Issing 2005)[16]. Beyer et al. (2009)[17] provide evidence that, in comparison to the United States and the United Kingdom, the Bundesbank's monetary policy rule showed a strong response to deviations of inflation from its target. Because of this, a quick response and a tighter monetary policy allowed the UK to better manage inflation.

INFLATION IN DEVELOPED COUNTRIES
(Year-on-year percentage changes)



Source: IMF.

13 Nelson, Edward. 2007. "The Great Inflation and Early Disinflation in Japan and Germany." Internacional Journal of Central Banking 3(4), 23-76.

14 Nelson, Edward. 2004. "The Great Inflation of the Seventies: What Really Happened?" The Federal Reserve Bank of St. Louis Working Papers 2004-001.

15 Yoshio, Suzuki. 1981. "Why Is the Performance of the Japanese Economy So Much Better?" The Journal of Japanese Studies 7 (2), 403-413.

16 Issing, Otmar. 2005. "Why Did the Great Inflation Not Happen in Germany?" Federal Reserve Bank of St. Louis Review. March/April, Part 2, 329-336.

17 Beyer, Andreas, Vítor Gaspar, Chirstina Gerberding and Otmar Issing. 2009. "Opting Out of The Great Inflation: German Monetary Policy After The Break Down of Bretton Woods." ECB Working Papers Nº 1020.

Monetary Policy Lessons

This period provided important lessons for the design of monetary policy. These experiences led to the recognition of the role of expectations and their necessary incorporation into macroeconomic models, as well as to acknowledging the importance that maintaining credibility and implementing consistent policies over time, i.e. policies that do not sacrifice long-term prosperity for short-term gains (Goodfriend, 2007) has for central banks. Another lesson derived from these experiences was that if central banks do not respond in a timely manner to increases in inflation expectations (Taylor principle), it will be more difficult to control inflation in the future. And last but not least, that if non-monetary policies such as price/wage controls are chosen to contain inflation, this can generate serious distortions in the economy.

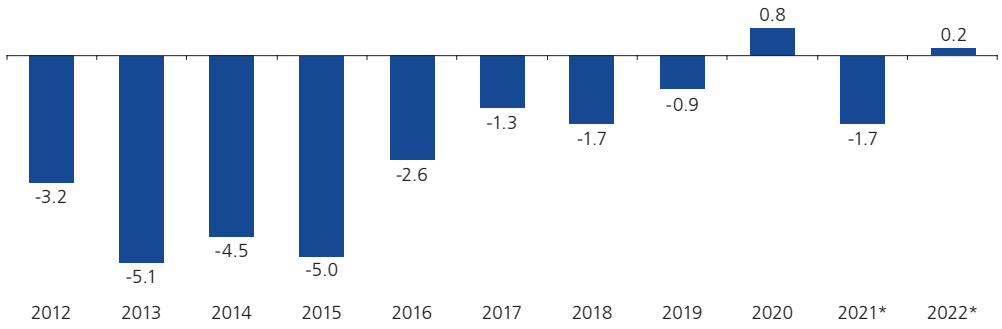
II. Balance of Payments

Current account

18. The deficit in the **current account** of the balance of payments was equivalent to 3.3 percent of GDP in the first half of 2021 (US$ 3,589 million). This balance, which is 2.9 percentage points higher than that recorded in the same period of 2020 and 1.0 percent higher to that of 2019, is explained by the increase in imports and the deficit in factor income, in line with the recovery of domestic demand, the increase in international freight costs, as well as by the contraction of travel revenues due to the slow recovery of inbound tourism. On the other hand, the trade balance showed a high surplus, with a significant increase in the value of exports, reflecting the high prices of exported commodities and the higher volume of exports of agricultural and fishing products. Finally, in line with the recovery of world economic activity, current transfers maintained their positive trend due to the resumption of activities in the main countries where remittances originate.

    In this favorable international scenario, the **current account** is projected to record a deficit of 1.7 percent of GDP in 2021 and a surplus of 0.2 percent of GDP in 2022 (versus surpluses of 0.2 and 1.8 percent of GDP, respectively, estimated in the previous Report). The downward revision in 2021 is explained by the higher factor income deficit, given the increase observed in the year in profits of companies with foreign direct investment in the country, as well as in imports of goods and services, driven by higher import prices and the upward revision in the pace of growth of domestic demand. In addition, the services account would be impacted by the increase in international freight costs. Thus, in a scenario of continued global economic recovery, the trade balance would continue to be in surplus, although the latter would be smaller than projected in the June Report. The downward correction of the current account surplus in 2022 is explained by higher imports and the expansion of the projected deficit due to factor and services income in comparison with the previous Report.

Graph 22
CURRENT ACCOUNT: 2012-2022
(% GDP)



* Forecast.

19. In the first half of 2021, the **financial account** amounted to 3.5 percent of GDP (US$ 3,893 million), lower by 0.5 and 3.2 percentage points of GDP respectively than the balances registered in the same period of 2020 and 2019. The reduction with respect to 2020 is mainly explained by the negative short-term capital flow, associated with the sale of local and foreign assets and the increase in demand for foreign currency, amid a context of political uncertainty.

The projection of the financial account in **2021** incorporates higher public sector financing, a higher increase in FDI in the country due to higher private profits, and a lower liquidation of portfolio investment in local assets. On the other hand, towards the fourth quarter of the year, the AFPs are expected to resume their investments abroad and the sale of their foreign assets to cover the approved withdrawals of their affiliates is expected to be lower.

Table 9
BALANCE OF PAYMENTS
(Million US$)

	2019	2020	2021*			2022*	
			I Sem.	IR Jun.21	IR Sep.21	IR Jun.21	IR Sep.21
I. CURRENT ACCOUNT BALANCE	**-2,154**	**1,583**	**-3,589**	**410**	**-3,806**	**4,441**	**420**
% GDP	*-0.9*	*0.8*	*-3.3*	*0.2*	*-1.7*	*1.8*	*0.2*
1. Trade Balance	7,118	8,228	5,534	16,630	14,969	19,741	17,635
a. Exports	48,224	42,941	28,126	60,254	60,658	64,143	64,346
Of which:							
i) Traditional	*34,258*	*29,937*	*20,842*	*44,346*	*44,486*	*46,857*	*46,716*
ii) Non-Traditional	*13,812*	*12,883*	*7,194*	*15,795*	*15,981*	*17,006*	*17,312*
b. Imports	-41,106	-34,713	-22,592	-43,625	-45,689	-44,401	-46,712
2. Services	-3,152	-4,170	-2,795	-5,040	-5,834	-4,632	-5,240
3. Investment income	-9,838	-6,546	-8,220	-14,761	-16,775	-14,422	-15,998
4. Current transfers	3,718	4,071	1,892	3,582	3,833	3,754	4,023
Of which: Remittances	3,326	2,939	1,693	3,227	3,455	3,388	3,627
II. FINANCIAL ACCOUNT 1/	10,348	4,808	774	-1,117	2,058	-1,879	1,005
1. Private Sector	5,949	-5,010	-4,257	-8,302	-8,379	-3,759	-1,876
a. Long-term	*4,039*	*-1,096*	*8,788*	*1,566*	*5,892*	*-3,359*	*-1,876*
b. Short-term 1/	*1,910*	*-3,914*	*-13,045*	*-9,868*	*-14,271*	*-401*	0
2. Public Sector 2/	4,399	9,818	5,031	7,185	10,437	1,880	2,882
III. CHANGE ON NIRs	8,195	6,391	-2,815	-707	-1,748	2,562	1,425

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

On the other hand, a greater pace of portfolio investment abroad is projected for **2022**, with the return of asset purchases by the PFAs and the continuity of mutual fund investments, in an international context of normalization of activity after mitigating the impact of COVID-19 on the world economy, with less uncertainty and a gradual increase in long-term interest rates.

20. In the first half of 2021, the surplus in the **trade balance** was US$ 5,534 million, US$ 4,354 million higher than the one recorded in the same period of 2020 (US$ 1,180 million) and US$ 2,815 million higher than the one in the same period of 2019 (US$ 2,719 million). This higher balance is explained by an increase in exports, from US$ 17,142 million in the first half of 2020 to US$ 28,126 million in the period under analysis, mainly as a result of the higher prices of industrial metals (copper and zinc). Other exports that also had a positive influence on the trade balance were the higher volume of exports of agricultural and fishery products, associated with a higher anchoveta catch in the first fishing season of 2021, and the upward trend in fruit exports, which reflected the increase in world demand.

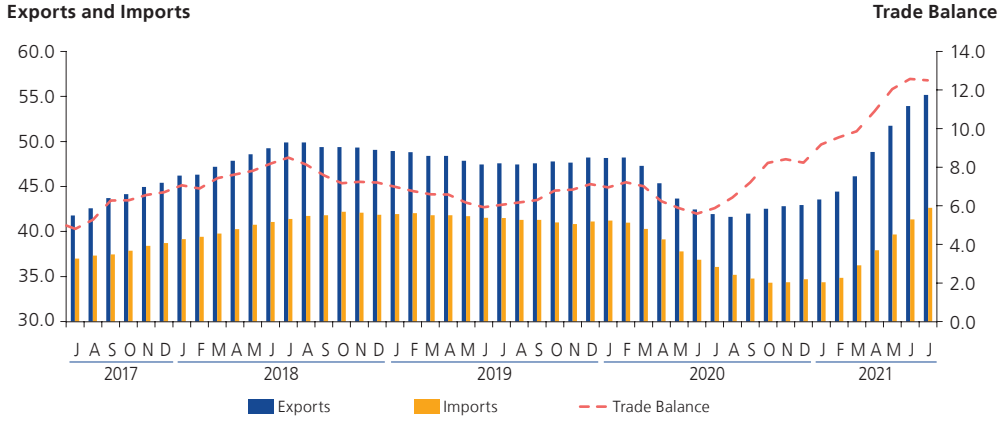
Based on this, the trade balance is projected to reach a surplus of US$ 14,969 million in **2021**, a balance US$ 1,661 million lower than the one estimated in the previous Report. This correction is mainly explained by the increase in the value of imports, associated with a higher than expected value recorded in the first half of the year. In **2022**, the trade surplus would amount to US$17,635 million, a figure US$ 2,107 million less than projected in the previous report, reflecting the higher growth of imports compared to that of exports.

The projection of exported volumes in 2021 and 2022 reflects the favorable performance of primary production resulting from greater international trade flows, in line with the reactivation of foreign trade of the country's main trading partners and better control of the pandemic. On the other hand, the recovery in the value of imports in 2021 would be mainly explained by the higher-than-expected volumes recorded in the first half of the year, in line with the higher growth of domestic demand, and by the higher import prices of food, oil, and industrial inputs. By 2022, the highest imports would be observed in the main food products, industrial inputs, and non-durable consumer goods.

Graph 23

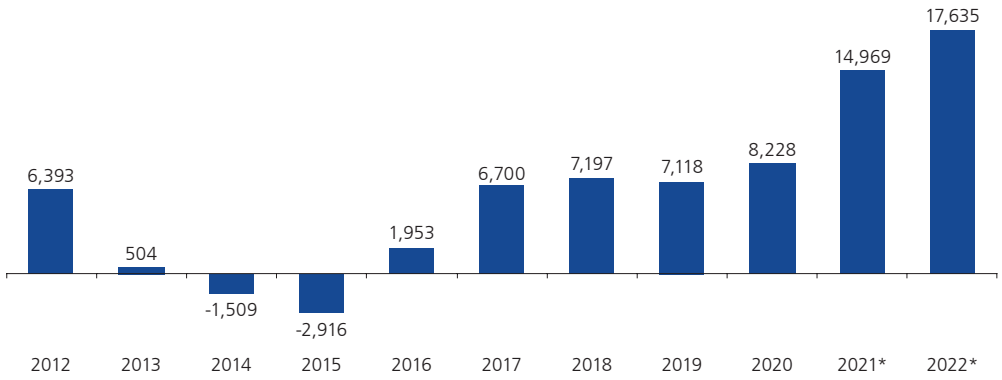
TRADE BALANCE, EXPORTS AND IMPORTS

(Accumulated 12 months - Billion US$)



Average export prices would be supported by the high prices of industrial commodities, although with a tendency to moderate, while import prices would decrease over the projection horizon, reflecting the stabilization of oil prices and the demand for other renewable energy sources.

Graph 24
TRADE BALANCE
(Million US$)



* Forecast.

21. **Exports** amounted to US$ 28,126 million in the first half of 2021, which represents an increase of US$ 10,984 million (64.1 percent) with respect to the amount registered in the same period of 2020. This is explained by higher exports of traditional products (74.5 percent), with fishmeal and copper standing out, and, to a lesser extent, by non-traditional exports (40.2 percent), such as agricultural, chemical, fishing, textile, and iron and steel products.

The value of exports projected for **2021** is revised up, as exports would be supported by higher prices of traditional mining products. A significant factor explaining this is the faster pace of expansion of global manufacturing activity, which has generated a super cycle of industrial metals, associated with a series of actions aimed at promoting environmentally sustainable growth of global energy transition and decarbonization of economic activities, which in turn would favor the production of goods and infrastructure with clean and renewable energy technology. In line with this, the projection of shipped volumes would contribute positively, the shipment of non-traditional products standing out.

In **2022**, growth in shipments of non-traditional products and exported volumes of traditional products is expected to be similar to that projected in the June Report, in a scenario of recovery of the local mining supply and the normalization of foreign trade following a massive worldwide vaccination process against COVID-19.

22. On the other hand, **imports** totaled US$ 22,592 million in the first half of 2021, which represents an increase of US$ 6,630 million (41.5 percent) with respect to the same period of 2020. This result is explained by the acceleration of local demand, stimulated by the growth of public investment and private investment, as well as by the recovery in the price of oil, industrial inputs, and food.

Higher growth in import volumes and a normalization of international prices with respect to the previous year are expected in **2022**. The expected drop in average import prices would be supported mainly by the stabilization of oil and food prices.

Table 10
TRADE BALANCE
(Real % change)

	2020	2021*				2022*	
		I Sem. respect to:		IR Jun.21	IR Sep.21	IR Jun.21	IR Sep.21
		I Sem.20	I Sem.19				
1. Value:							
Exports	-11.0	64.1	22.8	42.1	41.3	6.5	6.1
Traditional products	*-12.6*	*74.5*	*27.6*	*50.8*	*48.6*	*5.7*	*5.0*
Non-traditional products	*-6.7*	*40.2*	*10.8*	*22.6*	*24.0*	*7.7*	*8.3*
Imports	-15.6	41.5	11.9	25.9	31.6	1.8	2.2
2. Volume:							
Exports	-14.1	22.1	-5.9	12.4	11.0	5.4	5.2
Traditional products	*-18.5*	*19.1*	*-11.0*	*11.6*	*9.4*	*5.9*	*5.8*
Non-traditional products	*-1.7*	*30.8*	*8.8*	*15.2*	*15.6*	*5.0*	*5.0*
Imports	-11.1	26.0	5.6	12.6	15.5	3.6	4.7
3. Price:							
Exports	3.7	34.4	30.4	26.3	27.2	1.0	0.9
Traditional products	*7.2*	*46.5*	*43.4*	*35.1*	*35.8*	*-0.2*	*-0.8*
Non-traditional products	*-5.1*	*7.1*	*1.8*	*6.4*	*7.3*	*2.5*	*3.1*
Imports	-5.0	12.4	5.9	11.8	13.9	-1.7	-2.4

* Forecast.

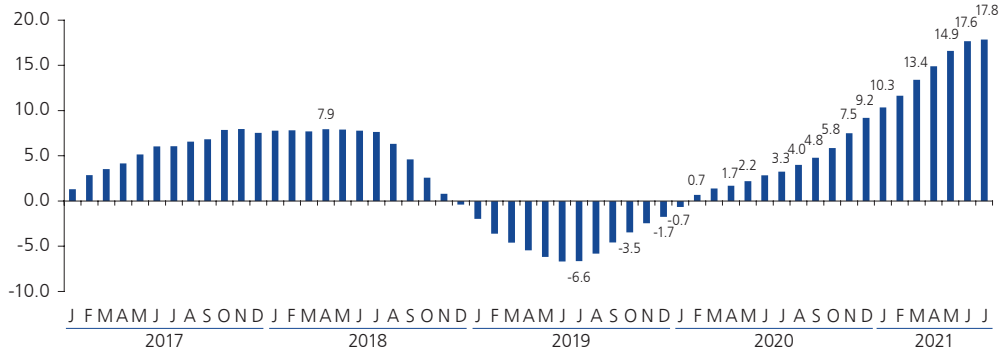
Terms of trade

23. The terms of trade increased by 19.5 percent in the first half of 2021, driven by the maximum values reached by the price of copper after the progressive advance of the global vaccination process and the continued recovery of global economic activity.

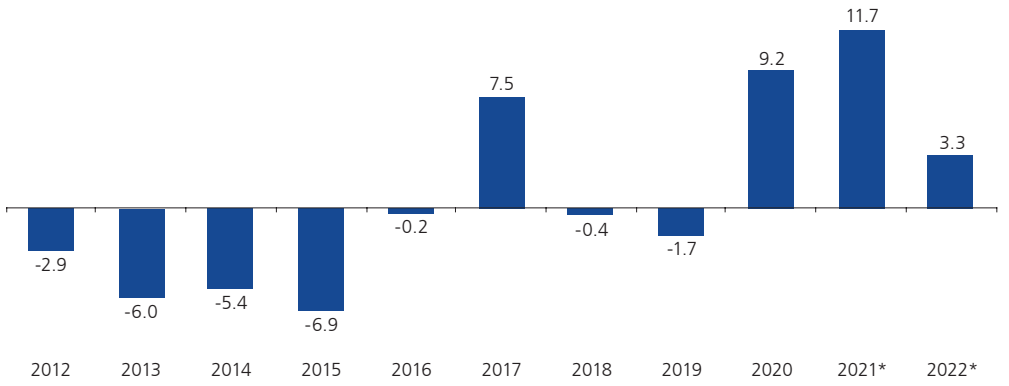
In 2021, the terms of trade would show an expansion of 11.7 percent, lower than that projected in the June Report (13.0 percent), influenced by the higher projected increase in the average import price as a result of higher oil and food prices, such as wheat and soybean oil. This would offset the upward revision in export prices. The current projection also includes a slight downward correction with respect to the average price of copper forecast in the previous Report –from US$ 4.4 to US$ 4.2 the pound–, but the projection maintains the accumulated gains observed in the period, supporting the positive trend.

The annual growth rate of the terms of trade would moderate in 2022 with an expansion rate of 3.3 percent, a higher rate than that projected in the June Report. The favorable commodity cycle maintains the positive outlook for copper prices and an upward trend in the rest of the industrial metals, although with a contraction in the export price of gold. The projection also includes a fall in the price of crude oil and maize in 2022, compared to the average of the previous year. With this evolution, the terms of trade would accumulate three consecutive years of increase.

Graph 25
TERMS OF TRADE
(Accumulated 12 months % change)



Graph 26
TERMS OF TRADE: 2012-2022
(Annual average % change)



* Forecast.

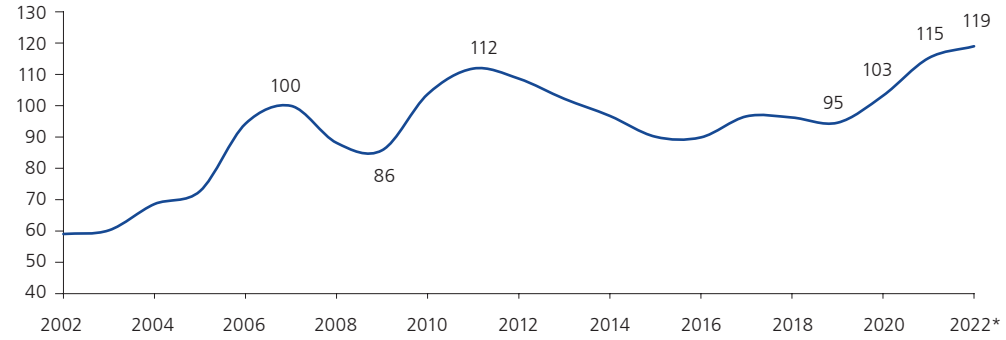
Table 11
TERMS OF TRADE: 2020 - 2022

	2020	2021*			2022*	
		I Sem.21	IR Jun.21	IR Sep.21	IR Jun.21	IR Sep.21
Terms of Trade						
Annual average % chg.	**9.2**	**19.5**	**13.0**	**11.7**	**2.8**	**3.3**
Price of exports						
Annual average % chg.	**3.7**	**34.4**	**26.3**	**27.2**	**1.0**	**0.9**
Copper (US$ cents per pound)	280	412	438	419	447	424
Zinc (US$ cents per pound)	103	128	132	132	135	135
Lead (US$ cents per pound)	83	94	97	100	100	102
Gold (US$ per troy ounce)	1,770	1,806	1,815	1,794	1,834	1,781
Price of imports						
Annual average % chg.	**-5.0**	**12.4**	**11.8**	**13.9**	**-1.7**	**-2.4**
Oil (US$ per barrel)	39	62	62	65	60	63
Wheat (US$ per ton)	186	240	250	253	250	267
Maize (US$ per ton)	137	231	239	232	216	216

* Forecast.

Therefore, incorporating the current projection, the level of the terms of trade between 2020 and 2022 would be the highest in at least the last 20 years, surpassing the level reached in 2011.

Graph 27
TERMS OF TRADE, 2002-2022
(Index 100 = 2007)



* Forecast.

External financing

24. **Long-term external financing of the private sector** totaled US$ 8,788 million in the first half of 2021, a figure US$ 9,597 million higher than the one recorded in the same period of 2020 and US$ 7,300 million higher than that recorded in the same period of 2019. This result is mostly explained by the AFPs' higher sale of external portfolio assets, mainly from to meet authorized withdrawals, and the higher sale of assets by mutual funds. **Short-term capital inflows** were negative by US$ 13,045 million in the first half of the year.

The projection for **2021** considers an upward revision of the private sector's long-term external financing, associated with the increase in foreign direct investment in the country (FDI) and the reduction of portfolio investment abroad – with a tendency to regularize by the end of the period. Additionally, higher foreign portfolio investment in the country would also contribute to this result. On the other hand, the short-term financial account would reflect a negative flow of capital in the accounts of the non-financial sector, associated with higher deposits abroad by households and non-financial companies in a context of uncertainty.

FDI in 2021 would show a positive trend as the main source of financing, driven mainly by the increase in reinvestment of profits, in line with the evolution of export prices and the faster pace of recovery of local activity. The reduction in portfolio investment abroad is explained by the sale of financial assets by the PFAs so far this year, given the liquidity they require to meet their members' withdrawals of their funds. It is estimated that the AFPs and mutual funds will resume investing in foreign assets towards the end of the year, with better yields on foreign assets as a result of the recovery of world growth and the progress of vaccination. On the other hand, the recovery of foreign portfolio investment in the country incorporates a lower rate of outflows of variable income capital –reflecting the correction of stock prices– and a lower rate of inflows of

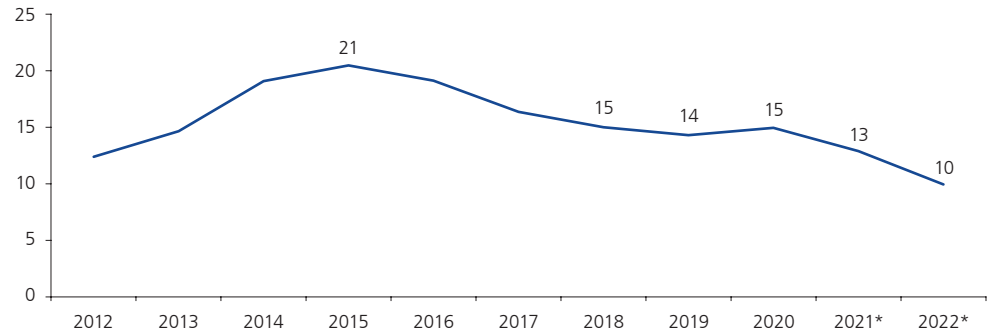
fixed income capital, in a context where political instability would gradually decrease. Moreover, a similar pace of amortizations is expected, in a context of greater preference for local financing.

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

	2020	2021*			2022*	
		I Sem.	IR Jun.21	IR Sep.21	IR Jun.21	IR Sep.21
PRIVATE SECTOR (A + B)	**-5,010**	**-4,257**	**-8,302**	**-8,379**	**-3,759**	**-1,876**
% GDP	-2.4	-3.9	-3.7	-3.8	-1.5	-0.8
A. LONG-TERM	**-1,096**	**8,788**	**1,566**	**5,892**	**-3,359**	**-1,876**
1. Assets	**175**	**5,613**	**907**	**2,012**	**-3,727**	**-3,194**
2. Liabilities	**-1,270**	**3,174**	**659**	**3,881**	**368**	**1,317**
Foreign direct investment in the country	1,382	3,931	5,236	6,631	4,162	5,111
Long-term loans	-3,367	-1,383	-2,613	-3,151	-4,318	-4,317
Portfolio investment	715	626	-1,964	401	523	523
B. SHORT-TERM 1/	**-3,914**	**-13,045**	**-9,868**	**-14,271**	**-401**	**0**

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

Graph 28
BALANCE OF MEDIUM- AND LONG-TERM PRIVATE EXTERNAL DEBT: 2012 - 2022
(% GDP)



* Forecast.

The projection for **2022** assumes an upward correction in the private sector's long-term external financing, compared to what was forecast in the June Report, supported by higher reinvestment, in line with projected profits for that year. The forecast scenario assumes the AFPs' recovery of portfolio investment abroad and a progressive increase in portfolio investment in the country by non-residents, as well as a zero flow of short-term capital, all of which would occur under a scenario of macroeconomic, political, and social stability, with greater control of the pandemic crisis following the progress of local vaccination.

25. The **public financial account** showed a positive balance of US$ 5,031 million in the first half of 2021, US$ 970 million higher than that recorded in the same period of 2020 and US$ 710 million lower than that registered in 2019. Operations standing out in the first half of the year included the issuance of 10, 20 and 30-year global bonds

in dollars for a total of US$ 4 billion and the issuance of 10-year global bonds in euros for €850 million (equivalent to US$ 1,022 million) in early March. There were also more loans with international organizations, which implied a disbursement of US$ 400 million in June as a result of a loan coordinated with the Inter-American Development Bank (IDB) in March. Finally, Petroperú placed US$ 1 billion at the beginning of February 2021 through the reopening of the bond maturing in 2047, in order to finance the modernization project of the Talara refinery. All of this offset non-residents' sales of sovereign bonds amounting to US$ 1,905 million.

The 2021 public financial account has been revised up due to the free availability disbursements observed in the second quarter of the year, as well as those projected towards the end of the period. On the other hand, a reduction in the sale of sovereign bonds purchased by non-residents is expected in the third and fourth quarters of the year. The public financial account would increase with respect to the estimates included in previous Report at the end of the projection horizon, favored by higher disbursements of freely available funds, in a scenario in which global and local uncertainty would decline after the negative effects of COVID-19 on the economy are controlled through a massive vaccination process.

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

	2020	2021*			2022*	
		I Sem.	IR Jun.21	IR Sep.21	IR Jun.21	IR Sep.21
I. Disbursements [1/]	**9,977**	**6,571**	**8,137**	**10,759**	**710**	**2,210**
II. Amortization	**-935**	**-210**	**-560**	**-507**	**-1,165**	**-1,189**
III. Net external assets	**-288**	**94**	**-86**	**102**	**-140**	**-140**
IV. Other transactions with Treasury Bonds (IV = a - b)	**1,064**	**-1,424**	**-306**	**84**	**2,475**	**2,000**
a. Sovereign Bonds held by non-residents	1,565	-1,905	-580	-502	2,475	2,000
b. Global Bonds held by residents	501	-480	-273	-586	0	0
V. TOTAL (V = I+II+III+IV)	**9,818**	**5,031**	**7,185**	**10,437**	**1,880**	**2,882**

1/ Includes bonds.
* Forecast.

26. The soundness of the balance of payments to face negative external events can be assessed by considering the position of international reserves in relation to the balance of short-term external liabilities or comparing the total of these liabilities and the country's current account deficit. In addition to the high levels of financial backing the Peruvian economy enjoys thanks to the precautionary accumulation of international reserves, Peru has an automatic freely available credit line (FCL) from the IMF for approximately US$ 11.4 billion to face possible contingencies.

Table 14
NIR INDICATORS

	2017	2018	2019	2020*	2021*	2022*
NIR as a % of:						
a. GDP	29.7	26.7	29.6	36.4	32.9	31.5
b. Short-term external debt [1/]	414	343	498	540	430	438
c. Short-term external debt plus current account deficit	351	281	431	610	351	449

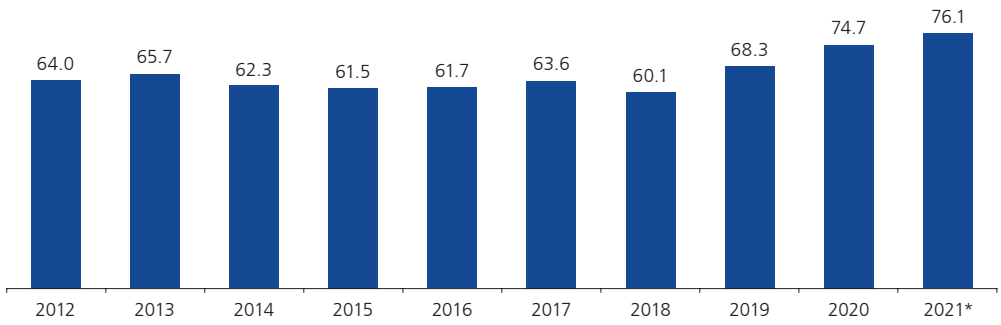
1/ Includes short-term debt balance plus redemption (1-year) of private and public sector.
* Forecast.

27. As of September 10, **Net International Reserves** (NIR) have increased by US$ 1,407 million compared to the end of last year, bringing the total of NIRs to US$ 76,114 million. This result is explained in part by the increase in the financial system's deposits in the BCRP (US$ 1,940 million). In addition, on August 23, income from allocations of Special Drawing Rights (SDR) amounted to US$ 1,815.5 million, which is also reflected in an increase in the level of International Reserves.

Graph 29

NET INTERNATIONAL RESERVES: 2012 - 2021

(Billion US$)



* As of September 10.

Box 3
FOOD IMPORTS, TRADE AGREEMENTS, AND FOOD PRICES

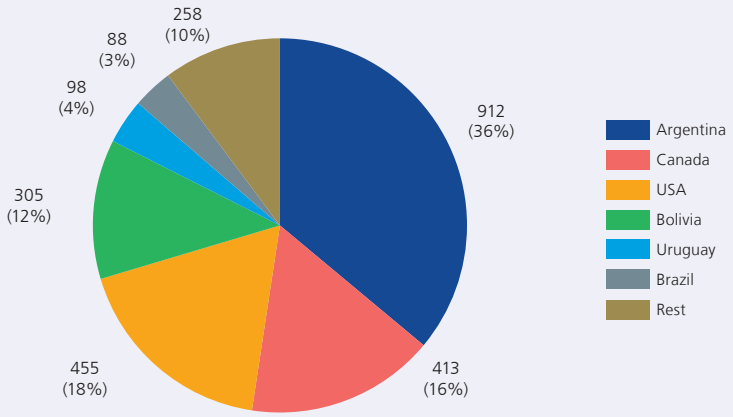
Food imports and the role of trade agreements on the level of food prices in the country is described in this box.

Soybeans, maize, wheat, rice, sugar, and dairy products are among the main foodstuffs imported by Peru. In 2020, the FOB value of imports of these products was US$ 2,529 million, a sum equivalent to 7.3 percent of total imports of goods (and 46.5 percent of imports of non-durable consumer goods). The main countries of origin of these food products are Argentina (mainly maize, soybeans, and wheat), Canada (wheat), and the United States (soybeans, maize, dairy products, and wheat).

Food imports and trade agreements

Ninety-nine percent of these food imports come from countries with which Peru has trade agreements in force (US$2,498 million). For example, the main countries from which we import soybeans are Bolivia (33 percent), Argentina (33 percent) and the United States (25 percent), while 81 percent of our imports of maize come from Argentina and 80 percent of our imports of wheat come from Canada. Finally, the main countries of origin of the rice we import are Uruguay and Brazil (both countries accounting for 97 percent of our rice imports).

IMPORTS OF MAIN FOODS IN 2020, BY COUNTRY OF ORIGIN
(FOB value in millions of US $; nominal percentage structure in parentheses)



Source: SUNAT.

Taking into account the countries of origin of imports, the ad-valorem tariff rate for these products is 0 percent[18]. Because of this, the amount paid for tariffs on imports of these products was zero in 2020, which reduces the price level at which these products are brought into the country. It is worth pointing out that almost all imports of these foodstuffs come from countries with which Peru has signed trade agreements. Under these bilateral trade agreements, our exports are not subject to the tariffs of the destination country and imports of goods from these countries are not subject to our tariffs.

18 Except for 3 corn-related tariff items that have a 6 percent tariff rate: corn starch (tariff item: 1108.12.00.00), potato starch (tariff item 1108.13.00.00) and dextrin and other modified starches (tariff item 3505.10.00.00).

PERCENTAGE OF TARIFF RELEASED BY COUNTRY OF ORIGIN OF MAIN FOODS *
(%)

	Soybean oil	Soy bean	Soy cake	Rice	Sugar 1/	Maize	Wheat
Argentina	100	100	100	100	100	100	100
Canada	100	100	100	56	100	100	100
USA	100	100	100	100	100	100	100
Bolivia	100	100	100	100	100	100	100
Uruguay	100	100	100	100	100	100	100
Brazil	100	100	100	100	100	100	100
Paraguay 2/	100	100	100	100	100	100	100
Colombia	100	100	100	100	100	100	100

It represents the percentage released with respect to the base tariff established in the trade agreements with those countries. Some of these countries and products are subject to the Price Band System.
* It considers the main import tariff items for these products.
1/ Agreement with Mercosur does not specify sugar (heading 1701999000), current ad valorem tax is 0%.
2/ Soybean oil is considered by Paraguay as a historical heritage product, so it had a special tax relief treatment, the which culminated in 2012.
Sources: SUNAT, Foreign Trade Information System (SICE) - Organization of American States.

In the particular case of imports of hard yellow maize, rice, sugar, and milk, Peru uses a price band system (PBS), which applies additional variable duties (when the international import benchmark price is below the floor price of the band) or ad-valorem tariff reductions (when the international benchmark price exceeds the ceiling price of the band)[19]. As of July 2021, given the relatively high international price levels of these food products, there are no additional duties for maize, sugar, and milk. However, as of July 2021, there are duties for rice, these duties being equivalent to approximately 2 percent of the benchmark price.

Trade with other countries allows Peruvian consumers to benefit from lower prices than those that would result from producing these goods locally and at the same time, allows the world to consume Peruvian products at lower prices. Thus, food imports complement the local supply of these goods taking into account the comparative advantages existing in the production of each crop. According to the Ministry of Agrarian Development and Irrigation, in the case of soybeans, almost the entire supply of this crop comes from other countries. Likewise, around 90 percent of local wheat consumption is based on imported production, while the share of locally produced hard yellow maize in national consumption is around 25 percent.

The increase in international food prices at the global level affects the domestic prices of important products included in the basic food basket. For example, one of the products subject to the PFS is maize, the main input used for the production of chicken meat, whose international price increased by 49.5 percent between January and July 2021. It is estimated that, even if no additional duties were applied, this would have generated a cumulative increase of 12.7 percent in the price of chicken during 2021,.

19 The duty or tariff rebate is calculated as the simple difference between the floor price and the benchmark price (tariff duty), or between the benchmark price and the ceiling price (tariff rebate). To ensure compliance with international agreements, the sum of "Additional Variable Duties" plus the CIF Ad-valorem import duties are capped. For example, the total amount of duties may not exceed 20 percent of the CIF value of the goods being imported under the PBS until December 31, 2021 and may not exceed 15 percent as from January 1, 2022. It should be pointed out that the PFS does not apply to all countries. For example, countries belonging to the CAN, or Comunidad Andina de Naciones, (e.i. Bolivia, Colombia, and Ecuador) are not subject to the application of the PBS, while the United States has preferences in the application of the PBS.

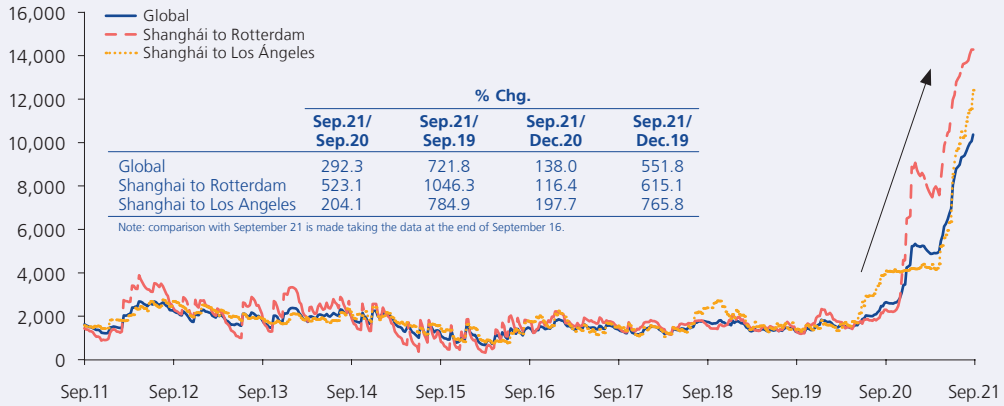
Box 4
GLOBAL SHIPPING COST INCREASES

The global pandemic generated a series of difficulties in maritime transportation that were reflected, among other factors, in the increase of freight costs. What was supposed to be a short-term shock has persisted and even worsened in recent months. This box explains the existing imbalances in the maritime transport of goods, the factors (cyclical and structural) that give rise to them, and the short and medium-term outlook for this transport of goods.

Rising transport costs

Maritime transport costs have shown a sustained and marked upward trend worldwide. For example, the average shipping rate for a 40-foot container has reached US$ 10,000 in September 2021, almost 7 times the value it had in September 2019 (2.9 times compared to 2020). Moreover, the increase in costs has intensified on those routes whose point of origin is China: year-to-date, the freight rate has more than doubled on voyages bound for Europe and North America. According to Drewry's World Container Index, freight cost on routes departing from Shanghai to Rotterdam reached US$ 14,294 in mid-September 2021 (up 116.4 percent year-on-year), while those bound for Los Angeles showed rates of US$ 12,424 (up 197.7 percent year-on-year).

DREWRY'S CONTAINER INDEX*
(US$ per 40ft container)



	% Chg.			
	Sep.21/ Sep.20	Sep.21/ Sep.19	Sep.21/ Dec.20	Sep.21/ Dec.19
Global	292.3	721.8	138.0	551.8
Shanghai to Rotterdam	523.1	1046.3	116.4	615.1
Shanghai to Los Angeles	204.1	784.9	197.7	765.8

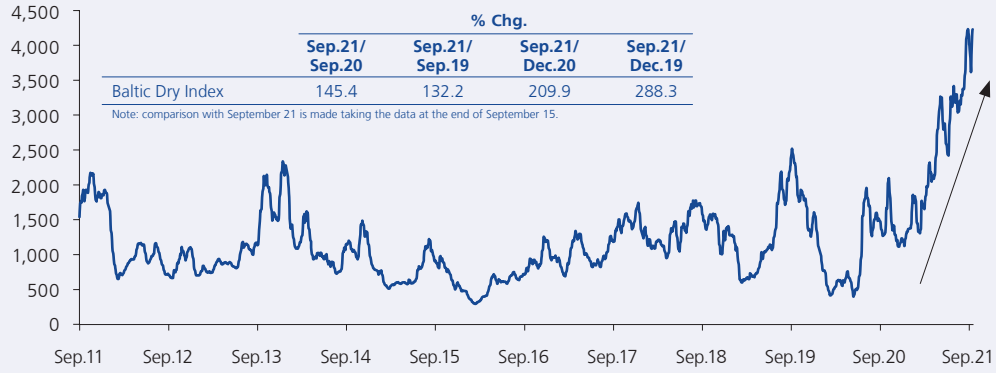
Note: comparison with September 21 is made taking the data at the end of September 16.

* Data as of September 16.
Source: Drewry.

Likewise, the Baltic Dry Index[20] rose to a more than 11-year high due to increased demand for all sizes of vessels. As of the second week of September, it has more than doubled the value it recorded in 2019 and 2020, while year-to-date it shows an increase of 209.9 percent.

20 The Baltic Dry Index is an index of average prices paid for the transport of dry bulk materials accros 20 key charter shipping routes around the world, administered by the Baltic Exchange in London.

BALTIC DRY INDEX*



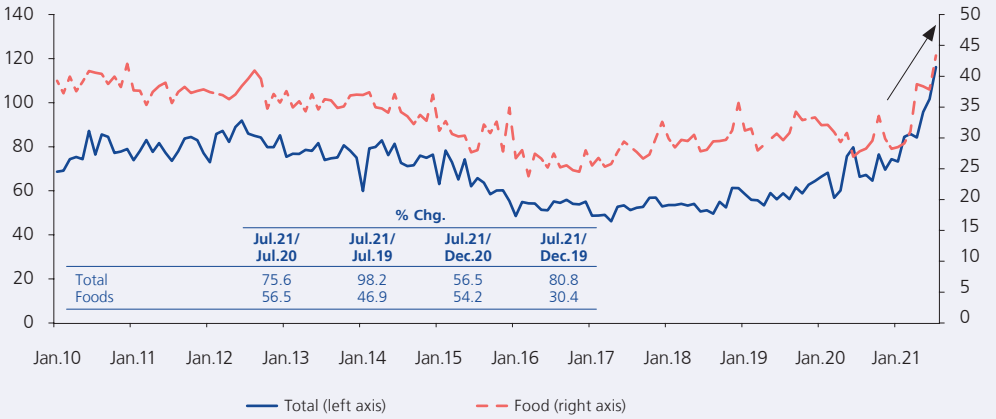
	% Chg.			
	Sep.21/ Sep.20	Sep.21/ Sep.19	Sep.21/ Dec.20	Sep.21/ Dec.19
Baltic Dry Index	145.4	132.2	209.9	288.3

Note: comparison with September 21 is made taking the data at the end of September 15.

* Data as of September 15.
Source: Trading Economics.

Goods imported by Peru also show an increase in shipping costs: the freight cost in July of this year was US$ 116 per MT of imported products, which represents an increase of 98.2 and 75.6 percent compared to the same month of 2019 and 2020, respectively. This upward trend, which ultimately impacts local selling prices, is also observed in food import freight rates which are up 54.2 percent so far this year.

IMPORTS
Freight by volume (US$/MT)



	% Chg.			
	Jul.21/ Jul.20	Jul.21/ Jul.19	Jul.21/ Dec.20	Jul.21/ Dec.19
Total	75.6	98.2	56.5	80.8
Foods	56.5	46.9	54.2	30.4

A series of bottlenecks are being observed along with the increase in costs, as reflected in the following indicators:

a. **Longer vessel delays:** the overall average delay of vessels in June of this year remains high (between 6 and 7 days), while in June 2019, the average delay was 4 days[21].

21 Sea-Intelligence https://www.sea-intelligence.com/press-room/84-schedule-reliability-continues-to-be-low-in-june-2021

b. The **increase in the time it takes for goods to reach their destination**: for example, the delay in getting a container from Beijing to Chicago has risen from approximately 30 days to more than 70 days[22].

c. The **deterioration in the "overall port scheduling reliability" indicator**, which has shown a level of 40 percent (between March and June), well below its pre-pandemic levels (80 percent in June 2019).

The factors behind this trend

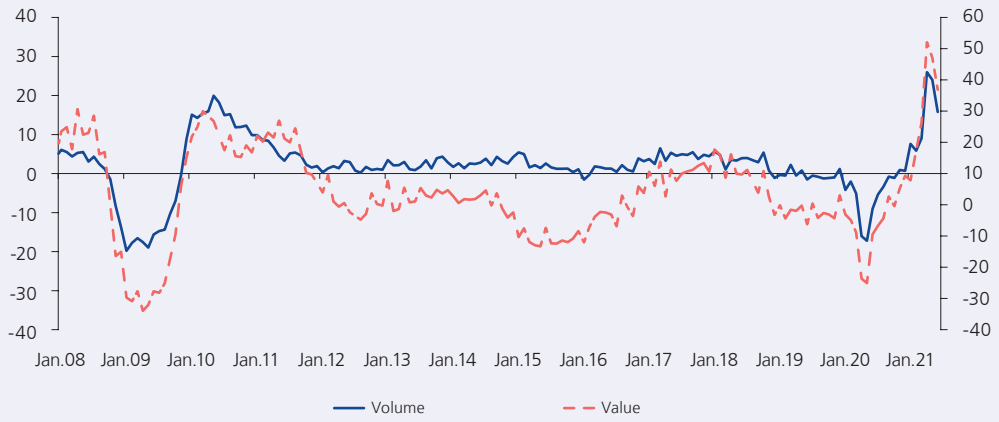
A number of factors explain this upward trend in transportation costs. Some are directly linked to the pandemic, while others reflect structural problems already present before the COVID-19 crisis.

a. **Rapid recovery of global trade** after the significant contraction resulting from the containment measures taken to deal with the health crisis.

With the onset of the pandemic, many countries closed their ports as a measure to contain the spread of COVID-19. For example, in China, which hosts seven of the ten largest container ports in the world[23], ports were closed for two months. According to Maersk's report of results in the first quarter 2021[24], the idle capacity of the company's fleet increased to 9.4 percent at the end of the first quarter, the highest level in 10 years. These measures reflected a significant contraction in global trade.

However, global trade revived with the reopening of the economies and grew at even higher rates to fill backlogged orders and meet rapidly recovering demand. This factor was reinforced by a change in consumption patterns that was observed in all sectors, from services (restaurants, cinemas, travel and concerts) to goods (clothing, computers, furniture, home grills, entertainment systems, and other goods), which were imported mostly from Asia.

WORLD EXPORTS: VOLUME AND VALUE
(% variation last twelve months)



Source: WTO, World Trade Monitor and country trade statistics.

22 Wall Street Jornal, August 4, 2021. Where Did All the Shipping Containers Go?

23 https://www.rferl.org/a/29637065.html

24 https://ml-eu.globenewswire.com/Resource/Download/f14141bb-a831-40e8-8825-512eac8a819f

b. **Short-term shocks that affected port operations**: the return of demand coincided with a series of events that severely restricted the supply of maritime transport:

(i) New port closures in the wake of COVID-19 outbreaks. The "zero tolerance" approach to the new outbreak of the virus in recent months has paralyzed the home ports of Ningbo, Xiamen, and Shenzhen. According to James Baker, container editor for Lloyd's List, the number of ships anchored in the region near the Yantian terminal quadrupled. The waiting time for a ship to berth in Shenzhen has increased from 0.5 days to 16 days[25] and in the port of Ningbo, ship unloadings haave decreased by 70 percent. These events have also affected the rest of the ports due to a lower availability of containers and the flow of vessels.

(ii) Weather factors. Storms in Texas and the blockage of the sewer channel for almost a week in the first quarter of 2021 partially paralyzed the Port of Houston[26]. In addition, the container ship "Ever Given" ran aground in the Suez Canal, blocking it completely for 6 days, as a result of a sandstorm.

c. **Inadequate development of logistics and port infrastructure**. In the last 25 years, the transport capacity of a container ship has increased fourfold. According to FT[27], the largest ships today have the capacity to transport 24,000 20-foot containers, enough to cover an area of 145 kilometers. The steady increase in the size of these giant ships has not been matched by an equivalent improvement in ports, which has led to a debate as to whether the current infrastructure can be sufficient to handle such ships efficiently and in a timely manner.

The recent case of the *Ever Given*, mentioned above, is an example of this inadequacy. Moreover, according to logistics firm Kuehne+Nagel, there are currently 353 container ships stuck in the world's ports, more than double the number observed at the beginning of the year. According to IHS Markit, in North America, the average waiting time for container ships was 33 hours in May, compared to only 8 hours in 2019. There are also cases of severe delays: in the ports of Los Angeles and Long Beach, it can take up to 12 days for a score of ships to unload their containers.

d. **Shortage of containers**. The availability of containers in several parts of the world has been affected because large volumes of containers are located in places where their use is not required. This, in turn, is a reflection of the strong imbalances in world trade.

For example, the U.S. trade deficit has reached US$ 429 billion in the first half of the year, a record level that is much higher than the record highs registered in the same periods of 2019 and 2020 (US$ 299 billion and US$ 293 billion, respectively). This explains the high ratio between full containers at entry versus full containers at exit in the main U.S. ports (Los Angeles and New York), which implies that thousands of containers remain empty in the United States and that Chinese exporters face long waits to get containers for new shipments. Paradoxically, there are large inventories of containers because of safety-related reasons in U.S. and European ports. In addition, congestion in logistics networks means that containers are stuck in places where they are not needed.

25 Shehrina Kamal, Everstream Analytics

26 https://porthouston.com/port-houston-weathers-historic-winter-storm/

27 FT, March 28, 2021, Too big to sail? The debate over huge container ships.

This shortage of containers is exacerbated because Chinese exporters' higher payments for the availability of containers cause ships to return to Asia as soon as possible, often without cargo. It is estimated that shipping lines are moving more than 30,000 empty containers to Asia each week.

e. **Shortage of new container ships**. According to FT, the tight supply of vessels poses a significant potential threat because, despite a recent increase in orders for new vessels, the availability of these container ships is likely to remain tight over the next five years. In addition, the number of shipyards globally had shrunk by two-thirds since 2007 to about 115. These few still operating yards have received a flood of orders, so the inflow of new capacity would continue to be delayed.

f. **Congestion in out-of-port transportation networks**. Congestion in the rail networks and shortages of trucks, drivers, and warehouse workers have hampered the rapid disembarking, unloading, and emptying of containers.

g. **Changes in market structure**: As a result of multiple mergers and acquisitions[28], more than 85 percent of the world's maritime fleet capacity is concentrated in just 10 companies, which accounted for a little under 7 percent of the world's total shipping lines in August 2021. The unprecedented profits recorded by these companies since the start of the pandemic suggest that there are incentives to provide limited supply in order to obtain higher rates. In addition, these major carriers have formed three alliances (the 2M Alliance, the Ocean Alliance, and the Alliance), which has further concentrated the market and reduced the flexibility to lower rates.

Outlook

Ocean freight rates are expected to decline as some temporary factors (such as measures implemented in response to the pandemic and other port operational problems) subside and as world trade volumes normalize. Another factor that would offset tariff pressures is the higher container throughput expected for China. Despite this, however, structural factors –including those associated with port infrastructure, cargo vessel shortages, and other logistical constraints– are likely to limit this reduction and keep rates above pre-pandemic levels.

28 https://alphaliner.axsmarine.com/PublicTop100/

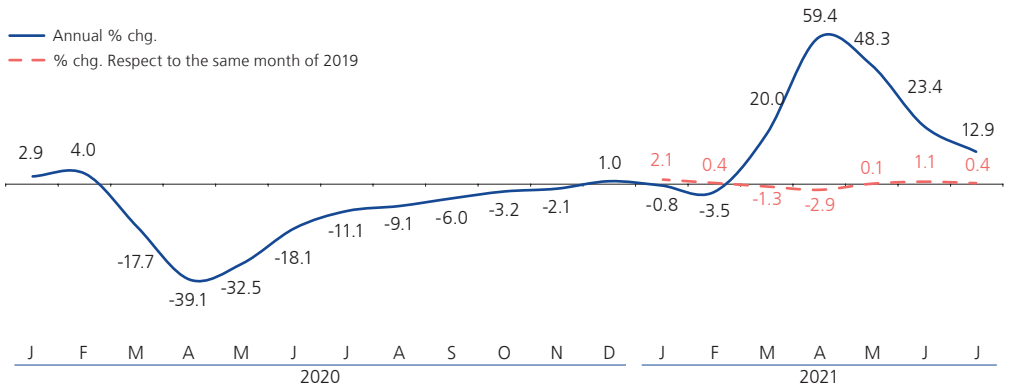
III. Economic Activity

Sector GDP

28. Economic activity between January and July 2021 showed a similar level to that observed in the same period in 2019, recording a year-on-year increase of 19.7 percent, mainly due to a low comparative base, the local and global progress of the vaccination process, and the easing of sanitary measures.

After the recovery of monthly GDP seen at the end of 2020, monthly growth rates during 2021, compared to 2019, reflected the focused quarantine implemented in February as well as the effect of political uncertainty on expectations. As of July 2021, economic activity has been 0.4 percent above the growth rate registered in the same month of 2019, although some sectors, especially those with a higher degree of physical interaction –e.g. services and trade– still lag behind in terms of recovery.

Graph 30
REAL GDP



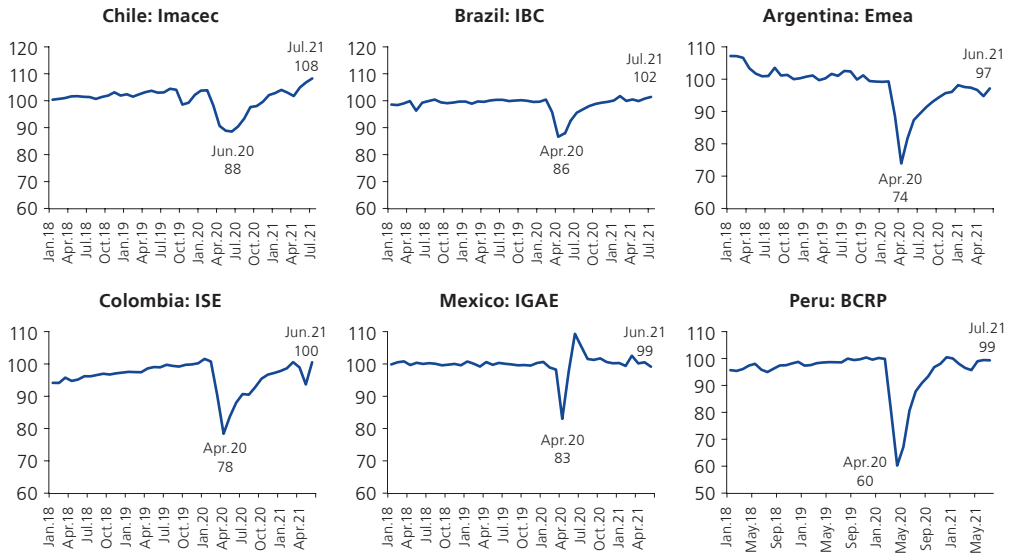
29. Compared to other countries in the region, the seasonally adjusted GDP index reached its pre-crisis level (February 2020) in December 2020 and June 2021. However, it

declined slightly in July and was 1.0 percent below its pre-pandemic level. As a result, after having experienced the fastest relative recovery in December 2020, Peru is in an intermediate position with respect to the main economies in the region. In quarterly terms, in the second quarter of 2021 the country's output was 0.6 percent below the 2019 result, surpassed in the region by Chile and Brazil. Moreover, Peru shows a faster relative pace of recovery in comparison to most major developed economies in Europe.

Graph 31

SEASONAL ADJUSTED INDEX OF ECONOMIC ACTIVITY IN THE REGION

(Base 100 = Q4.19)



Source: Central banks and statistical institutes of each country.

Table 15

REAL GDP

% change respect to the same quarter of 2019*

	2020				2021	
	Q1	Q2	Q3	Q4	Q1	Q2
Germany	-1.9	-11.3	-3.7	-2.9	-4.9	-3.0
France	-5.4	-18.6	-3.6	-4.3	-4.0	-3.4
Italy	-5.8	-18.2	-5.2	-6.5	-6.5	-4.0
Spain	-4.3	-21.6	-8.6	-8.9	-8.3	-6.1
Netherlands	-0.2	-9.2	-2.6	-2.9	-2.6	-0.4
United Kingdom	-2.2	-21.4	-8.5	-7.3	-8.2	-4.0
USA	0.6	-9.1	-2.9	-2.3	1.1	2.0
Argentina**	-5.2	-19.0	-10.1	-4.3	-2.8	-3.7
Brazil	-0.3	-10.9	-3.9	-1.1	0.7	0.1
Chile	0.2	-14.2	-9.0	0.0	0.7	1.3
Colombia	0.7	-15.8	-8.5	-3.6	1.8	-1.0
Mexico	-1.3	-18.7	-8.7	-4.5	-4.9	-2.8
Peru	-3.9	-29.9	-8.8	-1.4	0.4	-0.6

* Variations in 2021 compared to 2019 are own calculations based on interannual variations to one decimal place.
** Data for the second quarter of 2021 are estimated from monthly activity indices.
Source: Central banks and statistical institutes of each country.

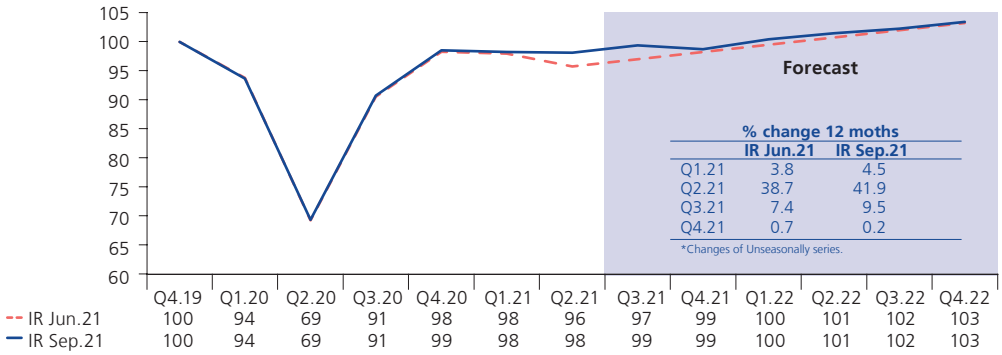
30. The growth projection in this Report assumes the preservation of a stable macroeconomic framework throughout the projection horizon. Macroeconomic stability considers sustained growth of economic activity in an environment of monetary stability and fiscal and external sustainability.

A favorable economic environment with stable rules improves economic agents' confidence, encouraging consumption and investment. The evidence for our country shows that there is a direct relationship between confidence indicators and the growth rates of output and private investment. For instance, it is estimated that for every 1 percent increase in the cyclical component of the business confidence index, private investment would increase by about 0.6 percent in a year.[29] Therefore, economic policy actions that convey greater certainty and predictability about the future scenario of the economy and a climate of macroeconomic stability will contribute positively to the growth of investment.

Economic growth also favors increased employment, improved labor income, and poverty reduction, even more so if it is complemented by efficient public social security policies. For example, the monetary poverty rate between 2004 and 2019 was reduced by 38.5 percentage points, in a period in which GDP per capita increased 4.0 percent on average per year in a context of macroeconomic stability. Among its consequences, the sharp fall in GDP in 2020 resulted in an increase in poverty of 9.9 percentage points. Despite this, however, an early recovery of economic activity in 2021 and 2022 would contribute to reduce the poverty rate in this period.

31. Driven by the recovery of non-primary sectors –i.e. services, trade, and construction– and by a low comparative base, the first half of the year saw year-on-year growth of 20.9 percent. However, economic dynamism is expected to moderate during the second half of the year (4.6 percent year-on-year), due to a lower statistical effect and lower levels of business confidence. Moreover, a third wave of COVID-19 infections is assumed in the base scenario, although it is not foreseen to imply a significant economic impact. Therfore, the economy is expected to grow by 11.9 percent in 2021 –a higher rate than the one considered in the previous report (10.7 percent)– due to a higher than expected outturn in July and leading indicators for August. Activity in the following quarters is expected to be driven by the acceleration of the vaccination process in the remainder of 2021 and the high prices of exported metals.

Graph 32
FORECAST OF GDP, 2019-2022
(Seasonally adjusted index 2019.Q4=100)

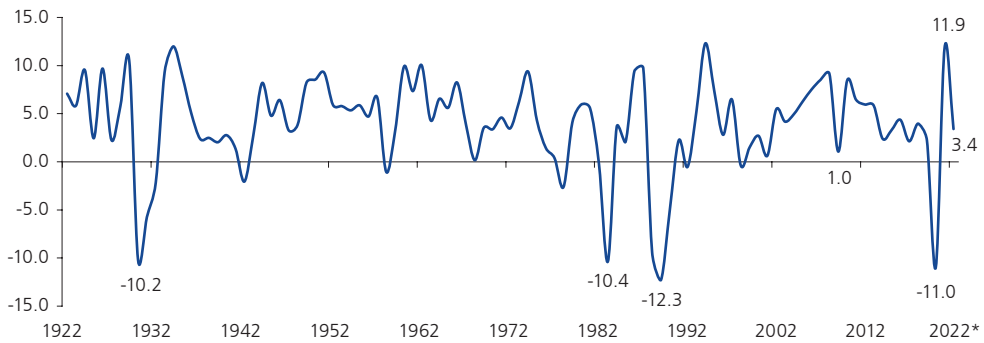


29 See Box 1 of the December 2016 Inflation Report.

32. In the forecast horizon, the economy would reach a growth rate of 3.4 percent in 2022. The massive vaccination process in the second half of 2021 would allow economic activity to continue recovering next year, with the gradual normalization of spending habits and the lifting of health restrictions that remain in place to date, all of which would boost activity in non-primary sectors and the recovery of the labor market.

The normalization of both local and global activity, together with the normalization of consumption habits, would be partially buffered by the effect of agents' lower confidence regarding the future of the economy. Since lower business confidence would affect investment decisions and, consequently, future production plans, the growth rate projected for 2022 has been revised down with respect to that estimated in the previous Inflation Report (4.5 percent). At the pace of recovery considered in this Report, GDP would reach pre-pandemic levels during the first quarter of 2022, although tourism and restaurant-related activities are projected to reach pre-crisis levels in 2023.

Graph 33
TOTAL GDP, 1922-2022
(Annual % change)



* Forecast.

Table 16
GDP BY PRODUCTION SECTOR
(Real % change)

		2021*				2022*	
	2020	I Sem. respect to I Sem.20	I Sem. respect to I Sem.19	IR Jun.21	IR Sep.21	IR Jun.21	IR Sep.21
Primary GDP	**-7.7**	**11.4**	**-2.3**	**7.4**	**6.2**	**5.7**	**5.9**
Agriculture and livestock	1.4	-0.1	2.8	2.0	2.0	3.0	2.7
Fishing	4.2	27.3	7.9	7.2	5.4	4.7	4.4
Metallic mining	-13.8	21.3	-5.9	11.4	10.8	6.9	6.9
Hydrocarbons	-11.0	-7.3	-15.4	4.0	-3.8	9.0	13.4
Manufacture	-2.0	16.2	5.7	6.7	5.6	5.1	4.9
Non-Primary GDP	**-12.0**	**24.0**	**0.6**	**11.7**	**13.6**	**4.2**	**2.7**
Manufacture	-16.4	45.4	3.6	18.1	21.1	2.0	1.4
Electricity and water	-6.1	12.9	0.9	7.5	7.7	2.3	1.7
Construction	-13.9	100.2	17.9	17.4	30.6	3.0	0.0
Commerce	-16.0	33.4	-3.4	18.0	17.8	3.3	1.4
Services	-10.3	14.1	-1.0	8.9	9.9	4.9	3.6
GDP	**-11.0**	**20.9**	**-0.1**	**10.7**	**11.9**	**4.5**	**3.4**

IR: Inflation Report.
* Last two columns correspond to the annual projection of the previous and current IR.

a) As of the second quarter of 2021, the **agricultural sector** had accumulated a growth rate of 2.8 percent with respect to the same period of 2019. Despite this, however, it registered a 0.1 percent year-on-year drop due to delays in plantings (potato, rice, and hard maize) due to insufficient water in 2020 and delays in harvests (coffee and avocados). This lag was corrected on a monthly basis since June. Thus, as of July 2021, the sector had accumulated a growth rate of 1.3 percent due to higher agricultural and livestock production (1.6 and 0.8 percent, respectively).

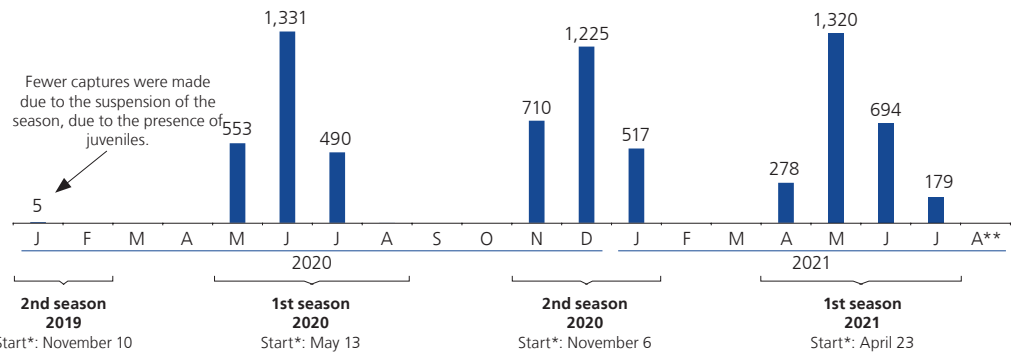
Projected growth for the third quarter was adjusted upwards from 4.8 to 5.6 percent due to the recovery of delayed plantings, the normalization of harvests and, higher blueberry production.

The projection for the agricultural sector in **2021** remains at 2.0 percent, supported by the continued dynamism of agro-exports (grapes, blueberries, and avocados) and by the recovery of potatoes, rice, and hard yellow maize plantings with better water conditions in 2021, as well as by higher poultry production due to the base effect of the pandemic scenario.

On the other hand, the projection for **2022** was adjusted downwards, from 3.0 to 2.7 percent, due to a more gradual recovery in demand.

b) The **fisheries** sector grew 3.7 percent in the second quarter of 2021 compared to the same period of 2019 –which is mainly explained by a higher anchoveta catch due to larger biomass– and 21.2 percent year-on-year due to a higher anchoveta catch for industrial consumption. In 2020, the first fishing season started on May 13, whereas in 2021 it started on April 23. The latter allowed higher catches in the second quarter of 2021 due to the greater number of days allowed for fishing. With this, the sector accumulated a growth rate of 7.9 percent in the first half of 2021 compared to the same period of 2019 (27.3 percent year-on-year).

Graph 34
ANCHOVY EXTRACTION FOR INDUSTRIAL CONSUMPTION NORTH-CENTER ZONE
(Thousands of tons)



* Start date of exploratory fishing in the seasons that there were.
** Information as of August 13 (end of the first season).
Source: IMARPE, Ministry of Production.

As reported by IMARPE[30], the first anchoveta season in the North-Central Zone concluded on August 13, 2021, due to the start of the spawning period.

30 IMARPE report entitled "Informe sobre el Proceso Reproductivo del Stock Norte-Centro de Anchoveta Peruana (al 21 de julio de 2021)".

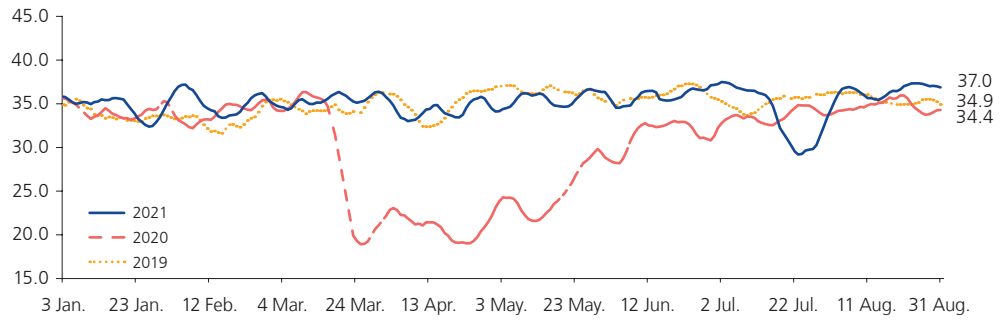
Moreover, 98 percent of the quota was caught (around 2.46 million MT) in the first fishing season. A biomass of 9.9 million MT and a percentage of juveniles of 77 percent in number of individuals and 47 percent in weight units was detected at the beginning of the season.

A 5.4 percent growth in fish production is expected for **2021**, while the sector is projected to grow by 4.4 percent in **2022**, this rate being consistent with normal weather conditions.

c) Output in the **metallic mining** sector decreased 7.7 percent in the second quarter of 2021 compared to the same period of 2019, mainly due to lower production of copper (-9.5 percent) and gold (-28.2 percent). Large and medium mining production was affected in this period due to lower grades, limitations in operational capacities to avoid COVID-19 infections, and conflicts with communities. Gold production was also influenced by lower artisanal mining. Despite this, the sector recorded a 46.6 percent year-on-year growth rate due to a base effect compared to the previous year. However, during the first half of 2021, the sector accumulated a 5.9 percent drop compared to the same period of 2019 (21.3 percent year-on-year growth).

During the first months of the third quarter of 2021, mining companies' consumption of electricity continued to recover gradually.

Graph 35
MINING COMPANIES' DAILY ELECTRICITY CONSUMPTION
(Gwh - Average 7 days)



	Mar.20	Jun.20	Sep.20	Dec.20	Jan.21	Feb.21	Mar.21	Apr.21	May.21	Jun.21	Jul.21	Aug.21
% chg. compared to the same period of the previous year	-18.9	-11.9	-0.4	1.1	1.0	2.9	25.9	63.1	41.5	13.0	-0.5	5.3

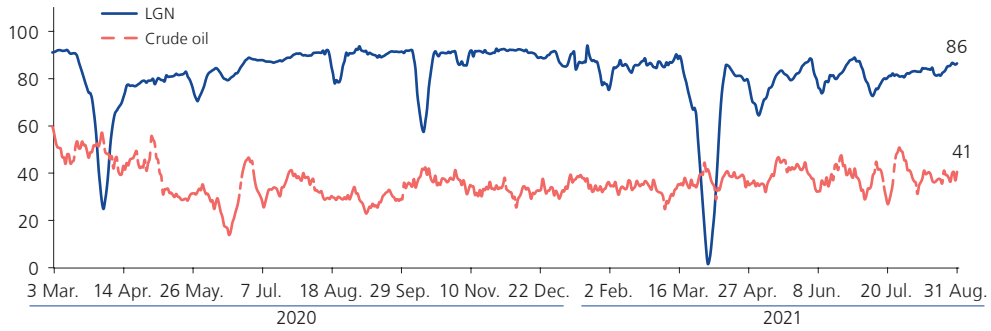
The sector is expected to grow 10.8 percent in **2021** as a result of higher production from large and medium mining and the start-up of Mina Justa (the company has been recording production since July) and the expansion of Toromocho. In **2022**, production in the metallic mining sector would increase 6.9 percent due to higher production from Toromocho, Mina Justa, Las Bambas (Chalcobamba), and Constancia (Pampacancha), in addition to the onset of operations at the Quellaveco project.

d) Activity in the **hydrocarbon** sector fell 15.3 percent in the second quarter of 2021 compared to the same period of 2019 due to lower oil production (-27.4

percent) as a result of the halt in the extraction of oil in jungle lots 192 and 8 because of the termination of contracts. Likewise, the production of natural gas and natural gas liquids decreased by 18.3 and 4.5 percent, respectively, due to various maintenance activities and to a failure at the Melchorita Plant that affected the production of lots 56 and 57. Despite this, however, output in the sector grew 3.3 percent year-on-year due to the base effect of the previous year, when there was lower domestic demand for natural gas and lower oil production due to the stoppage of the North Peruvian Pipeline to prevent the spread of COVID-19. During the first six months of the year, the sector's output dropped 15.4 percent compared to the same period of 2019 (-7.3 percent year-on-year).

The sector's extraction so far in the third quarter (July and August) was affected by lower production of oil, natural gas, and natural gas liquids. Operations in lots 192 and 8 continue to be halted, while the extraction of natural gas and natural gas liquids fell due to a failure at the Melchorita Plant between July 5 and August 24, when there was no production of lot 57. After resuming operations for 2 days, the plant stopped its activities again on August 27.

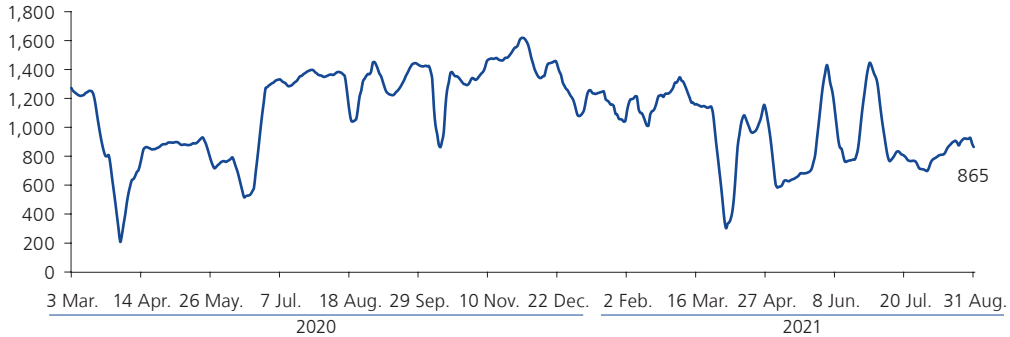
Graph 36
LIQUID HYDROCARBON PRODUCTION
(Thousands of barrels per day, 7-day moving average)



	Jan.21	Feb.21	Mar.21	Apr.21	May.21	Jun.21	Jul.21	Aug.21
LGN (% chg.)	-1.5	-8.7	-7.2	-7.2	1.8	-1.7	-10.1	-5.0
Crude oil (% chg.)	-40.8	-44.7	-31.1	-20.4	30.4	29.9	12.0	20.8

* Calculated with respect to the monthly average of the month.

Graph 37
PRODUCTION OF NATURAL GAS
(Millions of cubic feet per day, 7-day moving average)



	Jan.21	Feb.21	Mar.21	Apr.21	May.21	Jun.21	Jul.21	Aug.21
% Chg.	-5.1	-9.4	18.2	10.3	-7.7	28.3	-38.8	-34.5

* Calculated with respect to the monthly average of the month.

As a result, a drop of 3.8 percent is expected for **2021**, the correction of the projection with respect to the previous report being explained by the aforementioned events.

On the other hand, in **2022** the sector is projected to grow 13.4 percent due to the normalization in the production of natural gas and natural gas liquids, as well as due to higher oil extraction expected from the lots located in Loreto.

e) Activity in the **primary manufacturing** subsector fell 0.3 percent in the second quarter of 2021 compared to the same period of 2019, due to lower refining of metals (-2.8 percent) and oil (-34.3 percent). However, the subsector recorded an increase of 17.6 percent year-on-year as a result of the base effect of the previous year. With this, it accumulated a growth rate of 5.7 between January and June 2021 compared to the first half of 2019 (16.2 percent year-on-year). On the other hand, in the third quarter of the year it is projected to drop 6.2 percent with respect to 2020, due to the lower expected production of fishmeal, and canned and frozen fish products.

Because of this, the growth projection for the sub-sector's has been lowered from 6.7 percent to 5.6 percent in **2021**, mostly due to a lower outlook for the production of canned and frozen fish products and oil refining. Moreover, the sub-sector is expected to reach a growth rate of 4.9 percent in **2022**.

f) **Non-primary manufacturing** activity increased 91.1 percent in the second quarter of 2021, driven by the 2020 base effect. On the other hand, with respect to 2019, the subsector grew 4.1 percent. This increase in activity was due to higher production of mass consumption goods (10.9 percent) and investment-oriented goods (5.0 percent), with a higher production of furniture, alcoholic beverages, and pharmaceutical products standing out within the former and a higher production of metallic products and cement standing out within the latter. In the third quarter, production in this sector is expected to recover with respect to 2020 (9.7 percent), but to fall with respect to 2019 (-0.1 percent).

The recovery in non-primary manufacturing would continue in 2021, with an increase of 21.1 percent, but without reaching pre-pandemic levels yet. Growth in **2022** is projected at 1.4 percent.

g) Activity in the **construction sector** grew 12.1 percent in the second quarter of 2021 compared to the same period of 2019, driven mainly by self-construction projects and the continuation of public and private works. On a year-on-year basis, construction registered a 230.9 percent growth rate explained by the base effect of the previous year when activities were suspended in the same period. Moreover, activity in the construction sector as a whole during this period was reflected in domestic consumption of cement, which increased 15.8 percent compared to 2019 levels and 217.1 percent compared to 2020 levels.

In **2021**, the construction sector is forecast to grow 30.6 percent, driven by higher public and private investment, while activity in this sector in **2022** is projected to remain unchanged (0.0 percent).

h) Activity in the **trade** sector in the second quarter of 2021 fell 1.1 percent from the rate recorded in the same period in 2019 due to lower retail trade activity following restrictions on capacity as a measure to prevent the spread of COVID-19. On a year-on-year basis, the sector increased by 85.9 percent due to the sector's standstill in the same period of the previous year. This resulted in a 3.4 percent drop during the first half of 2021 compared to the same period in 2019 (33.4 percent year-on-year growth).

In **2021**, the sector is projected to grow 17.8 percent due to higher domestic demand compared to the previous year. Similarly, the sector's activity in **2022** is expected to increase by 1.4 percent.

i) Output in the **services** sector declined 1.1 percent in the second quarter of 2021 compared to the same period of 2019, due to lower dynamism in the branches of (i) accommodation and restaurants (-45.6 percent), which are among the most affected activities due to the lockdown of activity in the tourism sector given the high degree of interaction between people required by the sector, (ii) transportation and storage (-15.8 percent), and (iii) services provided to businesses (-7.7 percent). In year-on-year terms, a growth rate of 31.4 percent was observed in the same period. Thus, during the first half of 2021, activity in the sector fell 1.0 percent compared to the first six months of 2019 (growth rate of 14.1 year-on-year).

In **2021**, the sector is projected to grow 9.9 percent, driven by the greater dynamism observed during the first half of the year. However, the high degree of personal interaction that much of the sector requires would make it difficult for it to recover at the pace seen in the rest of the sectors. This projection takes into account a more prolonged impact of the pandemic on tourism-related industries, such as transportation, restaurants and lodging, than in the other subsectors. A growth rate of 3.6 percent is projected for **2022**.

Expenditure-side GDP

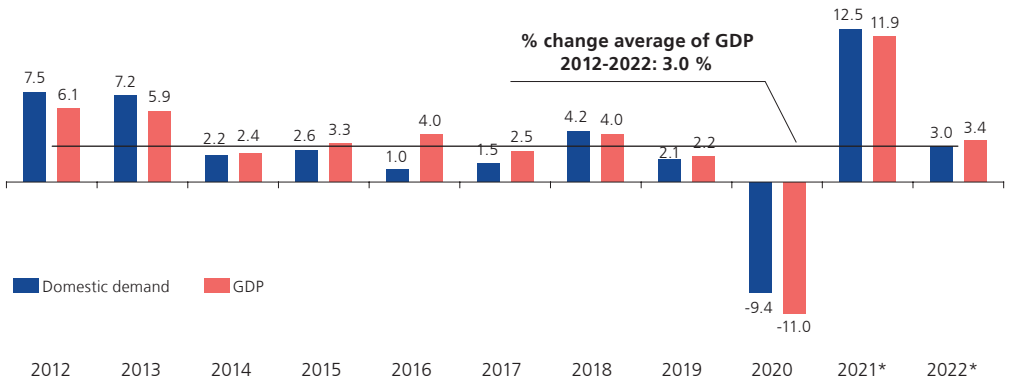
33. Covid-related restrictions and measures began to be eased thanks to the progress made in the vaccination process, especially in the months of May and June, as well as due to the reduction of COVID infections and mortality. However, this was offset by the deterioration of economic agents' expectations, which slowed the recovery of private spending. In addition, the dynamism of domestic demand was also offset by the negative contribution of exports of services –with services in inbound tourism standing out among them– which are still far from their pre-crisis levels.

In the projection horizon, activity is expected to return to its progressive recovery path, supported by expansionary fiscal and monetary policies, the recovery of external demand and terms of trade, and a context of social and political stability. This projection assumes an acceleration of the vaccination process of the target population during the second half of 2021 and a third wave of COVID-19 without a significant economic impact.

Economic activity is expected to recover at a rate of 11.9 percent in 2021, showing a higher rate than that forecast in the previous Report (10.7 percent), given the higher-than-expected performance observed during the first half of the year as a result of

the higher execution of public spending and private investment, as well as due to the expected evolution of private consumption in the second half of the year. However, this would be partially offset by the slowdown in activity following the deterioration in business confidence, which is expected to continue during the second half of the year and next year. Therefore, the growth projection for 2022 is revised downward from 4.5 to 3.4 percent.

Graph 38
DOMESTIC DEMAND AND GDP: 2012-2022
(Real % change)



*Forecast.

Table 17
DOMESTIC DEMAND AND GDP
(Real % change)

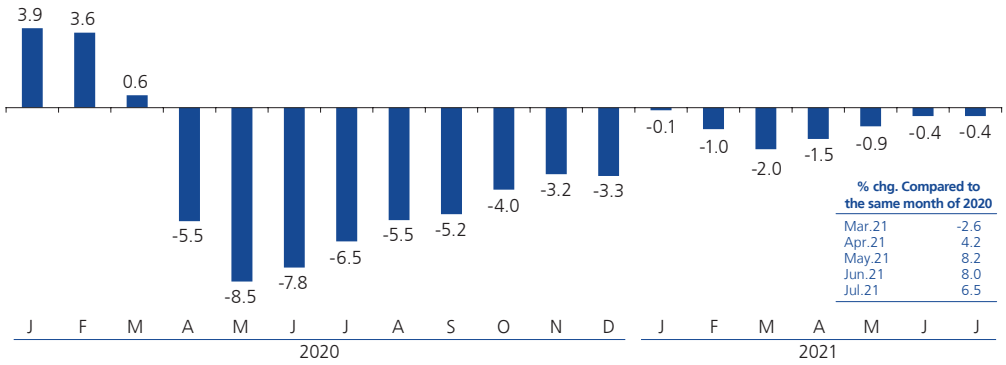
		2021*				2022*	
	2020	S1 compared to: S1.20	S1 compared to: S1.19	IR Jun.21	IR Sep.21	IR Jun.21	IR Sep.21
Domestic demand	**-9.4**	**21.5**	**3.2**	**10.3**	**12.5**	**4.0**	**3.0**
Private consumption	-8.7	14.0	0.1	8.5	9.2	4.8	4.0
Public consumption	7.2	19.5	17.9	7.0	9.0	1.0	1.5
Private investment	-16.5	80.2	14.8	15.5	24.5	2.5	0.0
Public investment	-15.5	94.1	17.2	19.0	20.0	4.5	4.5
Change on inventories (contribution)	-0.5	-4.5	-2.0	0.0	0.0	0.0	0.0
Exports	**-20.8**	**18.5**	**-13.0**	**13.5**	**11.9**	**6.4**	**6.4**
Imports	**-15.6**	**20.8**	**-1.2**	**11.8**	**14.5**	**4.4**	**4.9**
Gross Domestic Product	**-11.0**	**20.9**	**-0.1**	**10.7**	**11.9**	**4.5**	**3.4**
Memo:							
Public expenditure	0.8	32.4	17.7	9.9	11.6	1.9	2.2
Domestic demand excluding inventories	-8.7	26.2	5.3	10.0	12.2	3.9	2.9

IR: Inflation Report.
* Last two columns correspond to the annual forecast of the previous and current IR.

34. Indicators of **private consumption**, specifically those related to the labor market, continued to recover between May and June, supported by the easing of sanitary measures and the progress of vaccination. However, a deterioration has been observed in August. Other leading indicators, such as imports of consumer durables, credit to individuals and electronic vouchers, show a positive advance so far this year.

a) Formal employment continued to recover as health containment measures to deal with the pandemic were being eased. Formal jobs in July contracted at a rate of 0.4 percent with respect to the same month of 2019, showing a lower reduction than that recorded in March.

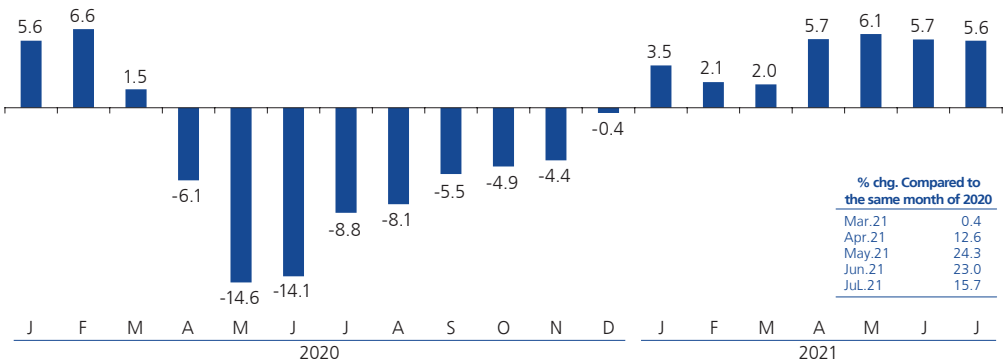
Graph 39
FORMAL EMPLOYMENT
(% chg. compared to the same month of 2019)



Source: SUNAT – Payroll.

b) The formal wage bill increased 5.6 percent in July with respect to the same month of 2019. Year-to-date, this variable has shown positive expansion rates. This is supported by the increase in workers' average remuneration and the gradual recovery of jobs.

Graph 40
FORMAL WAGE BILL
(% chg. compared to the same month of 2019)

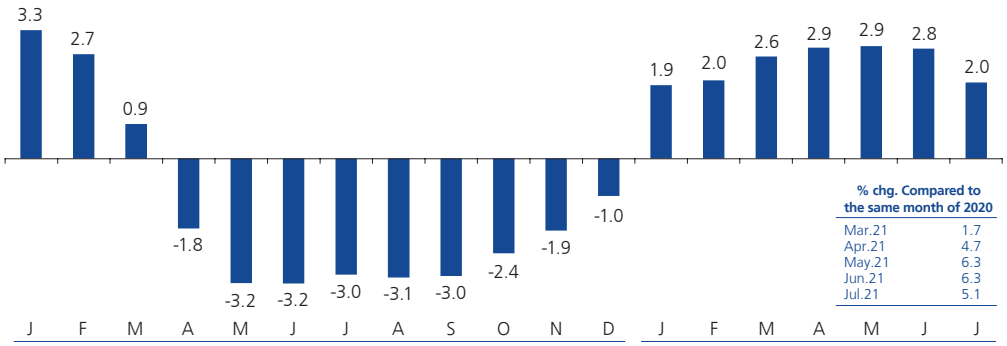


Source: SUNAT – Payroll.

c) In July, 320 thousand private companies reported employment information indicating that the number of companies grew 2.0 percent compared to the

same month of 2019 (5.1 percent year-on-year). The largest increases in the number of firms were recorded in the trade and construction sectors.

Graph 41
PRIVATE SECTOR COMPANIES REPORTING FORMAL EMPLOYMENT
(% chg. compared to the same month of 2019)

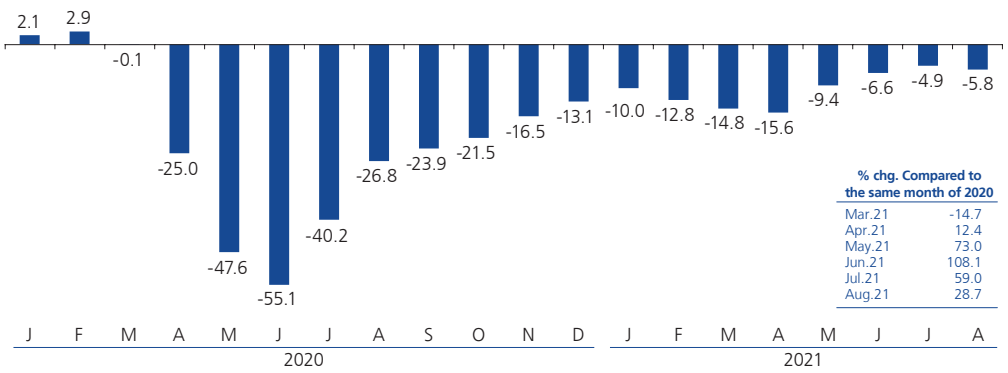


Companies	J.19	J.20	A	S	O	N	D	J.21	F	M	A	M	J	J
Total in thousand	313	304	305	306	309	310	311	312	313	317	319	320	321	320

Source: SUNAT – Payroll.

d) According to the Permanent Employment Survey, the employed workforce in Metropolitan Lima recovered between May and June due to the relaxation of health restriction measures. However, its recovery pace slowed down in August, when it registered a 5.8 percent contraction compared to the same month of 2019. Thus, as of August 286 thousand people were still out of work compared to the same period of 2019.

Graph 42
EMPLOYED POPULATION OF METROPOLITAN LIMA, MOVING QUARTER
(% chg. compared to the same month of 2019)

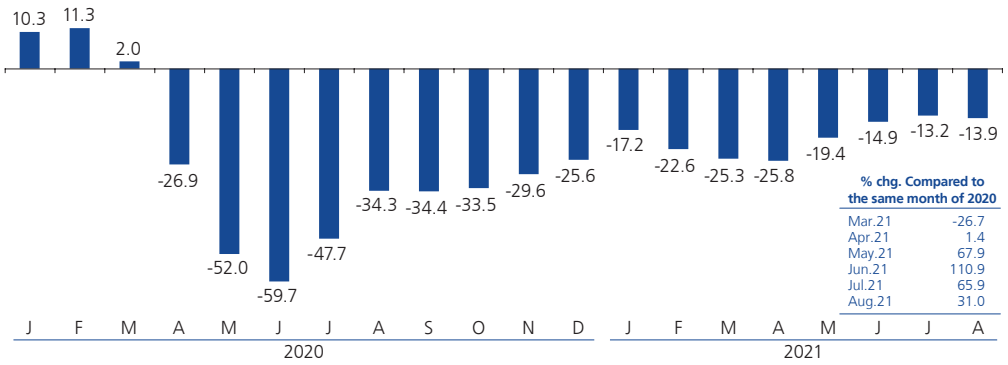


Source: INEI.

e) The higher contraction in the number of workers generated a greater drop in the nominal wage bill in Metropolitan Lima, which recorded a rate of -13.9

percent in the moving quarter to July with respect to the same period of 2019.

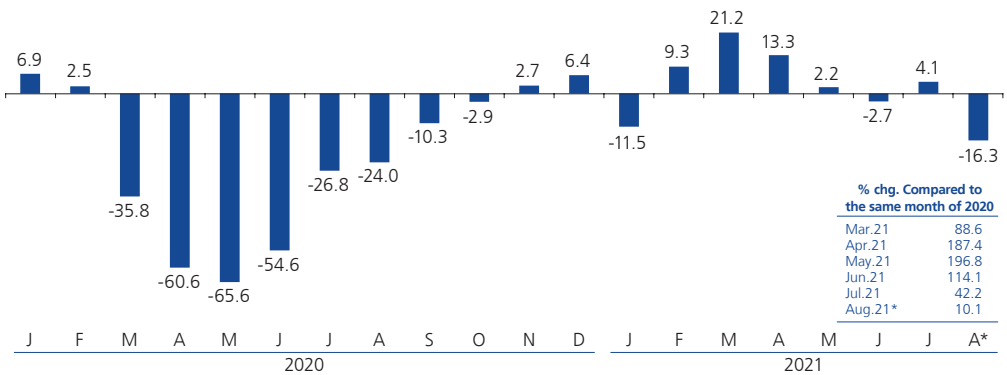
Graph 43
WAGE BILL OF METROPOLITAN LIMA, MOVING QUARTER
(% chg. compared to the same month of 2019)



Source: INEI.

f) The volume of imports of consumer durables is estimated to have fallen 16.3 percent in August compared to the same month of 2019, growing 10.1 percent year-on-year. In July, this indicator grew 4.1 percent compared to the same period of 2019 and 42.2 percent year-on-year.

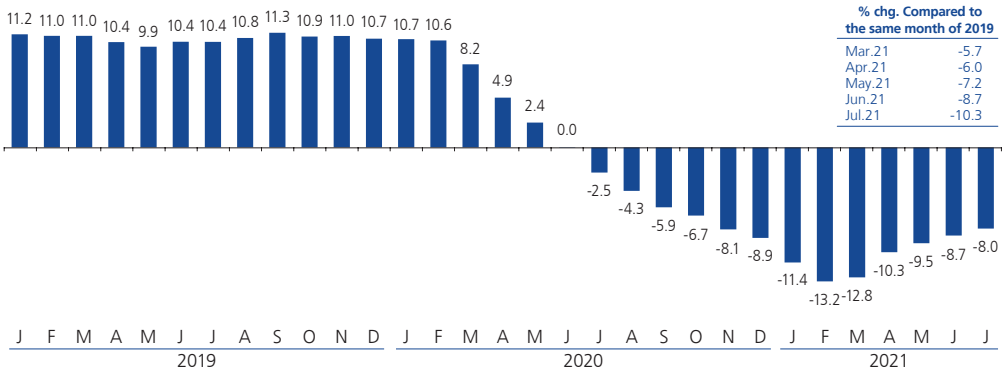
Graph 44
VOLUME OF IMPORTS OF DURABLE CONSUMER GOODS
(% chg. compared to the same month of 2019)



* Preliminary.
Source: SUNAT – Customs.

g) Consumer credit in real terms registered a lower contraction rate and decreased 8.0 percent year-on-year in July. This slight reversal is due to the recovery of car loans and the use of credit cards.

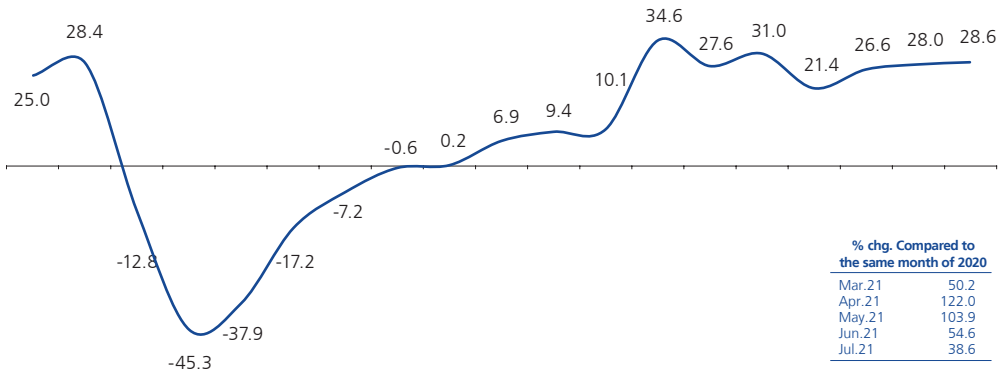
Graph 45
REAL CONSUMER LOANS
(Annual % change)



Source: BCRP.

h) The value of electronic vouchers in real terms in the sectors of commerce and services –a high-frequency indicator of private consumption– continued to accelerate its growth rate with respect to 2019 levels and grew 28.6 percent in July, which represents an increase of 38.6 percent year-on-year Greater access to goods and services, the use of digital channels and the stimuli implemented by the government have have led to a significant increase in sales in sectors linked to private consumption in recent months.

Graph 46
VALUE OF ELECTRONIC RECEIPTS IN THE COMMERCE AND SERVICES SECTOR
(% chg. compared to the same month of 2019)

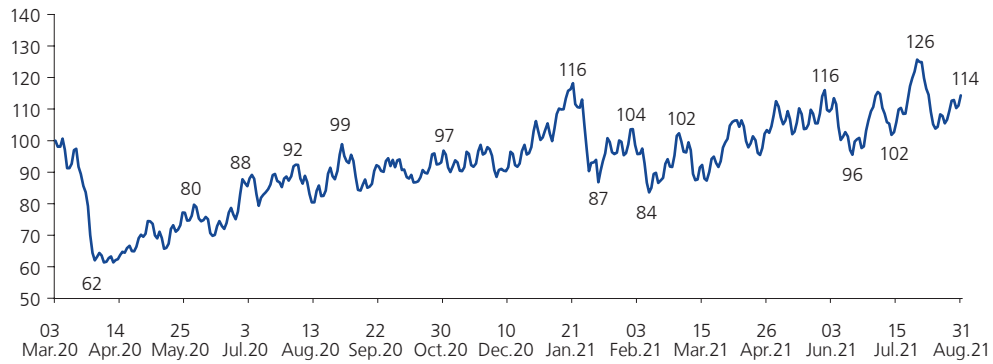


Source: SUNAT.

i) The number of customer transactions carried out through the Real-Time Gross Settlement System (RTGS system) decreased after the elections process, declining

to levels recorded prior to the beginning of the pandemic. Despite this, however, a positive trend has been observed since the last week of June. Thus, as of August 31, 2021, this indicator is 14 percent above the levels recorded at the beginning of March 2020.

Graph 47
NUMBER OF CUSTOMER TRANSACTIONS IN THE RTGS SYSTEM
(7-day moving average, index 100 = March 3)

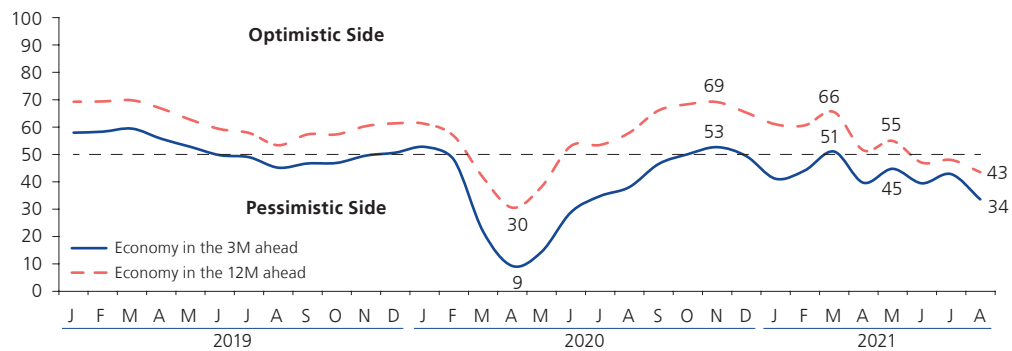


Source: BCRP.

35. Most of the leading indicators about private investment have become more dynamic in recent months. However, businessmen's expectations have deteriorated due to uncertainty regarding the development of the electoral process and the political scenario.

a) Business expectations about the future of the economy continued to deteriorate in August, influenced by the political uncertainty that arose after the presidential elections. The 3- and 12-month indicators remained on the pessimistic side.

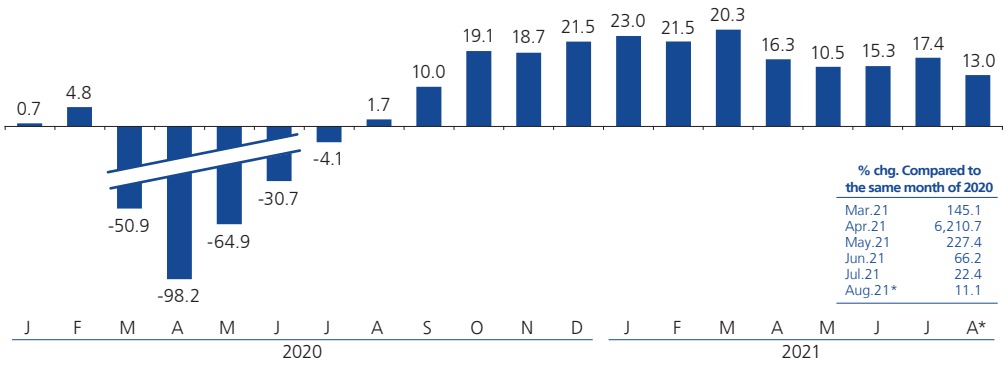
Graph 48
EXPECTATIONS ABOUT THE ECONOMY IN 3 AND 12 MONTHS AHEAD
(Index)



Source: BCRP.

b) Domestic consumption of cement, an indicator related to construction investment, has continued to grow at high rates in recent months and is estimated to have increased 13.0 percent in August with respect to August 2019 (11.1 percent year-on-year). This increase is explained by the continued dynamics of self-construction and investment projects under execution.

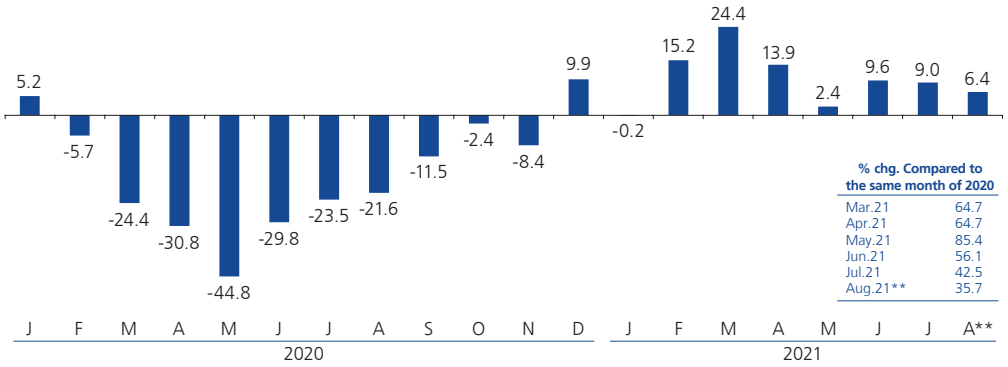
Graph 49
DOMESTIC CONSUMPTION OF CEMENT
(% chg. compared to the same month of 2019)



* Preliminary.
Source: Cement companies.

c) In August, the volume of capital goods imports, excluding construction materials and cell phones, would have increased 6.4 percent compared to the same month of 2019 and 35.7 percent year-on-year.

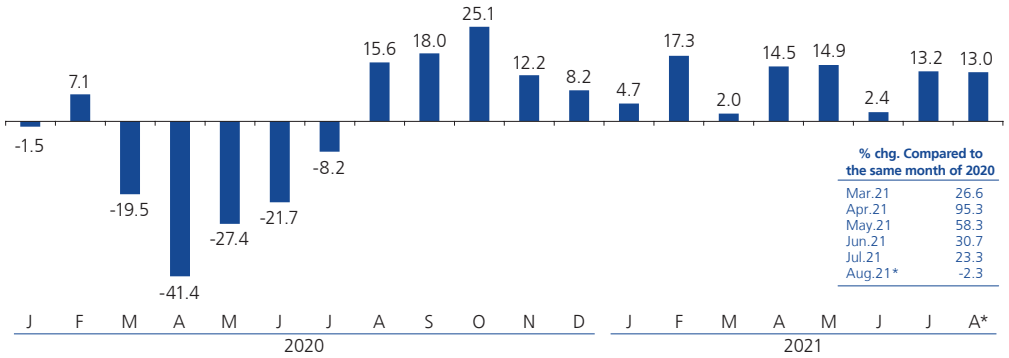
Graph 50
VOLUME OF IMPORTS OF CAPITAL GOODS*
(% chg. compared to the same month of 2019)



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

36. The volume of non-traditional exports has continued to grow and is estimated to have registered an expansion rate of 13.0 percent in August compared to the same month of 2019 (-2.3 percent year-on-year). This increase would reflect higher exports of agricultural, fishing, chemical, and textile products.

Graph 51
VOLUME OF NON TRADITIONAL EXPORTS
(% chg. compared to the same month of 2019)



*Preliminary.
Source: SUNAT-Customs.

37. Private sector expectations on GDP growth have been updated in line with the dynamism of economic activity during the first half of the year and with the political scenario. The latest **Survey on Macroeconomic Expectations** indicates that economic analysts and financial entities project a recovery of 9.0 percent for this year and a growth rate between 3.0 and 3.6 percent for 2022.

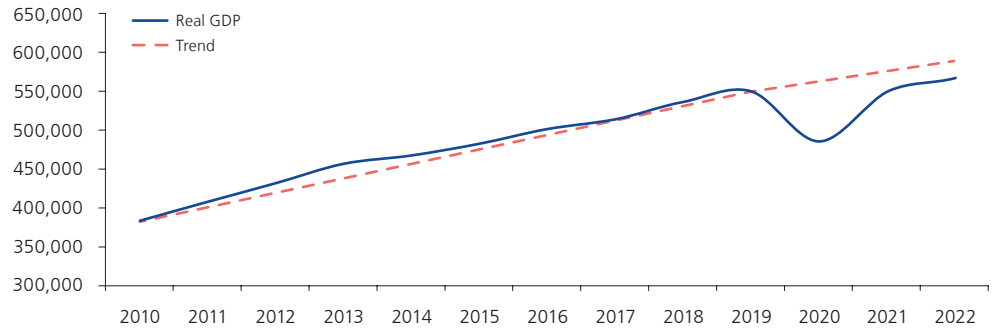
Table 18
MACROECONOMIC EXPECTATIONS SURVEY: GDP GROWTH
(% change)

	IR Dec.20	IR Jun.21	IR Sep.21*
Financial entities			
2021	9.0	8.5	9.0
2022	4.0	4.0	3.0
Economic analysts			
2021	9.0	8.5	9.0
2022	4.5	4.6	3.6
Non-financial firms			
2021	4.0	4.5	6.0
2022	4.0	4.0	4.0

* Survey conducted on August 31.
Source: BCRP.

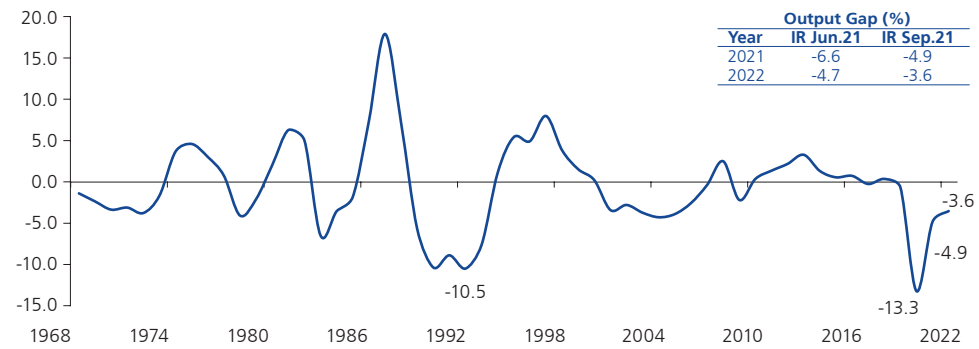
38. The output gap, calculated as the difference between observed GDP and trend (or long-term) GDP after the COVID-19 shock, would be negative by 4.9 percent in 2021, recovering partially from the previous year (-13.3 percent). This result takes into account the higher capital accumulation originating from the 24.5 percent increase in private investment and the 20.0 percent increase in public investment, which explain 4.3 and 0.8 percentage points, respectively, of GDP growth in 2021. Furthermore, production will continue to recover as sanitary protocols and Covid-related restrictions become more flexible. However, this recovery is estimated to occur under lower productivity levels associated with the supply restrictions caused by the pandemic, as well as with the reallocation of production factors among sectors.

Graph 52
REAL GDP AND TREND*
(Millions Soles 2007)



* Long-term trend of GDP is calculated using Hodrick-Prescot filter in annual frecuency.

Graph 53
OUTPUT GAP*
(As a percentage of trend GDP)



Output Gap (%)		
Year	IR Jun.21	IR Sep.21
2021	-6.6	-4.9
2022	-4.7	-3.6

* Long-term trend of GDP is calculated using Hodrick-Prescot filter in annual frecuency.

39. **Private consumption** in the first half of 2021 registered a year-on-year growth rate of 14.0 percent and a growth rate of 0.1 percent compared to the same period of 2019. This is explained by greater access to goods and services, the recovery of the labor market, and the positive effect of government stimuli. In the following quarters of the year, household spending is expected to continue recovering, driven by better labor market conditions and greater access to goods and services that were previously restricted.

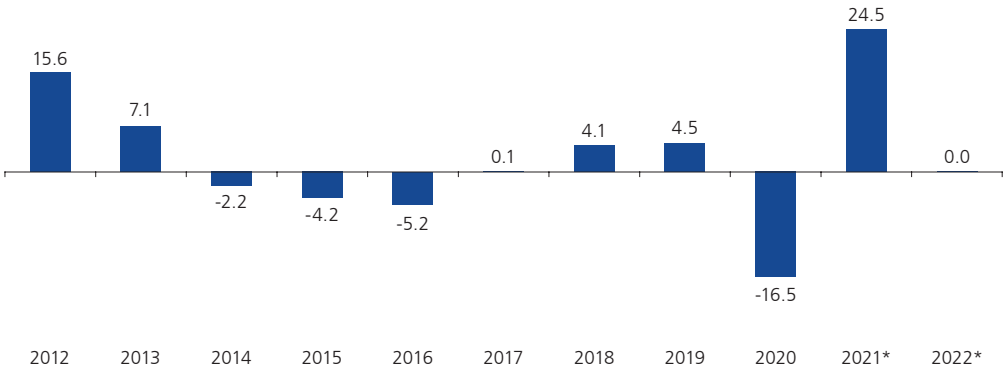
In addition, the government announced the delivery of the Yanapay bonus, through which S/ 350 will be allocated to 13.5 million people living in conditions of poverty and vulnerability. The latter, which will stimulate household consumption, is also expected to contribute to lead families to resume their pre-pandemic spending habits as the vaccination process progresses and current health restrictions are lifted. Thus, the growth of private consumption is estimated to reach an average of 9.2 percent in 2021.

Moreover, private consumption is expected to grow by 4.0 percent in 2022, in a context of higher terms of trade, a gradual normalization of economic activity, and a recovery of employment and household income.

40. **Private investment** grew 14.8 percent in the first half of 2021 compared to the same period in 2019 (80.2 percent year-on-year), showing a higher pace of growth than

expected, driven mostly by the dynamism of self-construction, home improvement, and sales of new homes, as well as by the increased execution of large infrastructure projects. This is expected to continue in the following quarters, although lower business expectations would begin to affect private investment during the last quarter of the year and this would continue throughout 2022. Mining investment is also expected to continue to approach its pre-pandemic levels. With this, private investment would grow 24.5 percent (versus 15.5 percent estimated in the previous Report). On the other hand, the 2022 growth rate has been revised down from 2.5 percent to 0.0 percent.

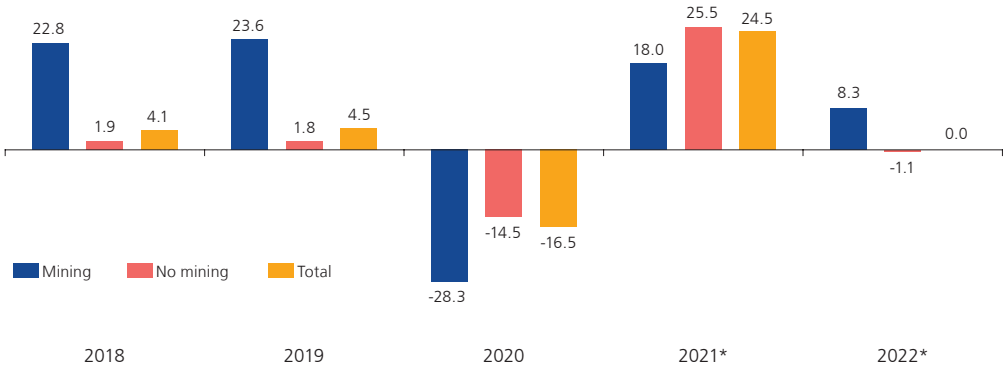
Graph 54
PRIVATE INVESTMENT: 2012 - 2022*
(Real % change)



* Forecast.

a. Investments in the **mining sector** from January through July 2021 totaled US$ 2,533 million, with investments by Anglo American Quellaveco (US$ 680 million), Antamina (US$ 222 million), and Southern Peru Copper Corporation (US$ 158 million) standing out. The construction of the Mina Justa project was completed (US$ 1.6 billion total investment) in the first half of 2021. The projection for the 2021-2022 period considers the completion of the construction of the Quellaveco project (US$ 5.3 billion total investment) and the Toromocho Expansion (US$ 1.3 billion). Additionally, other projects such as Corani (US$ 0.6 billion), San Gabriel (US$ 0.4 billion) and Yanacocha Sulfides (US$ 2.1 billion) are expected to start construction in 2022.

Graph 55
PRIVATE INVESTMENT
(Annual Real % change)



* Forecast.

b. With the recovery of private investment, **investment in infrastructure** continues with the construction of the main projects. Line 2 of the Lima Metro stands out, with a 38 percent progress in its execution as of June, according to OSITRAN. The first stage of this project is expected to end the year with 5 stations (Evitamiento, Óvalo Santa Anita, Colectora Industrial, Hermilio Valdizán, and Mercado Santa Anita). As for the expansion of Jorge Chávez International Airport, the first asphalt works on the second runway have already begun and the construction of the new control tower shows a physical progress of 50 percent, which will allow it to start operations at the beginning of 2023. On the other hand, regarding the Marcona Port Terminal, Shougang submitted the Modification of the Environmental Impact Study (MEIA) of the project to SENACE in February and expects the project to be completed by the end of 2022. As for the modernization of the Callao North Pier, 47 percent progress has been made and an addendum is being negotiated for the modification of stages 3, 4, and 5, increasing the investment amount from US$ 749 million to US$ 1.1 billion. On the other hand, DP World has announced that the expansion project of the Bicentennial Pier has already had its EIA approved and plans to start work on Phase 2 in the second half of 2021 and finish in 2024, with total investment having been increased to more than US$ 350 million.

Table 19
MAIN ANNOUNCEMENTS OF PRIVATE INVESTMENT PROJECTS: 2021-2022

SECTOR	INVESTOR	PROJECTS
MINING	Angloamerican	Quellaveco
	Chinalco	Expansion of Toromocho Mine
	Yanacocha	Yanacocha Sulfuros
	Bear Creek	Corani
	Buenaventura	San Gabriel
HYDROCARBONS	Cálidda Gas Natural del Peru	Wide-Scale Use of Natural Gas in Central ad South Region
	Promigas Surtigas	Wide-Scale Use of Natural Gas in Piura
ELECTRICITY	ISA Peru	500 kV Mantaro - Carapongo
	CSF Continua Misti	Solar plant in Arequipa
	Engie	Punta Lomitas wind power plant
INDUSTRY	Yura	Cement manufacturing improvement project
	Cementos Interoceánicos	Cement and lime plant
INFRASTRUCTURE	Consorcio Nuevo Metro de Lima	Line 2 of the Metro network of Lima and Callao
	Grupo Volcan	Modernization of Muelle Norte
	Lima Airport Partners	Expansion of International Airport (Jorge Chavez)
	Shougang Hierro Peru	Marcona Port Terminal
	APM Terminals	Modernization of Muelle Norte
	DP World Callao	Expansion of Muelle Sur
	Consorcio Transportadora Salaverry	Salaverry Port
	Covi Peru	Pucusana-Ica road network

* Estimated.
Source: Information on companies, newspaper and specialized media.

c. **Proinversión** reports that investment projects amounting to more than US$ 7.4 billion would be awarded under concession contracts in the 2021-2023 period.

Table 20

MAIN PROJECTS TO BE IMPLEMENTED THROUGH CONCESSION ARRANGEMENTS IN 2021-2023

(Million US$)

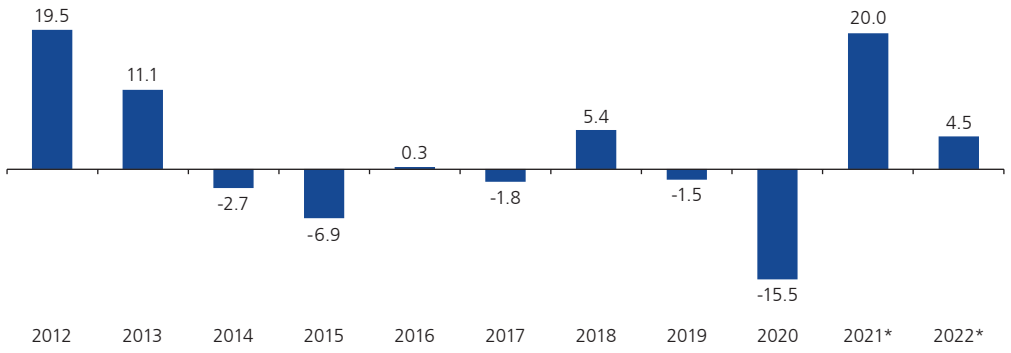
	Estimated investment
To be called	**7,358**
Peripheral Ring Road	1,969
Ancon Industrial Park	750
Longitudinal of the Sierra road project, Section 4	709
New San Juan de Marcona Port Terminal	480
Headworks and Conduction for the Drinking Water Supply in Lima	480
Broadband AWS-3 and 2.3 GHz	289
Improvement of Tourist Services in the Choquequirao Archeological Park	260
National Hospital Hipólito Unanue	250
Huancayo - Huancavelica Railway	232
Schools in risk: Metropolitan Lima	227
Treatment system for wastewater Huancayo	172
500 kV Transmission Line and Piura Nueva - Frontera Substation	163
Essalud Piura	159
Schools in Risk: Ate-San Juan de Lurigancho	148
IPC- Wastewater Treatment for effluent dumping or reuse - Trujillo	129
Essalud Chimbote	121
Central Military Hospital	115
Schools at Risk: Comas - San Martín de Porres	95
IPC -Wastewater Treatment for effluent dumping or reuse, Chincha province, Ica, Peru	93
Schools at Risk: Villa María del Triunfo	75
High Performance Schools: COAR Centro	66
IPC -Wastewater Treatment System for Puerto Maldonado	55
Improvement and enlargement of the sewage and wastewater treatment system in Cajamarca	55
IPC- Wastewater Treatment for effluent dumping or reuse, Cusco province	42
Ilo desalination plant	37
Solid Waste Management of Health Establishments Minsa	35
IPC - Wastewater treatment for effluent dumping or reuse, Cañete province	34
Reque Nueva Carhuaquero	31
Rural sanitation in Loreto	28
IPC - Wastewater Treatment Plant for the city of Tarapoto	26
Improvement of Schools in Cusco	19
Tourist Project Cable Car Historic Center Lima-San Cristobal	14
Wide-Scale Use of Natural Gas in Central ad South Region	*
220 kV Transmission Line Piura Nueva - Colán	*
500 kV Transmission Line San José-Yarabamba	*
220 kV Substation North Lambayeque and 220 kV Transmission Line West Chiclayo - La Niña / Felam	*
220 kV Transmission Line Belaunde Terry - North Tarapoto	*
100 MVA 220/60/23 kV Substation West Piura	*
220 kV Transmission Line Ica - Poroma	*
500 kV Transmission Line Huanuco –Tocache - Celendín - Trujillo	*
500 kV Transmission Line Celendín - Piura link	*
220 kV Transmission Line Caclic - Jaen Norte	*

* There is currently no estimated investment amount.
Source: Proinversión.

41. In the first half of 2021, **public investment** increased 17.2 percent compared to the same period of 2019 and 94.1 percent year-on-year. The largest investment amounts were for transportation, education, sanitation and health projects and works, including the reconstruction projects (especially those carried out under the Government-to-Government Agreement with the United Kingdom) and National Infrastructure Plan.

Public investment in 2021 and 2022 is expected to grow 20.0 and 4.5 percent, respectively, as a result of higher spending on reconstruction works under the Government-to-Government Agreement with the United Kingdom, Special Public Investment Projects, and those included in the National Infrastructure Plan for Competitiveness (NIPC).

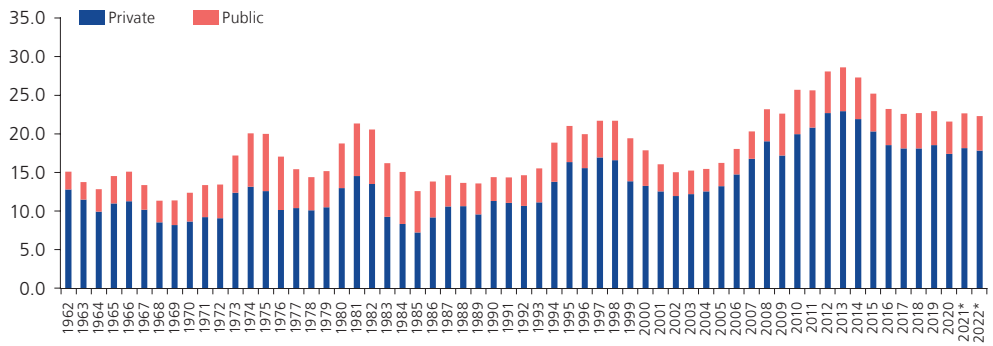
Graph 56
PUBLIC INVESTMENT: 2012-2022
(Real % change)



* Forecast.

42. **Gross fixed investment**, as a percentage of real GDP, would increase by 0.3 percentage points between 2019 and 2022 to a rate of 23.2 percent of output. In order for investment to continue to grow in the following years, it is necessary to recover investor confidence and maintain economic stability, as well as to implement reforms aimed at increasing the economy's productivity.

Graph 57
GROSS FIXED INVESTMENT: PRIVATE AND PUBLIC, 1962-2022
(% of real GDP)



* Forecast.

43. Domestic savings are projected to decline from 19.5 percent of GDP in 2020 to 19.3 percent in 2021, as the fall in private savings outweighs the recovery in public savings. The latter would increase by 5.1 percentage points of GDP between 2020 and 2021 due to the lower use of state resources to face the pandemic and to the increase in revenues collected following the resumption of economic activities. Private sector savings would fall to 18.8 percent of GDP as a result of higher consumption growth and the gradual return of spending habits to those observed prior to the pandemic. The resumption and increased execution of public and private projects would raise the gross domestic investment ratio with respect to the previous year by 2.4 percentage points. Therefore, external financing requirements would represent 1.7 percent of GDP in 2021.

In 2022, after the normalization of the global health scenario and the recovery of economic activity, public savings would continue to register a positive trend due to a lower fiscal deficit. On the other hand, private savings would increase by 0.6 percentage points, influenced by lower business confidence about the economic environment. Thus, the external gap would stand at 0.2 percent of nominal GDP.

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

		2020	2021*			2022*	
			Q1	IR Jun.21	IR Sep.21	IR Jun.21	IR Sep.21
1	**Domestic Gross Investment 1/**	**18.7**	**21.7**	**19.6**	**21.1**	**19.2**	**20.3**
2	**Domestic Saving**	**19.5**	**18.5**	**19.8**	**19.3**	**21.0**	**20.5**
	External Gap (=2-1)	**0.8**	**-3.3**	**0.2**	**-1.7**	**1.8**	**0.2**
	1.1 Private Domestic Gross Investment 1/	14.4	17.7	15.2	16.6	14.8	15.9
	1.2 Private Saving	24.1	14.3	19.8	18.8	19.6	19.4
	Private Gap (=1.2-1.1)	**9.6**	**-3.4**	**4.6**	**2.2**	**4.9**	**3.5**
	2.1 Public Investment	4.3	4.1	4.5	4.5	4.4	4.5
	2.2 Public Saving	-4.6	4.2	0.0	0.5	1.4	1.1
	Public Gap (=2.2-2.1)	**-8.9**	**0.1**	**-4.5**	**-4.0**	**-3.1**	**-3.4**

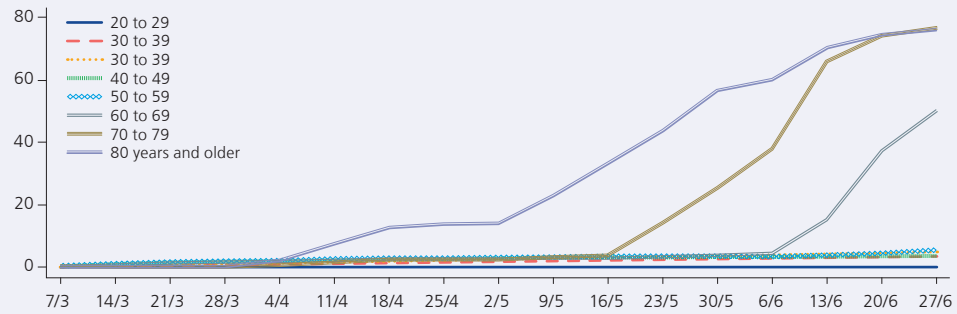
IR: Inflation Report.
* Last two columns correspond to the annual forecast of the previous and current IR.
1/ Includes change on inventories.
Source: BCRP.

Box 5
PERU: IMPACT OF VACCINATION ON COVID-19 INFECTIONS AND EXCESS DEATHS

The vaccination campaign against COVID-19 in Peru has undergone some strategy changes since it first started being implemented in February 2021. Priority with the first batches of vaccine, from the Sinopharm laboratory, was given to vaccinating front-line health personnel. Then, the first phase of vaccination included other health personnel, firefighters, armed forces and police personnel, among other groups. Later, in March, the elderly were also included in the first phase, starting with those over 80 years of age. Finally, as vaccine doses arrived in the country, vaccination moved to younger age groups.

Thus, for example, by June 27, 2021, a common date among the available databases[31], about 80 percent of the population in the age groups over 80 years old and between 70 and 79 years old is fully vaccinated. In other words, they have received the two doses required to achieve maximum immunity. In addition, vaccination of the population between 60 and 69 years of age showed an advance of 50.2 percent as of that date, whereas vaccination in the population of the other age groups (under 59 years of age) does not exceed 5 percent of complete vaccination, as can be seen in the following graph.

EVOLUTION OF THE FULLY VACCINATED POPULATION [1/]
ACCORDING TO AGE GROUPS, 2021
(Cumulative and in % respect to the population of each age group)



1 / With two doses.
Source: MINSA.

At present, several studies demonstrate the efficacy and effectiveness of vaccines against COVID-19[32], although studies on the latter indicator are more recent since they can only be developed once the vaccination campaign has been initiated in a country. The first study on the level of protection provided by the vaccine was carried out in Israel[33], which was leading the world inoculation ranking

31 This box has been prepared using the databases of deaths from the National Deaths System (SINADEF), as well as the databases on COVID-19 infections and on the vaccination process. These three databases have different cut-off dates for updating the information. At the time of developing the content of this box, the cutoff date of the SINADEF database was August 12, 2021, while the cutoff dates for the databases on infections and on people vaccinated were July 3 and 19, respectively. Because of this, in order to have a common analysis date for all the databases and prevent distortions caused by recent updates, June 27 (the week prior to the cutoff date for those infected by COVID-19) was established as the common analysis date.

32 Efficacy refers to the protection provided by the vaccine within a controlled trial of a vaccine, while effectiveness relates to the actual protection provided by the vaccine in the real world.

33 Rossman et al. (2021). Patterns of COVID-19 pandemic dynamics following deployment of a broad national immunization program.

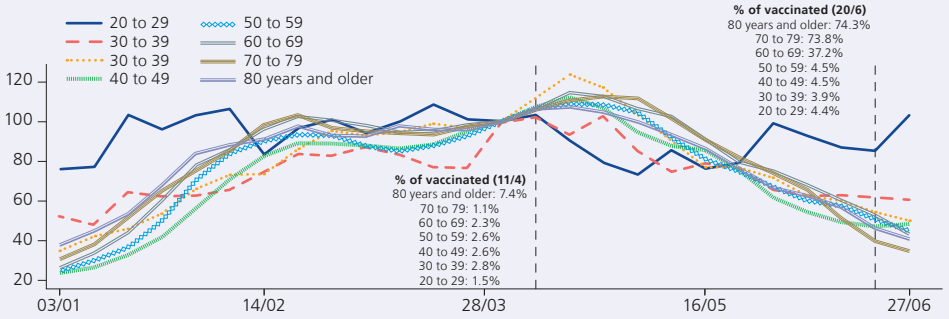
at the beginning of 2021 using mostly the Pfizer vaccine. The study finds that new cases of COVID-19 and hospitalizations began to decrease in mid-January (one month after the vaccination campaign began), this reduction being more evident in older people and in cities that began to vaccinate early.

In Peru, a study published by the National Institute of Health demonstrates the effectiveness of the Sinopharm vaccine among health care workers[34]. The research shows that full vaccination with Sinopharm (two doses) is 50.4 percent effective in preventing SARS-CoV-2 infection and 94.0 percent effective in preventing death among medical personnel. In addition, it finds that partial vaccination (1 dose) is 17.2 percent effective in preventing infection and 46.3 percent effective in preventing death; that is, that it provides significantly less protection than two doses of vaccine.

In fact, several studies indicate that the efficacy or effectiveness of the vaccines acquired by the Peruvian government (Sinopharm, Pfizer, and AstraZeneca) in preventing death is over 90 percent. In the case of the Pfizer vaccine, an article in *The Lancet* states that it is 96.7 percent effective against death from COVID-19, according to a study in Israel.[35] Moreover, no deaths were reported in those who received the vaccine in the clinical trials of AstraZeneca conducted in the United Kingdom, South Africa, and Brazil.[36]

The above evidence is consistent with a significant reduction in the mortality rate[37] as a consequence of COVID-19 as the vaccination process progresses in Peru (see graph below). Thus, for example, the mortality rate of the population aged 80 years and older declined by nearly 60 percent between the weeks of April 4 and June 27, since the vaccination progress of this age group reached 70.2 percent in the week of June 13. Similarly, mortality in the 70-79 age group decreased by 65.4 percent by June 27, the vaccination rate reaching 65 percent as of June 13.

EVOLUTION OF THE MORTALITY RATE 1/
ACCORDING TO AGE GROUPS, 2021
(Indices, weekly base from 03/29 to 04/04)



1 / Mortality rate is calculated between the excess of non-violent deaths among the total population of each group of analysis. Excess of deaths is obtained by comparing the evolution of total non-violent deaths -those that exclude accidents, homicides and suicides- from the years 2020 and 2021 respect to the year 2019.
Source: MINSA.

34 Silva-Valencia, J et al. (2021) Efectividad de la vacuna BBIBP-CorV para prevenir infección y muerte en personal de salud, Perú 2021.

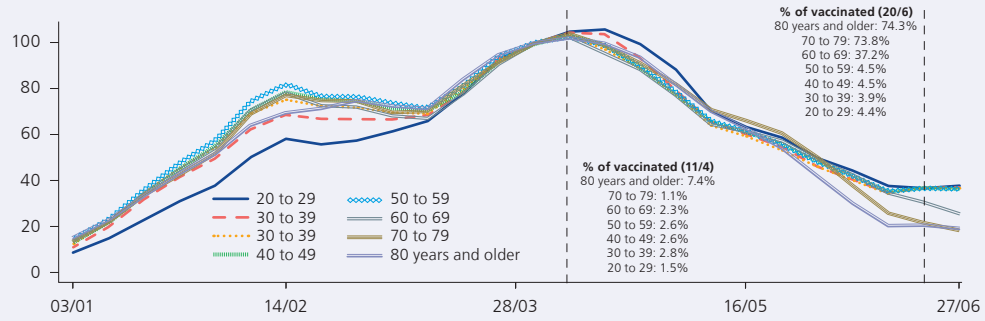
35 Haas, E (2021) Impact and effectiveness of mRNA BNT162b2 vaccine against SARS-CoV-2 infections and COVID-19 cases, hospitalizations, and deaths following a nationwide vaccination campaign in Israel: an observational study using national surveillance data.

36 Deloria Knoll, M. and Wonodi, C. (2020) Oxford–AstraZeneca COVID-19 vaccine efficacy.

37 The mortality rate is calculated as the division between the excess of nonviolent deaths and the total population of each analysis group. Excess deaths are obtained by comparing the evolution of total nonviolent deaths –deaths excluding accidents, homicides, and suicides– in 2020 and 2021 with respect to those that occurred in 2019.

Like mortality, the rate of infections[38] has undergone significant reductions as the vaccination process has progressed. For example, the age groups 80 years and older and 70 to 79 years, which are the groups with the greatest vaccination progress (65.4 and 70.2 percent as of June 13), reduced their infection rate by more than 80 percent between the weeks of April 4 and June 27 (see graph below). On the other hand, the age groups with the least progress in vaccination show a smaller drop, or even none at all, in the case of the population aged 20 to 29 years.

EVOLUTION OF COVID-19 INFECTED 1/ BY AGE GROUPS, 2021
(Indices, weekly base from 03/29 to 04/04)



1/ Total number of people with a positive antigen or molecular test.
Source: MINSA.

To formally analyze the impact of vaccination on the excess death rates, an indicator that is more robust to errors in the classification of deaths by COVID-19 officials, and infections by COVID-19, we worked with two linear models containing as dependent variables the index of excess deaths *(*$IndDeceased_{ept}$*)* and the index of infected *(*$IndInfected_{ept}$*)*, corresponding to age group *e*, living in province *p* and having been vaccinated up to period *t*, taking the week of April 4, 2021 as the base period.

To evaluate the impact of the progress of vaccination on the rate of excess deaths, we incorporated the explanatory variable $ShareVac_{ept-2}$ which measures the percentage of the population of age group *e*, living in province *p* and that has been vaccinated up to period *t-2*. This variable has a two-period lag with respect to the log of deaths because it allows us to consider the period (2 weeks) of attainment of maximum immunity after having received the second dose of the COVID-19 vaccine. This assumption is relaxed in the infected equation, where the variable $ShareVac_{ept-1}$ only presents a lag.

The specifications incorporate province and time fixed effects (α_{pt}) and age groups and province (α_{ep}), which allow us to control for unobservable characteristics for the researcher that vary over time and are specific to each age group and province, respectively. For example, α_{pt} controls, among other variables, for mobility specific to each province as well as for risk zones (extreme, very high, high and moderate risk zones), which vary over time and by province, among other variables. On the other hand, α_{ep} controls, among other aspects, for the educational, socio-demographic or health characteristics of each age group in each province. In addition, "pairs" of groups with adjacent ages have been formed in the estimates to achieve a more specific and precise analysis. For example, only the group of people aged 80 and over and those aged 70-79 are considered in the first regression, while the latter group is also included in a second group of pairs together with the population aged 60-69.

38 Group of persons with positive antigen or molecular COVID-19 tests

Information on deaths, infected and vaccinated persons provided by the *Plataforma Nacional de Datos Abiertos* provided by the Presidency of the Council of Ministers (PCM) was used to carry out the estimation. In addition, the 2017 Population and Housing Census was used to obtain the total population by age group and province.

$$IndDeceased_{ept} = \alpha_{ep} + \alpha_{pt} + \beta ShareVac_{ept-2} + \varepsilon_{ept}$$
$$IndInfected_{ept} = \alpha_{ep} + \alpha_{pt} + \beta ShareVac_{ept-1} + \varepsilon_{ept}$$

The results of the estimates, which are consistent with the previous descriptive analysis, indicate that mortality and those infected with COVID-19 decrease as the vaccinated population increases. For example, a one percentage point increase in the percentage of vaccinated people in the 80+ age group would be associated with a statistically significant reduction in the death rate by 0.15 points and a reduction of 0.28 points in the rate of infected people. This relationship is maintained, even with different specifications, for the rest of the age groups analyzed (see table below).

IMPACT OF VACCINATION ON THE EXCESS OF DEATHS AND INFECTED BY COVID-19

Deceased			
	[80 and older / 79-70]	**[79-70/69-60]**	**[69-60/59-50]**
$ShareVac_{ept-2}$	-0.157**	-0.126**	-0.334*
N° observations	9200	9220	9230
R2	0.852	0.870	0.858
Infected			
	[80 and older / 79-70]	**[79-70/69-60]**	**[69-60/59-50]**
$ShareVac_{ept-1}$	-0.277***	-0.196***	-0.290**
N° observations	9644	9636	9618
R2	0.872	0.912	0.940

Notes:
1. Estimates are weighted with population and erase outliers (death / infected index above the 99th percentile and below the 1st percentile).
2. The results are also consistent if it considers the series of confirmed deaths (by a molecular, antigen or molecular test) by COVID-19.
3. Estimates include fixed effects of province and time (α_{pt}) and age groups and province (α_{ep}).
Source: MINSA and Census 2017.

In conclusion, the evidence indicates that the larger the fully vaccinated population, the greater the prevention of hospitalization and death from COVID-19. Therefore, vaccination is the main tool to fight against this virus, so it is crucial to encourage full vaccination among the Peruvian population. This will reduce morbidity and mortality due to COVID-19 and will also prevent the collapse of health systems, allowing the population's health needs to be met in a timely manner.

IV. Public Finances

44. The fiscal deficit in annual terms decreased from 8.9 to 5.0 percent of GDP between December 2020 and August 2021. After the increasing trend it registered last year as a result of the pandemic, the fiscal deficit has shown six consecutive months of reduction since March 2021.

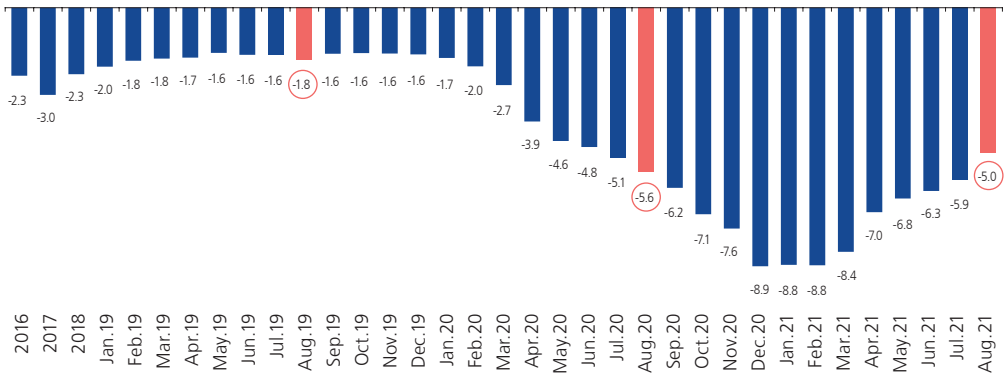
The increase in the current revenues of the General Government in the last 12 months to August reflected the favorable context of metal prices and the recovery of economic activity. By components, income came mostly from the National Government's tax revenues, particularly from the value added tax (VAT), both internal and external, and from income tax, mainly from domiciled legal entities and, to a lesser extent, from individuals. On the other hand, non-tax revenues showed higher revenues from mining royalties, social contributions and own resources, and transfers.

Annualized non-interest expenditures of the General Government have decreased as a percentage of GDP, but have increased in nominal terms between December 2020 and August of this year. The nominal increase in expenditures (10.5 percent) was mainly observed in the component of gross capital formation (40.8 percent), at the three levels of government, and particularly at the levels of the national government and local governments. It is worth pointing out that the increase in current expenditure (4.8 percent) was mainly associated with higher purchases of goods and services (17.7 percent) to address the health emergency, suport reactivation, as well as with the recovery of non-COVID-19 expenditure, which was affected by the quarantine and the suspension of contracting processes.

Graph 58

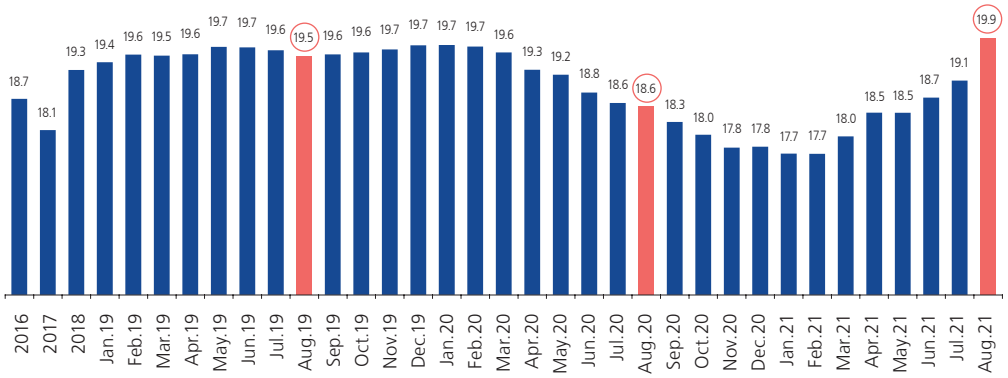
ECONOMIC BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2016 - 2021

(Accumulated last 12 months - % GDP)



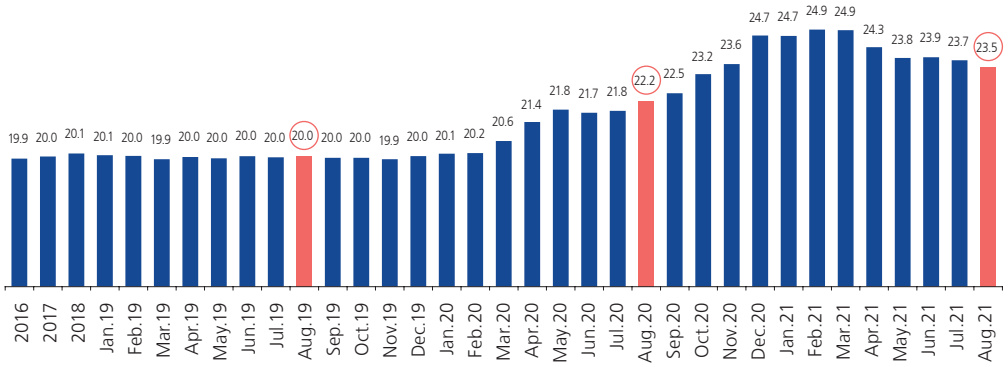
Source: MEF, SUNAT and BCRP.

Graph 59
CURRENT REVENUES OF THE GENERAL GOVERNMENT: 2016 - 2021
(Accumulated last 12 months - % GDP)



Source: SUNAT and BCRP.

Graph 60
NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT: 2016 - 2021
(Accumulated last 12 months - % GDP)



Source: MEF and BCRP.

45. The fiscal deficit is expected to fall to 4.0 percent of GDP in 2021. This decline in the deficit, which would be explained by the growth of current revenues due to a favorable international context, the recovery of economic activity, and the collection of extraordinary revenues, would be reinforced by lower non-interest expenditures as a percentage of GDP, particularly current expenditures after the temporary public spending measures adopted to deal with the pandemic.

The consolidation process of public finances is foreseen to continue in 2022,, with the fiscal deficit standing at 3.4 percent of GDP. This level is 0.3 percentage points of GDP lower than the 3.7 percent established by the fiscal rule (Emergency Decree No. 079-2021), which would provide a margin for action in the event of a contingency.

The fiscal deficit projection for 2021 has been reduced from 4.5 percent (June Report) to 4.0 percent of GDP, while the projection for 2022 has been increased from 3.1 to 3.4 percent of GDP. The lower deficit projected for 2021 is explained by an upward revision of fiscal revenues as a result of: i) higher-than-expected tax revenues and ii)

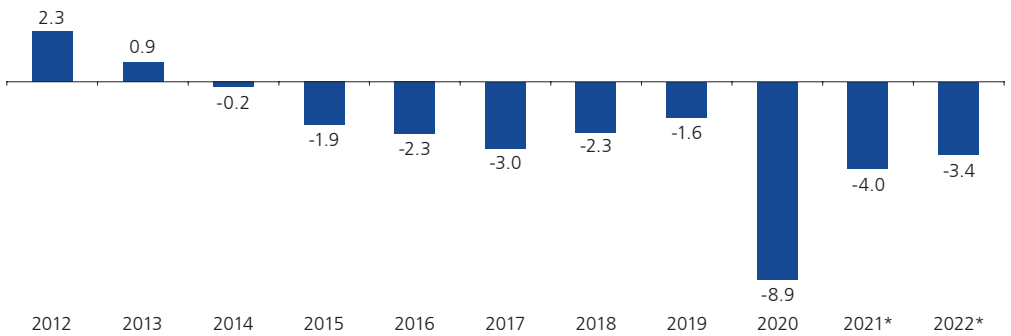
extraordinary revenues from the payment of tax debts. This evolution would be in part offset by higher than expected current expenditures in June. On the other hand, the upward revision of the deficit for 2022 is mainly explained by lower revenues, in line with the more gradual recovery of economic activity and lower copper and gold prices, as well as with higher non-interest expenses.

Table 22
NON-FINANCIAL PUBLIC SECTOR
(% GDP)

	2020	2021*			2022*	
		S1	IR Jun.21	IR Sep.21	IR Jun.21	IR Sep.21
1. General government current revenues	**17.8**	**21.2**	**19.3**	**20.1**	**20.1**	**20.0**
Real % change	*-17.4%*	*35.3%*	*23.7%*	*30.1%*	*9.8%*	*3.7%*
2. General government non-financial expenditure	**24.7**	**20.1**	**22.3**	**22.6**	**21.7**	**21.9**
Real % change	*12.8%*	*21.7%*	*2.7%*	*5.3%*	*2.7%*	*1.3%*
Of which:						
Current expenditure	20.2	15.8	17.3	17.8	16.7	16.7
Real % change	*19.4%*	*9.2%*	*-2.2%*	*1.2%*	*1.8%*	*-1.3%*
Gross capital formation	3.8	3.6	4.1	4.1	4.2	4.2
Real % change	*-13.2%*	*121.9%*	*23.9%*	*25.0%*	*7.7%*	*8.2%*
3. Other 1/	**-0.4**	**0.6**	**0.0**	**0.0**	**0.1**	**0.1**
4. Primary balance (1-2+3)	**-7.3**	**1.7**	**-2.9**	**-2.4**	**-1.5**	**-1.8**
5. Interests	**1.6**	**1.6**	**1.6**	**1.5**	**1.6**	**1.6**
6. Overall Balance	**-8.9**	**0.1**	**-4.5**	**-4.0**	**-3.1**	**-3.4**

1 / Includes capital income of the general government and primary balance from state-owned companies.
* Forecast.
IR: Inflation Report.

Graph 61
ECONOMIC BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2012 - 2022
(% GDP)



* Forecast.

Current income

46. The expected real expansion rate of current revenues of 30.1 percent for 2021 would be higher than that estimated in the previous Report (23.7 percent). Moreover, as a percentage of GDP it represents an increase of 0.8 percentage points in the projection.

By components, the higher revenues projected for 2021 are mainly explained by the growth of tax revenues from the income tax and the value added tax (VAT). Income tax would increase due to the higher regularization corresponding to FY 2020 and to the higher payments on account expected as a result of the impact of price and exchange rate increases on the sales of the tradable sector. In addition, the projection incorporates the payments made in August for tax amnesty and regularization of payments of other tax revenues.

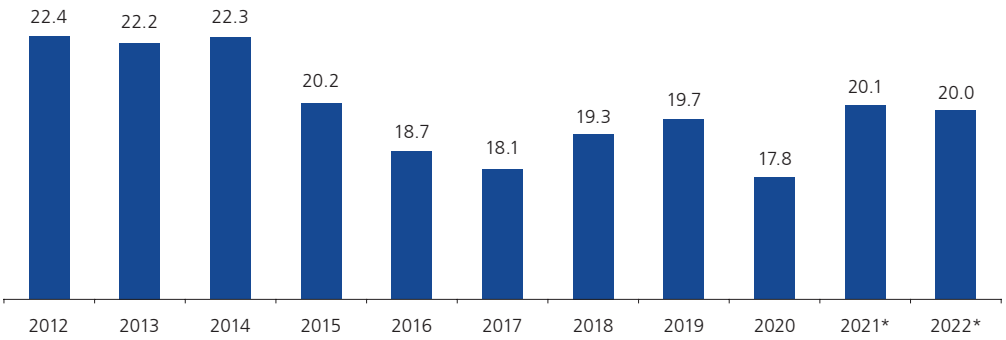
Table 23
CURRENT REVENUES OF THE GENERAL GOVERNMENT
(% GDP)

	2020	2021*			2022*	
		S1	IR Jun.21	IR Sep.21	IR Jun.21	IR Sep.21
TAX REVENUES	**13.3**	**16.6**	**15.0**	**15.6**	**15.7**	**15.5**
Income tax	5.3	7.1	5.8	6.0	6.4	6.2
Value Added Tax	7.7	8.8	8.5	8.7	8.5	8.6
Excise tax	1.0	1.1	1.0	1.0	1.0	1.0
Import duties	0.2	0.2	0.2	0.2	0.2	0.2
Other tax revenues	1.5	1.8	1.8	2.1	1.8	1.9
Tax returns	-2.4	-2.3	-2.2	-2.3	-2.2	-2.3
NON-TAX REVENUES	**4.5**	**4.6**	**4.4**	**4.5**	**4.5**	**4.5**
Contributions to social security	2.2	2.2	2.1	2.1	2.2	2.1
Own resources and transfers	1.6	1.4	1.3	1.3	1.4	1.4
Royalties and likely	0.5	0.8	0.7	0.8	0.7	0.7
Other	0.2	0.2	0.2	0.2	0.2	0.3
TOTAL	**17.8**	**21.2**	**19.3**	**20.1**	**20.1**	**20.0**

* Forecast.
IR: Inflation Report.

Compared to the previous Report, current revenues in 2022 would register lower real growth (3.7 versus 9.8 percent) and as a percentage of GDP these revenues would be 0.1 percentage points below the level expected in June (20.1 percent). The lower dynamism of revenues in 2022 is explained by the lower projection of mineral prices –which would reduce income tax– as well as by the lower projected growth of economic activity.

Graph 62
CURRENT REVENUES OF THE GENERAL GOVERNMENT: 2012 - 2022
(% GDP)



* Forecast.

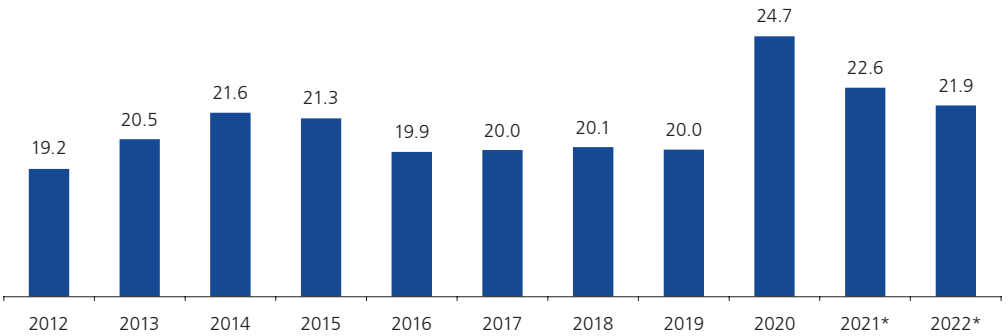
Given the growth projections for 2021 and 2022, current revenues would represent 20.0 percent of GDP at the end of the forecast horizon, a higher level than those recorded during the last 5 years.

Non-financial expenditure

47. Non-financial expenditures would register a real growth of 5.3 percent in 2021, and as a percentage of GDP would stand at 22.6 percent, a level 2.1 percentage points lower than in 2020 (24.7 percent of GDP). In 2022, non-financial expenditures would represent 21.9 percent of GDP, in line with the expected consolidation of public spending and compliance with the macro-fiscal rules of the Non-Financial Public Sector for 2022 (Emergency Decree N° 079-2021).

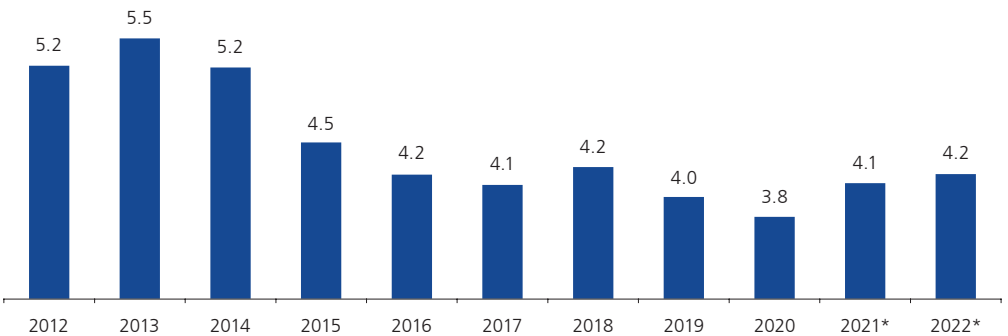
Compared to what was foreseen in the last Report, the increase in the projection of non-financial expenditures for 2021 incorporates the new Yanapay Peru bond authorized by Emergency Decree N° 080-2021. This transfer will grant S/ 350 to elderly people living in poverty, with a minimum of S/ 700 being allocated per family. The total cost for granting this monetary subsidy is estimated at S/ 5,145 million. On the other hand, the increase in the expenditure estimate for 2022 corresponds to the progressive increase in education spending and higher investment levels than those foreseen in June.

Graph 63
NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT: 2012 - 2022
(% GDP)



* Forecast.

Graph 64
GROSS CAPITAL FORMATION OF THE GENERAL GOVERNMENT: 2012 - 2022
(% GDP)



* Forecast.

Public spending in the projection horizon is expected to continue to be focused on addressing the health emergency, especially on guaranteeing the vaccination process, as well as on consolidating economic recovery.

Table 24
NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT
(% GDP)

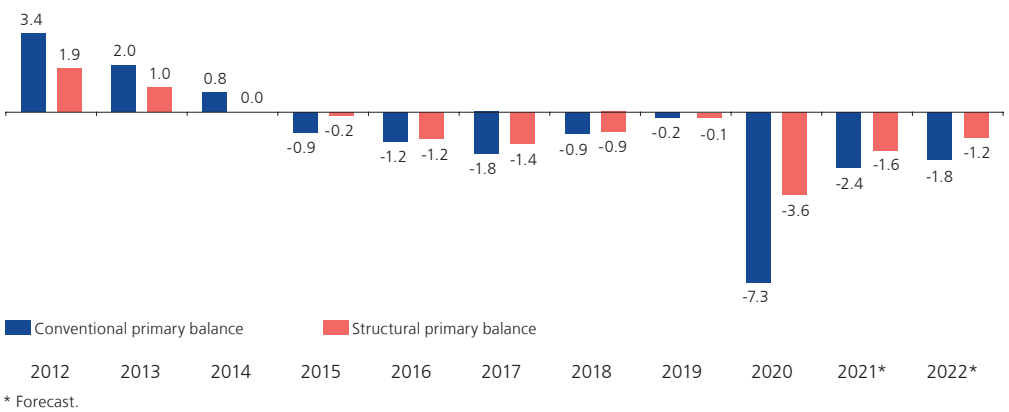
	2020	2021*			2022*	
		S1	IR Jun.21	IR Sep.21	IR Jun.21	IR Sep.21
Current expenditure	**20.2**	**15.8**	**17.3**	**17.8**	**16.7**	**16.7**
National Government	13.8	10.7	11.5	11.9	11.2	11.4
Regional Governments	4.2	3.5	3.8	3.7	3.6	3.5
Local Governments	2.1	1.6	2.1	2.1	1.9	1.9
Capital expenditure	**4.5**	**4.3**	**4.9**	**4.8**	**4.9**	**5.1**
Gross capital formation	3.8	3.6	4.1	4.1	4.2	4.2
National Government	1.4	1.4	1.5	1.5	1.5	1.5
Regional Governments	0.8	0.7	0.9	0.8	0.9	0.9
Local Governments	1.6	1.5	1.7	1.8	1.8	1.8
Other	0.7	0.7	0.8	0.7	0.8	0.9
TOTAL	**24.7**	**20.1**	**22.3**	**22.6**	**21.7**	**21.9**
National Government	15.9	12.9	13.8	14.1	13.4	13.7
Regional Governments	5.1	4.1	4.6	4.6	4.5	4.4
Local Governments	3.7	3.1	3.9	3.9	3.7	3.8

* Forecast.
IR: Inflation Report.

Fiscal stance

48. The **structural primary balance** is an indicator that identifies the impact of fiscal policy decisions on fiscal accounts, by isolating the transitory or cyclical components of fiscal accounts, components related with the business cycle and price fluctuations that affect tax revenues, such as the prices of minerals and hydrocarbons. The structural primary deficit is estimated at 3.6 percent of trend GDP in 2020 and is expected to be equivalent to 1.6 percent of trend GDP in 2021, reflecting the expansionary position of fiscal policy in these two years. On the other hand, a structural primary deficit of 1.2 percent of trend GDP is expected at the end of the forecast horizon.

Graph 65
CONVENTIONAL AND STRUCTURAL PRIMARY BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2012 - 2022
(% GDP and Trend GDP)



* Forecast.

49. The **fiscal impulse** measures the primary balance of the government resulting from variations in public spending and tax policies. The weighted fiscal impulse is an alternative indicator used to measure the fiscal stance of a year in comparison with the preceding year, weighing with differentiated multipliers the changes in structural income, current expenditure, and capital expenditure. This indicator registers an expansionary fiscal policy in 2020, estimated at 1.8 percentage points of trend GDP, which together with the expansionary monetary policy stance, offset the negative shock of COVID-19 on the economy in 2020. For 2021 and 2022, the weighted fiscal impulse is estimated at -0.4 and -0.2, respectively.

Financing and Debt

50. The projection of financing requirements for 2021 has been revised down while the projection for 2022 has been revised up compared to the respective projection in the June Report as a result of corrections in the nominal fiscal deficit projections. A lower use of public deposits is estimated to be required for 2021 while a higher use is now estimated for 2022. Likewise, a lower issuance of sovereign bonds and a higher level of external disbursements are projected for 2021 since no resources from contingent credit lines from international organizations were considered in June of this year. In contrast, a higher issuance of sovereign bonds is projected for 2022.

Table 25
FINANCIAL REQUIREMENT AND FINANCING OF THE NON-FINANCIAL PUBLIC SECTOR
(Million soles)

	2020	2021*			2022*	
		S1	IR Jun.21	IR Sep.21	IR Jun.21	IR Sep.21
I. USES	**66,511**	**1,173**	**40,403**	**37,161**	**32,303**	**35,964**
1. Amortization	2,761	1,655	2,960	3,112	4,511	4,699
a. External	1,024	717	1,948	1,835	3,600	3,944
b. Internal	1,738	938	1,012	1,277	911	755
Of which: recognition bond	*498*	*287*	*498*	*548*	*550*	*550*
2. Economic balance (negative sign indicates surplus)	63,749	-483	37,443	34,049	27,792	31,265
II. SOURCES	**66,511**	**1,173**	**40,403**	**37,161**	**32,303**	**35,964**
1. Disbursements and others	36,255	28,796	40,470	40,384	28,594	31,781
a. External	8,762	5,766	7,939	15,286	2,608	8,700
b. Bonds	27,492	23,031	32,530	25,098	25,985	23,082
2. Variation in deposits and others 1/	30,256	-27,624	-67	-3,223	3,710	4,182
Note:						
Percentage of GDP						
Gross public debt balance	34.7	33.9	34.4	34.9	34.4	34.7
Net public debt balance	22.3	20.8	24.3	24.3	25.4	25.4
Balance of public deposits	12.4	13.1	10.1	10.5	9.0	9.3

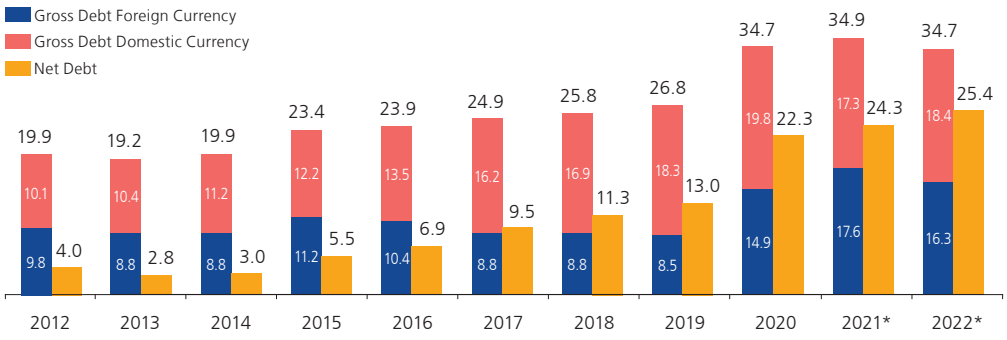
1/ Positive sign indicates reduction of deposits.
* Forecast.
IR: Inflation Report.

The **gross debt** of the non-financial public sector would increase from 34.7 to 34.9 percent of GDP between 2020 and 2021 and would finally reach the same level recorded in 2020 by the end of the forecast horizon. This level of gross debt in 2022 would be

lower than the maximum established by the macrofiscal debt rule of 38.0 percent of GDP (Emergency Decree N°079-2021).

On the other hand, the **debt net** of Non-Financial Public Sector deposits would increase from 22.3 to 24.3 percent of GDP between 2020 and 2021 and would reach 25.4 percent of output in 2022. The increasing trend of the net debt reflects the still high fiscal deficits, which would be financed to a lesser extent by public sector deposits.

Graph 66
NON-FINANCIAL PUBLIC SECTOR DEBT: 2012 - 2022
(% GDP)

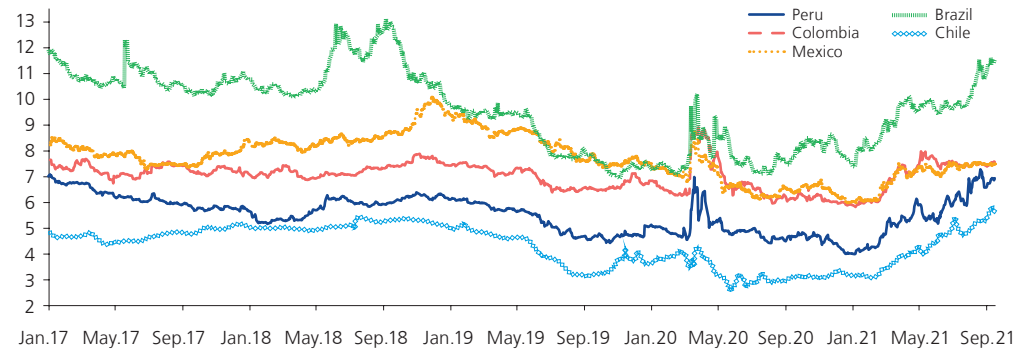


* Forecast.

51. The interest rates of government bonds in local currency of the countries in the region showed a lower performance in the third quarter than in the second quarter of 2021, as well as high volatility. Yield curves in Brazil, Peru, Chile and Mexico show rates higher by 201, 103, 69, and 1 basis point, respectively, in 10-year bonds.

The yields on Peruvian 10-year bonds increased from 5.37 to 6.40 percent between June and September 8, 2021. Moody's downgraded Peru's long-term debt in domestic and in foreign currency from A3 to to Baa1 and changing the outlook from negative to stable too.

Graph 67
10 YEAR SOVEREIGN BOND YIELDS IN LOCAL CURRENCY
(%)



Source: MEF and Reuters.

The interest rates of nominal and inflation-adjusted government bonds, known as *Valor Adquisitivo Constante* (VAC), also increased by an average of 18 basis points between June and September, in line with the evolution of nominal Treasury Bonds (BTP) and the increase in inflation expectations. In terms of volatility, these bonds maintained a high daily variability in the third quarter. Specifically, on July 30, BTPs maturing in 2031, 2034, and 2040 registered the highest daily increases since they were issued (98, 84, and 87 basis points, respectively).

The balance of nominal fixed-rate sovereign bonds amounted to S/ 124.6 billion on September 8, 2021. Non-resident investors increased their sovereign bond holdings by S/. 5.6 billion, thereby increasing their share from 45 to 50 percent between June and September 2021.

Graph 68
SOVEREIGN BOND BALANCE AND PARTICIPATION OF NON-RESIDENT INVESTORS
(Amounts in millions of soles and participation in %)

Note: Until February excludes inflation-indexed bonds and GDN and transactions in Euroclear of non-residents. From March, it includes nominal sovereign bonds and VAC and GDN is excluded.
Source: BCRP, CAVALI, MEF, and SBS.

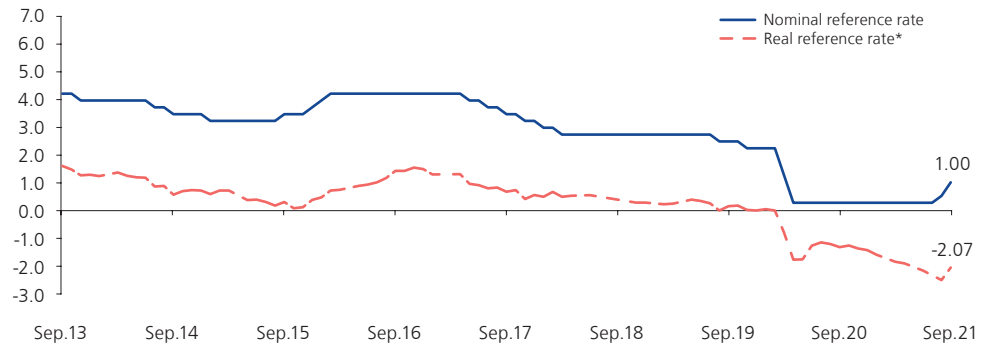
V. Monetary Policy and Financial Conditions

Monetary Policy Actions

52. Between April 2020 and July 2021, BCRP has maintained a minimum historical benchmark interest rate of 0.25 percent –the minimum historical level of this rate since inflation targeting was implemented–, together with a portfolio of monetary policy instruments to expand monetary impulse in order to prevent a disruption in the payments system and the credit channel given the magnitude of the shock associated with the COVID-19 pandemic.

The supply shocks that have raised inflation have also led to an increase in inflation expectations, which are now around the upper band of the target range. As a result, the real monetary policy interest rate has continued to decline in recent months. In this context, the BCRP Board of Directors decided in August and September to raise the benchmark interest rate from 0.25 to 1.0 percent (increasing the rate by 25 basis points in August and by 50 basis points in September). These decisions imply maintaining an expansionary monetary policy stance, since the real reference interest rate remains at significantly negative levels (-2.07 percent in September).

Graph 69
REFERENCE INTEREST RATE
(%)



* With expectation of inflation.

53. In their meetings of August and September, the Board of Directors also approved to raise the interest rates of the BCRP's over-the-counter operations in domestic currency with the financial system to the following rates per annum:

    i. Overnight deposits: 0.85 percent.

    ii. Direct security and currency repos, and monetary regulation loans: 1.50 percent.

    Given that over-the-counter operations should be operations of last resort, and that financial institutions should preferably channel their liquidity surpluses through the interbank market, the lower and upper limits of this corridor should induce financial institutions to this behavior.

54. The monetary policy decisions of August and September 2021 have been made in light of the following factors:

    - The twelve-month inflation rate increased from 3.25 percent in June to 4.95 percent in August, standing transitorily above the target range.

    - The increase in inflation was explained by the increase in the international prices of food inputs (grains) and fuels, as well as the exchange rate.

    - Trend inflation indicators are within the target range. Twelve-month inflation excluding food and energy was at 2.39 percent in August.

    - Inflation is projected to return to the target range over the next twelve months and to remain in that range for the rest of next year because of the reversal of the effect of transitory factors on the inflation rate and because economic activity will still continue to be below its potential level.

    - Twelve-month inflation expectations increased from 2.6 percent in June to 3.1 percent in August, slightly above the upper limit of the inflation target range.

    - Most indicators of economic expectations remain in the pessimistic range and showed a deterioration in August.

    - Global economic activity is expected to recover in the coming quarters as the global vaccination process continues around the world and significant fiscal stimulus packages are impleented in developed countrie.

55. In terms of communication, the Board of Directors of BCRP has emphasized that "*it is especially attentive to new information regarding inflation expectations and the evolution of economic activity in order to consider making changes in the monetary policy stance, if it is necessary*". The latter is is known in economic literature as the "forward guidance" of monetary policy, which is conditional on the state of the economy.

The Board has also said that *"the Central Bank will continue to carry out all the necessary actions to sustain the payment system and the flow of credits in the economy"*. It also pointed out that "*financial markets have been highly volatile in a context of electoral uncertainty and that the BCRP actions are intended to mitigate this volatility*."

Additional BCRP actions in response to the COVID-19 pandemic

56. The balance of liquidity injection operations in domestic currency decreased from S/ 60.8 billion at the end of June to S/ 57.9 billion on September 15, mainly due to the amortization of Reactiva Peru repos (S/ 3,433 million), offset in part by the net increase in the balance of security repos (S/ 199 million). This balance of liquidity injection operations is equivalent to 7.1 percent of GDP as of September 15, 2021, of which S/ 44.5 billion correspond to the amount liquidated in repo transactions of the government-guaranteed credit portfolio (Reactiva Peru program).

Table 26
BALANCE OF INJECTION OPERATIONS OF BCRP
(Million S/)

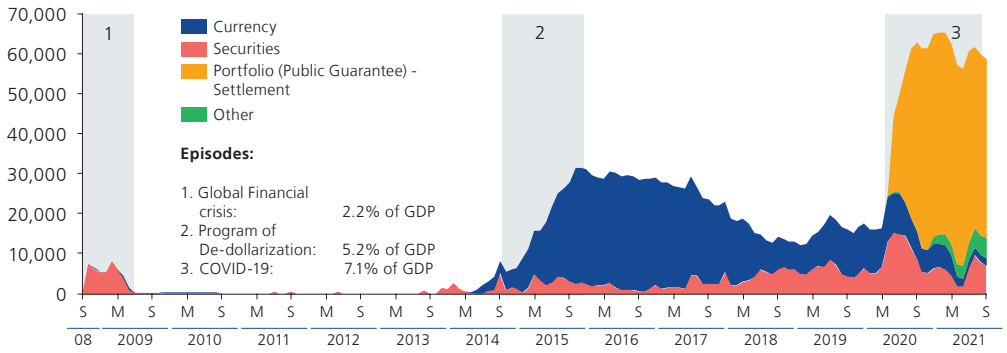
Episode	Date	Values	Currency (Regular)	Currency (Expansion)	Currency (Substitution)	Portfolio (Government-backed) - Settlement	Other*	Total
Financial crisis 2008-2009	Oct.08	7,383	300	0	0	0	0	7,683
	Nov.08	5,959	30	0	0	0	0	5,989
	Dec.08	5,412	0	0	0	0	0	5,412
	Jan.09	5,239	0	0	0	0	0	5,239
	Feb.09	7,877	0	0	0	0	0	7,877
	Mar.09	5,989	735	0	0	0	0	6,724
De-dollarization program	Dec.14	1,300	8,600	0	0	0	0	9,900
	Mar.15	4,900	8,600	2,200	1,500	0	0	17,200
	Jun.15	2,631	11,500	5,100	4,305	0	0	23,536
	Sep.15	3,034	16,050	7,900	4,805	0	0	31,789
	Dec.15	2,500	14,900	7,900	4,805	0	0	30,105
Covid-19 crisis	Feb.20	5,100	9,650	0	0	0	0	14,750
	Mar.20	6,675	11,150	0	0	0	0	17,825
	Apr.20	13,015	10,030	0	0	0	250	23,295
	May.20	15,060	10,145	0	0	19,017	260	44,482
	Jun.20	14,947	8,095	0	0	24,338	260	47,640
	Jul.20	14,452	7,195	0	0	33,090	154	54,891
	Aug.20	11,379	6,895	0	0	42,363	250	60,886
	Sep.20	8,604	5,895	0	0	47,002	304	61,805
	Oct.20	5,359	5,695	0	0	49,798	295	61,146
	Nov.20	5,059	5,970	0	0	50,246	269	61,543
	Dec.20	6,309	5,970	0	0	50,729	1,785	64,793
	Jan.21	6,554	6,030	0	0	50,497	2,258	65,339
	Feb.21	6,179	5,230	0	0	50,242	2,598	64,249
	Mar.21	4,454	2,430	0	0	49,907	2,812	59,603
	Apr.21	1,929	1,657	0	0	49,661	2,999	56,246
	May.21	1,929	1,922	0	0	49,118	3,569	56,538
	Jun.21	6,476	1,922	0	0	47,968	4,408	60,774
	Jul.21	9,636	1,922	0	0	45,384	4,717	61,659
	Aug.21	7,725	1,872	0	0	45,163	4,964	59,724
	Sep.21**	6,277	1,872	0	0	44,535	5,240	57,924

* The item "Others" includes the purchase of Public Treasury bonds, in line with article 61 of the Organic Law of the BCRP, and Repo operations of loan portfolio.
** As of September 15.

It is worth mentioning that, in comparative terms, the total balance of liquidity injection operations is 7.3 times higher than the maximum balance of these operations reached during the 2008-2009 international financial crisis (S/ 7.9 billion) and 1.8 times the balance reached during the period of falling commodity prices (2013-2016) and the de-dollarization program (S/ 31.8 billion).

On the other hand, between June 15 and August 5, 2021, 3-month security repos were carried out with the AFPs for a total amount of S/ 6,221 million in a context of withdrawals from the capitalization accounts of AFP members. However, given the early maturities recorded, the balance of these repo transactions as of September 15 amounted to S/ 3,221 million.

Graph 70
BALANCE OF MONETARY INJECTION OPERATIONS OF BCRP
(Balance in mill. S/)



* As of September 15.

57. Additionally, the balance of repos conditioned to the expansion of long-term credits increased from S/ 245 million in June 2021 to S/ 695 million as of September 15.

58. On the other hand, interest rate swaps –instruments created through Circular N°035-2020-BCRP (December 19, 2020)– with maturity terms between 3 and 9 months amounting to S/ 9,450 million were placed between August 23 and September 15. Interest rate swaps are derivative instruments denominated in local currency, in which BCRP undertakes to pay a variable interest rate in exchange for the commitment of the participating entity to pay a fixed interest rate.

The variable interest rate is equal to the capitalization of the Interbank Overnight Index (ION). The fixed interest rate is the rate offered by the financial entity in the auction or the interest rate established by BCRP in the direct placement. These operations contribute to match maturity terms in a context of expectations of rising interest rates, and also to the development of the swap market in soles.

Table 27

AUCTIONS OF INTEREST RATE SWAPS (STI) BCRP

(In million soles and % rates)

Date	Terms	Amount awarded	Average rate
23-Aug		100	0.65
24-Aug		200	0.66
25-Aug		300	0.72
26-Aug		300	0.74
31-Aug		200	0.75
1-Sep		200	0.78
2-Sep	3 months	200	0.78
3-Sep		200	0.85
6-Sep		200	0.87
7-Sep		200	0.90
10-Sep		200	1.37
13-Sep		100	1.30
14-Sep		200	1.33
15-Sep		200	1.33
	Total 3 months	**2,800**	
24-Aug		300	0.75
25-Aug		400	0.82
26-Aug		400	0.86
27-Aug		400	0.88
31-Aug		500	0.90
1-Sep		300	0.98
2-Sep	6 months	300	1.15
3-Sep		300	1.22
6-Sep		300	1.31
7-Sep		300	1.32
10-Sep		400	1.71
13-Sep		400	1.70
14-Sep		100	1.69
15-Sep		100	1.67
	Total 6 months	**4,500**	
27-Aug		150	1.00
31-Aug		200	1.02
1-Sep		200	1.13
2-Sep		200	1.18
3-Sep		200	1.27
6-Sep	9 months	200	1.36
7-Sep		200	1.43
10-Sep		200	1.80
13-Sep		200	1.83
14-Sep		200	1.78
15-Sep		200	1.76
	Total 9 months	**2,150**	
	Total STI BCRP	**9,450**	

59. BCRP has placed variable rate certificates (CDV BCRP) for a total of S/ 6,035 million for the first time since 2015. This sterilization instrument indexed to the monetary policy rate was initially created in 2010 to provide a hedge against the risk of interest rate increases. In 2015 (Circular N° 043-2015-BCRP), it was modified to

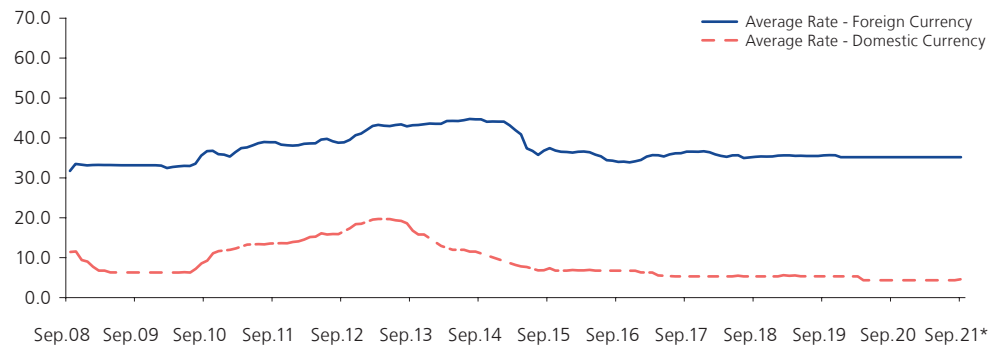
include the capitalization of the Interbank Overnight Index (ION) as an adjustment factor.

60. At the end of August 2021, BCRP published Circular No. 024-2021-BCRP, which establishes the increase of reserve requirements as of September 2021, in order to complement the recent increase of the monetary policy benchmark rate and thus have a better monetary and liquidity control in soles.

The rate of reserve requirements in local currency will be the greater of: (i) the rate resulting from a marginal reserve requirement rate of 25.0 percent on the increase in total obligations subject to reserve requirements (TOSE) with respect to July 2021, and (ii) the rate resulting from applying the minimum average reserve requirement rate of 4.0 percent in September, 4.25 percent in October, and 4.50 percent as from November 2021. Moreover, the minimum current account requirement will be raised from 0.75 percent to 1.0 percent of the TOSE since October 2021.

It should be pointed out that, as part of the monetary policy measures taken by BCRP in response to the COVID-19 crisis, the Central Bank reduced the reserve requirement rate in soles from 5.0 to 4.0 percent in March 2020, as well as the minimum current account requirement from 1.0 percent to 0.75 percent of the TOSE, in order to ease financial conditions in soles. With the measures adopted, the reserve requirement rate in soles would remain below the rate observed prior to the pandemic.

Graph 71
RESERVE REQUIREMENTS IN DOMESTIC AND FOREIGN CURRENCY
(As % banks' liabilities)

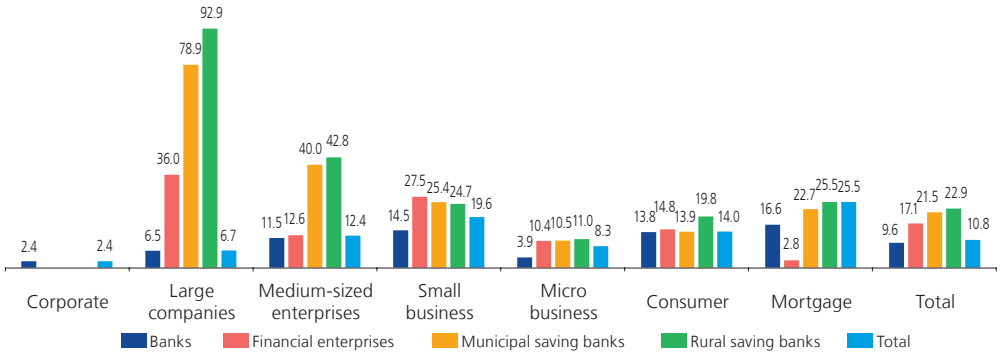


* Estimated.

61. The balance of loan rescheduling by depository corporations has continued to decrease. In fact, the total balance of rescheduled loans as of July is S/ 86 billion lower than that observed in June 2020 (S/ 128 billion, equivalent to 35.6 percent of the portfolio). This is explained by the repayment of rescheduled loans, in line with the reopening of economic activities.

As of July 31, 2021, the depository institutions –banking companies, financial companies, municipal savings banks, and rural savings banks– have rescheduled loans for around S/ 42 billion, which is equivalent to 10.8 percent of the total portfolio of the depository companies. Moreover, as of July 2021, 19.6 percent of the small business portfolio, 8.3 percent of the microbusiness portfolio, and 14.0 percent of the consumer portfolio had been rescheduled. Furthermore, entities specializing in microfinance have rescheduled at least 21 percent of their portfolios.

Graph 72
RESCHEDULED CREDITS OF DEPOSITARY COMPANIES:1/ JULY 2021
(As % of total credits)



1/ Banks, Financial enterprises, Municipal savings bank and Rural savings banks.
Source: Financial statement of depository companies.

62. Since July 15, 2020, BCRP has been carrying out repo operations with rescheduling of credit portfolios through which financial entities obtain liquidity with long terms and favorable conditions, when they reschedule the loans of their clients to terms between 6 and 48 months and at lower interest rates than those initially agreed. As of September 15, 2021, the net outstanding balance of rescheduling repos amounted to S/ 3,622 million, of which S/ 3,162 million corresponds to portfolio repos and S/ 460 million to security repos.

63. Among other measures ordered by the Executive regarding credit guarantees or loan rescheduling within the framework of support or relief programs for households and MSEs, the extensions of the maturity terms of such programs stand out. On June 24, the term of the Covid-19 Guarantee Program (rescheduling of consumer, personal, mortgage, vehicle, and MSE loans) was extended until December 31, 2021 (Law No. 31245) and on June 27, Emergency Decree No. 057-2021 was published extending the term of the programs FAE Agro, FAE Turismo, FAE MYPE, and the rescheduling of both Reactiva Perú and of FAE MYPE until September 30, 2021.

Within the framework of the current rescheduling of the Reactiva Perú Program, established by Emergency Decree No. 026-2021 of March 5, 2021 (as amended), BCRP has carried out rescheduling repo operations amounting to S/ 7,608 million.

Table 28
BALANCE OF REPOS OF LOANS WITH GOVERNMENT BACKED (REPOGART) *
(In billion soles)

% Guarantee	Government	Banks	Financial	CMAC	CRAC	Total
80	Original	9.1	-.-	-.-	-.-	9.1
	Cancelled	3.3	-.-	-.-	-.-	3.3
	Reprogrammed	1.3	-.-	-.-	-.-	1.3
	Net	5.8	-.-	-.-	-.-	5.8
90	Original	23.1	-.-	0.1	-.-	23.2
	Cancelled	3.0	-.-	0.0	-.-	3.1
	Reprogrammed	4.4	-.-	0.0	-.-	4.4
	Net	20.1	-.-	0.1	-.-	20.2
95	Original	12.6	0.0	0.8	0.1	13.5
	Cancelled	0.9	0.0	0.1	0.0	1.0
	Reprogrammed	1.5	-.-	0.1	-.-	1.6
	Net	11.7	0.0	0.7	0.1	12.5
98	Original	4.3	0.2	1.7	0.2	6.4
	Cancelled	0.1	0.0	0.2	0.0	0.3
	Reprogrammed	0.3	-.-	0.0	-.-	0.4
	Net	4.1	0.2	1.5	0.2	6.0
Total	Original	49.1	0.2	2.6	0.3	52.2
	Cancelled	7.4	0.0	0.3	0.0	7.7
	Reprogrammed	7.5	-.-	0.1	-.-	7.6
	Net	41.7	0.2	2.3	0.3	44.5

The rescheduling corresponds to the amounts settled and the requests to be settled.
* Information as of September 15.

64. The **Central Bank's operations** continued to ensure adequate levels of liquidity in the interbank market between May and August. To do so, BCRP injected liquidity through the net maturity of BCRP CDs (S/ 9,582 million) and BCRP CDRs (S/ 336 million), term and overnight deposits (S/ 1,591 million), the net placement of security repos (S/ 5,796 million), the increase in auctions of Public Treasury funds (S/ 1,344 million), and the net liquidation of portfolio repos (S/ 825 million). These operations were partially offset by the amortization of government-guaranteed portfolio repos (S/ 3,955 million), the placement of BCRP CDVs (S/ 1,450 million), and the maturity of currency repos (S/ 50 million).

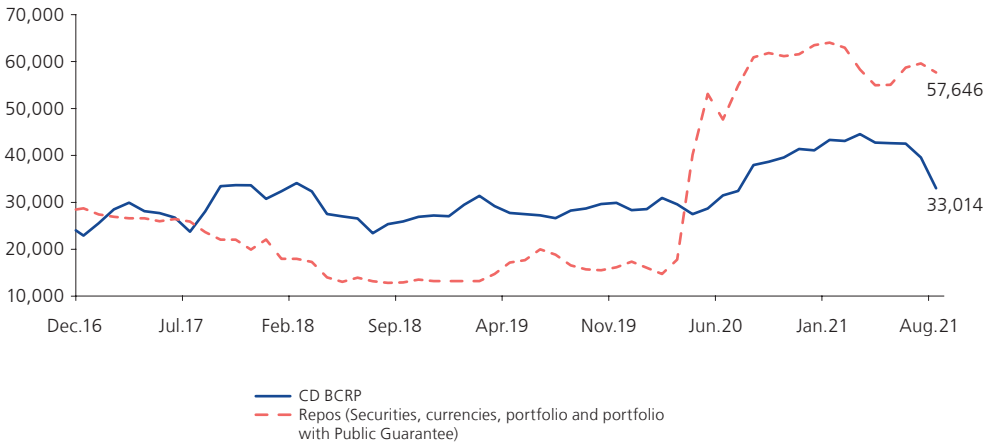
As a result, the balance of repo transactions increased from S/ 55,030 million in May to S/ 57,646 million at the end of August 2021, while the balance of CD BCRP, CDR BCRP and CDV BCRP decreased from S/ 49,304 million in May to S/ 40,836 million in August.

Table 29
BALANCE OF BCRP MONETARY OPERATIONS

	Balance (Mill. S/)			Average interest rate of the balance (%)		
	Dec.20	May.21	Aug.21	Dec.20	May.21	Aug.21
Monetary sterilization						
1. CD BCRP	41,067	42,596	33,014	0.74	0.45	0.42
2. CDR BCRP	6,392	6,708	6,372	0.18	0.24	0.42
3. CDV BCRP	-	-	1,450	-	-	-
4. Term and overnight deposits	43,714	28,164	26,573	0.23	0.23	0.44
Monetary injection						
4. Currency repos	5,970	1,922	1,872	2.80	1.78	1.79
5. Security repos 1/	6,309	1,929	7,725	1.09	1.41	0.61
6. Portfolio repos	464	2,061	2,886	0.50	0.50	0.50
7. Government-backed portfolio repos *	50,729	49,118	45,163	1.40	1.40	1.40
8. Public Treasury fund auctions	200	3,321	4,665	3.18	0.60	0.53

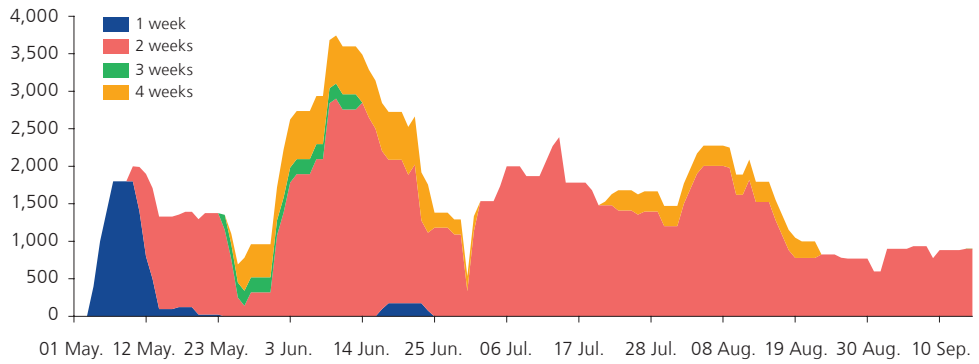
* The disbursed amount of the instrument to date is considered.
1/ Not consider the Securities Repo to provide foreign currency.

Graph 73
BALANCE OF REPO OPERATIONS AND CDBCRP
(Million S/)



As an additional measure to meet liquidity requirements in dollars, in May 2021, BCRP reinitiated security repo operations in exchange for foreign currency, which had previously been carried out in December 2020. The maturity term of these operations was gradually increased from 1 to 4 weeks. On September 15, 2021, the balance of these operations amounted to US$ 900 million.

Graph 74
BALANCE OF SECUTITY REPOS - FOREIGN CURRENCY*
(Million US$)



* As of September 15.

Thus, the share of the balance of repo operations in the BCRP's net assets decreased from 16.4 percent in May to 15.9 percent on August 31, 2021. On the side of BCRP

liabilities, Public Sector deposits went from representing 22.7 percent in May to 21.5 percent in August. On the other hand, BCRP instruments (BCRP CD, BCRP CDV, BCRP CDR, and term and overnight deposits) decreased their share in BCRP net liabilities from 23.1 to 18.6 percent during the same period, making current assets the BCRP's most important liability.

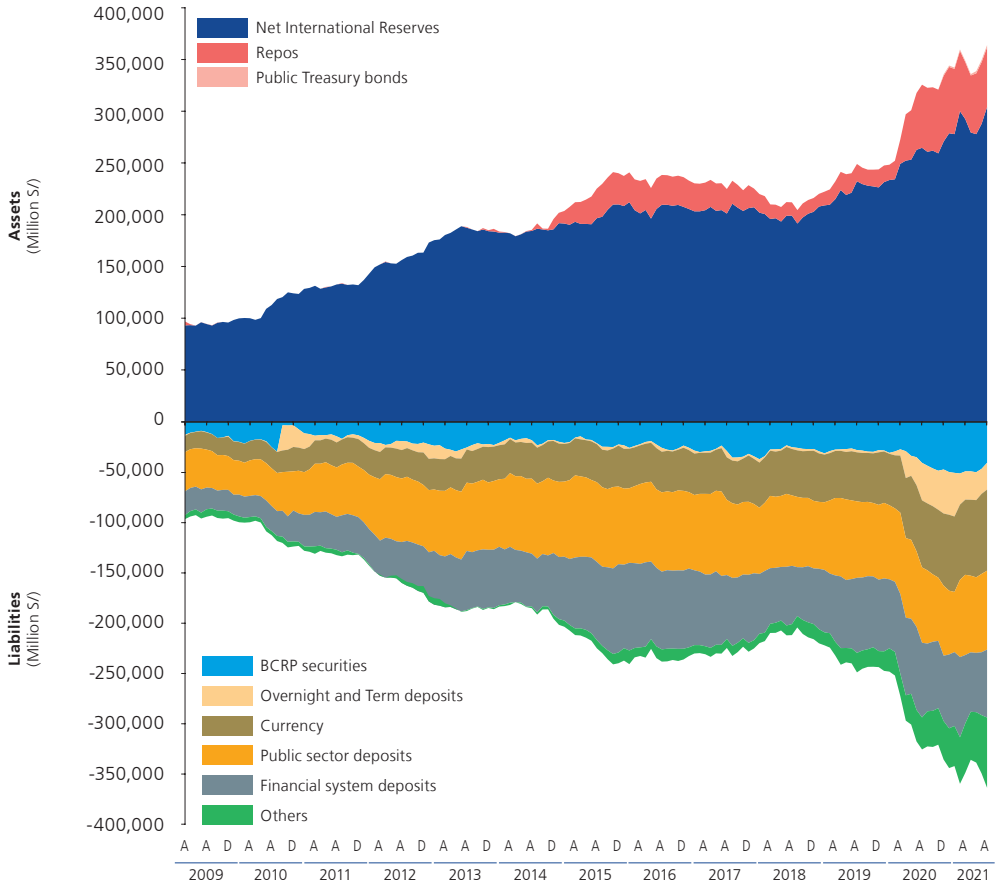
Table 30
SIMPLIFIED BALANCE SHEET OF THE BCRP*
(As % of Net Assets)

	Dec.20	May.21	31 Aug.21
I. Net assets	**100**	**100**	**100**
Net International Reserves	**80.7**	**83.2**	**83.6**
	(US$74,706 mills.)	*(US$73,069 mills.)*	*(US$74,424 mills.)*
Repos	**18.9**	**16.4**	**15.9**
Sovereign bonds	**0.4**	**0.4**	**0.6**
II. Net liabilities	**100**	**100**	**100**
1. Total public sector deposits	**20.7**	**22.7**	**21.5**
In domestic currency	17.4	19.8	18.7
In foreign currency	3.3	2.9	2.8
2. Total financial system deposits	**19.3**	**17.6**	**18.5**
In domestic currency	4.3	3.7	3.4
In foreign currency	15.0	13.9	15.1
3. BCRP instruments	**27.2**	**23.1**	**18.6**
CD BCRP	12.3	12.7	9.1
CDV BCRP	0.0	0.0	0.4
CDR BCRP	1.9	2.0	1.8
Term deposits	10.6	6.8	6.1
Overnight deposits	2.4	1.6	1.2
4. Currency	**21.4**	**22.5**	**22.2**
5. Others*	**11.4**	**14.2**	**19.2**

* Includes assets and other accounts.

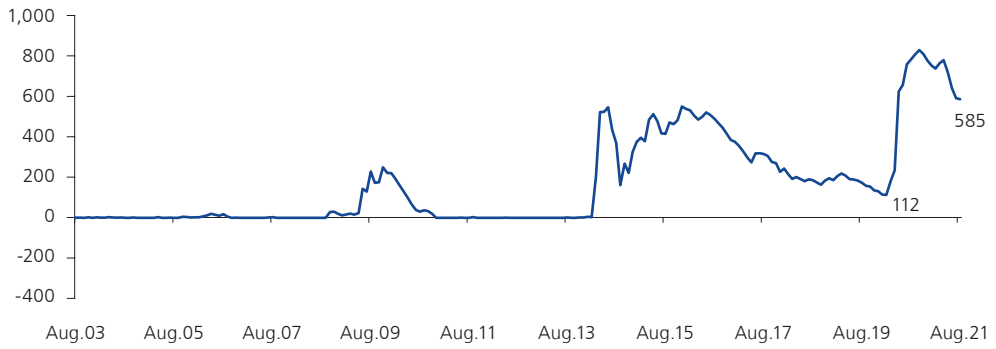
The result of these operations is reflected in the change in the size and composition of the Central Bank's balance sheet. Thus, in August 2021, BCRP assets amounted to S/ 363 378 million, a figure equivalent to 49.4 percent of GDP and higher than that observed in 2015 during the de-dollarization program (39.3 percent of GDP). The greater injection of liquidity made in recent months is reflected in the growing contribution of repo operations in BCRP assets, mainly in foreign currency assets.

Graph 75
EVOLUTION OF THE BCRP BALANCE SHEET: 2008 - 2021

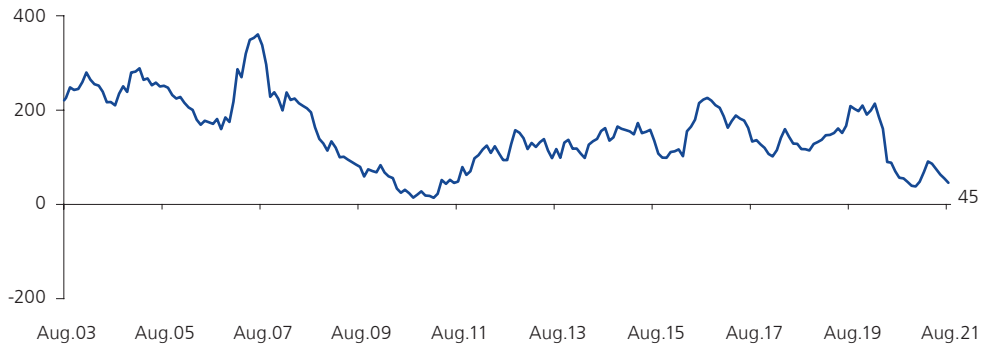


The higher injection of liquidity at longer maturity terms is reflected in the increased residual maturity of these operations, from 112 days in February 2020 to 585 days in August 2021. Likewise, BCRP has been conducting sterilization operations at shorter maturity terms. As a result, the residual term of sterilization operations has decreased from 214 days in February 2020 to 45 days in August 2021.

Graph 76
RESIDUAL TERM OF BCRP INJECTION OPERATIONS
(In days)

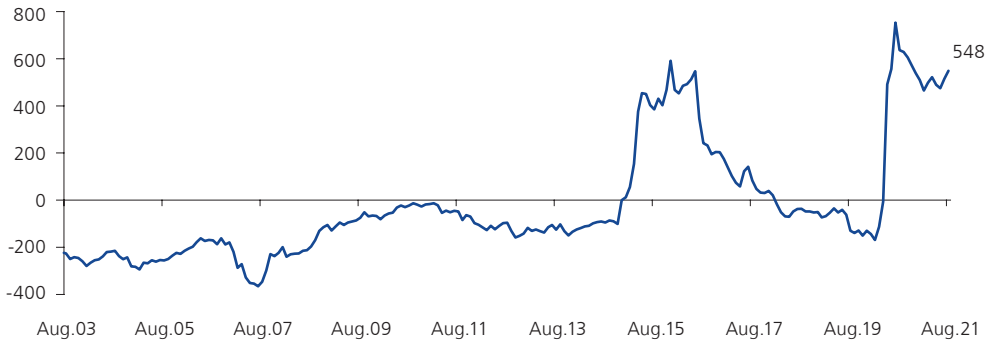


Graph 77
RESIDUAL TERM OF BCRP STERILIZATION OPERATIONS
(In days)



The net residual term of BCRP[39] operations is an indicator used to measure the stance of these operations in the yield curve. Injecting liquidity at longer maturity terms and sterilizing it at short maturity terms contributes to flatten the yield curve and the net residual term is higher. Thus, a high net residual term denotes greater liquidity in the financial system since there are liquid assets close to maturity (BCRP CD) and there is the obligation of repurchasing the repo assets in a long term. At the end of August 2021, the weighted net residual term of BCRP operations was 548 days, which includes the effect of the interest rate swap operations.

Graph 78
NET WEIGHTED RESIDUAL TERM OF BCRP OPERATIONS
(In days)



Financial Markets

65. Following the easing of financial conditions between March 2020 and July 2021, interest rates were influenced by the increase in the BCRP benchmark rate in August and September 2021. The interbank overnight rate converged immediately to the new reference levels (0.50 percent in August and 1.0 percent in September), while prime

39 The net residual term is the difference between the residual term of injection and sterilization operations, weighted by the balance of each instrument. It is calculated according to the following formula: $Net\ residual\ term = \frac{Injection\ balance}{Sterilization\ balance} * RT\ injection - RT\ sterilization$, where RT refers to the residual terms of the injection and sterilization operations, respectively.

lending and deposit rates for overnight and twelve-month terms increased by an average of 57 and 54 basis points, respectively, between June and September 2021.

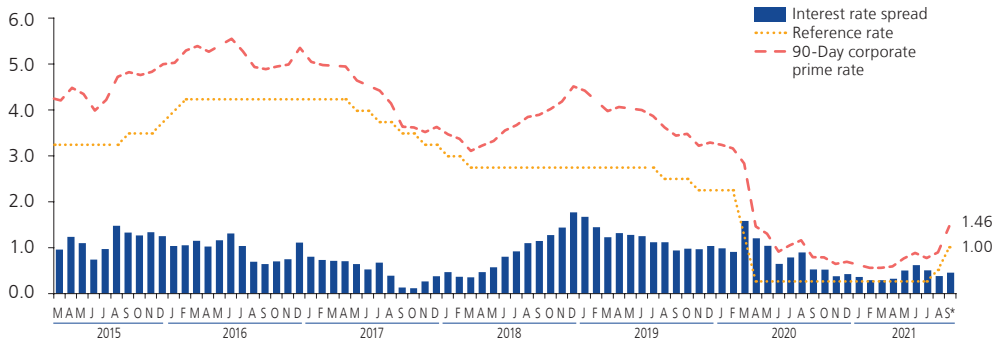
The credit segments for medium-sized businesses, consumers, corporations and small businesses registered the largest increases in interest rates in the third quarter of 2021, whereas loans to the microenterprise sector, on the other hand, recorded a lower interest rate than in June (24 basis points).

As for deposit interest rates, those paid to companies showed higher interest rates both in the quarter and in monthly terms (34 and 11 basis points, respectively), while the rates on personal deposits have decreased in terms longer than 30 days by an average of 5 basis points in the third quarter. On the other hand, between June and September, the average interest rate for CTS deposits has increased from 2.4 to 3.0 percent, influenced mostly by greater competition among banking companies to capture this type of deposits.

Graph 79

INTERES RATE IN S/: 90-DAY CORPORATE PRIME AND REFERENCE RATE

(%)



* As of September 15.
Source: BCRP and SBS.

Table 31

INTEREST RATE IN DOMESTIC CURRENCY

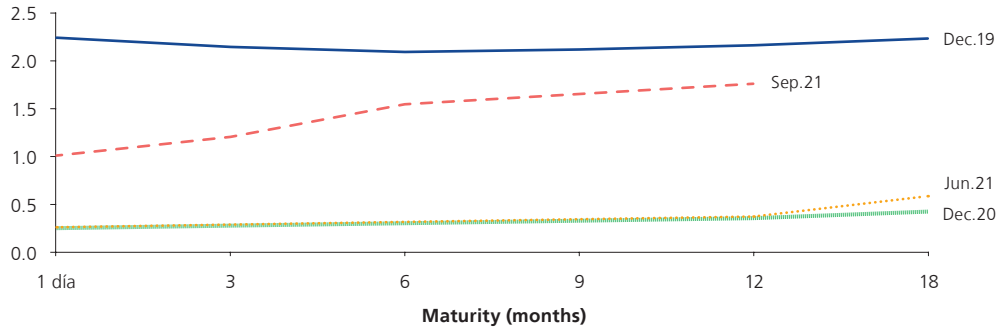
(%)

		Dec.19	Mar.20	Jun.20	Sep.20	Dec.20	Mar.21	Jun.21	Sep.21
Pasive	Deposits up to 30-day	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.3
	Individuals	1.6	1.7	0.3	0.1	0.2	0.1	0.2	0.3
	Business	2.3	2.0	0.1	0.1	0.0	0.0	0.2	0.3
	On 31 to 180-day term deposits	2.8	2.6	0.9	0.3	0.3	0.2	0.4	0.7
	Individuals	2.0	2.0	1.2	0.6	0.5	0.4	0.4	0.4
	Business	2.9	2.7	0.8	0.2	0.3	0.2	0.4	0.7
	On 181 to 360-day term deposits	3.3	3.0	1.8	1.1	0.7	0.7	0.8	1.3
	Individuals	3.3	2.9	2.5	1.6	1.3	1.3	1.4	1.3
	Business	3.3	3.1	1.3	0.7	0.4	0.5	0.6	1.3
	CTS	2.2	3.7	2.8	3.0	1.9	2.5	2.4	3.0
Active	90-day corporate prime	3.3	2.8	0.9	0.8	0.7	0.6	0.9	1.5
	Corporates	3.8	3.6	3.0	2.5	2.5	2.2	1.4	2.0
	Large companies	6.0	5.9	2.6	4.1	4.6	3.9	3.7	4.1
	Medium-sized enterprises	9.3	8.9	3.9	4.2	6.1	8.0	7.3	8.2
	Small business	18.0	18.1	4.3	6.2	17.2	18.2	17.6	18.2
	Micro business	31.3	32.6	3.8	10.7	30.1	32.8	32.4	32.1
	Consumer	40.9	39.3	38.6	38.3	39.5	38.6	38.7	39.6
	Mortgage	7.0	6.7	6.8	6.7	6.4	5.9	5.9	6.3

Memo: Annual rates for operations in the last 30 working days.
As of September 15.
Source: BCRP and SBS.

66. The yield curve of BCRP securities increased 122 basis points on average between June and September, in line with the 75 basis point increase in the BCRP benchmark rate in August and September, and with expectation of future increases. The rates on 3-month, 6-month, 9-month and 12-month maturities rose by 92, 124, 131, and 140 basis points, respectively.

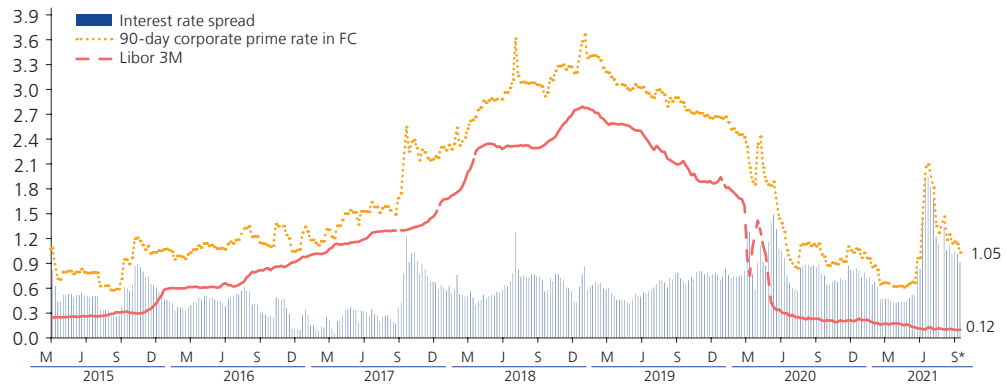
Graph 80
YIELD CURVE OF CENTRAL BANK SECURITIES 1/
(%)



1/ Yield rate in the primary and secondary market.
As of September 15.
Source: BCRP.

67. In the case of interest rates in dollars, the upward trend observed in the second quarter of 2021 slowed down but rates still remain above their values in December 2020, this fact being associated with the high demand for dollars in the money market. Thus, in the third quarter of 2021, the interbank rate in foreign currency decreased from 0.45 to 0.25 percent, while the prime lending rates charged to the major clients decreased 93 basis points on average at terms between 1 and 6 months. The prime deposit rates decreased as well but by a smaller magnitude (19 basis points). Moreover, the spread between the prime lending rate and the Libor rate decreased from 185 basis points in June 2021 to 93 basis points in September 2021. On the other hand, the spread between the deposit rate and the 3-month Libor rate decreased from 53 to 45 basis points in the third quarter.

Graph 81
INTEREST RATE IN US$: 90-DAY CORPORATE PRIME AND LIBOR 3-MONTH
(%)



* As of September 15.
Source: BCRP.

Most deposit rates increased in the third quarter. The rates of time deposits increased by an average of 20 basis points between June and September. In addition, in the dollar-denominated credit market, all segments showed higher interest rates between June and September, the rates for the consumer and microenterprise sectors standing out.

Table 32
INTEREST RATE IN FOREIGN CURRENCY
(%)

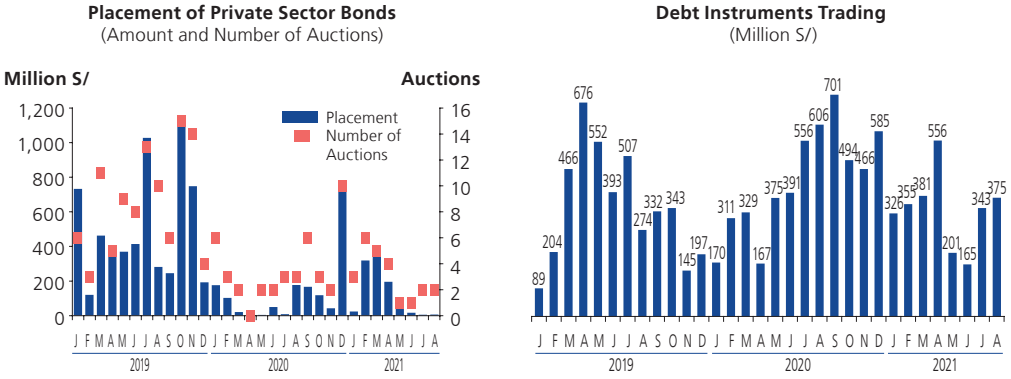
		Dec.19	Mar.20	Jun.20	Sep.20	Dec.20	Mar.21	Jun.21	Sep.21
Pasive	Deposits up to 30-day	1.4	1.0	0.1	0.0	0.1	0.1	0.4	0.4
	Individuals	1.3	0.8	0.1	0.1	0.0	0.1	0.1	0.1
	Business	1.4	1.0	0.1	0.0	0.1	0.1	0.4	0.4
	On 31 to 180-day term deposits	1.4	1.1	0.5	0.2	0.3	0.2	0.3	0.5
	Individuals	1.0	0.7	0.4	0.2	0.2	0.2	0.2	0.3
	Business	1.6	1.3	0.5	0.2	0.3	0.3	0.4	0.5
	On 181 to 360-day term deposits	1.4	1.0	0.8	0.4	0.3	0.3	0.4	0.8
	Individuals	1.2	0.8	0.8	0.3	0.3	0.3	0.3	0.4
	Business	1.8	1.3	0.9	0.5	0.3	0.3	0.5	1.1
	CTS	1.3	1.4	1.2	1.1	1.0	1.2	1.2	1.1
Active	90-day corporate prime	2.7	1.9	1.0	0.9	1.0	0.6	2.0	1.1
	Corporates	3.2	2.7	2.8	2.3	2.0	1.8	1.6	2.0
	Large companies	5.5	4.8	5.2	4.7	4.5	4.3	4.3	4.9
	Medium-sized enterprises	6.6	6.7	6.3	6.7	5.9	5.9	5.9	6.1
	Small business	8.8	7.7	4.8	6.1	5.3	7.1	9.7	10.7
	Micro business	11.0	12.3	15.6	6.9	8.5	4.4	17.6	13.3
	Consumer	36.1	36.1	36.6	34.4	35.1	34.7	31.7	34.1
	Mortgage	5.6	5.9	6.0	5.9	5.4	5.0	5.2	5.5

Memo: Annual rates for operations in the last 30 working days.
As of September 15.
Source: BCRP and SBS.

Fixed-income market

68. Political uncertainty and its effect on the price of government bonds has increased the cost of financing and discouraged Peruvian companies from borrowing in the local and international markets. Between July and September 2021, private companies' placements by public offerings in the local capital market amounted to S/ 11.1 million, well below the amount issued in the first and second quarter of 2021 (S/ 714 million and S/ 262 million, respectively). During the third quarter of 2021, only four companies have sold dollar-denominated securities.

Graph 82
FIXED INCOME MARKET OF THE PRIVATE SECTOR



Source: SMV.

The trading of debt securities in the secondary market on the Lima Stock Exchange (BVL) between July and August 2021 amounted to S/ 718 million. The monthly average traded in 2021 (S/ 338 million) is very similar to the average traded in 2019 (S/ 348 million) and below the monthly average traded in 2020 (S/ 420 million).

As regards placements by Peruvian private companies in the foreign market, between July and September two companies placed securities at higher interest rates than those observed in the first quarter of 2021. First, Compañía de Minas Buenaventura placed debt for a total of US$ 550 million at a 5-year term, with a coupon rate of 5.50 percent. These securities, issued under par, have a spread of 501 and 412 basis points over the rates of U.S. Treasury bonds and Peruvian global bonds, respectively[40]. Second, San Miguel Industrias issued bonds worth US$ 380 million for a 7-year term, with a coupon rate of 3.50 percent to pay for the repurchase of US$ 205 million of bonds maturing in September 2020. The bonds were placed at par and the yield rate (3.70 percent) shows a spread of 247 and 166 basis points over the rates of the U.S. Treasuries and the Peruvian global bonds, respectively.

In the third quarter, international placements by non-resident entities in soles totaled S/ 321 million, a higher amount than that placed in the second quarter (S/ 71 million), but lower than the one placed in the first quarter of the year (S/ 374 million). The amount issued in 2020 is the highest ever observed (S/ 1,801 million), which was encouraged by the low cost of hedging.

In the case of institutional investors, the value of the portfolio managed by the AFPs and mutual funds has decreased in the third quarter of 2021. The investment portfolio of the AFPs decreased from S/ 158,148 million to S/ 133,658 million between June 30 and September 3, this being associated with the negative performance of local securities and with the liquidation of securities (mainly external external securities) to pay AFP members the extraordinary withdrawal of funds approved by Law No. 31192[41] . The AFP's investment portfolio has grown an average of 19 percent in the last 20 years and the largest annual drop in the value of the portfolio was recorded in 2008 (18 percent) due to the devaluation of investments during the international financial crisis. In 2009, they showed a recovery of 39 percent.

The facilities granted by BCRP for the approved withdrawals of pension funds prevented the liquidation of securities in significant amounts in a short period of time from having undesirable impacts on interest rates and on the stability of financial markets. In 2020, the AFPs had access to liquidity from the BCRP through repos with BTP to mitigate the withdrawal effect for a total of S/ 6,137 million.Moreover, direct repos have been made for S/ 6,221 million for a term of 3 months and a rate of 0.33 percent between January and July 2021. The balance of repos on September 15 amounts to S/ 3,221 million.

In the case of mutual funds, the assets under management and the number of participants fell by 10.8 and 5.0 percent, respectively, between June and August. In the current context of high local volatility, the most demanded funds have been those from debt instruments. On the other hand, the investment portfolio of insurance companies increased slightly between March and June 2021, from S/ 50,938 million to S/ 51,309 million.

40 The spread is higher than that obtained by the bonds issued by Volcan in February 2021, which had a similar maturity term and credit rating (392 and 320 basis points over the rates of the U.S. Treasury bond and the Peruvian global bond, respectively).

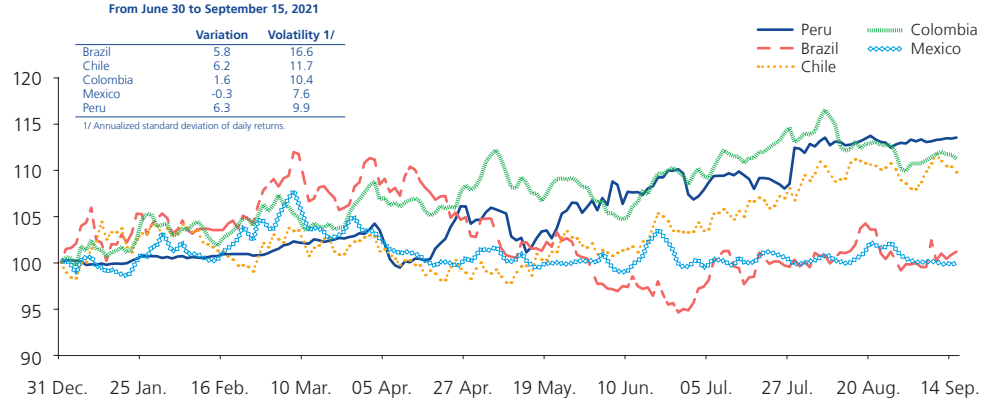
41 The law allows AFP members to withdraw up to 4 tax units (S/. 17,600). Members began the withdrawal process on May 27.

Foreign exchange market

69. Upward pressures on the exchange rate continue in the third quarter of 2021 mainly due to local factors, such as the high demand for dollars in the spot market, mainly from the corporate sector; greater risk aversion due to the anticipation of an early normalization of the Federal Reserve's monetary policy, and fears about the spread of the COVID-19 Delta variant. The US dollar/PEN exchange rate reached a new historical high in the third quarter of 2021 (S/ 4,117 per dollar on August 20).

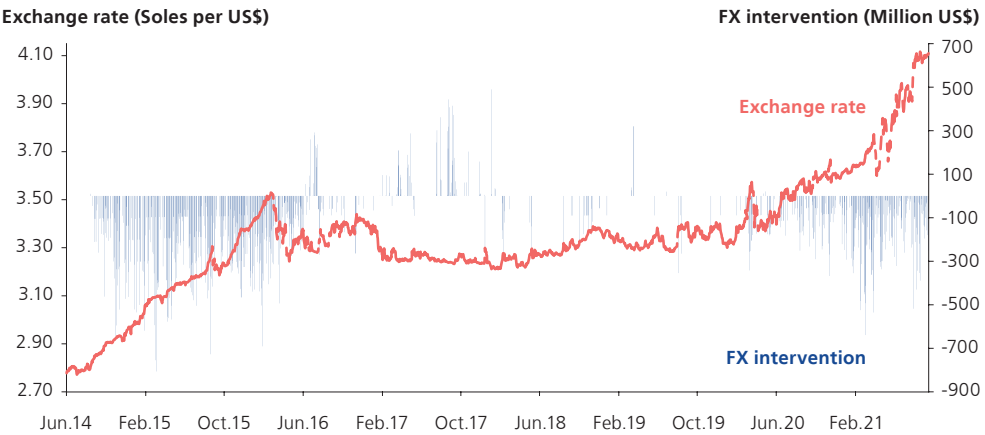
Latin American currencies showed a better performance from June to September 2021 than in the second quarter of the year. The increase in the price of the main commodities has mitigated to some extent the negative impact of the higher political risk in the region, affecting the region's currencies differently.

Graph 83
EXCHANGE RATE INDEX 1/
(Dec 31, 2020=100)



1/ An index increase indicates the depreciation of the currency.
Data as of September 15.
Source: BCRP and Reuters.

Graph 84
EXCHANGE RATE AND FX INTERVENTION 1/



1/ Includes Net purchases of US$ in the spot market and placement of CDLD BCRP, CDR BCRP, and FX swaps.
As of September 15.
Source: BCRP.

In a context of high volatility, the BCRP has intervened in the foreign exchange market through the auction of foreign exchange swap sales, placing Adjustable Certificates

of Deposit (CDR BCRP), and through currency sales at the trading desk to minimize volatility in the price of the PEN and thus preserve the stability of the financial system and ensure the proper functioning of the markets. Thus, from July to September, FX swaps amounting to S/ 7,604 million (US$ 1,874 million) were placed at terms between 1 and 6 months and, on the other hand, S/ 8,521 million (US$ 2,323 million) matured. As a result, the balance of FX swap sales on September 15 was S/ 25,871 million (US$ 6,819 million). In the case of BCRP CDRs, S/ 6,522 million (US$ 1,624 million) were placed at terms between 1 and 6 months and a total of S/ 8,835 million (US$ 2,329 million) matured, bringing the balance to S/ 5,421 million (US$ 1,344 million) on September 15.

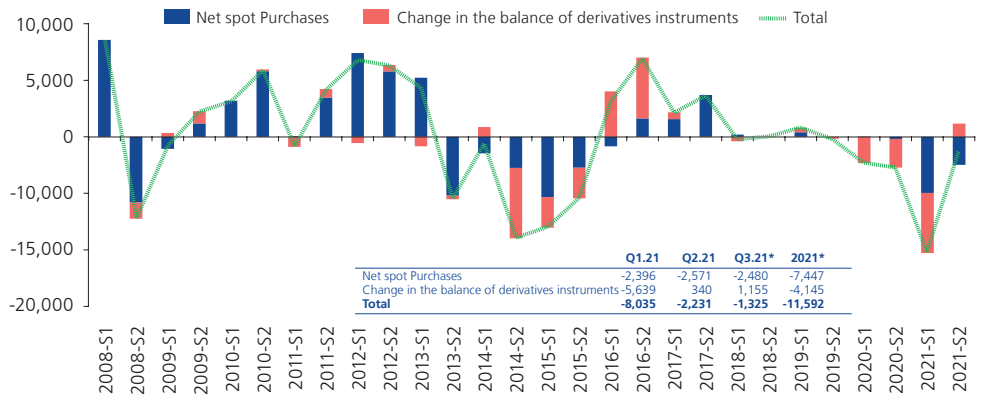
Table 33
NUMBER OF DAYS OF INTERVENTION

	Trading days	Spot Market	Placement of derivatives and indexed instruments	Total (*spot* and/or placement)	% of days with intervention			SD of the Exchange Rate (Annual % change)
					Spot	Instruments	Total	
2016	250	50	118	133	20%	47%	53%	7.3%
2017	249	55	26	64	22%	10%	26%	4.5%
2018	245	4	27	30	2%	11%	12%	3.4%
2019	249	4	6	10	2%	2%	4%	4.4%
2020	254	13	97	100	5%	38%	39%	7.4%
2021 1/	117	93	125	145	53%	71%	82%	10.4%

* As of september 15.

Year-to-date, BCRP has offered US$ 11.6 billion in the foreign exchange market through sales in the spot market (US$ 7.5 billion) and through net placement of foreign exchange derivatives and BCRP CDRs (US$ 4.1 billion).

Graph 85
FX INTERVENTION OF THE BCRP
(Million US$)

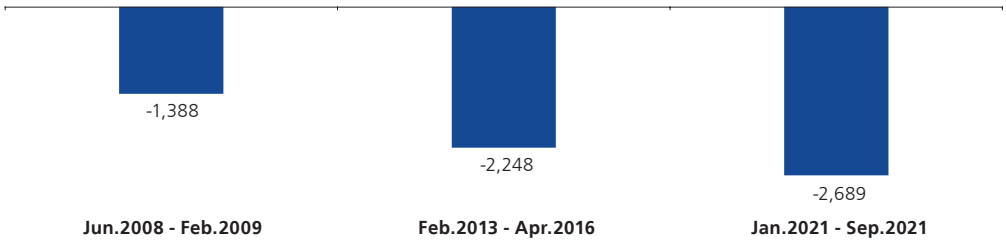


	Q1.21	Q2.21	Q3.21*	2021*
Net spot Purchases	-2,396	-2,571	-2,480	-7,447
Change in the balance of derivatives instruments	-5,639	340	1,155	-4,145
Total	**-8,035**	**-2,231**	**-1,325**	**-11,592**

* As of September 15.
Source: BCRP

Moreover, the average intervention in the foreign exchange market in this episode of volatility (from January to September 2021), which amounts to US$ 2,689 million, is higher than that observed in the period of the international financial crisis (US$ 1,388 million) and the period between February 2013 and April 2016 (US$ 2,248 million). In addition, the foreign exchange position in the three periods decreased and the exchange rate depreciated.

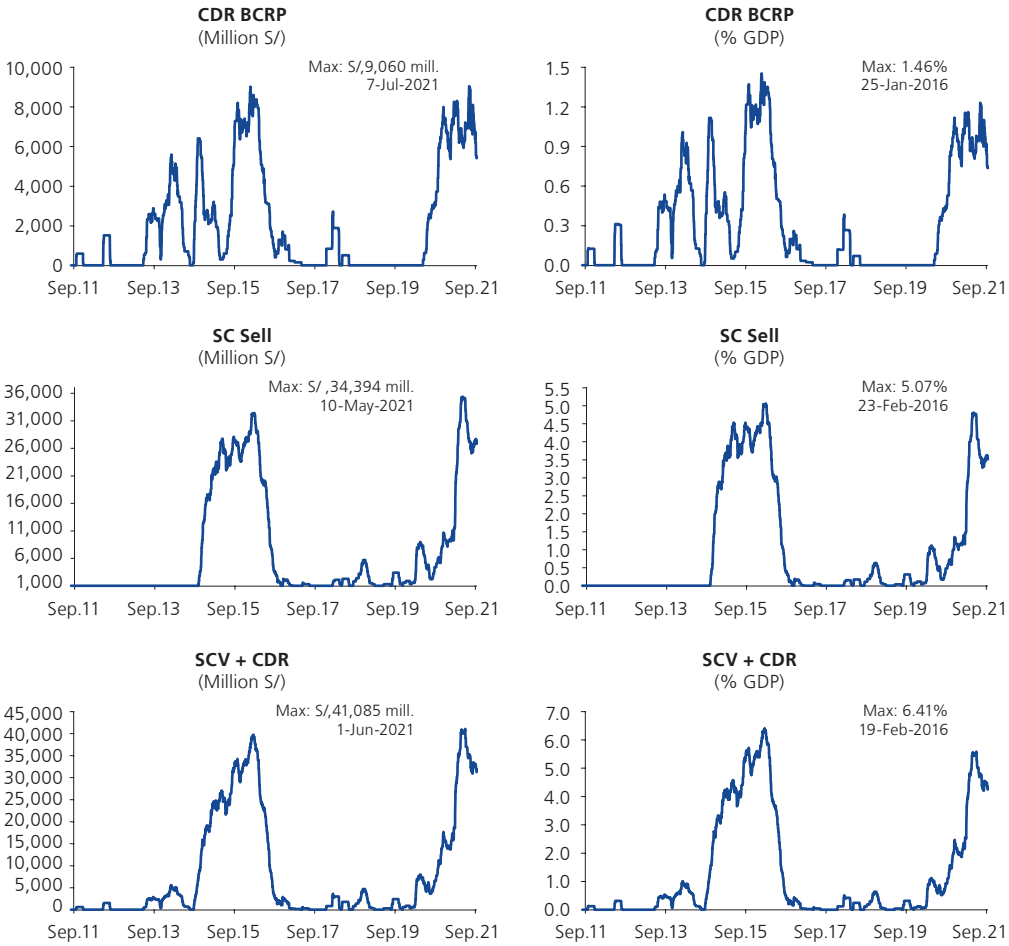
Graph 86
MONTHLY AVERAGE FX INTERVENTION OF THE BCRP
(Million US$)



Includes Net purchases of US$ in the spot market and the gross placement of instruments in the negotiation table.
As of September 15.
Source: BCRP.

The accumulated balance of FX swaps sale and CDR BCRP as of September 15 reached S/ 31.9 billion (4.3 percent of GDP) and the number of days in which foreign exchange intervention actions were carried out in 2021 is at similar levels to those registered in 2015. The increase in the average maturity terms of the instruments was associated with the demand for hedging over a longer horizon. Thus, in the case of FX swaps sale, the average term has increased from 107 to 258 days between December 2019 and September 2021.

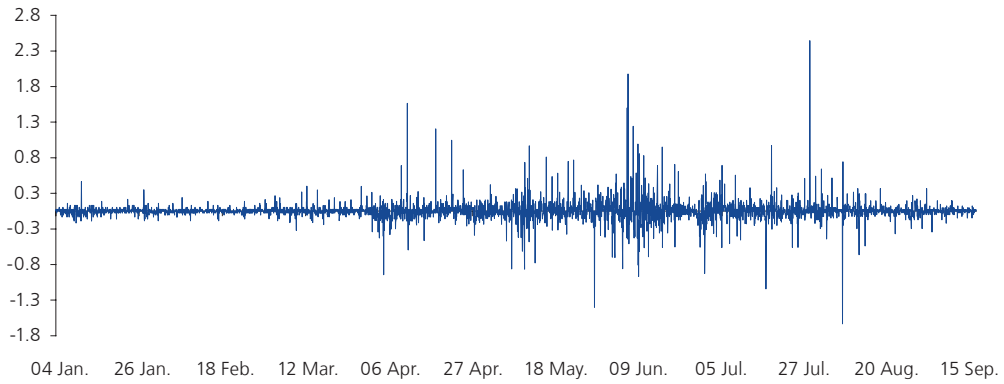
Graph 87
EXCHANGE INSTRUMENTS BALANCE



As of September 15.
Source: BCRP.

The volatility of the PEN continues to be high in the third quarter of 2021, the annualized daily percentage variation of the exchange rate in July and August (14.7 and 5.9 respectively) reflecting economic agents' high level of uncertainty. It is worth mentioning that, considering the evolution of the exchange rate every 10 minutes between 9:30 a.m. and 1:30 p.m., the intraday variation has fluctuated between a depreciation of 2.39 percent (July 27, 2021) and an appreciation of 1.58 percent (August 9, 2021). As shown in the graph below, the intraday variation shows less persistence and sensitivity to new information in September 2021 in comparison to what was observed after the first round of the elections (April 11).

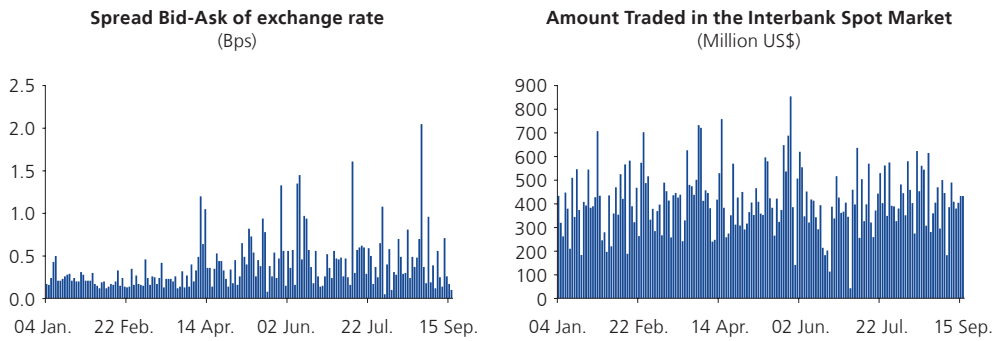
Graph 88
INTRADAY VARIATION OF EXCHANGE RATE



1/ % change every 10 minutes in the exchange rate between 9:00 a.m. and 1:30 p.m. A positive variation indicates depreciation of Sol.
Data as of September 15.
Source: Reuters.

This higher volatility has also been reflected in the bid-ask spreads of the exchange rate. As one can see, the increase has occurred since the second week of April, and until the last available data, it has not returned to the levels registered prior to the first round of the elections, although a reduction was observed in the second week of September. The average daily negotiation in the interbank spot exchange market has remained relatively stable between January and September 2021.

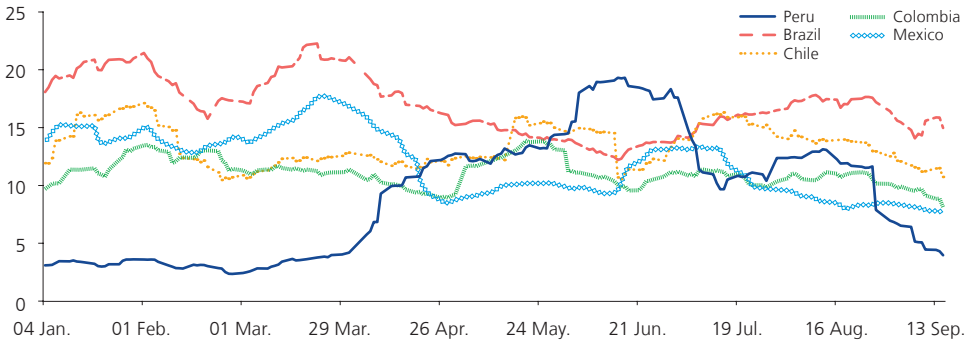
Graph 89
SPREAD AND EXCHANGE RATE NEGOTIATION



As of September 15.
Source: Reuters and BCRP.

Comparatively, the historical volatility of the Peruvian exchange rate in 30-day moving periods between January and March 2021 was consistently the lowest in the region. Between April and June, however, it showed an upward trend (peak level of 19.6 percent on June 17). From July to September, volatility has decreased from 14.7 to 2.7 percent. Similarly, using three alternative definitions of exchange rate volatility for daily data in recent months (historical, implied, and based on a GARCH-type volatility model), we observe an increase in the variability of the PEN between April and July, as well as a decrease in August and September 2021.

Graph 90
1-MONTH ANNUALIZED HISTORICAL VOLATILITY



Annualized standard deviation in the last 30 days.
Data as of September 15.
Source: Reuters.

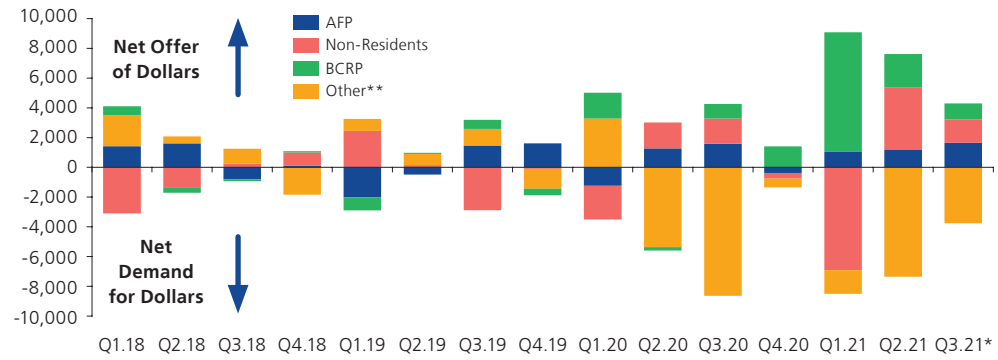
Table 34
LATAM VOLATILITY

	Historical (SD) 1/					Implicit 2/					GARCH(1,1) 3/				
	Brazil	Chile	Colombia	Mexico	Peru	Brazil	Chile	Colombia	Mexico	Peru	Brazil	Chile	Colombia	Mexico	Peru
Jan.21	22.6	17.3	14.5	14.4	2.6	18.4	13.8	13.6	15.3	6.5	22.0	13.9	16.5	18.1	5.7
Feb.21	13.7	11.2	10.9	14.8	1.8	19.2	12.3	13.4	17.1	5.0	22.0	14.2	13.5	20.9	4.6
Mar.21	20.0	13.2	12.5	14.1	4.3	19.7	13.8	14.3	15.5	4.2	20.8	12.9	12.1	14.7	6.0
Apr.21	17.3	11.0	9.9	8.9	14.0	18.0	12.0	14.1	12.3	7.4	20.6	13.8	13.2	14.0	15.2
May.21	13.4	13.8	12.8	8.2	14.6	16.4	13.4	14.7	11.7	11.6	18.6	12.6	12.2	12.2	13.2
Jun.21	13.8	10.8	11.8	13.5	16.2	15.8	13.3	14.4	10.7	11.0	18.0	12.4	13.1	12.6	15.4
Jul.21	17.0	12.7	9.8	9.2	14.7	17.7	14.1	13.8	11.4	6.7	17.9	12.2	13.0	11.9	10.8
Aug.21	15.1	11.7	12.6	7.8	5.9	18.8	13.9	13.8	10.5	6.5	17.6	12.1	12.7	11.7	9.8
Set-21	19.3	10.5	5.0	2.6	2.7	18.7	13.7	13.7	10.5	3.0	17.6	12.1	12.2	10.7	7.9

1/ Annualized standard deviation of daily returns.
2/ Corresponds to the resulting variable in the Black Scholes option pricing model. It measures the market's expectations of the exchange rate for one month.
3/ The model GARCH (1,1) applies a stochastic process to historical time series of the exchange rate to predict its future volatility. The concept is similar to applying exponential moving averages to volatility where the current exchange rate has the greatest impact on the forecast.
As of September 15.
Source: BCRP and Reuters.

BCRP has increased its interventions in the foreign exchange market with the aim of offsetting the high demand for dollars in the local market, particularly in the first quarter of 2021. In September, the foreign exchange market registered a net demand of US$ 10 869 million –US$ 5,715 million in March 2021, the highest level observed since 2010–, which comes mainly from non-financial sector participants, such as retailers and the corporate sector, as well as from non-resident investors.

Graph 91
FLOWS TO THE FOREIGN EXCHANGE MARKET (SPOT AND DERIVATIVES)
(Million US$)



* As of September 15.
** Other includes companies in the corporate sector, mining and retail sector.
Source: BCRP.

In the third quarter of 2021, non-resident investors have offered dollars in the spot markets (US$ 813 million) and purchased Bonos del Tesoro Público (BTP) for a total of US$ 1,485 million. In addition, they have bid dollars in the derivatives market for US$ 767 million (US$ 4,633 million in the second quarter). However, foreign investor flows between the third and second quarters indicate a moderation in their expectations regarding the exchange rate and their expected return.

On the other hand, the AFPs (Pension Fund Administrators) offered US$ 3,662 million in the spot market due to the liquidation of their investments abroad (US$ 8,521 million in 2021) to meet the extraordinary withdrawals associated with Law No. 31192. On the other hand, the derivatives market saw a demand of US$ 2,019 million (US$ 1,182 million in the second quarter).

On the other hand, between July and September, the corporate and retail sectors registered a net demand of US$ 4,821 million and US$ 1,666 million, respectively, which would indicate an increase in economic agents' level of dollarization due to precautionary reasons.

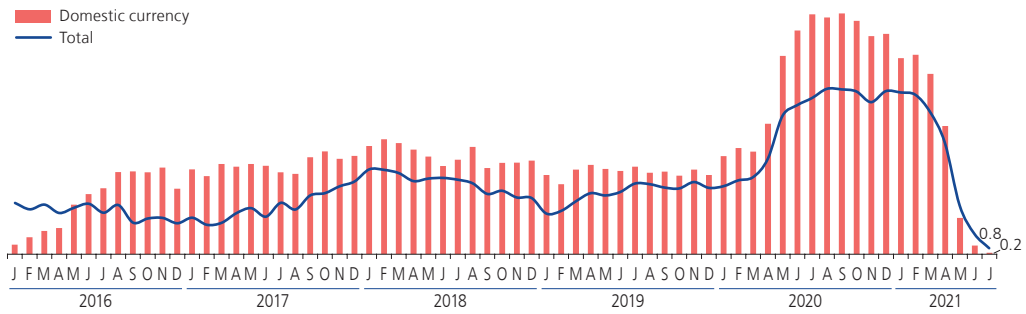
In such a context of high demand for dollars in the foreign exchange market, BCRP has offered dollars to banks through sales in the market and placements of BCRP CDRs and FX swaps (US$ 11,592 million net) between January and September 2021. In addition to the adequate level of international reserves it has, BCRP enjoys high credibility and has access to credit lines such as the IMF's Flexible Credit Line (FCL), which only countries with very solid macroeconomic fundamentals have access to. The increased foreign exchange intervention of BCRP to offer dollars in the spot markets, and mainly in the derivatives markets, has contributed to offset the extraordinary upward pressures on the exchange rate.

Liquidity

70. In July, private sector deposits showed a year-on-year growth rate of 0.8 percent. By currency, deposits in soles grew 0.2 percent year-on-year, while deposits in dollars grew

2.2 percent in the last 12 months. The growth of domestic currency deposits has slowed down in recent months and due to the statistical effect of high growth rates in 2020 and electoral uncertainty, is lower than the year-on-year change in foreign currency deposits observed since May.

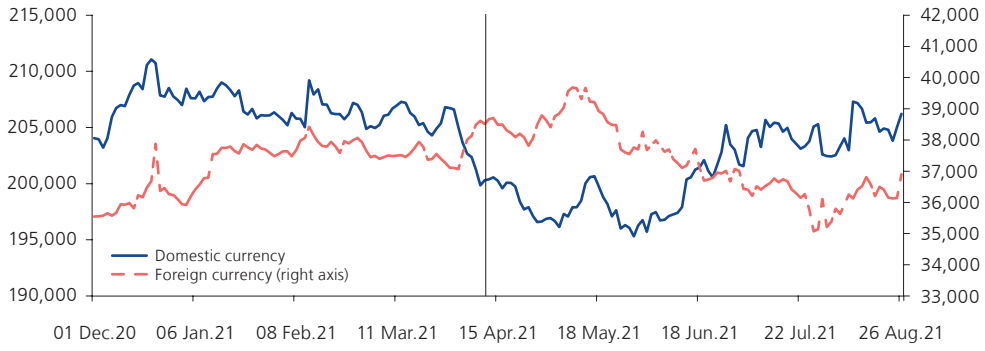
Graph 92
DEPOSITS OF THE PRIVATE SECTOR BY CURRENCY
(Annual % change)



The dollarization ratio of deposits decreased from 31.4 percent in 2020 to 31.3 percent in July 2021. This reduction is explained by a decrease in the dollarization ratio of individual deposits (from 26.7 to 25.6 percent), partially offset by an increase in the dollarization of corporate deposits (from 38.9 to 40.6 percent).

After decreasing significantly in March, April and May, banks' total obligations subject to reserve requirements in local currency increased in June, July, and August (S/. 9,955 million), while their total obligations subject to reserve requirements in foreign currency decreased by US$ 798 million in the same period.

Graph 93
TOTAL OBLIGATIONS SUBJECT TO RESERVE REQUIREMENTS OF BANKS
(In millions of S/ and US$)



In the remainder of the year and in 2022, deposits are expected to return to a higher growth rate than credit to the private sector.

Table 35

MONETARY AND CREDIT ACCOUNTS OF THE DEPOSITORY CORPORATIONS (END-OF-PERIOD) 1/

(Annual % change)

	Dec.19	Mar.20	Jun.20	Sep.20	Dec.20	Mar.21	Jun.21	Jul.21	Dec.21*	Dec.22*
Currency in circulation (End-of-period)	4.7	10.1	33.5	36.3	37.3	42.5	20.6	21.7	12.5	3.0
Deposits in domestic currency	11.9	15.4	33.6	36.2	33.1	25.2	0.6	-0.5	2.1	4.9
Total deposits 1/	10.0	11.6	22.5	24.8	24.6	20.6	2.7	1.1	1.9	3.8
Broad money in domestic currency	10.2	13.3	32.1	34.7	32.3	28.9	5.0	4.4	4.5	4.4
Total broad money 1/	9.4	10.9	24.1	26.3	25.9	23.9	5.6	4.4	3.7	3.7
Credit to the private sector in domestic currency	9.8	9.4	18.9	23.1	19.7	17.5	7.6	5.7	3.8	3.4
Total credit to the private sector 1/	**6.9**	**7.6**	**13.2**	**14.3**	**11.8**	**9.5**	**5.0**	**3.9**	**3.0**	**3.0**

1/ Balances are valuated at constant exchange rate on December 2019.
* Forecast.

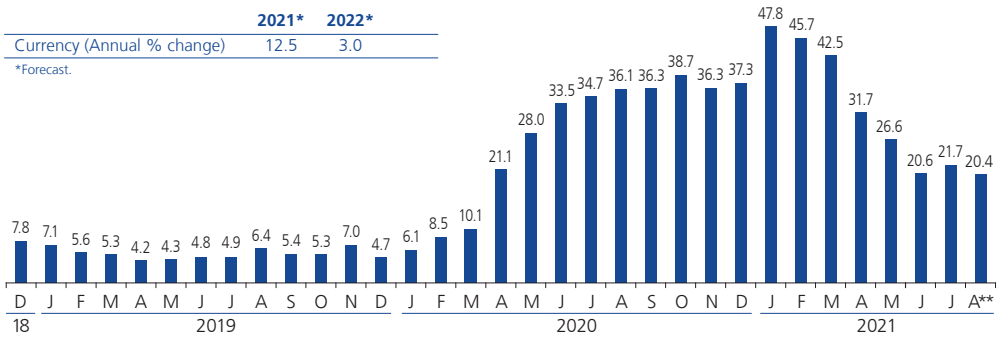
71. **Currency in circulation** would grow by 12.5 percent in 2021 and 3.0 percent in 2022. These projections take into account the effect of the people's greater accumulation of banknotes and coins since the beginning of the state of emergency as a precautionary measure[42]. This effect, which would be explained by the greater transactional and precautionary demand originated by the impacts of the state of emergency due to the COVID-19 pandemic, is expected to continue during this year. Restrictions on economic activity and the implementation of monetary subsidies for low-income people to cover their basic needs have led an important segment of the population to use cash in their transactions and also to keep it for precautionary reasons under the current situation.

The growth of currency in circulation accelerated temporarily in January, moderating thereafter in the rest of the year and especially since the second quarter of 2021.

Graph 94

CURRENCY

(Annual % change)

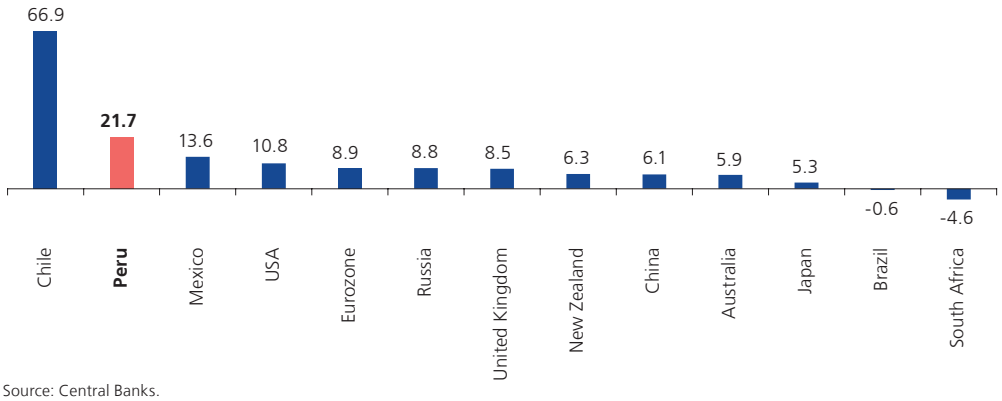


72. The annual growth rate of currency in circulation in August 2021 was 20.4 percent, higher than the growth rate observed in March 2020 (10.1 percent) and lower than the growth rate observed in December 2020 (37.3 percent).

42 Precautionary cash savings are likely to have been driven mainly by transfers to families through the subsidies granted by the State.

The annual growth rate of money velocity in the second quarter of 2021 showed a positive rate of 30.8 percent, higher than the growth rate observed in the first quarter of 2020 (negative 12.3 percent). Despite this, however, demand for cash remains exceptionally high given the context of the state of emergency. The delivery of economic relief in cash through the subsidy *Bono Universal Familiar* during February and May, which amounted to S/. 2,520 million, has also contributed to the increase in the demand for cash.

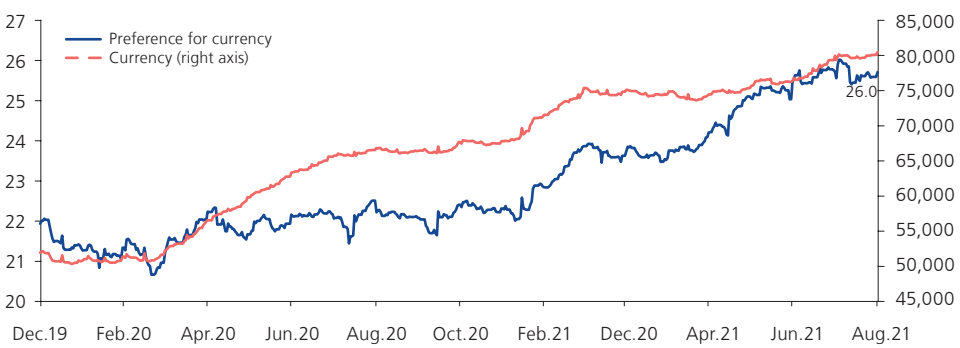
Graph 95
CURRENCY GROWTH BY COUNTRIES: JULY 2021
(% change)



Source: Central Banks.

73. At the beginning of the quarantine in March 2020, people's preference for cash had reached historic lows (20.7 percent), two periods of growth in this preference being observed (from March to May 2020 and from December 2020 to February 2021), after which its level remained around 23.6 percent until March. From April onwards, the preference for cash has steadily increased, reaching a peak level of 26.0 percent at the beginning of August.

Graph 96
CURRENCY AND PREFERENCE FOR CURRENCY
(In millions soles and %)



Credit to the private sector

74. The growth of **credit to the private sector** slowed down from an expansion rate of 11.8 percent in 2020 to a year-on-year rate of 3.9 percent in July 2021. By segment, credit to businesses grew 5.6 percent, a lower rate than that observed in December 2020 (21.7 percent). On the other hand, credit to individuals went from contracting 3.1 percent in 2020 to increasing by 0.6 percent in July 2021, an increase being observed in car loans (1.1 percent), together with a decrease in credit card credit (4.7 percent), and an increase of 8.0 percent in mortgage loans. On the side of corporate loans, the segments registering the highest rate of expansion were medium-sized companies (22.0 percent), followed by small and micro companies (2.0 percent), while credit to corporations and large companies registered a drop of 0.3 percent.

Table 36
CREDIT TO THE PRIVATE SECTOR 1/
(Annual growth rate)

	Dec.19	Mar.20	Jun.20	Sep.20	Dec.20	Mar.21	Jun.21	Jul.21
Businesses	**4.2**	**6.6**	**20.0**	**24.6**	**21.7**	**18.6**	**8.0**	**5.6**
Corporate and large companies	4.4	9.6	21.8	14.2	8.3	3.3	-2.0	-0.3
Medium-sized enterprises, Small business and Micro business	4.1	3.0	17.8	37.0	37.4	37.6	19.9	12.3
Individuals	**11.3**	**9.3**	**2.8**	**-1.3**	**-3.1**	**-4.5**	**-0.4**	**0.6**
Consumer	12.8	10.2	1.6	-4.2	-7.1	-10.6	-5.7	-4.5
Car loans	11.9	6.9	0.9	-3.1	-2.5	-8.3	-0.4	1.1
Rest	12.9	10.3	1.7	-4.2	-7.3	-10.6	-5.9	-4.7
Mortgage	9.0	8.0	4.6	3.1	3.2	4.8	7.5	8.0
TOTAL	**6.9**	**7.6**	**13.2**	**14.3**	**11.8**	**9.5**	**5.0**	**3.9**

1/ Balances are valuated at constant exchange rate on December 2019.

75. During 2020 and early 2021, there were reclassifications in the business and consumer credit segments[43]. It is worth pointing out here that the indicator of growth rates of credit balance by business and consumer credit segment not only takes into account the effect of greater or lesser credit activity, but also reflects the effect of the changes in base associated with reclassifications.

Table 37
TOTAL CREDIT TO THE PRIVATE SECTOR BY TYPE OF BUSINESS 1/

	Million S/	Annual growth rate (%)									
		Mar.21/Mar.20		Apr.21/Apr.20		May.21/May.20		Jun.21/Jun.20		Jul.21/Jul.20	
	Jul.21	With Reclass.	Without Reclass.	With Reclass.	Without Reclass.	With Reclass.	Without Reclass.	With Reclass.	Without Reclass.	With Reclass.	Without Reclass.
Businesses	**2,52,824**	**18.6**	**18.6**	**16.7**	**16.7**	**8.3**	**8.3**	**8.0**	**8.0**	**5.6**	**5.6**
Corporate and large companies	126,989	3.3	-0.0	-0.6	-3.4	-5.2	-7.7	-2.0	-4.3	-0.3	-2.9
Medium-sized enterprises	70,535	56.1	40.7	58.5	42.3	38.0	22.4	30.2	15.2	22.0	9.0
Small business and Micro business	55,299	19.8	42.9	20.8	43.8	12.3	35.3	9.0	30.7	2.0	22.1

1/ Balances are valuated at constant exchange rate (3.31).
Source: RCC and bank account.

43 The reclassification of credit is discussed in greater detail in Nota de Estudio del BCRP No. 37-2021.

Thus, if the reclassification effect is omitted for July 2021, credit to the corporate segment would have contracted by 2.9 percent, while credit to the medium-sized, small and microenterprise segments would have expanded by 9.0 percent and 22.1 percent, respectively.

As for consumer loans, credit in the segment of credit cards would have contracted by 19.6 percent, while other consumer loans would have grown by 2.3 percent.

Table 38
TOTAL CREDIT TO THE PRIVATE SECTOR BY TYPE OF CONSUMER

	Million S/	Annual growth rate (%)									
		Mar.21/Mar.20		Apr.21/Apr.20		May.21/May.20		Jun.21/Jun.20		Jul.21/Jul.20	
	Jul.21	With Reclass.	Without Reclass.	With Reclass.	Without Reclass.	With Reclass.	Without Reclass.	With Reclass.	Without Reclass.	With Reclass.	Without Reclass.
Consumer	**72,291**	**-10.6**	**-10.6**	**-8.2**	**-8 .2**	**-7.2**	**-7.2**	**-5.7**	**-5.7**	**-4.5**	**-4.5**
Vehicles	2,283	-8.3	-8.3	-4.4	-4.4	-1.6	-1.7	-0.4	-0.4	1.1	1.1
Credit card	12,273	-48.9	-27.3	-35.3	-7.8	-46.6	-24.1	-46.0	-21.8	-47.7	-19.6
Rest	57,735	8.8	-2.2	1.6	-8.5	11.4	0.8	13.1	1.6	15.5	2.3

1/ Balances are valuated at constant exchange rate (3.31).
Source: RCC and bank account.

Thus, the segment most affected by the reclassification in the case of corporate loans was that of micro and small companies (loans amounting to S/ 3,366 million became classified as loans to corporations and large companies, while loans for a total of S/ 7,502 million were classified as loans to medium-sized companies).

76. Credit in soles has slowed down since March 2021, mainly due to the mitigation of the statistical effect of the Reactiva Peru program. On the other hand, credit in dollars has been declining since June 2020 due to the greater preference for local funding and interest rates in soles that remained below their historical averages. However, this decline has been offset since May 2021. Thus, as of July 2021, credit in soles grew 5.7 percent, while credit in dollars fell by 2.5 percent in the same period.

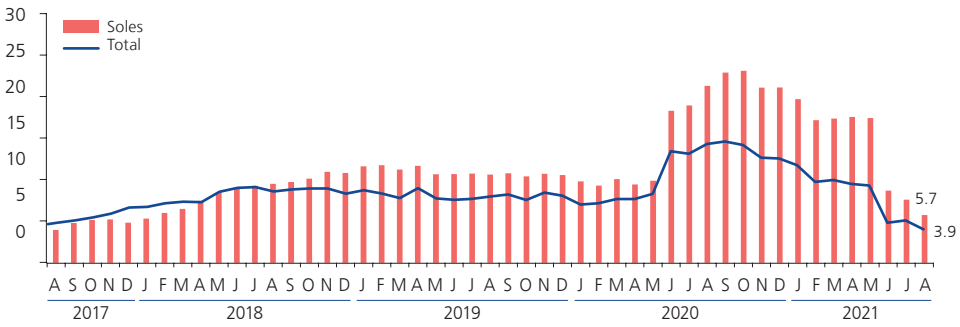
77. The measures taken by BCRP have favored a countercyclical behavior of credit, thus counteracting the negative effects of the pandemic on economic activity.

Table 39
CREDIT TO THE PRIVATE SECTOR 1/
(Annual % change)

	Dec.19	Mar.20	Jun.20	Sep.20	Dec.20	Mar.21	Jun.21	Jul.21
Domestic Currency	9.8	9.4	18.9	23.1	19.7	17.5	7.6	5.7
Foreign Currency	-0.4	2.8	-2.1	-9.8	-10.6	-13.4	-3.6	-2.5
Total	**6.9**	**7.6**	**13.2**	**14.3**	**11.8**	**9.5**	**5.0**	**3.9**

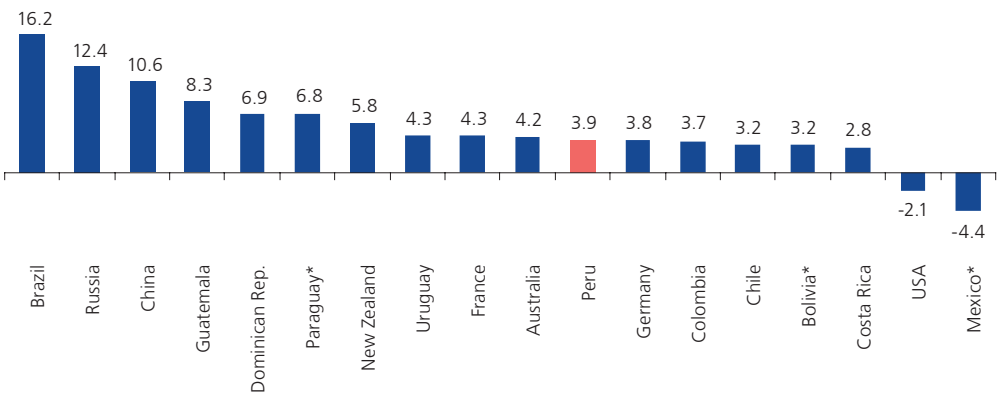
1/ Balances are valuated at constant exchange rate on December 2019.

Graph 97
CREDIT TO THE PRIVATE SECTOR
(Annual % change)



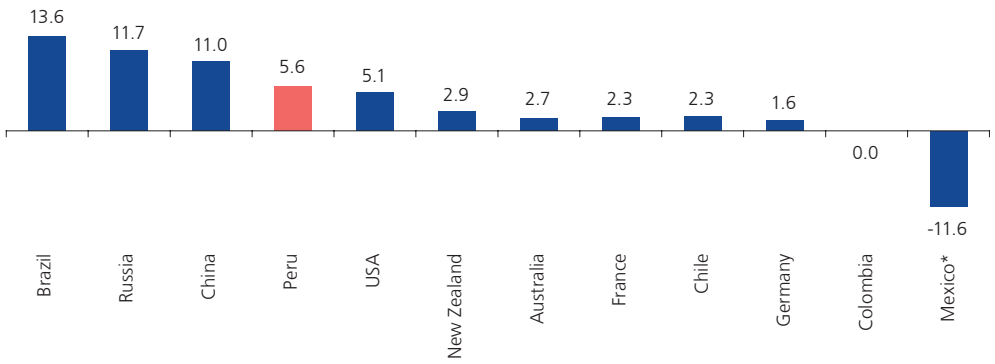
78. Globally, credit to the private sector has responded to monetary stimulus measures adopted by central banks. The annual growth rate of credit to business recorded in Peru in July 2021 is among the highest rates observed internationally (5.6 percent).

Graph 98
GROWTH OF CREDIT TO THE PRIVATE SECTOR: JULY 2021
(Annual % change)



* As of June 2021.
Source: Central Banks.

Graph 99
GROWTH OF CREDIT TO PRIVATE COMPANIES: JULY 2021
(%)



* As of June 2021.
Source: Central Banks.

Dollarization of Credit and Liquidity

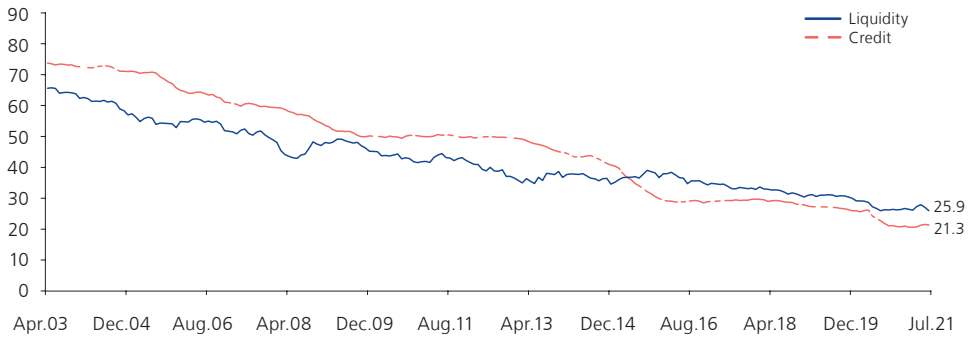
79. The ratio of dollarization of credit measured at a constant exchange rate was 21.3 percent in July 2021, higher than the level observed in December 2020 (20.7 percent). An increase was observed in the dollarization ratio of credit to companies, which rose from 27.4 to 28.1 percent in the same period. On the other hand, the dollarization ratio of credit to individuals fell from 8.0 to 7.8 percent, with dollarization ratio of the mortgage loans segment declining from 11.6 percent in December 2020 to 10.2 percent in July 2021, while that of consumer loans increased from 5.5 percent to 6.0 percent in the same period.

Table 40
RATIO OF DOLLARIZATION OF CREDIT TO THE PRIVATE SECTOR 1/
(%)

	Dec.19	Mar.20	Jun.20	Sep.20	Dec.20	Mar.21	Jun.21	Jul.21
Businesses	**37.3**	**37.5**	**31.8**	**27.8**	**27.4**	**27.2**	**28.5**	**28.1**
Corporate and large companies	50.5	50.0	43.4	41.4	42.4	41.8	43.9	43.0
Medium-sized enterprises	38.5	38.7	30.0	24.4	22.0	21.2	20.6	20.3
Small business and Micro business	5.7	5.6	4.9	3.8	4.0	4.1	3.9	3.9
Individuals	**8.9**	**8.5**	**8.3**	**8.2**	**8.0**	**7.9**	**7.9**	**7.8**
Consumer	6.0	5.7	5.5	5.4	5.5	5.5	6.0	6.0
Car loans	14.8	14.9	14.9	16.0	16.7	16.8	16.0	15.9
Credit cards	7.1	6.6	5.6	5.3	5.7	8.3	11.5	12.1
Rest	5.0	4.9	5.0	5.0	4.8	4.4	4.3	4.3
Mortgage	13.3	12.7	12.5	12.1	11.6	11.0	10.4	10.2
TOTAL	**25.9**	**26.0**	**23.4**	**21.1**	**20.7**	**20.6**	**21.5**	**21.3**

1/ Balances are valuated at constant exchange rate on December 2019.

Graph 100
RATIO OF DOLLARIZATION OF CREDIT AND LIQUIDITY: 2003 - 2021
(%)



Non-Performing Loans

80. The NPL ratio was 3.80 percent in July 2021, 0.19 percentage points lower than in December 2020 (3.99 percent). This result is mainly explained by lower delinquency rates in loans to individuals, particularly those associated with credit cards. On the other hand, the NPL ratio of corporate loans increased in all segments, with the increase in the segment of medium-sized companies being particularly noteworthy.

Table 41
NON-PERFORMING LOANS INDEX
(%)

	Dec.19	Mar.20	Jun.20	Sep.20	Dec.20	Mar.21	Jun.21	Jul.21
Businesses	**3.57**	**3.68**	**3.49**	**3.52**	**3.72**	**4.02**	**4.03**	**4.18**
Corporate and large companies	0.62	0.63	0.66	0.84	1.03	1.08	1.15	1.13
Medium-sized enterprises	8.24	9.00	7.53	6.81	6.26	6.44	6.76	7.50
Small business and Micro business	7.13	7.41	6.24	5.54	6.10	7.18	7.11	7.16
Individuals	**3.15**	**3.33**	**3.43**	**3.72**	**4.93**	**4.20**	**3.58**	**3.39**
Consumer	3.27	3.47	3.38	3.95	5.95	4.70	3.66	3.34
Credit cards	5.47	5.79	6.05	8.03	12.70	11.75	8.52	7.83
Car loans	3.75	3.86	4.78	5.58	5.85	5.74	5.51	5.28
Rest	1.68	1.83	2.05	2.03	3.10	2.96	2.47	2.29
Mortgage	2.98	3.15	3.51	3.39	3.52	3.57	3.47	3.44
Average	**3.28**	**3.41**	**3.34**	**3.47**	**3.99**	**3.96**	**3.76**	**3.80**

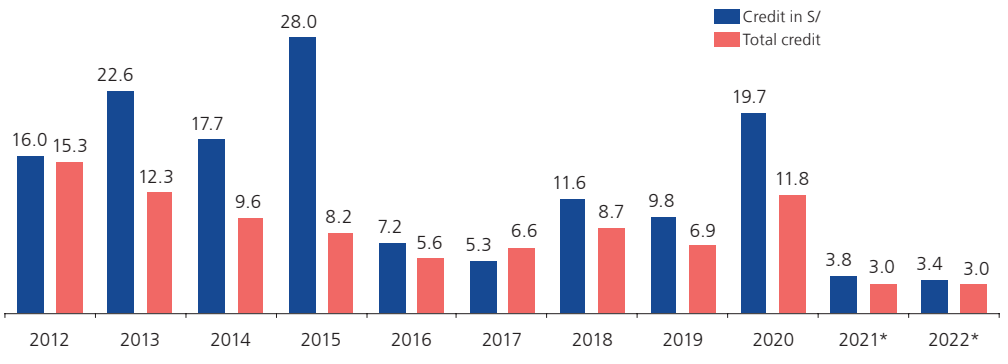
81. The financial system has been taking measures to mitigate the impact of the pandemic on its solvency. Among these measures are the strengthening of the equity base, improving the control of operating and financial expenses, and establishing voluntary provisions.

Projection of Credit to the Private Sector

82. After showing a significant increase in the credit-to-GDP ratio in 2020, credit to the private sector in the forecast horizon (2021-2022) is expected to moderate its growth and grow at a slower pace than nominal GDP. The ratio to GDP would decrease from 52 percent in 2020 to 42.0 percent in 2022. This projection also assumes the recovery of economic activity to pre-pandemic levels in 2022.

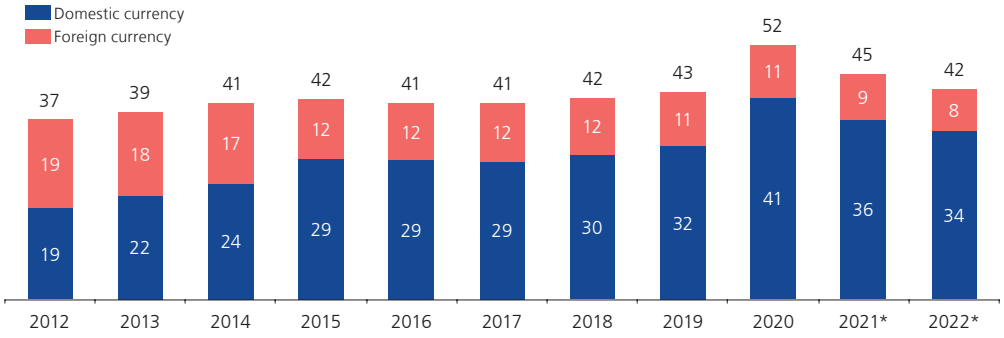
Credit to the private sector in domestic currency is projected to grow 3.8 percent in 2021 and 3.4 percent in 2022, taking into account the statistical effect of the strong increase of credit in 2020 and the beginning of the amortization of loans granted under the Reactiva Perú program. Thus, total credit would grow 3.0 percent in 2021 and would maintain this growth rate in 2022. As a result, the dollarization ratio of credit would continue to decline, reaching a level of 19.8 percent by the end of 2022.

Graph 101
CREDIT TO THE PRIVATE SECTOR
(% change)



* Forecast.

Graph 102
RATIO CREDIT/GDP
(%)



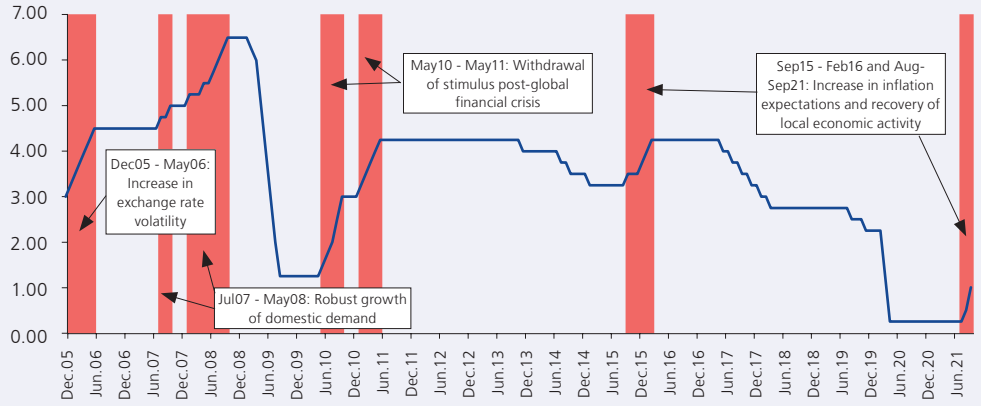
Note: calculated with constant exchange rate (December 2019).
* Forecast.

Box 6
THE TONE OF MONETARY POLICY COMMUNICATION IN PERU

Central bank communication is a key element of monetary policy. Adequate communication contributes to the effectiveness of monetary policy by allowing monetary authorities to explain the objective of their actions, thereby influencing inflation expectations, as well as to reduce uncertainty by reducing the dispersion of information among market agents[44]. When BCRP modifies the benchmark interest rate, the policy statements provide the justification for such decision. On the other hand, when the benchmark interest rate remains unchanged, the monetary policy statements reflect the intentions of the monetary authority. In either case, the wording of the statements serves as a guide to anticipate future changes in the rate (this is known as forward guidance).

In the last 15 years, there have been six episodes of hikes in the policy interest rate, each of which responded to different local and international economic contexts: (i) the first, between December 2005 and May 2006, to withdraw monetary stimulus in a context of accelerating economic growth, international interest rate hikes, and exchange rate volatility; (ii) the second, between July and September 2007 and between January and September 2008, in response to the strong increase in domestic demand and higher inflationary expectations; (iii) between May and October 2010 and between January and May 2011, to withdraw the monetary stimulus established to face the global financial crisis in 2009, and (iv) between September 2015 and February 2016, in response to increased inflation expectations and given the recovery of local economic activity. The recent interest rate increases in August and September 2021 represent the first rate hikes in six years, in a context of rising inflationary expectations and historically low real rates.

REFERENCE INTEREST RATE*
(%)



* The interest rate rises episodes are shaded.

The tone of monetary policy communication can be analyzed and quantified on the basis of the episodes mentioned above. To do so, we calculated an indicator that captures the sentiment of the

44 Castillo, P., Herrada, R., Montoro, C. and Pérez, F. (2019). "La comunicación de la política monetaria en los bancos centrales de América del Sur", Banco Central de Reserva del Perú.

monetary authority's communications. Lahura and Vega (2021) constructed a dictionary of phrases that indicate expansionary (dovish), contractionary (hawkish), and neutral stances based on the press releases of the BCRP's Monetary Policy Statements[45] (*Notas Informativas del Programa Monetario*). By counting the number of times when hawkish, dovish and neutral phrases appear in each policy statement, we can claculate the following indicator:

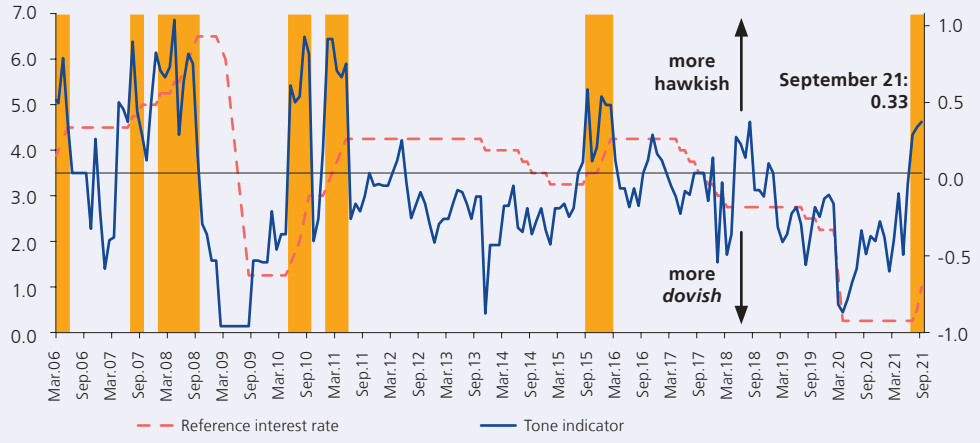
$$tone_t = \frac{H_t - D_t}{H_t + D_t + N_t}$$

Where H_t represents the number of hawkish sentences, D_t the number of dovish sentences, N_t and the number of neutral sentences. Thus, a positive value of the indicator implies a tone in favor of a contractionary stance, while a negative value implies a communication tone indicating an expansionary stance.

The monetary policy tone indicator adapts to the hike event by adopting a positive value (hawkish), in some cases in anticipation of the decision to raise the interest rate. According to the indicator calculated, the change in tone towards a hawkish stance in monetary policy communications was contemporaneous (in other words, there was no anticipation) in the 2005 and 2010 hike episodes, while in the 2011 and 2015 periods the change occurred with an anticipation of 1 month and, in the 2007 period, with an anticipation of 3 months.

REFERENCE INTERNATIONAL RATE AND MONETARY POLICY TONE INDICATOR

(In % and index value)



* For monetary policy tone indicator, the positive values of the index indicate a tone in favor of a contractionary position, while negative values imply a communication with an expansive position. Shaded areas correspond to periods of interest rate rise.

According to the tone indicator, the July 2021 Policy Statement would have given indications of a hawkish tone, anticipating the BCRP's future actions. In comparison with the June Statement, in which the Central Bank implies that it is still willing to expand monetary stimulus, the July Statement gives special emphasis to information on inflation expectations and economic activity, removing the reference to the expansion of monetary stimulus. The indicator also implies that the statement has taken a more favorable stance to the withdrawal of monetary stimulus in August and September.

45 Vega, M. y Lahura, E. (2021). "Assessing central bank communication through monetary policy statements: Results for Colombia, Chile and Peru", Banco Central de Reserva del Perú.

FORWARD GUIDANCE IN MONETARY POLICY RELEASES
Upload period: August 2021

June 2021	The Board considers it appropriate to maintain a strong expansionary monetary stance as long as the negative effects of the pandemic on inflation and its determinants persist. The BCRP will continue to take the necessary steps to sustain the payments system and credit flows, **and stands ready to expand monetary stimulus using a range of instruments.**
July 2021	The Board considers it appropriate to maintain an expansionary stance as long as the negative effects of the pandemic on inflation and its determinants persist and is **especially attentive to new information referring to inflation expectations and the evolution of economic activity.** The BCRP will continue to take the necessary steps to sustain the payments system and credit flows.
August 2021	The Board considers it appropriate to maintain an expansionary stance as long as the negative effects of the pandemic on inflation and its determinants persist and is **especially attentive to new information referring to inflation expectations and the evolution of economic activity to consider, if necessary, changes in the monetary policy position.** The BCRP will continue to take the necessary steps to sustain the payments system and credit flows.
September 2021	The Board is e**specially attentive to new information referring to inflation expectations and the evolution of economic activity to consider, if necessary, changes in the monetary policy position.** The BCRP will continue to take the necessary steps to sustain the payments system and credit flows.

The change in the communication tone also took into account the evolution of inflation variables, inflation expectations, and the recovery of global activity. It is worth mentioning that the increase in the level of the hawkish tone of this latest episode is comparable to that observed in the previous rate hike episode of 2015.

At the international level, the central banks of Chile, Colombia, and Mexico began to adopt a stance favorable to the withdrawal of monetary stimulus in their monetary policy communiqués since the end of the second quarter of 2021. Subsequently, the rate in Chile was raised from 0.50 percent to 0.75 percent in July and to 1.50 percent in August, while in Mexico, it was raised from 4.25 percent to 4.5 percent in August.

Box 7
ESTIMATED DELINQUENCY RATE OF COMPANIES THAT HAVE ACCESSED THE REACTIVA PERÚ PROGRAM

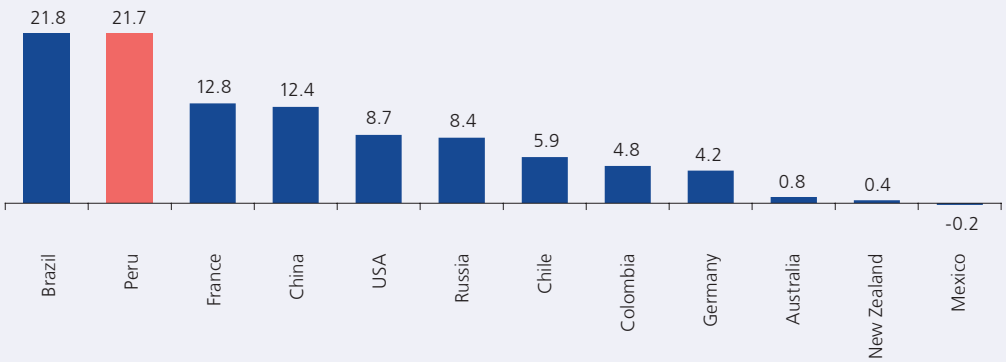
The Reactiva Perú guarantee program was designed as an extraordinary mechanism to provide liquidity and promote the expansion of credit to the private sector in the context of economic contraction and uncertainty generated by the Covid-19 pandemic. This program contributed to mitigate not only the negative effects of the pandemic, but also one of the strictest mobility restriction policies applied in the world, which could have led to an economic depression and undermined the stability of the financial system.

The program prevented a disruption in the flow of payments as a result of the sudden negative shock of the pandemic on supply and demand. This shock caused a drop in the income of businesses that could have generated a generalized bankruptcy of companies and the breakdown of relations between workers, companies, clients, suppliers, financial entities, and the government. In other words, the program prevented the breakdown of economic relationships, preventing an abrupt and lasting drop in production, employment, and income in the country.

Peru experienced a disruption in the payments system in the late 1990s during the Asian and Russian financial crises of 1997/98. Such interruption in the flow of short-term capital affected the provision of bank credit and deteriorated the portfolio of several financial institutions. These liquidity problems subsequently turned into solvency problems. On the other hand, the reduction in aggregate demand affected the capacity of these companies to generate short-term profits, thus intensifying their exposure to the external shock. As a result, the rate of growth of the Peruvian economy fell from 6.5 percent in 1997 to 0.4 percent in 1998, after which the output grew only 1.5 percent in 1999.

The story was different in the case of the Covid-19 crisis, because the loans of the Reactiva Perú program generated a counter-cyclical behavior of credit that contributed to the recovery of the economy. The companies that accessed the program generated around 2.8 million jobs, which did not disappear during the development of the pandemic. Thus, Peru registered a significant growth in business credit in 2020 (21.7 percent), with credit reaching rates among the highest observed in both the advanced and the emerging economies.

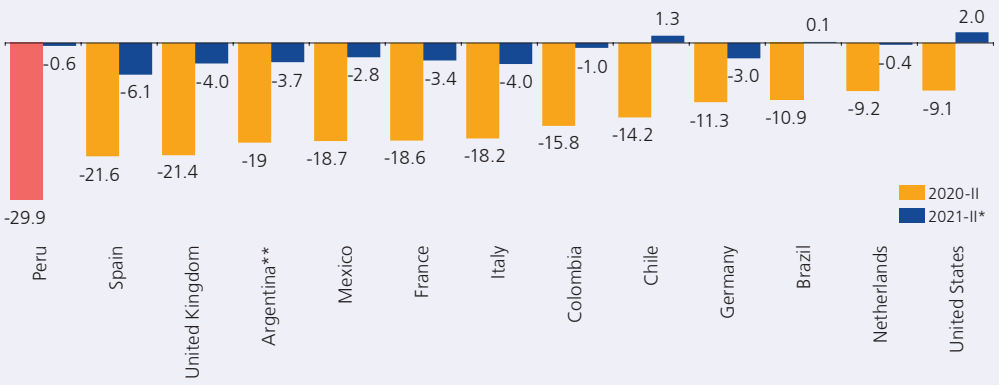
CREDIT TO THE PRIVATE SECTOR: DECEMBER 2020
(%)



Source: Central Banks.

This countercyclical evolution of credit allowed Peruvian economic activity to have one of the fastest recoveries seen worldwide. For example, Peru's GDP went from falling 29.9 percent in the second quarter of 2020 –the period with the greatest economic constraints– to falling 1.4 percent in the fourth quarter of 2020, reaching pre-pandemic levels in December 2020.

YEAR-ON-YEAR CHANGE IN REAL GDP (%)



* Change with respect to the same period in 2019.
** The annual change for the second quarter of 2021 is estimated using the monthly series as of June 2021.
Source: Statistical Institutes and Central Banks.

In summary, the Reactiva Perú program met its objectives. The provision of liquidity and its countercyclical effect ensured continuity in the flow of payments. This provision of liquidity reached economic agents, both directly and indirectly, through the payment system, for example, through the payments made by companies to their suppliers and employees, regardless of the size of the company and regardless of whether they are in the formal or in the informal sector. In some cases, the need for liquidity was only transitory, as evidenced by the fact that many of these companies have already prepaid their loans.

In addition, the design of the program has allowed for massive participation and low delinquency rates among the companies that accessed these loans. In order to have access to the program, a company was required to have a record as a good taxpayer and payer of debts before the pandemic[46], which contributed to align incentives between companies and financial entities.

The impact of the Reactiva Peru Program on the delinquency ratio is analyzed below by comparing the group of companies that participated in the program with those that could have accessed the program but did not; in other words, with companies that showed normal credit ratings or those with potential problems during February 2020. In order not to take into account the reclassifications of business segments established at the time, the company's classification remained unchanged during the period of analysis.

On the delinquency ratio

A comparison of the delinquency ratio[47] recorded in July 2021 in the different business segments and for all types of companies was carried out, so companies included those that accessed the Reactiva Peru credit program (participated in PRP), companies with a credit rating that enabled them

46 More specifically, requirements included the following: (i) not having enforceable tax debts in coercive collection of more than 1 tax unit until February 29, 2020; (ii) the company's credit rating in the financial system had to be classified as "Normal" or "With Potential Problems (WPP)" until February 29, 2020.

47 In order that the delinquency ratio be comparable among the different groups, the loan amount obtained from the Reactiva Perú program is excluded for those companies that have accessed this program.

to access PRP credit but did not request loans (PRP-like companies), and the rest of companies (other companies). The comparison reveals that, as of July 2021, companies that accessed the Reactiva Peru program show a delinquency ratio of 2.5 percent in other loans outside the PRP, which is a rate significantly lower than that of the groups that did not access the program. The same is observed by credit segments, so we have the following outturns:

a) In the segment of corporations and large companies, the delinquency ratio of the companies that participated in the program (0.8 percent) is lower than the one registered in the group of companies that also showed a "normal" or "WPP" rating during February 2020 (1.0 percent) and lower than that of the group of companies that do not belong to these two groups, classified as other companies (22.5 percent).

b) In the segment of medium-sized companies, the delinquency ratio of the companies participating in the program (5.4 percent) is lower than that of those that showed a normal or WPP rating before the pandemic (6.9 percent) and lower than that observed in the rest of the companies (53.4 percent).

c) Finally, the same behavior is observed in the segment of micro and small enterprises: the delinquency ratio of the companies participating in the program (6.7 percent) is lower than that of companies similar to those participating in the PRP (8.4 percent) and lower than in the rest of companies (16.9 percent).

It is worth mentioning that, according to SBS data, between August 2020 and July 2021, financial institutions recorded loan write-offs amounting to S/ 1,229 million in micro and small companies, S/ 220 million in medium-sized companies, and S/ 39 million in corporations and large companies. This write-off of the portfolio has reduced the delinquent portfolio and the delinquency ratios, particularly for the remaining micro and small companies that did not participate in the PRP, as a result of which the ratio is even lower than that of the segment of corporations and large companies that did not participate in the PRP.

NON-PERFORMING LOANS ACCORDING TO THEIR SHARE OF THE REACTIVA PERU PROGRAM (PRP) JULY 2021

	Total credit balance (Million S/)	Participation (%)	Reactiva Peru credit balance (Million S/)	Non-performing Portfolio 1/ (Million S/)	Adjusted non-performing index 2/ (%)
Total Companies	**242,882**	**100.0**	**51,058**	**10,542**	**5.5**
They participated in the PRP	141,815	58.4	51,058	2,266	2.5
Similar to PRP 3/	84,359	34.7	--	3,361	4.0
Rest of companies	16,708	6.9	--	4,915	29.4
Corporate and large companies	**126,047**	**51.9**	**15,028**	**1,818**	**1.6**
They participated in the PRP	74,339	30.6	15,028	472	0.8
Similar to PRP	47,885	19.7	--	485	1.0
Rest of companies	3,823	1.6	--	862	22.5
Medium-sized enterprises	**66,953**	**27.6**	**26,065**	**4,843**	**11.8**
They participated in the PRP	50,528	20.8	26,065	1,329	5.4
Similar to PRP	11,293	4.6	--	774	6.9
Rest of companies	5,132	2.1	--	2,740	53.4
Small business and Micro business	**49,882**	**20.5**	**9,964**	**3,881**	**9.7**
They participated in the PRP	16,948	7.0	9,964	465	6.7
Similar to PRP	25,181	10.4	--	2,103	8.4
Rest of companies	7,753	3.2	--	1,313	16.9
TOTAL	**242,882**	**100.0**	**51,058**	**10,542**	**5.5**

1 / Includes credits with overdue classification and in judicial collection.
2 / In the case of companies that accessed the Reactiva Peru program, the balance of the Reactiva credit is not included.
3 / Companies that had a normal rating or CPP in February 2020.
Source: Consolidated Credit Registry (RCC).

Current status of the program

As of July 2021, 12.5 percent of the total amount of Reactiva Peru loans disbursed since May 2020 (S/ 58,374 million) have been paid off and repaid. By credit segment, companies in the segment of corporations and large companies are the ones that have amortized the most (24.8 percent). It is worth mentioning that the loans these companies received had 80 and 90 percent guarantees, and that, as mentioned in Table 29, these companies have paid off their loans earlier. On the other hand, medium-sized companies repaid and amortized 7.3 percent of their loans, while MSEs repaide and amortized 3.0 percent of their loans.

CREDITS GRANTED THROUGH REACTIVA PERU
(Million S/)

	Credits granted 1/	Canceled 2/	Amortized 3/	Ratio 4/ (%)			Balance Jul.21
				Cancel.	Amort.	Total	
Total	**58 374**	**4 566**	**2 749**	**7,8**	**4,7**	**12,5**	**51 058**
By credit segment							
Corporate and large companies	19 993	3 701	1 264	18,5	6,3	24,8	15 028
Medium-sized enterprises	28 109	717	1 326	2,6	4,7	7,3	26 065
Small business and Micro business	10 272	149	159	1,4	1,6	3,0	9 964

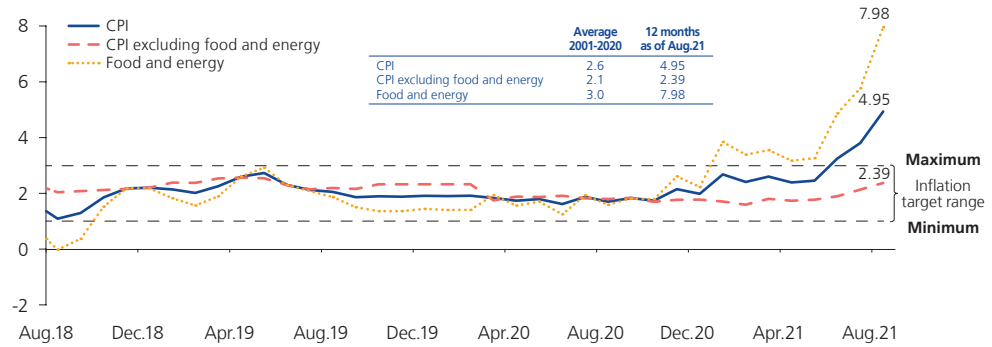
1/ Estimated from RCC.
2/ Companies whose Reactive credit balance is reduced to zero after receiving it.
3/ Companies whose Reactive credit balance is reduced after receiving it.
4/ The ratio represents the amount of loans amortized and/or canceled out of the total loans granted.
Source: RCC.

VI. Inflation and Balance of Inflation Risks

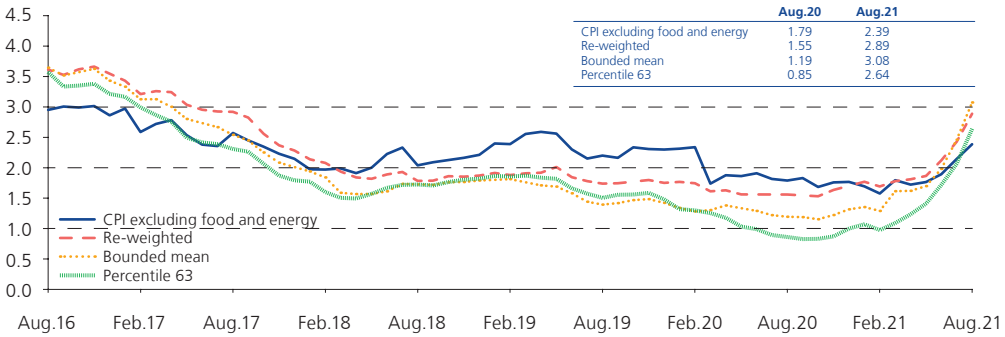
Recent inflation trends

83. Year-on-year **inflation** rose to 4.95 percent in August, from 2.45 percent in May, due to supply-side factors such as significant increases in the international prices of food inputs (grains and fertilizers), fuels and derivatives, foreign trade freight, as well as the depreciation of the sol. Inflation excluding food and energy rose from 1.76 to 2.39 percent in the same period, remaining within the target range. Similarly, the different trend inflation indicators remain within the target range, with the exception of the narrow average, whose variation reached 3.08 percent.

Graph 103
INFLATION
(Last 12-month % change)

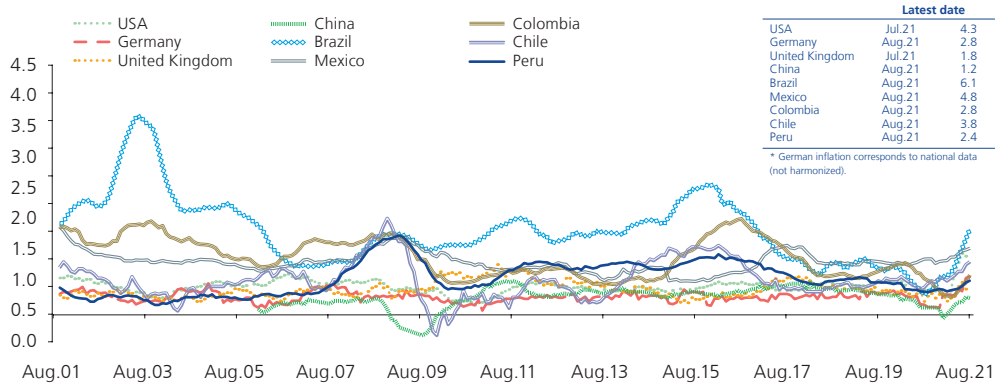


Graph 104
MEASUREMENTS OF THE INFLATIONARY TREND
(Last 12 months % change)



Memo:
1. CPI excluding food and energy: CPI excluding food, fuel and electricity.
2. 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.
3. Bounded mean: Weighted average of the percentage change of prices between the 34th and 84th percentiles.
4. Percentil 63: Corresponds to the percentage changes of the item located in the 63th percentile.

Graph 105
CPI EXCLUDING FOOD AND ENERGY
(Last 12 months % change)



	Latest date	
USA	Jul.21	4.3
Germany	Aug.21	2.8
United Kingdom	Jul.21	1.8
China	Aug.21	1.2
Brazil	Aug.21	6.1
Mexico	Aug.21	4.8
Colombia	Aug.21	2.8
Chile	Aug.21	3.8
Peru	Aug.21	2.4

* German inflation corresponds to national data (not harmonized).

Source: Reuters, Central Banks and Institutes of Statistics.

84. Thus, inflation's upward trend in recent months is mainly the result of a global phenomenon, which is explained by supply issues and by the rapid recovery of the world economy. The international commodity prices that affected domestic inflation the most were the prices of oil and some foodstuffs, such as wheat, maize, and soybean oil. The price increases add onto the higher cost of maritime freight and other inputs, as well as onto the local increase in the exchange rate.

Table 42
PRICES OF FOOD AND OIL
(US$ per unit of mesure)

		Spot			% change	
		Dec.19	Dec.20	31 Aug.	Aug.21/Dec.20	Aug.21/Dec.19
WTI oil	US$/barrel	61.1	48.5	68.5	41.2	12.2
GLP*	US$/barrel	23.9	31.4	49.5	57.7	106.9
Gasoline*	US$/barrel	73.8	57.8	79.7	38.0	8.0
Wheat	US$/ton	177.8	231.1	269.8	16.7	51.7
Maize	US$/ton	148.4	186.6	220.1	17.9	48.3
Soybean oil	US$/ton	756.4	977.3	1,535.1	57.1	102.9

* International prices published by OSINERGMIN as of August 30.
Source: Reuters and OSINERGMIN.

85. Moreover, the growth in the prices of food commodities is due to: (i) the effects of the COVID-19 pandemic on the global economy, (ii) the search for substitute fuels given rising oil prices (ethanol and biodiesel, which are produced from maize and soybeans), and (iii) adverse weather effects. Thus, the recovery of the global economy after the confinements would have been faster than expected, which puts pressure on the global food balance. In addition, demand from countries such as China would have been favored by the global depreciation of the dollar (see Box 1: Episodes of rising food prices).

86. In addition to the increase in food commodity prices, the increase in the price of oil and other fuels, as well as the restrictions of the COVID-19 pandemic that limit access to other basic inputs, would have affected the cost of industrial products. Thus, the

cumulative price variation for industrial inputs in 2021 would have been exceptionally high for products such as plastics (47 percent), iron and steel (42 percent), organic chemicals (33 percent), and fertilizers (46 percent). It is worth highlighting that the increase in the price of fertilizers and manures puts additional pressure on food inflation as it affects the production costs of perishable agricultural crops.

Table 43
IMPORT PRICES

	% change	
	Aug.21 / Dec.20	**Aug.21 / Dec.19**
Industrial inputs	26.9	31.7
Plastics	47.0	56.4
Iron and Steel	41.9	46.5
Textiles	,12.7	4.9
Papers	22.9	12.0
Chemical products	12.7	,17.6
Organic chemicals	32.6	37.4
Rest	23.6	30.8
Fertilizers	45.9	29.7
Rest	21.5	30.4

Source: Sunat.
Elaboration: BCRP.

87. In addition, there are a series of logistical problems that have increased the cost of maritime transport and therefore the cost of food and industrial inputs. This was triggered by global restrictions on mobility to contain the spread of the virus, which led to the closure of ports, inefficiencies in relocating containers, and limitations on the labor force in logistics chains. However, this problem is also associated with a series of structural factors that have been latent and are now affecting global transport capacity, such as the obsolescence of port infrastructure and a lower global supply of shipyards (See Box 4: Rising global shipping costs).

88. Thus, the effect of all of these factors that exerted upward pressures on the cost of inputs would have been reflected in the Wholesale Price Index (WPI), which grew 10.4 percent in 2021 (12.0 percent year-on-year variation as of August) and reached its highest level since June 1995. Although there is strong pressure on the side of directly imported inputs, the domestic input component has also been affected.

89. Another factor that weighs on this dynamic is the increase in the exchange rate (with a cumulative depreciation of 13.4 percent between January and August 2021, or 14.7 percent year-on-year), which affects the cost of imported inputs in domestic currency. For example, the current correlation between the WPI and the exchange rate which has been high in recent years (around 90 percent), is related to both the imported component and the domestic component of inputs. In addition, it is estimated that the pass-through effect of the annual exchange rate depreciation to the consumer price index (CPI) would be 10.8 percent.

90. Thus, the items most closely linked to the exchange rate, international prices, and WPI-linked contracts contributed 2.8 percentage points to year-on-year inflation in August. It is worth mentioning as a reference that in December 2020, these same items contributed 0.7 percentage points to annual inflation, which was 2.0 percent. These contributions only represent the direct effects of the aforementioned shocks, and not the total effect of these increases (including second-order effects or indirect effects).

Table 44

ITEMS LINKED TO THE EXCHANGE RATE, INTERNATIONAL PRICES AND TO THE WHOLESALE PRICE INDEX (WPI)

	Weight	% chg 12 months Dec.20	Weighted contribution	% chg 12 months Aug.21	Weighted contribution
CPI	**100.0**	**1.97**		**4.95**	
Items linked to the exchange rate	**14.1**	**1.66**	**0.21**	**3.18**	**0.41**
Appliances	1.3	-0.42	0.00	1.94	0.02
Personal care items	4.9	0.75	0.03	0.85	0.04
Cleaning articles	0.9	0.74	0.01	1.94	0.02
Medicinal products	2.1	5.53	0.11	2.42	0.05
Vehicle purchase	1.6	3.34	0.06	8.95	0.16
Spare parts and car wash	0.2	2.15	0.00	6.06	0.01
Vehicle repair	0.2	2.04	0.00	4.94	0.01
Rentals	2.4	0.50	0.01	1.49	0.03
Plane tickets	0.4	-3.32	-0.01	25.42	0.08
Items linked to international prices and exchange rate	**9.8**		**0.19**		**1.95**
Linked to food commodities	7.0	4.83	0.30	15.62	1.01
Chicken meat	3.0	6.63	0.17	16.41	0.44
Bread	1.9	0.25	0.00	10.27	0.17
Sugar	0.5	16.41	0.08	3.65	0.02
Noodles	0.5	5.60	0.03	7.30	0.04
Oils	0.5	4.09	0.02	59.75	0.27
Eggs	0.6	0.00	0.00	12.21	0.07
Fuels	**2.8**	**-4.20**	**-0.11**	**39.69**	**0.94**
Gasoline and lubricants	1.3	-11.16	-0.14	40.69	0.42
Gas	1.4	1.97	0.02	42.02	0.51
Other fuels	0.1	3.02	0.00	5.09	0.01
Consumption of natural gas for home	0.0	-5.26	0.00	9.25	0.00
Items related to WPI	**1.6**		**0.06**		**0.20**
Water consumption	1.6	3.03	0.06	10.41	0.20
Items related to the exchange rate, WPI and prices	**2.9**		**0.24**		**0.28**
Electricity	2.9	6.73	0.24	7.76	0.28
Total items related to exchange rate, WPI and prices	**28.5**	**2.58**	**0.70**	**10.45**	**2.84**
Rest	**71.5**	**1.75**	**1.27**	**2.90**	**2.12**

91. The confluence of all the aforementioned shocks has had a greater impact on inflation in the food and energy group, whose variation drove the growth of total inflation in the last twelve months to a greater extent, with fuel prices increasing the most (39.7 percent) within this group, followed by electricity rates (7.8 percent). The latter item reflects the adjustments of a series of components affected by increases in the WPI, the exchange rate, and copper and aluminum prices. Finally, the price of food is estimated to have grown 6.1 percent.

Table 45
INFLATION
(% change)

	Weight	2019	2020	2021	
				Jan.-Aug.	12 months
CPI	**100.0**	**1.90**	**1.97**	**4.20**	**4.95**
1. CPI excluding food and energy	**56.4**	**2.30**	**1.76**	**1.79**	**2.39**
a. Goods	21.7	1.39	1.52	1.65	2.08
b. Services	34.8	2.86	1.91	1.87	2.57
2. Food and energy	**43.6**	**1.43**	**2.22**	**7.03**	**7.98**
a. Food and beverages	37.8	1.00	2.24	5.66	6.10
b. Fuel and electricity	5.7	4.32	2.13	15.90	20.45
Fuel	2.8	-0.39	-4.20	35.12	39.69
Electricity	2.9	8.04	6.73	3.32	7.76

92. On the other hand, some CPI components deviated from their historical average variations. For example, the services that registered the highest price increases in the last twelve months were health services (3.1 percent), reflecting the greater need for medical and health care due to the pandemic. In contrast, despite the increase in the cost of inputs, the category of meals consumed away from home showed a lower rate than that recorded in the 2001-2020 period, with lower demand and lower attendance to restaurants compared to pre-pandemic levels explaining this decline.

Table 46
INFLATION
(Annual % change)

	Weight	2019	2020	Aug.21	2021-20
					Annual Average
CPI	**100.0**	**1.90**	**1.97**	**4.95**	**2.56**
Education	**9.1**	**5.22**	**1.98**	**1.60**	**4.03**
Health	**1.1**	**1.47**	**1.20**	**3.08**	**2.75**
Meals outside the home	**11.7**	**1.69**	**1.00**	**2.33**	**3.40**
Other personal services	**3.3**	**1.35**	**0.99**	**1.89**	**1.49**
Of which:					
Household employees	2.1	0.81	0.57	1.07	0.69
Housekeeping	0.2	1.45	-0.04	0.21	1.61
Various repair	0.1	0.52	-0.37	0.29	2.14

94. As for the evolution of prices during 2021, from January to August the general price level increased 4.20 percent. The CPI index without food and energy grew 1.79 percent in the same period, while the food and energy component grew at a higher rate of 7.03 percent. The prices of food and beverages increased by 5.66 percent, while energy prices rose by 15.90 percent, reflecting the 35.12 percent rise in fuel prices and the 3.32 percent rise in electricity rates.

95. At a disaggregated level, the items with the highest positive contribution to inflation in the January-August period were gas, chicken meat, gasoline, edible oils and meals consumed away from home, while the items with the highest negative contribution were tangerines, avocados, lemons, bananas, and grapes.

Table 47

ITEM WITH THE HIGHEST WEIGHTED CONTRIBUTION TO INFLATION: JANUARY -AUGUST 2021

Positive	Weight	% chg.	Contr.	Negative	Weight	% chg.	Contr.
Gas	1.4	36.6	0.46	Tangerine	0.2	-26.4	-0.06
Chicken meat	3.0	16.6	0.44	Avocado	0.1	-18.5	-0.04
Gasoline and lubricants	1.3	36.6	0.39	Lemon	0.2	-17.2	-0.04
Oils	0.5	58.9	0.27	Banana	0.3	-5.7	-0.03
Meals outside the home	11.7	1.7	0.24	Grape	0.1	-10.7	-0.01
Fresh and frozen fish	0.7	37.2	0.24	Table orange	0.1	-16.0	-0.01
Tuition and teaching pension	8.8	1.6	0.17	Onion	0.4	-3.6	-0.01
Bread	1.9	10.2	0.17	Internet service and other	0.8	-1.1	-0.01
Vehicle purchase	1.6	8.5	0.15	Celery	0.0	-11.2	-0.01
Water consumption	1.6	7.2	0.14	National transportation	0.3	-1.2	0.00
Total			**2.67**	**Total**			**-0.22**

Food

During the January to August period, the price increases in products such as chicken meat, oils, and bread, all of which have a high import content, were particularly noteworthy.

The increase in the price of chicken (16.6 percent) was due to higher production costs as a result of the higher international price of hard yellow maize –the main input for poultry feed (cumulative variation of 42 percent for the year, and 97 percent year-on-year)– and the increase in the exchange rate, in a context of rising costs, which will affect the supply of chicken, and a lower availability of substitute products, such as fish.

In the case of bread (10.2 percent), in addition to the increase in the exchange rate, international wheat prices rose 26 percent in the first eight months of the year (58 percent year-on-year),.

In the case of edible oil (58.9%), production costs increased due to the rise in the international price of soybean oil, its main input, and the depreciation of the exchange rate. Although the price has fallen in the last two months, it reached an accumulated variation of approximately 71 percent in the January-August period (119 percent year-on-year).

Another food item that contributed to the rise in prices during the period was fish. Anomalous waves and lower sea temperatures in winter dispersed the species and made fishing more difficult. The largest price increases were recorded in mass consumption species such as jack mackerel, bonito, and mullet.

Fuels

The category of gasolines recorded an increase of 36.6 percent, with gasohol prices increasing in line with the average variation of ex-plant prices at local refineries, which reflected mainly increases in the international marker (Gulf Coast price). Another factor that also contributed to this increase was the update of the price band for B5 diesel for vehicle use carried out at the end of May.

In the case of domestic gas, the price increase was associated with the increase in the international benchmark price (the propane and butane gas prices at Mont Belvieu) and

the higher exchange rate. The price was also affected, to a lesser extent, by LPG supply problems due to the presence of anomalous wave conditions between July 12 and 16 that prevented the disembarkation of gas at the port of Callao.

Goods

Increases were recorded in the category of goods in the prices of vehicles (8.5 percent). This was mainly associated with the impact of the cumulative growth of the exchange rate in 2021 (13.4 percent).

Services

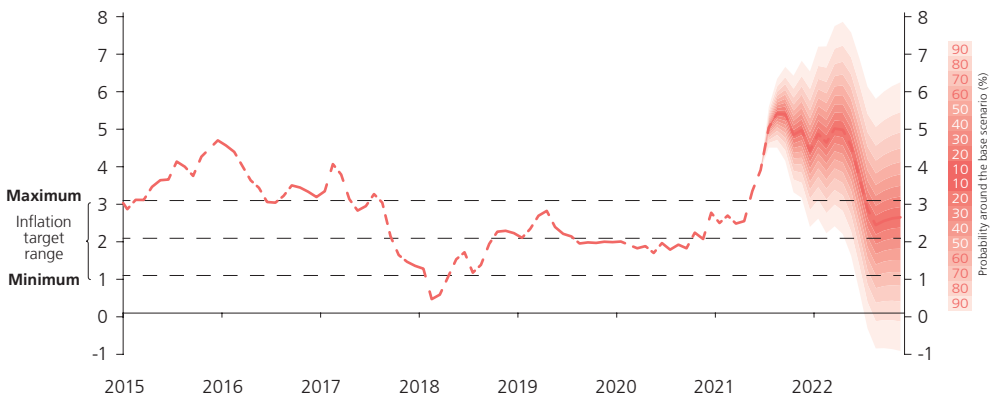
Among the services, the increase in the rate of potable water (7.2 percent) was noteworthy. The rate increases in the January-August period were made in accordance with current legislation, which establishes an automatic increase in the rate of this service if the WPI reaches an accumulated variation of 3 percent since the time when the last adjustment was made. That is why the rate was increased by 2.9 percent in March and a new increase was authorized in July based on the WPI increase between June and February 2021 (4.6 percent).

Forecasts

95. BCRP monetary policy actions are taken on the basis of inflation forecasts and projections of its determinants, taking into account all macroeconomic and financial information available at the time of decision making. Key determinants of inflation include inflation expectations, imported inflation (which comprises the effect of the exchange rate), and inflationary pressures on both demand and supply.

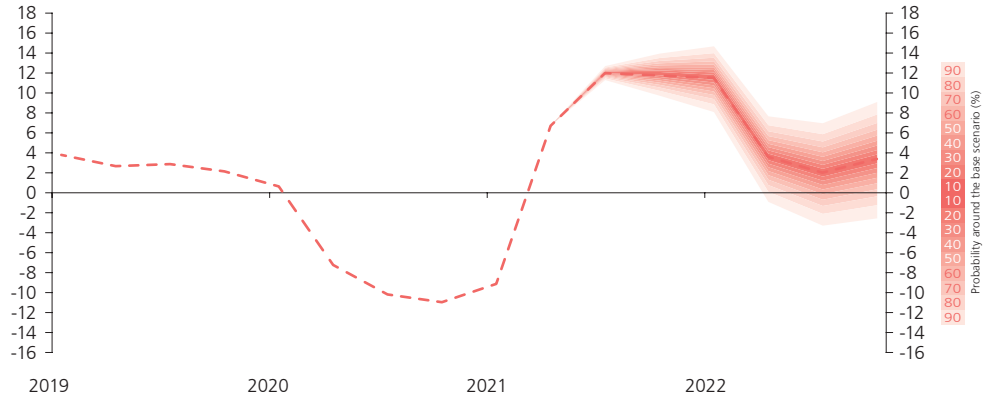
96. Based on available information and taking into account the gradual normalization of economic activity, year-on-year inflation in the next twelve months is projected to return to the target range and to remain within this range by the end of the forecast horizon. This projection assumes the moderation of supply factors, in a context in which the output gap will gradually close as the aggregate economy recovers its pre-pandemic level and inflation expectations gradually return to the center of the target range.

Graph 106
INFLATION FORECAST: 2021 - 2022
(Last 12-month % change)



97. A recovery in economic activity is expected in 2021 and 2022, supported by the gradual economic recovery of our main trading partners and better terms of trade, as well as by the recovery of business confidence. This is expected to result in a gradual but sustained recovery in the level of economic activity.

Graph 107
GDP GROWTH FORECAST: 2021 - 2022
(Last 12-month % change)



98. Inflation expectations, calculated on the basis of surveys carried out with representatives of financial and non-financial companies as well as with economic analysts, reveal that inflation is expected to be between 3.20 and 3.74 percent in 2021, and between 2.55 and 3.00 percent in 2022, indicating that expectations would return to be within the inflation target range by the end of the forecast horizon. It should be pointed out that twelve-month inflation expectations in August 2021 rose to 3.07 percent, temporarily close to the upper limit of the inflation target range.

Graph 108
EXPECTATION OF INFLATION FOR THE NEXT YEAR
(% points)

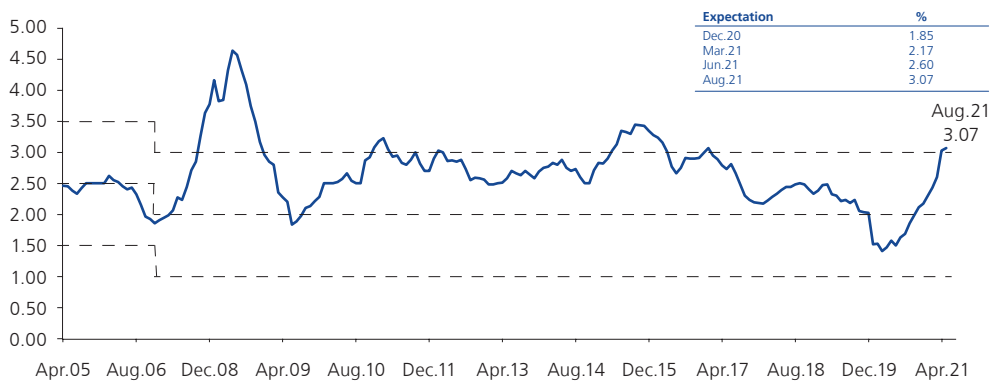


Table 48
SURVEY ON INFLATION EXPECTATIONS
(%)

	IR Dec.20	IR Mar.21	IR Jun.21	IR Sep.21*
Financial entities				
2021	1.50	2.00	2.50	3.60
2022	2.00	2.00	2.20	3.00
Economic analysts				
2021	1.90	2.20	2.50	3.74
2022	2.00	2.30	2.45	2.55
Non-financial firms				
2021	2.00	2.00	2.39	3.20
2022	2.00	2.20	2.30	3.00

* Survey conducted as of August 31.

99. Another determinant of inflation is the imported component, which combines the effect of the international prices of the products that our country imports, such as crude oil, wheat, soybeans and maize, among other goods, with the effect of the exchange rate variation (US dollar/PEN exhange rate).

Thus, average import prices are projected to increase by 13.9 percent in 2021, mainly due to the increase in the price of crude oil and some foodstuffs. such as maize, wheat, and soybeans. A correction of these prices is expected by 2022, so the price of imports would decrease by 2.4 percent. On the other hand, the surveys on the expected exchange rate show that, as of August, the US dollar/PEN exhange rate is estimated at levels between S/ 4.00 and S/ 4.10 in 2021 and between S/ 4.00 and S/ 4.25 in 2022.

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

	IR Dec.20	IR Mar.21	IR Jun.21	IR Sep.21*
Financial entities				
2021	3.43	3.50	3.50	4.10
2022	3.40	3.43	3.50	4.00
Economic analysts				
2021	3.54	3.56	3.70	4.10
2022	3.50	3.53	3.72	4.25
Non-financial firms				
2021	3.50	3.60	3.70	4.00
2022	3.50	3.55	3.60	4.00

* Survey conducted as of August 31.

Balance of Risks of the Inflation Forecast

100. The balance of inflation risk factors in this Report has been revised from neutral to positive based on the following shocks:

- **Domestic demand shocks**

  If consumer and business confidence does not recover, private sector consumption and investment growth will be lower. On the other hand, delays in the execution

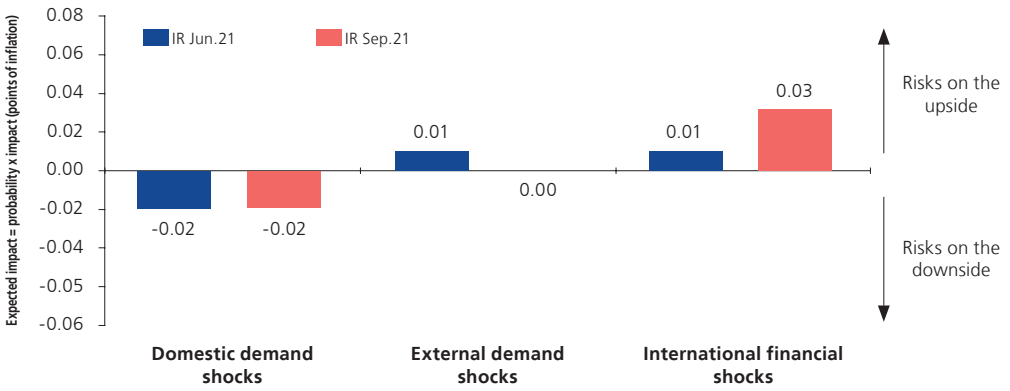
of public spending, especially in investment, could also reduce the pace of economic recovery. The short and medium-term impacts of these episodes would translate into a contraction of domestic demand and would have a negative effect on inflation through a decrease in the output gap.

- **Financial shocks**

  An episode of foreign capital outflows in emerging economies or a delay in the normalization of volatility in local financial markets would generate upward pressures on the exchange rate and, therefore, higher inflation over the forecast horizon.

Graph 109

BALANCE OF RISKS AGAINST THE BASE SCENARIO



Box 8
INFLATION TARGETING IN PERU AND ANCHORING OF EXPECTATIONS

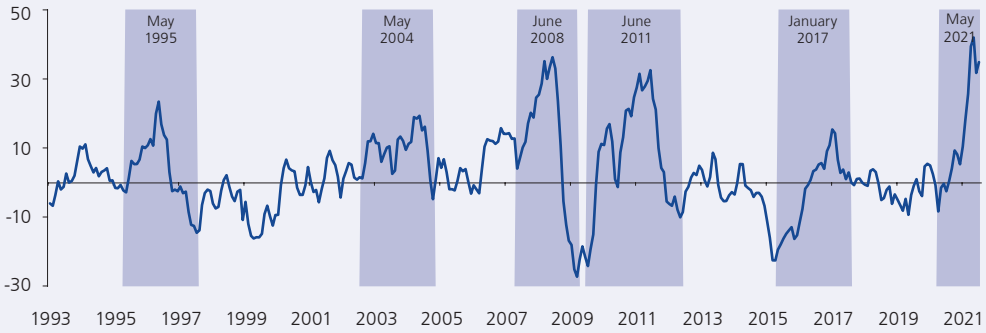
Inflation expectations refer to the rate at which economic agents expect the level of prices to increase in an economy. The lower and more stable these expectations are, the better price and wage decisions can be made by firms and households. Therefore, it is key for monetary policy that inflation expectations are within a central bank's inflation target range. In the case of the BCRP, which follows an Inflation Targeting (IT) scheme, this benchmark is the inflation target range, which is between 1 and 3 percent.

Since BCRP implemented the IT scheme at the beginning of 2002, inflation expectations have been within the inflation target range for 195 months, that is, 83 percent of the time since that date.

Total inflation is subject to the evolution of the output gap, changes in international prices, the exchange rate, and supply factors, such as changes in relative food prices, which can affect the formation of economic agents' expectations. When inflation responds to significant and persistent supply shocks, economic agents may begin to give greater weight to realized inflation as a predictor of future inflation. Because of thIn this, central banks' monetary policy actions should seek to prevent inflation expectations from deviating from their target range, as this could turn a transitory rise in inflation into a more prolonged process.

Since food production has a significant imported component, changes in international food prices will have an important influence on the evolution of food inflation. In recent months, the rate of annualized food inflation accelerated from 4.2 percent in July to 6.1 percent in August 2021, in line with the behavior of the FAO food price index (FFPI)[48]. In May 2021 this index reached its highest peak since September 2011, registering a level of 127.1 and an annual increase of 39.7 percent. The most recent figures indicate that the year-on-year growth of the FFPI remains high, with a level of 32.9 percent in August. On the other hand, the International Monetary Fund (IMF) food price index shows that the recent rise in international food prices has not been observed in the last 20 years, and that the annualized growth rate of food prices in the second quarter of 2021 is higher than those observed in the 2007-2009 and 2009-2012 episodes.

FOOD PRICE INDEX
(Annual % change)

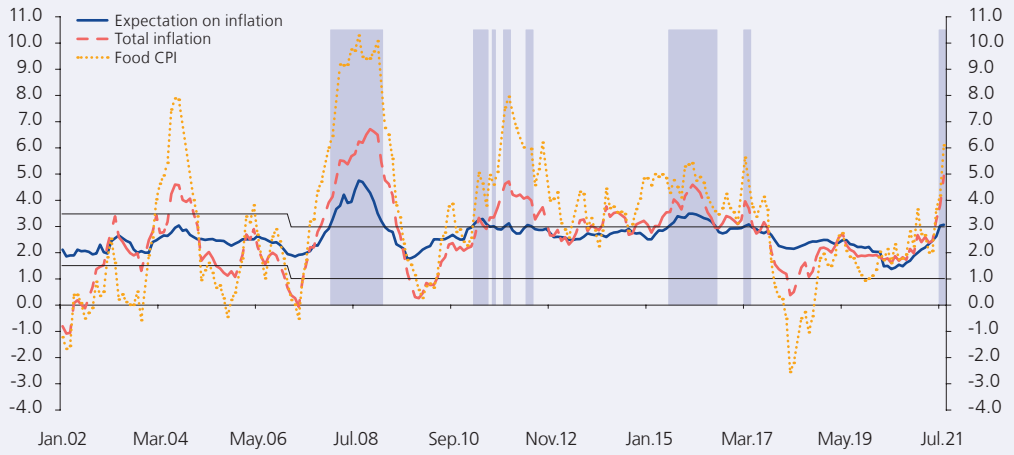


Source: IMF.

48 The FFPI is an index constructed by the UN Food and Agriculture Organization(FAO) that measures the monthly change in international prices of a basket of good commodities (cereal, vegetable oil, dairy, meat, and sugar).

Moreover, the gray areas in the graph below refer to the months in which inflation expectations have been located above the upper limit of the target range, which have typically coincided with episodes in which total inflation, and the increase in food prices, have been outside the target range. One can see that these deviations are short term, as the BCRP's monetary policy actions and communication with the market agents have helped to ensure that in episodes of rising international food and fuel prices (for example, during 2008 and 2009), or in episodes of rises in the exchange rate (for example, during 2014 and 2016 due to the fall in mineral prices) are not transferred to inflation expectations in a sustained and persistent manner.

INFLATION INDICATORS *
(Annual % change)



* The gray area represents the periods when expectation on inflation were above the target range.
Source: BCRP.

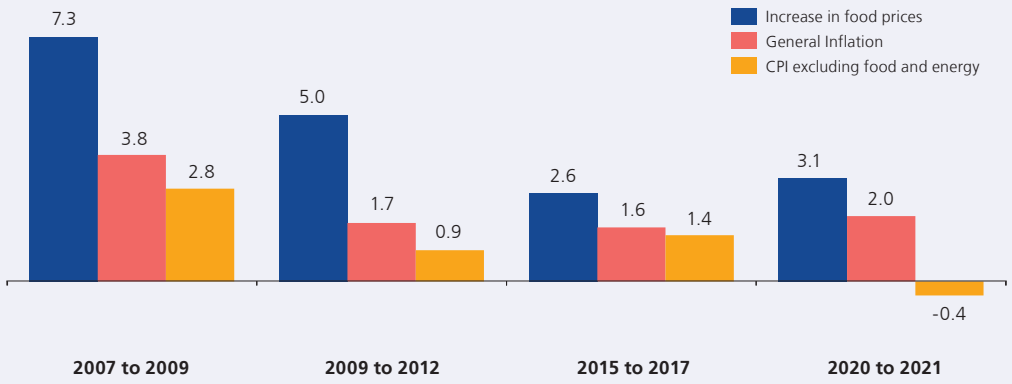
Episodes	Dates	Duration	Expectation on inflation	Total inflation	CPI excluding food and energy	Exchange rate	Depreciation 12 months
Episode 1	Jan08-Feb09	14 months	4.8	6.7	4.6	3.24	11.4
Episode 2	Mar11-Jun12	16 months	3.3	4.7	2.6	2.82	-0.9
Episode 3	Jul15-Jul16	13 months	3.5	4.6	3.8	3.51	15.1
Episode 4	Mar17-Apr17	2 months	3.1	4.0	2.8	3.26	-1.6

The duration (in number of months) of inflation expectations' misalignment with respect to the inflation target range has been decreasing over time. The longest episode in which inflation expectations were above the target range lasted for 14 consecutive months (between January 2008 and February 2009), while the second longest episode of expectations misalignment was observed for 13 consecutive months (between July 2015 and July 2016). On the other hand, other periods in which expectations have been above the target range have been of very short duration, i.e. the episode between March and April 2017, or have been intermittent, i.e, the episode between March 2011 and June 2012.

So far in the current episode (which began in July 2021), total inflation and food price increases have been above the upper band of the target range during the months of June, July, and August. However, the deviation of total inflation and the growth of food prices from the upper limit of the target range are lower than those registered in previous episodes, as shown in the following graph.

TOTAL INFLATION, FOOD INFLATION AND CPI EXCLUDING FOOD AND ENERGY IN PERU DURING EPISODES OF HIGH INTERNATIONAL FOOD INFLATION

(Maximum deviation of year-on-year inflation from the upper limit of the target range)



By way of conclusion, the IT scheme and the BCRP's commitment to monetary stability, which has allowed it to acquire a high level of credibility, facilitates the anchoring of expectations within the target range. Thus, temporary deviations of inflation from the BCRP target range do not generate a de-anchoring of expectations in the medium term. This is also reinforced by the transparency and communication of BCRP actions.