



INFLATION REPORT

March 2022

**Recent trends
and macroeconomic
forecasts
2022-2023**

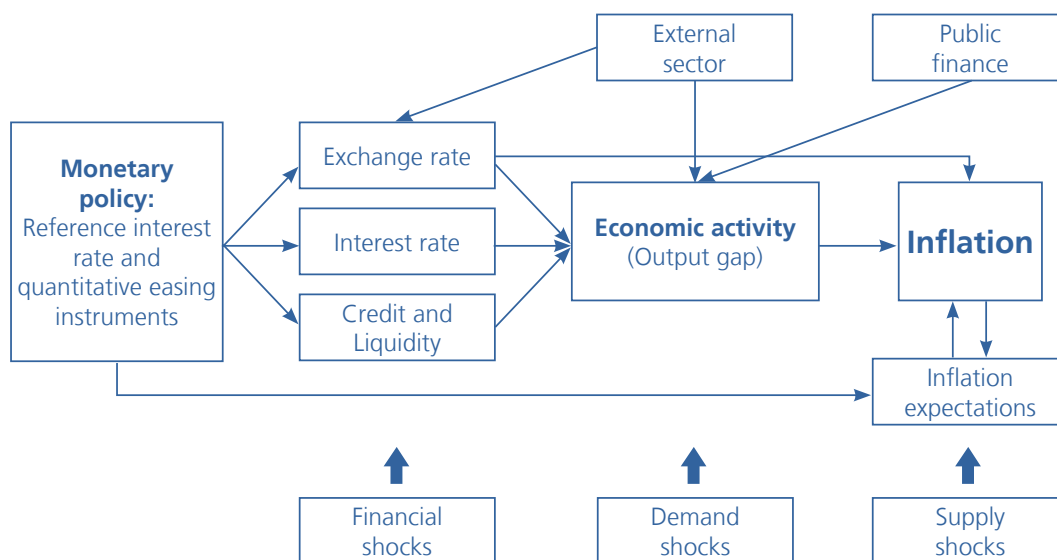


CENTRAL RESERVE BANK OF PERU
100 YEARS | 1922 - 2022

INFLATION REPORT

Recent Trends and Macroeconomic Forecasts 2022 - 2023

March 2022



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INFLATION REPORT

Recent trends and macroeconomic forecasts

CENTRAL RESERVE BANK OF PERU

INFLATION REPORT:

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This **Inflation Report** has been prepared using data on the balance of payments and the gross domestic product as of the fourth quarter of 2021, data on the trade balance, monthly GDP, and monetary accounts as of January 2022, and data on the operations of the non-financial public sector, inflation, financial markets and the exchange rate as of February 2022.

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.
- This Report includes the macroeconomic projections for 2022-2023 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 March 10, 2022.
- The following Inflation Report will be published on Friday, June 17, 2022.



Summary

- i. Since the end of 2021, activity in most of the world's major economies has been less dynamic due to constraints associated with increased contagion from the omicron variant of COVID and rising inflation. Supply chain disruptions and high energy prices are expected to persist during the year, and a more accelerated withdrawal of monetary stimulus is expected in the main developed economies. The conflict between Russia and Ukraine has heightened uncertainty regarding the evolution of the global economy, which is already having a direct impact on the prices of oil, natural gas and grains. In view of this, the **world economy** is expected to grow at 3.8 and 3.2 percent in 2022 and 2023, respectively, lower rates than projected in the previous Report (4.3 and 3.4 percent).
- ii. In 2021 the **terms of trade** grew by 11.8 percent in a scenario where export prices continued to benefit from the global economic recovery, while import prices increased due to the shocks that have been affecting the fuel and energy markets, in addition to problems in the supply chain. The terms of trade would remain at high levels, showing moderate percentage changes in 2022 (-1.4 percent) and 2023 (0.6 percent). However, higher increases in export (6.6 percent) and import (8.1 percent) prices would be observed in 2022, the latter component generating upward pressures on inflation. On the other hand, although a gradual recovery in gas supply and a reduction in oil prices compared to the previous year are expected in 2023, international food input prices are expected to remain high.
- iii. The **current account of the 2021 balance of payments** recorded a deficit of 2.7 percent of GDP, equal to the historical average deficit of the last 40 years (-2.7 percent). The deficit balance for the year resulted from: (i) higher imports of goods, reflecting higher input prices and the recovery of domestic demand; (ii) higher profits of companies with foreign direct investment in the country. and (iii) higher payments abroad for international freight. In 2022 the current account deficit is projected to decrease to 1.6 percent of GDP due to a higher trade surplus in goods –driven by higher export prices– and by lower profits of companies with foreign direct investment (FDI). In 2023, the deficit would continue to narrow further, reaching 0.6 percent of output, following the start of the correction in freight prices –which would reduce the services deficit– as well as the continued increase in the goods trade surplus.
- iv. **Economic activity** increased by 13.3 percent in 2021, exceeding the level observed in 2019 by 0.8 percent. This result is explained by the easing of health restrictions and the progress achieved in mass vaccination of the target population, in a context of fiscal stimulus and an expansionary monetary policy. During the second half of the year, activity slowed down due to a lower statistical effect and greater political uncertainty, which deteriorated expectations about the future of the economy. As a result, private investment grew at a slower pace, while public expenditure contracted in the last quarter, mainly due to lower investment execution.

Growth rates of 3.4 and 3.2 percent are expected in 2022 and 2023, respectively, with a higher relative contribution from net exports, in contrast with 2021 where a





higher relative growth of domestic demand was observed. These projections assume a favorable environment for business activity, in which macroeconomic and financial stability is preserved, which would contribute to boost the execution of investment projects and the creation of new jobs. The central scenario also considers a lower monetary stimulus at the local and global levels, a recovery of business and consumer confidence, the normalization of spending habits, and the recovery of the economic sectors with the highest degree of physical interaction after the massive vaccination of the population and the improvement seen in the pandemic scenario.

- v. In February 2022 the **fiscal deficit** accumulated in the last twelve months was equivalent to 2.4 percent of GDP, reflecting twelve consecutive months of reduction in the fiscal deficit after the increasing trend associated with the pandemic observed in 2020. This lower deficit reflects the increase in current revenues of the General Government due to the recovery of economic activity and higher commodity prices, as well as lower non-financial expenditure due to the end of the extraordinary spending measures adopted to face the health emergency and for economic reactivation purposes. In 2022, the deficit is estimated to close at 2.5 percent of GDP, before falling to 2.2 percent in 2023.

The **gross debt** of the Non-Financial Public Sector would fall from 36.1 to 35.2 percent of GDP between 2021 and 2022, showing a level of 34.8 percent at the end of the projection horizon. On the other hand, the **debt net** of deposits of the Non-Financial Public Sector would increase from 21.9 to 22.4 percent of GDP in the same period and would represent 23.0 percent of output in 2023.

- vi. During the first months of 2022, the BCRP Board of Directors continued with the normalization of the monetary policy stance initiated in August 2021. As a result, the BCRP Board has raised the benchmark **monetary policy interest rate** to 4.00 percent as of March 2022, accumulating so far eight increases in total. Thus, after reaching a historic low in August 2021, the benchmark real interest rate is slightly positive today (0.25 percent in March 2022).

In addition, the balance of liquidity injection operations in domestic currency was reduced from S/ 56.7 billion at the end of December 2021 to S/ 50.5 billion as of March 14, 2022. This balance of liquidity injection operations is equivalent to 5.8 percent of GDP, of which S/ 34.8 billion corresponds to the settled amount of government-guaranteed credit portfolio repo transactions. In comparative terms, the total balance of these operations is 6.4 times higher than the maximum balance reached during the 2008-2009 international financial crisis (S/ 7.9 billion) and 1.6 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** accelerated from an expansion rate of 2.8 percent in September 2021 to a year-on-year rate of 6.2 percent in January 2022. After showing a significant increase in the credit-to-GDP ratio in 2020 and a similar drop in 2021 due to a strong recovery in economic activity, credit to the private sector is expected to moderate its growth to 4.5 and 5.5 percent in 2022 and 2023, respectively.
- viii. Year-on-year **inflation** rose from 5.66 percent in November to 6.15 percent in February, driven by the higher prices of food with high imported content, fuels, and

by the depreciation of the sol. Inflation excluding food and energy rose from 2.91 to 3.26 percent in the same period, above the target range. The different indicators of trend inflation are above the target range, although there has been some moderation in their pace of growth between January and February.

Based on the information available today and taking into account the gradual recovery of economic activity, year-on-year inflation is projected to return to the target range by the beginning of the second quarter of 2023 and to converge to its central value by the end of the projection horizon. This projection assumes the reversal of the effect of transitory factors on the inflation rate (exchange rate, the international prices of fuel and grains) in a context in which the output gap will gradually close, while the gradual withdrawal of monetary stimulus continues and inflation expectations return to the center of the target range in the following months.

- ix. Given the recent international conflict events, the upward bias in the inflation projection has been raised. The following main risks and contingencies are considered in the projection: (i) increase in international food and fuel prices due to production and supply problems; (ii) persistent global inflation and its possible impact on inflation expectations and global economic growth; (iii) a lower level of local activity if business and consumer confidence do not recover, and (iv) upward pressures on the exchange rate and greater volatility in financial markets due to episodes of capital outflows in emerging economies or increased political uncertainty.





SUMMARY OF INFLATION REPORT FORECAST

	2021	2022 ^{1/}		2023 ^{1/}	
		IR Dec.21	IR Mar.22	IR Dec.21	IR Mar.22
Real % change					
1. Gross Domestic Product	13.3	3.4	3.4	3.2	3.2
2. Domestic demand	14.4	3.0	3.0	3.0	3.0
a. Private consumption	11.7	4.0	4.1	3.5	3.5
b. Public consumption	10.7	1.5	1.5	2.0	2.0
c. Fixed private investment	37.6	0.0	0.0	2.0	2.0
d. Public investment	23.7	4.5	4.0	1.6	1.6
3. Exports (good and services)	14.0	7.5	7.5	7.6	7.6
4. Imports (good and services)	18.8	5.6	5.6	6.7	6.7
5. Global economic growth	5.7	4.3	3.8	3.4	3.2
Memo:					
Output gap ^{2/} (%)	-3.7	-5.5 ; 0.5	-5.5 ; 0.5	-5.0 ; 1.0	-5.0 ; 1.0
% change					
6. Inflation	6.4	2.9	3.6	2.1	2.1
7. Expected inflation ^{3/}	3.5	3.5	3.9	2.9	3.0
8. Expected depreciation ^{3/}	12.1	2.7	-3.5	1.6	-0.3
9. Terms of trade	11.8	-1.5	-1.4	-0.7	0.6
a. Export prices	30.3	2.1	6.6	-0.6	-0.9
b. Import prices	16.6	3.6	8.1	0.0	-1.5
Nominal % change					
10. Currency in circulation	16.0	3.0	3.0	1.5	1.5
11. Credit to the private sector	4.4	3.5	4.5	5.5	5.5
% GDP					
12. Gross fixed investment	25.3	24.3	24.6	24.0	24.1
13. Current account of the balance of payments	-2.7	-1.3	-1.6	-0.8	-0.6
14. Trade balance	6.6	6.6	6.7	6.4	6.8
15. Long-term external financing of the private sector ^{4/}	-7.5	-0.1	-0.4	-0.2	0.0
16. Current revenue of the general government	21.0	20.6	20.7	20.6	20.7
17. Non-financial expenditure of the general government	22.3	21.8	21.8	21.4	21.3
18. Overall balance of the non-financial public sector	-2.6	-2.8	-2.5	-2.4	-2.2
19. Balance of total public debt	36.1	35.9	35.2	35.6	34.8
20. Balance of net public debt	21.9	23.7	22.4	24.4	23.0

IR: Inflation Report.

1/ Forecast.

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

3/ Survey on expectations to the analysts and financial entities carried out at the time of publication of the respective Inflation Report. Data observed in the case of depreciation for 2021, and the average of expectations throughout year in case of inflation has been considered.

4/ Includes net direct investment, foreign assets investment from residents (AFP), foreign net portfolio investment, and private sector's long term disbursement.

I. External Sector

1. The recovery in global economic activity has been constrained by a number of factors outlined in the December Inflation Report and whose persistence, in some cases, has exceeded initial forecasts. For example, it is estimated that supply chain shocks could continue to affect global growth during the second half of 2022 and even during 2023.

Furthermore, high energy prices, particularly gas and oil prices, have shown a higher than expected upward trend, supported by the conflict between Russia and Ukraine and by a weak supply growth in major oil-producing countries. Therefore, It is assumed that energy prices will remain high and above what was forecast in the December Report, basically during the second quarter of the year.

These supply shocks, together with the dynamism of private demand and fiscal stimuli, have been reflected in greater inflationary pressures at a global level and have increased expectations of a more aggressive withdrawal of monetary stimuli by the main central banks.

On the epidemiological side, the increase in infections associated with the new omicron variant led to the application of mobility restrictions, affecting growth between the end of 2021 and the beginning of this year. Since February, however, there has been a significant drop in the number of new infections, which has led to the lifting of restrictions in several developed economies.

As a result of these developments, global growth projections for 2022 have been revised from 4.3 percent to 3.8 percent. Lower growth rates are forecast for the United States, the Eurozone, China, Brazil and Russia, among other countries, which would be offset in part by higher growth in India than forecast in the December Report. The growth projection for 2023 has also been revised down, from 3.4 to 3.2 percent.

Recent developments in global economic activity

2. **Between the end of last year and the beginning of this year, economic activity showed signs of uneven recovery, affected by the expansion of**

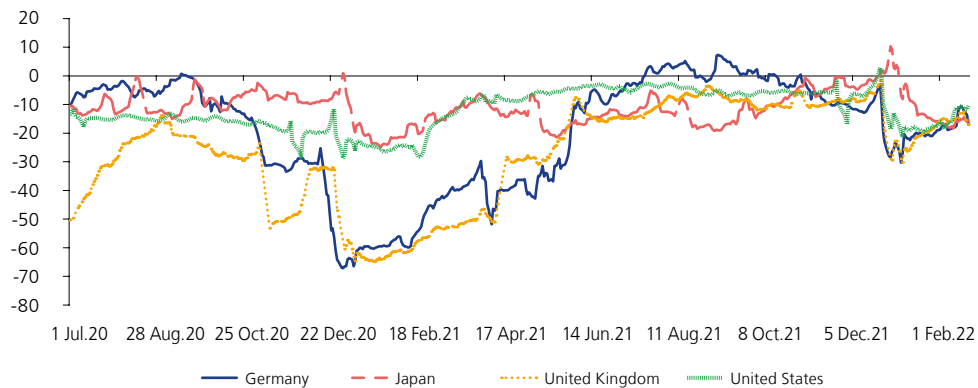




the omicron variable and the persistence of various supply shocks beyond expectations.

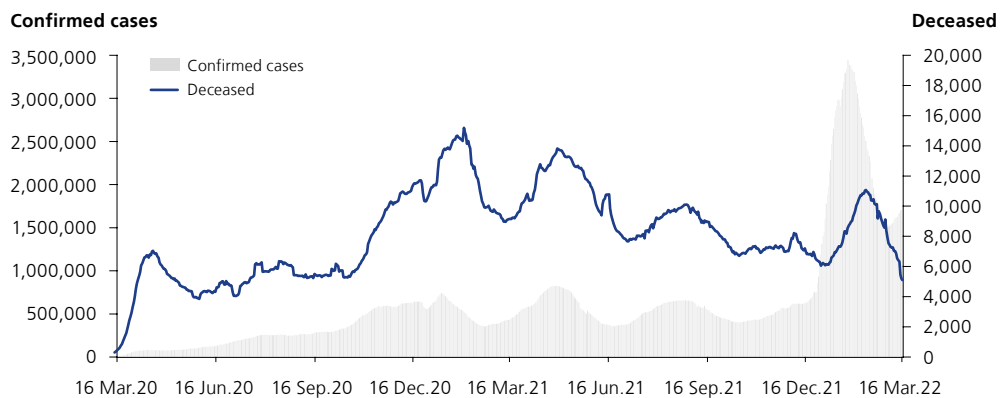
On the epidemiological side, the appearance of a new, more transmissible variant (omicron) led to a significant resurgence of new cases of COVID-19, with successive records in the number of new daily infections being observed both globally and in most countries. Despite its lower lethality and the progress made in the vaccination process, the high transmissibility of the omicron variant led to the adoption of new mobility restriction measures in many countries, such as China, Germany, Japan, and the United Kingdom. However, it should be pointed out that, at the time of closing this Report, global cases had significantly decreased with respect to the peaks observed at the end of January and that the restrictions adopted between December 2021 and January 2022 had begun to be lifted in several countries (e.g. the United Kingdom).

Graph 1
CHANGES IN MOBILITY: STORES AND ENTERTAINMENT VENUES
(%)



Source: Google Mobility Trends.

Graph 2
COVID-19 AVERAGE DAILY NUMBER OF CASES AND DEATHS



Source: Johns Hopkins University and Oxford.

As for the supply shocks, some of them are associated with the adoption of containment measures in response to the new outbreaks of COVID-19, particularly in China, where the “zero tolerance” policy led to massive quarantines in response to the appearance of the first infections and affected the production of goods and the supply chain. However, other shocks continue to be associated with the recomposition of demand as a result of changes in consumption patterns, which have not been adequately addressed by production. In other cases, high energy prices have meant an increase in costs and even to the closure of plants, as in the case of zinc refineries in several European countries. According to IMF estimates, these shocks in the global chain would have had an impact of 0.5 and 1.0 percentage points on growth and core inflation, respectively, during 2021. Contrasting with what was estimated in the December Inflation Report, these supply shocks are now expected to continue affecting growth in the second half of this year and even during 2023.

This persistence of shocks has also generated additional pressures on prices. These supply shocks weigh in addition to demand pressures resulting from private savings generated during the pandemic, favorable financial conditions and fiscal stimulus, among other factors. As a result, inflation has risen globally and, in most countries, inflation rates have reached levels not seen in several decades that are well above the targets set by central banks. In this context, the main central banks have decided to withdraw monetary stimulus earlier than anticipated in the December Inflation Report, either by reducing their asset purchase programs or by increasing (or announcing a future increase) in interest rates.

The worsening of geopolitical tensions is another factor not foreseen in the December Inflation. This is particularly noteworthy in the Russia-Ukraine conflict which would affect global growth and inflation through several channels, one of the direct impacts being upward pressures on energy and grain prices (see Box 1).

3. **These developments have been reflected in a more moderate pace of growth between the end of the fourth quarter of 2021 and the beginning of the first quarter of this year.** At the country level, monthly indicators suggest a moderate and uneven economic recovery.

In the fourth quarter, the global economy showed a recovery mainly as a result of the dynamism recorded in the months of October and November. As in previous months, activity was driven by the continuation of monetary and fiscal stimulus in developed economies, the reopening of activity following the decline in delta-variant COVID-19 cases, and increased household spending. This recovery was offset by supply shocks such as supply chain problems and higher energy prices.

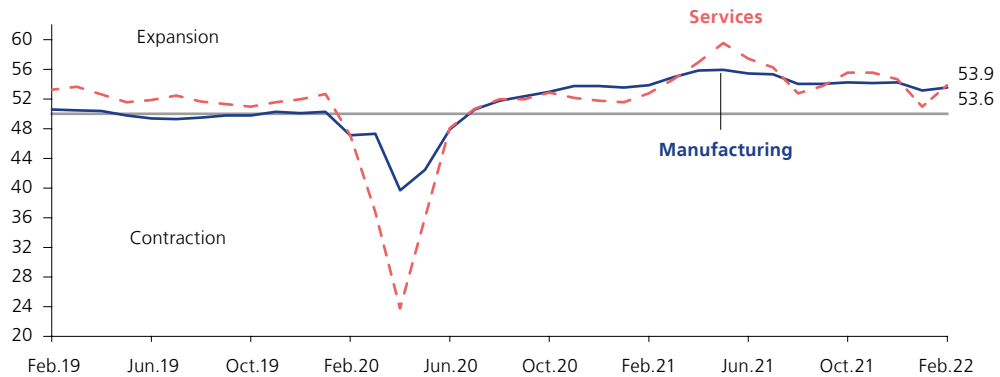
However, since the end of 2021, there has been less dynamism in activity in most major economies. As mentioned above, the emergence of a more transmissible variant –such as the omicron– and higher inflation rates affected the evolution of economic activity. This was reflected in the evolution of several indicators such as the global PMI indices for manufacturing and services which fell in December 2021 and January





2022. In February, the global index also increased in aggregate terms, in line with the lifting of mobility restrictions in some developed economies.

Graph 3
GLOBAL PMI: WORLD ECONOMIC ACTIVITY INDEX FOR MANUFACTURING AND SERVICES SECTORS
 Diffusion index



Source: JP Morgan.

Table 1
JP MORGAN GLOBAL ACTIVITY INDEX: MAJOR ECONOMIES

I. Services												
	Mar.20	Jun.20	Sep.20	Dec.20	Mar.21	Jun.21	Sep.21	Oct.21	Nov.21	Dec.21	Jan.22	Feb.22
Global	36.8	48.1	52.0	51.8	54.7	57.4	53.8	55.6	55.6	54.7	51.0	53.9
USA Markit	39.8	47.9	54.6	54.8	60.4	64.6	54.9	58.7	58.0	57.6	51.2	56.5
China Caixin	43.0	58.3	54.8	56.3	54.3	50.3	53.4	53.8	52.1	53.1	51.4	50.2
Eurozone	26.4	48.3	48.0	46.4	49.6	58.3	56.4	54.6	55.9	53.1	51.1	55.5
United Kingdom	34.5	47.1	56.1	49.4	56.3	62.4	55.4	59.1	58.5	53.6	54.1	60.5
Japan	33.8	45.0	46.9	47.7	48.3	48.0	47.8	50.7	53.0	52.1	47.6	44.2

II. Manufacturing												
	Mar.20	Jun.20	Sep.20	Dec.20	Mar.21	Jun.21	Sep.21	Oct.21	Nov.21	Dec.21	Jan.22	Feb.22
Global	47.3	47.9	52.4	53.8	55.0	55.5	54.1	54.3	54.2	54.3	53.2	53.6
USA Markit	48.5	49.8	53.2	57.1	59.1	62.1	60.7	58.4	58.3	57.7	55.5	57.3
China Caixin	50.1	51.2	53.0	53.0	50.6	51.3	50.0	50.6	49.9	50.9	49.1	50.4
Eurozone	44.5	47.4	53.7	55.2	62.5	63.4	58.6	58.3	58.4	58.0	58.7	58.2
United Kingdom	47.8	50.1	54.1	57.5	58.9	63.9	57.1	57.8	58.1	57.9	57.3	58.0
Japan	44.8	40.1	47.7	50.0	52.7	52.4	51.5	53.2	54.5	54.3	55.4	52.7

Source: JP Morgan.

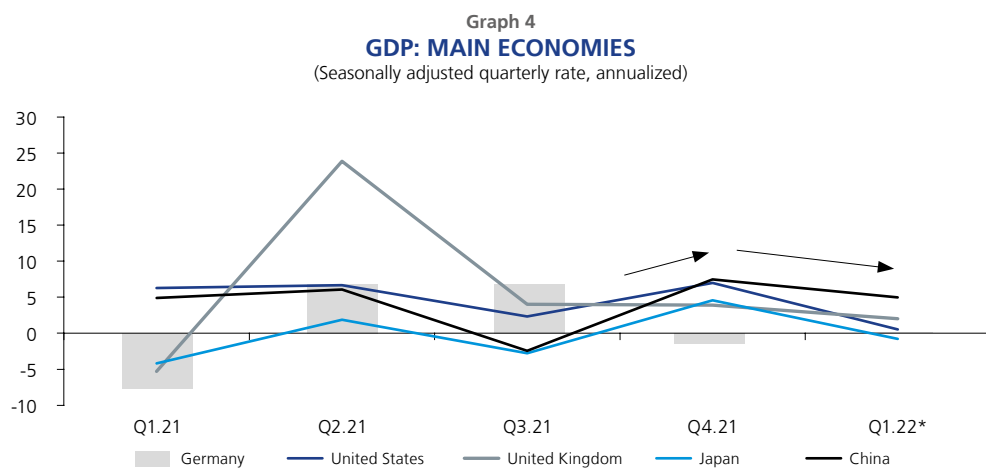
At the country level, a slowdown in GDP growth is estimated in the United States, the United Kingdom, Japan, and China in the first quarter of the year. The slowdown in growth in the **United States** reflects developments in the housing sector, deteriorating consumer confidence (affected by inflation and energy prices) and the heavy build-up of inventories during the previous quarter. There have also been delays and impasses in the approval of the Built Back Better initiative, aimed at strengthening the social safety net, combating climate change and regularizing undocumented workers.

In the **United Kingdom**, the increase in COVID-19 cases affected activity since December 2021 (GDP registered its first contraction since July of the same year in

that month) and generated a labor shortage in the following months that affected manufacturing and services activity: the manufacturing PMI reached a four-month low and the services PMI reached levels not seen since February 2021. It is worth mentioning that, in view of the sharp reduction in contagions, in February the government announced the easing of social containment measures, so a recovery in activity is expected in the following months.

In the case of **China**, the slowdown is explained by the lower dynamism of the export and real estate sectors, as well as by the measures adopted as part of the “zero tolerance” plan against the outbreaks of COVID-19 associated with the new omicron variant. In this context, during January and February the Chinese authorities announced new infrastructure programs and the central bank reduced its interest rate. The monetary stimulus measures were taken amid a context of low and declining inflation rates.

Among the major economies, only **Germany** reported a higher growth rate in the first quarter of 2022 than in the previous quarter, when the economy was particularly affected by the slowdown in China, rising oil and gas prices, and supply chain problems. The expected recovery in the first quarter of this year mainly reflects developments in the service sector, but is expected to be constrained by the increase in new cases of COVID-19 (a trend contrasting epidemiological developments in other European countries).



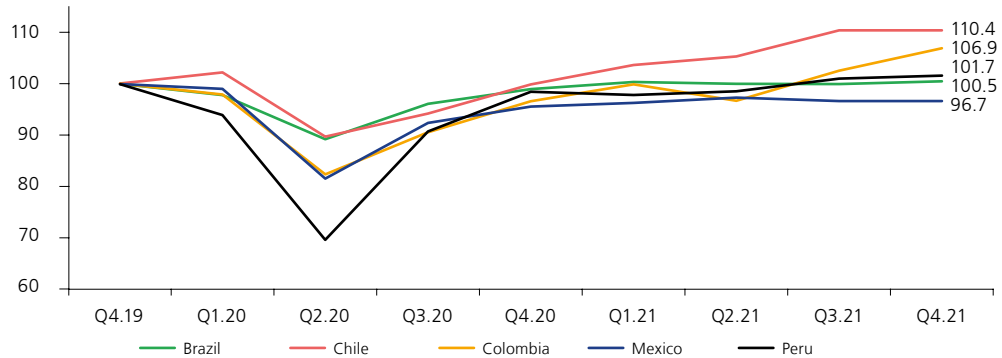
* Median of investment house projections.
Source: Statistical institutes and investment houses.

In **Latin America**, economic growth has been supported by favorable external conditions reflected in high export prices (for grains, oil and basic metals) and international financial conditions, in addition to the rapid progress in the vaccination process. It should be noted that, according to monthly activity indices and quarterly data, most countries in the region are registering higher levels than those observed prior to the pandemic (February 2020). However, this trend has been moderated by the impact of high inflation on consumption and lower fiscal and monetary stimuli.





Graph 5
LATIN AMERICA: QUARTERLY GDP*
(Index 100 = Q4.19)

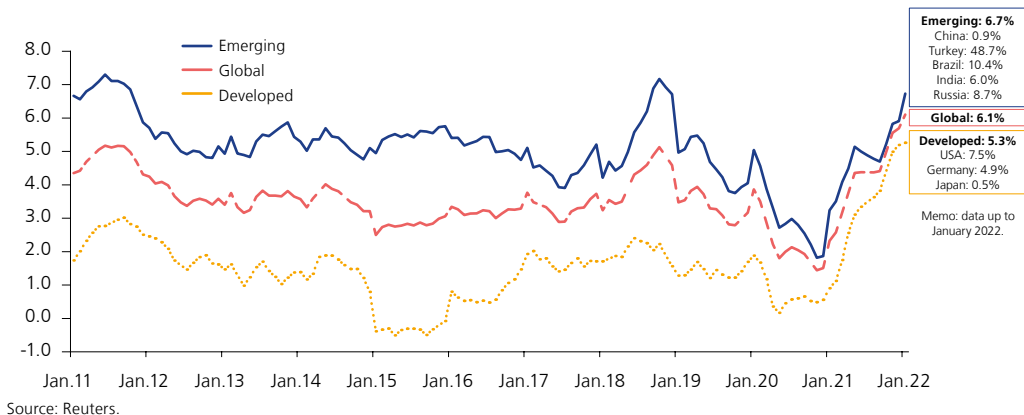


* Seasonally adjusted series.
Source: Statistical institutes and central banks.

4. **Maintaining the trend outlined in previous Reports, inflationary pressures have continued to rise globally.** The supply shocks highlighted in the December Inflation Report have persisted so far this year and the probability that they will persist beyond the first half of 2022 has increased significantly. This is compounded by demand pressures reflected in the closing of the output gap and expansionary fiscal policies in most developed economies.

Although the rise is registered in both developed and emerging economies, the increase has been more pronounced in the former and the levels reached have been the highest in several years, even decades. Within the emerging economies, the largest price increases are observed in Latin America (where Brazil stands out) and Europe (Turkey, Czech Republic. and Russia).

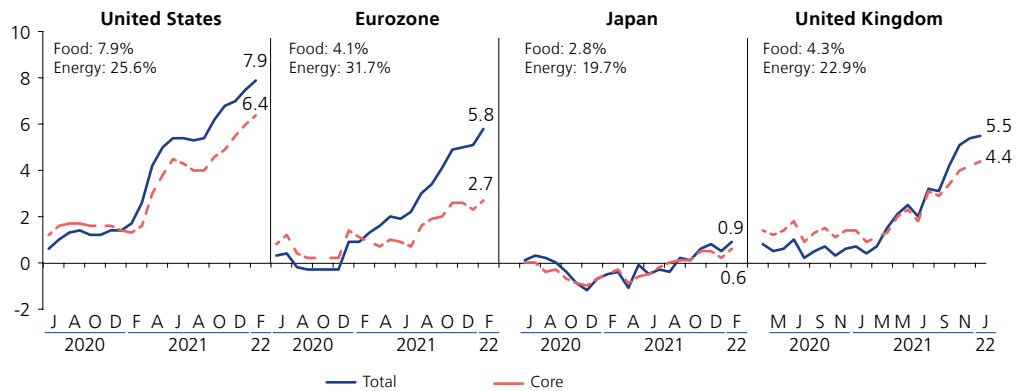
Graph 6
GLOBAL INFLATION
(12-months % chg.)



In the United States, the 7.9 percent inflation rate recorded in February was the highest in 40 years, while core inflation followed a similar trend and registered 6.4 percent, the highest level observed since August 1982. Similarly, the personal consumption expenditures (PCE) price index rose to 6.1 percent in January, while the core indicator, which excludes food and energy prices, rose to 5.2 percent (a rate not observed since August 1983).

In the United Kingdom, the 5.5 percent rate recorded in January was the highest in 30 years and in the Eurozone, it reached an all-time high of 5.9 percent in February. Moreover, in Germany inflation reached 5.1 percent in February due, among other factors, to bottlenecks in several activities.

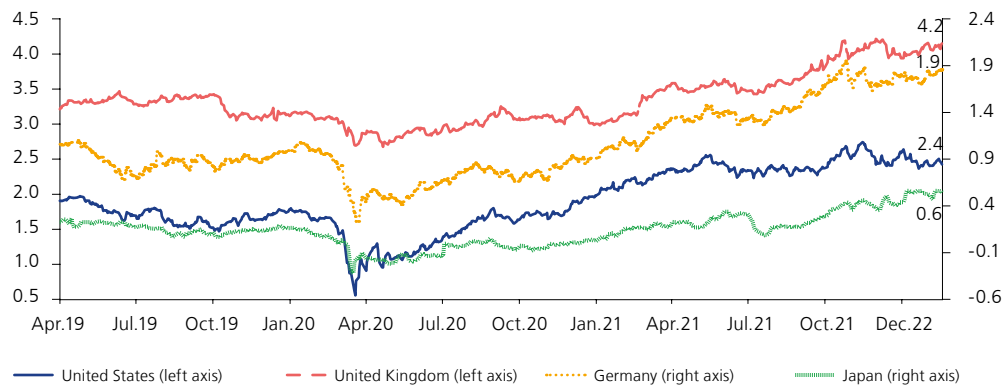
Graph 7
INFLATION IN DEVELOPED ECONOMIES 2020-2022
(12-months % chg.)



Source: Central banks and statistical institutes.

The upward trend in inflation was not reflected in an increase of similar magnitude in inflation expectations. Breakeven inflation, estimated from the difference between nominal and inflation-indexed yields, shows inflation rates below current levels and in line with central bank targets. The exception is the United Kingdom, where medium and long-term expectations remain high and have been above 4 percent.

Graph 8
BREAKEVEN INFLATION RATES (10-YEAR)



Source: Reuters.

- In the economies with inflation targeting, the year-on-year inflation rate has been above the target range in most cases**, this evidence being observed in both developed and emerging economies. At the regional level, the greatest pressures are observed in Europe and the Americas.





Table 2
INFLATION
(12-months % chg.)

Región/Country	Dec.20	Jun.21	Sep.21	Dec.21	Jan.22	Feb.22	Target (%)	Maximum from:
America								
United States	1.4	5.4	5.4	<u>7.0</u>	7.5	7.9	2.0	Jan.82
Canada	0.7	3.6	4.4	<u>4.8</u>	5.1	5.7	2.0+/-1.0	Aug.91
Uruguay	9.4	7.3	7.4	<u>8.0</u>	8.2	8.9	3.0-7.0	Feb.21
Colombia	1.6	3.6	4.5	<u>5.6</u>	6.9	8.0	3.0+/-1.0	Sep.16
Chile	3.0	3.8	5.3	<u>7.2</u>	7.7	7.8	3.0+/-1.0	Nov-08
Mexico*	3.2	5.9	6.0	<u>7.4</u>	7.1	7.3	3.0+/-1.0	Dec.17
Brazil	4.5	8.3	10.3	<u>10.1</u>	10.4	10.5	3.75+/-1.50	Nov-21
Peru*	2.0	3.3	5.2	<u>6.4</u>	5.7	6.2	2.0+/-1.0	Jan.09
Asia								
Indonesia	1.7	1.3	1.6	<u>1.9</u>	2.2	2.1	3.0+/-1.0	--
India	4.6	6.3	4.4	<u>4.9</u>	6.0	6.1	4.0+/-2.0	Jul.21
Philippines	3.3	3.7	4.2	<u>3.2</u>	3.0	3.0	3.0+/-1.0	--
Korea	0.5	2.4	2.5	<u>3.7</u>	3.6	3.7	2.0	Nov.21
Thailand	-0.3	1.2	1.7	<u>2.2</u>	3.2	5.3	2.5+/-1.5	Sep.08
Israel	-0.7	1.7	2.5	<u>2.8</u>	3.1	3.5	1.0-3.0	Feb.10
Europe								
Eurozone	-0.3	1.9	3.4	<u>5.0</u>	5.1	5.9	2.0	Record
Germany	-0.3	2.3	4.1	<u>5.3</u>	4.9	5.1	2.0	--
France	0.0	1.5	2.2	<u>2.8</u>	2.9	3.6	2.0	Jul-08
Italy	-0.2	1.3	2.5	<u>3.9</u>	4.8	5.7	2.0	Aug.95
Spain	-0.5	2.7	4.0	<u>6.7</u>	6.0	7.6	2.0	Dec.86
Serbia	1.3	3.3	5.7	<u>7.9</u>	8.2	8.8	3.0+/-1.5	Jun.13
Hungary	2.7	5.3	5.5	<u>7.4</u>	7.9	8.3	3.0+/-1.0	Aug.07
Norway	1.4	2.9	4.1	<u>5.3</u>	3.2	3.7	2.5	--
Czech Republic	2.3	2.8	4.9	<u>6.6</u>	9.9	11.1	2.0+/-1.0	Jun.98
United Kingdom	0.6	2.5	3.1	<u>5.4</u>	5.5	n.d.	2.0	Mar.92
Russia	4.9	6.5	7.4	<u>8.4</u>	8.7	9.2	4.0	Jan.16
Poland	2.4	4.4	5.9	<u>8.6</u>	9.2	8.5	2.5+/-1.0	--
Iceland	3.6	4.3	4.4	<u>5.1</u>	5.7	6.2	2.5	Apr.12
Sweden*	0.5	1.3	2.5	<u>3.9</u>	3.7	4.3	2.0	Sep.08
Turkey	14.6	17.5	19.6	<u>36.1</u>	48.7	54.4	5.0+/-2.0	Mar.02
Romania	2.1	3.9	6.3	<u>8.2</u>	8.4	8.5	2.5+/-1.0	Jul.08
Switzerland	-0.8	0.6	0.9	<u>1.5</u>	1.6	2.2	<2.0	Oct.08
Africa								
South Africa*	3.1	4.6	5.0	<u>5.9</u>	5.7	n.d.	3.0-6.0	Mar.17
Ghana	10.4	7.8	10.6	<u>12.6</u>	13.9	15.7	8.0+/-2.0	Oct.16
Oceania								
Australia **	0.9	3.8	3.0	3.5	n.d.	n.d.	2.0-3.0	Q1.2009
New Zealand **	1.4	3.3	4.9	5.9	n.d.	n.d.	2.0+/-1.0	Q2.1990

* The maximum corresponds to the December observation.

** Australia and New Zealand publish their data on a quarterly basis. The next data will be for the month of March.

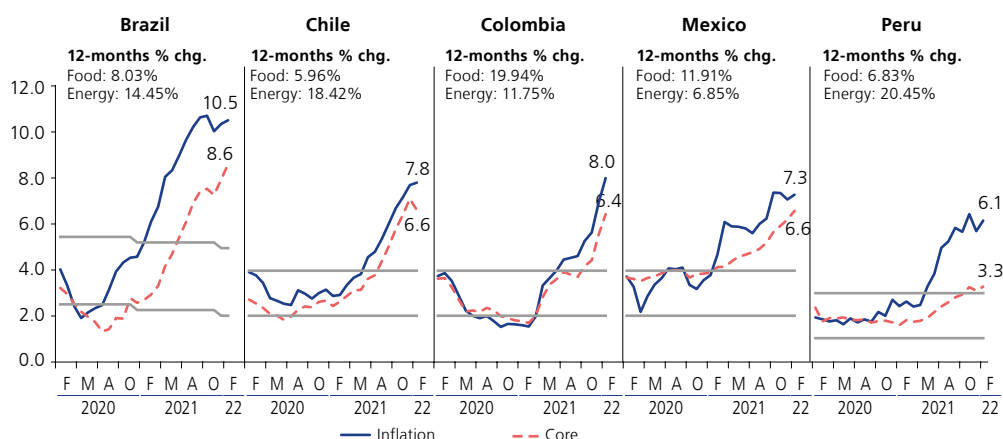
Note: Includes countries with an inflation target range, as well as economies with a target inflation level.

Source: central banks and statistical institutes of each country.

In the economies of the Latin American region, inflation remained above the target range, but in some countries –such as Mexico and Peru– there was a downward trend with respect to the rates recorded at the end of 2021. Inflation rates are influenced by the strong growth in food and energy prices (which are well above average) and by the recovery of domestic demand as a result of favorable epidemiological developments.

At the country level, the rise of inflation in Brazil stands out. After showing a temporary reduction in December, inflation resumed its upward trend and registered an annual rate of 10.5 percent. A similar upward trend was recorded in core inflation, which excludes the most volatile components of the basket, such as food and energy. Although the rates are lower than those observed for total inflation, this variable is above the upper band of the target range in all countries in the region.

Graph 9
INFLATION IN LATIN AMERICA 2020-2022
(%)



Note: in the case of Brazil, this refers to the energy component within the home.
Source: Central banks and national statistical institutes.

6. **In this context of rising inflationary pressures, most central banks have begun a partial withdrawal of monetary stimulus, although this does not necessarily imply a contractionary monetary policy.** This withdrawal is expected to be less gradual than anticipated in the December Inflation Report.

The main central banks of developed economies, with the exception of Japan, have continued carrying out the withdrawal of monetary stimulus initiated towards the end of last year. This withdrawal has been taking the form of an increase in interest rates or a reduction in asset purchases.

In the United States, during the first months of the year the Federal Reserve (Fed) continued to reduce its asset purchase program (which culminated in the first half of March). In line with expectations, at its March 16 meeting, it raised its interest rate by 25 basis points (to a range between 0.25 and 0.50 percent), the first rate increase since it established minimum levels at the beginning of the COVID-19 pandemic. The Fed also indicated that it would reduce the size of its assets through lower holdings of Treasury bonds and mortgage-backed securities. In terms of projections, it revised its growth outlook downward and its inflation outlook upward, pointing out in its policy statement that upward pressures on inflation have been intensified by the conflict between Russia and Ukraine.





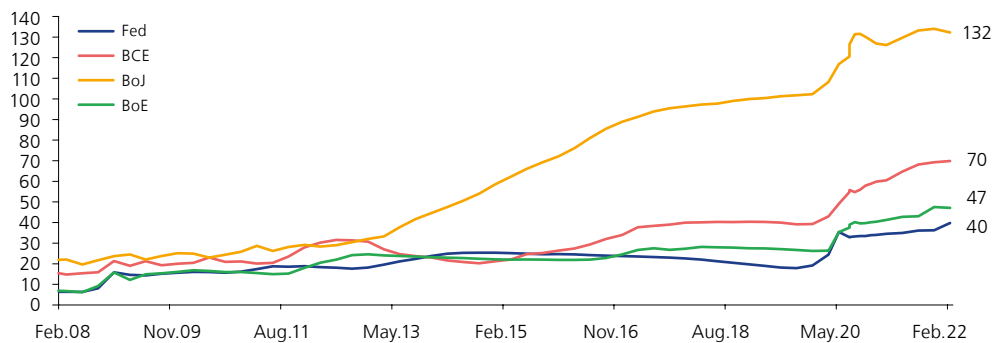
Table 3
FED PROJECTIONS*

	2022		2023		2024		Long term	
	Dec.21	Mar.22	Dec.21	Mar.22	Dec.21	Mar.22	Dec.21	Mar.22
Growth	4.0	2.8	2.2	2.2	2.0	2.0	1.8	1.8
Unemployment rate	3.5	3.5	3.5	3.5	3.5	3.6	4.0	4.0
Inflation (PCE)	2.6	4.3	2.3	2.7	2.1	2.3	2.0	2.0
Core inflation (core PCE)	2.7	4.1	2.3	2.6	2.1	2.3	-	-
Note: Core PCE excludes food and energy.								
Interest rate (%)	0.9	1.9	1.6	2.8	2.1	2.8	2.5	2.4
Interest rate range (%)	0.4-1.1	1.4-3.1	1.1-2.1	2.1-3.6	1.9-3.1	2.1-3.6	2.0-3.0	2.0-3.0

* Includes 16 data from the individual projections of the members of the Fed at the end of the period.
Source: Fed.

The European Central Bank (ECB) confirmed the culmination of the purchase program introduced during the pandemic –the Pandemic Emergency Purchase Program (PEPP)–, which would be offset in part by a temporary increase in its regular purchase program (Asset Purchases Program, APP). On the other hand, after initiating the cycle in December with a 15 bps increase, the Bank of England raised its interest rate by 25 bps in February and March, accumulating an increase of 65 bps from the minimum level recorded in the wake of the pandemic. It also announced that it expects a reduction in the size of its balance sheet due to the reinvestment of maturing bonds. Other developed economies that have raised rates so far this year are New Zealand and South Korea, both of which have raised their rates by 25 bps.

Graph 10
CENTRAL BANKS: TOTAL ASSETS
(Percentage of GDP)



Note: Fed (United States Federal Reserve), ECB (European Central Bank), BoJ (Bank of Japan) and BoE (Bank of England).

In the case of the emerging economies, most Latin American and European central banks, as well as the central bank of South Africa, raised their interest rates. The rate hikes in Brazil (250 bps) and Chile (150 bps) stand out within the first group. In the European countries, Russia has raised its rate by 1,150 bps. After the 100 bps hike decided at the meeting scheduled at the beginning of February, it further increased its rate by 1050 bps towards the end of the same month as a result of the strong pressures against the ruble influenced by the start of the war between Russia and Ukraine. On the other hand, in line with lower inflationary pressures, most central banks in Asia did not raise their interest rates.

Table 4
MONETARY POLICY INTEREST RATES
 (%)

	Interes rate							Variation with respect to:			
	Dec.19	Dec.20	Jun.21	Nov.21	Dec.21	Jan.22	Feb.22	Mar.22	Dec.21	Dec.20	Dec.19
Developed economies											
USA	1.75	0.25	0.25	0.25	0.25	0.25	0.25	0.50	25	25	-125
Canada	1.75	0.25	0.25	0.25	0.25	0.25	0.25	0.50	25	25	-125
Eurozone	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
United Kingdom	0.75	0.10	0.10	0.10	0.25	0.25	0.50	0.75	50	65	0
Sweden	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Switzerland	-0.75	-0.75	-0.75	-0.75	-0.75	-0.75	-0.75	-0.75	0	0	0
Norway	1.50	0.00	0.00	0.25	0.50	0.50	0.50	0.50	0	50	-100
Japan	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	0	0	0
South Korea	1.25	0.50	0.50	1.00	1.00	1.25	1.25	1.25	25	75	0
New Zealand	1.00	0.25	0.25	0.75	0.75	0.75	1.00	1.00	25	75	0
Australia	0.75	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0	0	-65
Emerging economies											
Latin America											
Brazil	4.50	2.00	4.25	7.75	9.25	9.25	10.75	11.75	250	975	725
Colombia	4.25	1.75	1.75	2.50	3.00	4.00	4.00	4.00	100	225	-25
Peru	2.25	0.25	0.25	2.00	2.50	3.00	3.50	4.00	150	375	175
Chile	1.75	0.50	0.50	2.75	4.00	5.50	5.50	5.50	150	500	375
Mexico	7.25	4.25	4.25	5.00	5.50	5.50	6.00	6.00	50	175	-125
Asia											
Pakistan	13.25	7.00	7.00	8.75	9.75	9.75	9.75	9.75	0	275	-350
Philippines	4.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0	0	-200
Malaysia	3.00	1.75	1.75	1.75	1.75	1.75	1.75	1.75	0	0	-125
India	5.15	4.00	4.00	4.00	4.00	4.00	4.00	4.00	0	0	-115
Thailand	1.25	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0	0	-75
Indonesia	5.00	3.75	3.50	3.50	3.50	3.50	3.50	3.50	0	-25	-150
Israel	0.25	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0	0	-15
Taiwan	1.38	1.13	1.13	1.13	1.13	1.13	1.13	1.38	25	25	0
China	4.15	3.85	3.85	3.85	3.80	3.70	3.70	3.70	-10	-15	-45
Euroe											
Czech Republic	2.0	0.25	0.50	2.75	3.75	3.75	4.50	4.50	75	425	250
Poland	1.50	0.10	0.10	1.25	1.75	2.25	2.75	3.50	175	340	200
Ukraine	13.50	6.00	7.50	8.50	9.00	10.00	10.00	10.00	100	400	-350
Russia	6.25	4.25	5.50	7.50	8.50	8.50	20.00	20.00	1150	1575	1375
Iceland	3.00	0.75	1.00	2.00	2.00	2.00	2.75	2.75	75	200	-25
Turkey	12.00	17.00	19.00	15.00	14.00	14.00	14.00	14.00	0	-300	200
Serbia	2.25	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0	0	-125
Romania	2.50	1.50	1.25	1.75	1.75	2.00	2.50	2.50	75	100	0
Hungary	0.90	0.60	0.90	2.10	2.40	2.90	3.40	3.40	100	280	250
Africa											
South Africa	6.50	3.50	3.50	3.75	3.75	4.00	4.00	4.00	25	50	-250

Source: Central banks, Reuters and others.

As regards **fiscal policy**, in the United States there have been delays in congressional approval of the new Built Back Better spending package aimed at infrastructure and social spending. This would mean a lower fiscal impulse for this year compared to what was forecast in the previous Inflation Report. On the other hand, the European Union completed the approval of the investment plans at the level of the member countries of the bloc –as mentioned in the previous report–, which facilitates the disbursement of resources foreseen in the Recovery and Resilience Plan (750 billion euros).





Global economic outlook

7. **Global growth in 2022 (3.8 percent) would be lower than forecast in the December Report (4.3 percent).** The revised projection reflects the persistence of the problems observed in the supply chain, the more accelerated withdrawal of monetary stimulus in the main developed economies, and high energy prices, which would affect growth more than foreseen in the December Report.

The weight of the latter factor has been accentuated by the impact of the conflict between Russia and Ukraine on oil, natural gas, and grain prices. The baseline scenario considers that the greatest tensions and impacts on growth would occur in the second quarter of the year, and would affect global growth (particularly in Europe) mainly through the trade channel. Therefore, a worsening or prolongation of the conflict is a downward factor for growth. In such a scenario, trade and financial sanctions would have a much greater impact which, among other aspects, would aggravate the problems in the global supply chain and would have a more permanent impact on consumer and investor confidence. Another risk factor is associated with a further slowdown in China due to the impact that the “zero tolerance” policy adopted in that country to face new outbreaks of COVID-19 would have on economic activity.

On the other hand, some of the factors that influenced the slower pace of growth in the first quarter could dissipate in the following quarters: the outlook for the pandemic has improved and, in line with the lifting of restrictions, epidemiological developments are expected to have a positive impact on growth. This would be compounded by the boost in consumption following the accumulation of savings, the increase in employment and, to a lesser extent, favorable financial conditions.

Table 5
GLOBAL GDP GROWTH
(Annual % change)

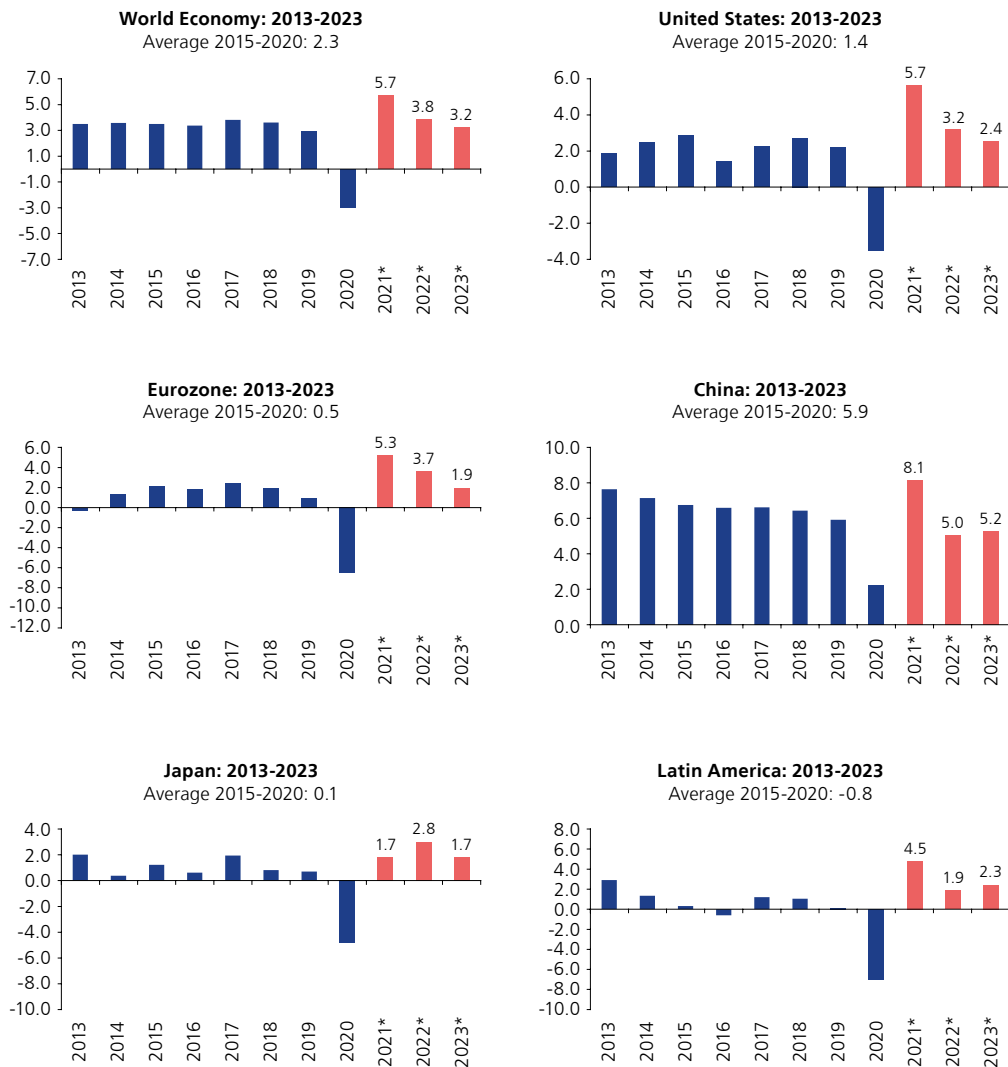
	PPP*	2020	2021**	2022		2023	
				IR Dec.21	IR Mar.22	IR Dec.21	IR Mar.22
Developed economies	42.2	-4.7	5.1	4.0	3.4	2.2	2.2
Of which							
1. United States	15.9	-3.4	5.7	4.0	3.2	2.2	2.4
2. Eurozone	12.0	-6.4	5.3	4.3	3.7	2.1	1.9
3. Japan	3.9	-4.5	1.7	3.0	2.8	1.4	1.7
4. United Kingdom	2.3	-9.4	7.5	5.0	4.4	1.4	1.0
5. Canada	1.4	-5.4	4.8	4.1	4.0	2.7	2.8
6. Other	6.8	-4.1	4.8	3.3	3.1	2.6	2.6
Emerging economies	57.5	-2.2	6.2	4.6	4.1	4.3	4.0
Of which							
1. China	18.7	2.2	8.1	5.2	5.0	5.3	5.2
2. India	7.0	-6.6	8.3	6.9	8.0	6.3	6.3
3. Russia	3.1	-2.7	4.2	2.6	-5.0	2.1	-0.3
4. Latin America and the Caribbean	7.3	-7.0	4.5	2.3	1.9	2.4	2.3
Argentina	0.7	-9.9	10.0	2.3	2.3	2.0	1.8
Brazil	2.4	-3.9	4.6	1.0	0.5	2.0	2.0
Chile	0.4	-5.8	12.0	2.6	2.5	2.0	1.5
Colombia	0.6	-7.0	10.6	3.8	4.0	3.5	3.1
Mexico	1.9	-8.2	4.8	3.0	2.5	2.0	2.0
Peru	0.3	-11.0	13.3	3.4	3.4	3.2	3.2
5. Other	17.9	-4.0	5.0	4.7	4.6	4.6	4.3
World Economy	100.0	-3.3	5.7	4.3	3.8	3.4	3.2

* Base 2021.

** Preliminary.

Source: IMF, Consensus Forecast.

Graph 11
GDP GROWTH
 (Real % change)



* Projection. Preliminary data for 2021.
 Source: IMF, Consensus Forecast.

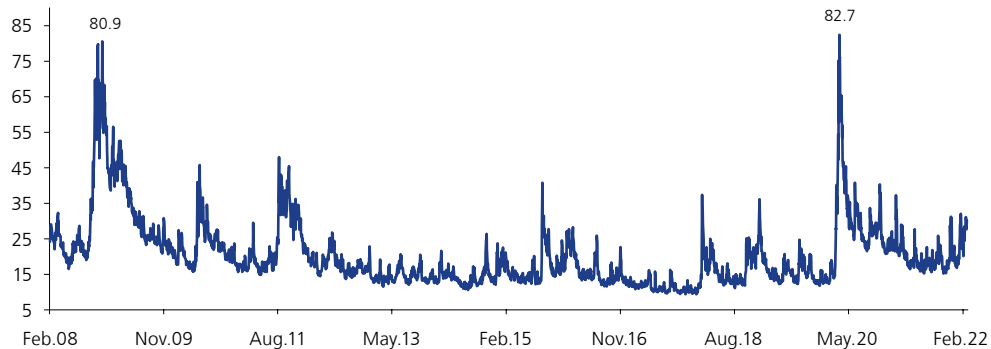
International financial markets

8. Since the last Inflation Report, **financial markets** have been affected by the lower economic dynamism seen in several of the main developed economies and in China, and by expectations that the main central banks will adopt more restrictive monetary stances in view of persistent increases in inflation rates. Towards the end of February, this was compounded by the escalation of geopolitical tensions that culminated in Russia’s military incursion into Ukraine. All these factors have contributed to raise risk aversion, counterbalancing the release of mostly positive corporate results and the epidemiological progress achieved in controlling the COVID-19 pandemic.





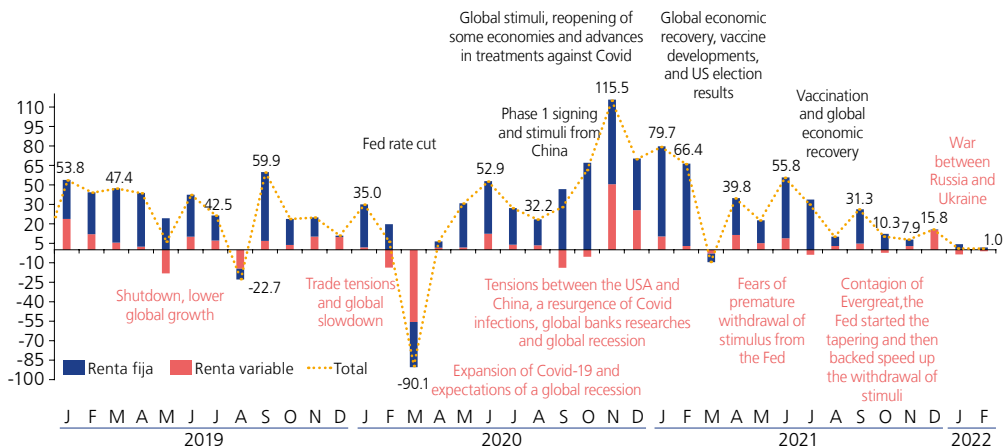
Graph 12
VIX INDEX
(Volatility of the US stock market)



Source: Reuters.

This context of increased risk aversion, particularly during February, led investors to liquidate riskier assets and prefer safe assets. As a result, most stock markets fell and the dollar appreciated in international markets. Similarly, capital inflows to emerging economies continued to decline.

Graph 13
CAPITAL FLOWS FROM NON-RESIDENTS TO EMERGING MARKETS
(Billion US\$)



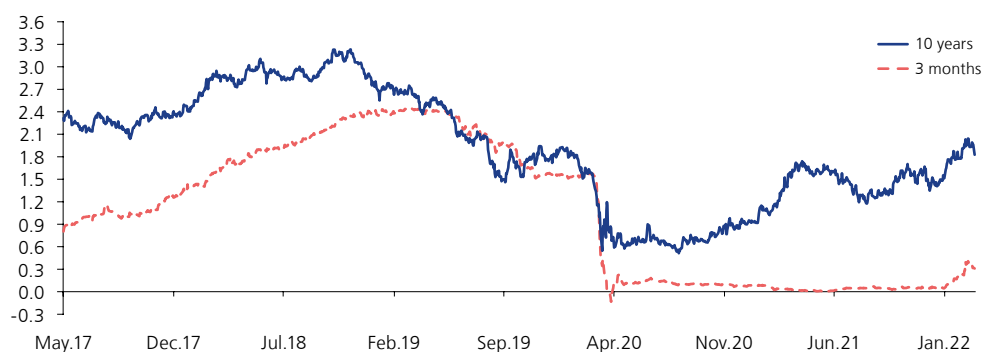
* February 2022 data is an estimate as of February 25.
Source: IIF.

- In **fixed-income markets**, the yields on long-term US sovereign bonds rose in January and in the first weeks of February, in a context of lower fears of the spread of the omicron variant and lower bond purchases by the Fed (whose asset purchase program ended at the beginning of March). However, towards the end of February, this upward trend in yields was reversed by the increase in global risk aversion following the start of the war between Russia and Ukraine.

A similar trend was observed in Europe, where long-term sovereign yields also rose at the beginning of the year, in line with the improvement in the health situation and

the continuity of economic recovery. In this context, the Bank of England increased its policy rate and the ECB announced the end of the asset purchase program introduced in the wake of the pandemic.

Graph 14
YIELD ON THE US SOVEREIGN BONDS
(%)



Source: Reuters.

In the emerging economies, yields rose, influenced by the increase in risk aversion registered towards the end of the month. It is worth highlighting the increase in the yield of the Russian sovereign bond, which was also affected by the financial sanctions imposed by various governments against that country.

Table 6
YIELDS ON 10-YEAR SOVEREIGN BONDS
(%)

	Dec.20	Dec.21	Feb.22*	Differences (bps)	
				Feb.22/Dec.21	Feb.22/Dec.20
United States	0.92	1.51	1.83	32	91
Germany	-0.57	-0.18	0.13	31	70
France	-0.34	0.20	0.60	41	95
Italy	0.54	1.17	1.71	54	116
Spain	0.04	0.56	1.11	55	107
Greece	0.62	1.32	2.51	120	189
United Kingdom	0.19	0.97	1.41	44	122
Japan	0.02	0.07	0.19	12	17
Brazil	6.90	10.84	11.56	72	466
Colombia	5.39	8.19	9.53	134	414
Chile	2.65	5.65	5.89	23	324
Mexico	5.53	7.56	7.93	37	240
Peru	3.51	5.90	6.16	26	265
South Africa	8.74	9.80	9.83	3	110
India	5.87	6.45	6.77	31	90
Turkey	12.54	23.54	23.30	-24	1076
Russia	5.92	8.29	15.99	770	1007
China	3.15	2.78	2.79	1	-36
South Korea	1.72	2.26	2.69	43	96
Indonesia	5.86	6.36	6.50	14	64
Thailand	1.32	1.89	2.15	25	83
Malaysia	2.65	3.59	3.67	8	102
Philippines	2.94	4.71	5.31	60	237

* Prepared on February 28, 2022.
Source: Reuters.





10. In **equity markets**, stock markets in developed countries fell at the beginning of the year following profit-taking on the back of tighter central bank stances and escalating geopolitical noise between Russia and Ukraine afterwards, offsetting global health improvement and the release of positive corporate results in Q4 2021. In the region, on the other hand, most stock markets recovered at the beginning of the year in a context of high commodity prices and increased demand from non-residents for the region's assets in a context of search for higher returns.

Table 7
STOCK EXCHANGE
(Index)

		Dec.20	Dec.21	Feb.22*	% chg.	
					Feb.22 / Dec.21	Feb.22 / Dec.20
VVIX**	S&P 500	22.75	17.22	30.15	12.9	7.4
USA	Dow Jones	28,538	35,132	33,893	-3.5	18.8
USA	S&P 500	3,756	4,766	4,374	-8.2	16.4
Germany	DAX	13,719	15,885	14,461	-9.0	5.4
France	CAC 40	5,551	7,153	6,659	-6.9	19.9
Italy	FTSE MIB	22,233	27,347	25,416	-7.1	14.3
Spain	IBEX 35	8,074	8,714	8,479	-2.7	5.0
Greece	ASE	809	893	892	-0.2	10.2
United Kingdom	FTSE 100	6,461	7,385	7,458	1.0	15.4
Japan	Nikkei 225	27,444	28,792	26,527	-7.9	-3.3
Brazil	Ibovespa	119,017	104,822	113,142	7.9	-4.9
Colombia	COLCAP	1,438	1,411	1,528	8.3	6.2
Chile	IPSA	4,177	4,308	4,534	5.2	8.6
Mexico	IPC	44,067	53,272	53,401	0.2	21.2
Argentina	Merval	51,226	83,500	87,970	5.4	71.7
Peru	Ind. Gral.	20,822	21,112	23,749	12.5	14.1
South Africa	JSE	59,409	73,709	76,091	3.2	28.1
India	Nifty 50	13,982	17,354	16,794	-3.2	20.1
Turkey	XU100	1,477	1,858	1,946	4.8	31.8
Russia	RTS	1,387	1,596	937	-41.3	-32.5
China	Shanghai C.	3,473	3,640	3,462	-4.9	-0.3
South Korea	KOSPI	2,873	2,978	2,699	-9.4	-6.1
Indonesia	JCI	5,979	6,581	6,888	4.7	15.2
Thailand	SET	1,449	1,658	1,685	1.7	16.3
Malaysia	KLCI	1,627	1,568	1,608	2.6	-1.2
Philippines	Psei	7,140	7,123	7,311	2.6	2.4

* Prepared as of February 28, 2022.

** Data are expressed in points and variations in percentages.

Source: Reuters.

11. As for **foreign exchange markets**, the dollar appreciated against major currencies due to the Fed's stance on accelerating the withdrawal of monetary stimulus following the improvement of the pandemic scenario, the persistence of rising inflation, and the economic recovery observed. This was compounded by demand for safe-haven assets in the wake of the Russia-Ukraine conflict.

In the emerging economies, the region's currencies appreciated, contrary to the global trend, benefiting from higher central bank interest rates and high export commodity prices. However, this trend was limited towards the end of February due to the more tense international context. The collapse of the Russian ruble stands out in this period.

Table 8
EXCHANGE RATE

(In monetary units per dollar, except for euro and pound sterling)

		Dec.20	Dec.21	Feb.22*	% chg. **	
					Feb.22 / Dec.21	Feb.22 / Dec.20
InDece dólar DXY***	US Dollar Index	89.94	95.97	96.71	0.8	7.5
Euro	Euro	1.221	1.137	1.122	-1.3	-8.2
United Kingdom	Pound sterling	1.367	1.353	1.342	-0.8	-1.8
Japan	Yen	103.24	115.08	115.07	0.0	11.5
Brazil	Real	5.194	5.570	5.160	-7.4	-0.6
Colombia	Peso	3,415	4,065	3,933	-3.3	15.2
Chile	Peso	710	851	798	-6.2	12.4
Mexico	Peso	19.87	20.49	20.47	-0.1	3.0
Argentina	Peso	84.08	102.68	107.39	4.6	27.7
Peru	Sol	3.620	3.991	3.782	-5.2	4.5
South Africa	Rand	14.69	15.99	15.36	-3.9	4.6
India	Ruppe	73.04	74.47	75.49	1.4	3.4
Turke	Lira	7.43	13.32	13.62	2.3	83.3
Russia	Ruble	73.79	74.56	105.06	40.9	42.4
China	Yuan (onshore)	6.525	6.352	6.308	-0.7	-3.3
South Korea	Won	1,084	1,188	1,200	1.0	10.6
Indonesia	Rupee	14,040	14,250	14,365	0.8	2.3
Thailand	Bath	30.04	33.23	32.63	-1.8	8.6
Malaysia	Ringgit	4.020	4.164	4.196	0.8	4.4
Philippines	Peso	48.01	50.99	51.17	0.4	6.6

* Prepared on February 28, 2022.

** 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

10. The prices of most products increased with respect those considered in the December Inflation Report. In general terms, prices continued to benefit from the rapid economic recovery (associated with the progress in the vaccination process and the maintenance of fiscal and monetary stimulus) and from supply restrictions associated with supply chain problems. These difficulties were mainly due to the rapid spread of new variants of COVID-19, which caused transportation bottlenecks.

However, the recovery was partially offset by slower economic recovery in China, which is the country with the greatest demand for most commodities. Moreover, after the Chinese New Year festivities and the Winter Olympic Games, the recovery in the consumption of the main basic metals has been slower than expected.

11. In addition, the conflict between Russia and Ukraine has had, in the short term, a mostly upward impact not only on products such as grains and energy (where the participation of these countries in global trade is significant), but also an impact on other products, such as basic metals, due to the impact of energy prices on production costs and also on fears about the impact of the conflict and the sanctions imposed on Russia on the supply chain. On the other hand, however, this geopolitical factor has led to a reduction in global growth projections, which implies a reduction in demand for the main raw materials.





Copper

12. In February the average price of copper was US\$ 4.51 the pound, 4 percent higher than in December 2021. This price was observed after the copper price accumulated an increase of 23 percent during 2021.

The average price of copper increased in the last two months due to signs of an increasingly tight global market. Copper inventories at the London Metal Exchange (LME) have continued to fall to multi-year lows, reflecting supply problems associated with supply chain disruptions, input inflation, and labor shortages (in some countries). On the other hand, demand will continue to be supported by the recovery of developed economies and the increased demand from “green industries”.

Despite this, however, the copper market has also faced downward pressures, underpinned by lower seasonal demand from China (which has recovered less than expected after the Lunar New Year) and increased supply of copper scrap, spurred by higher prices, which has provided consumers with an alternative raw material option. This is particularly key in Europe, the main beneficiary of Russian cathode exports. In addition, fears of lower demand for the metal associated with a likely sharp slowdown in real estate activity in China persist.

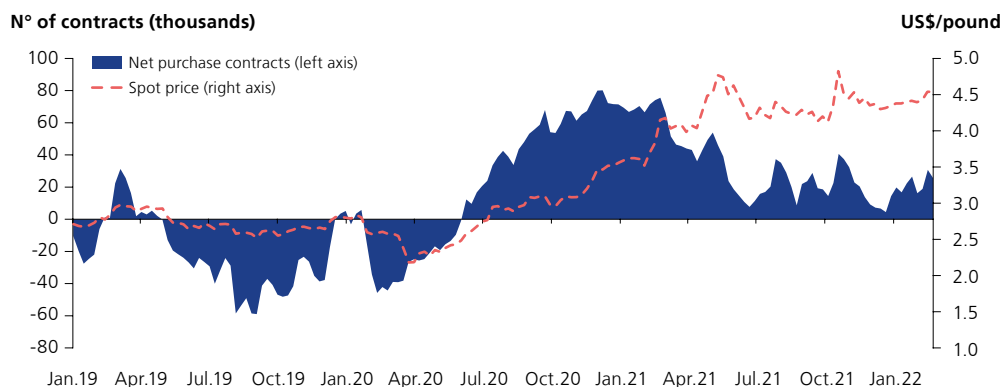
Table 9
SUPPLY AND DEMAND FOR REFINED COPPER
(Thousand metric tons)

	2018	2019	2020	Jan-Nov. 2020 2/	Jan-Nov . 2021 2/	% chg. 2021/2020
Global Mining Production	20,579	20,571	20,634	18,788	19,243	2.4%
Global Refining Production (Primary + Secondary)	24,063	24,016	24,505	22,398	22,692	1.3%
Global Use of Refined Copper	24,480	24,405	24,989	22,885	23,031	0.6%
Refined Balance 1/	-417	-389	-484	-487	-339	--

1/ The balance of refined products is calculated as the subtraction between the global production of refined products (supply) and their use (demand).
2/ ICSG report for February 2022.

Source: The International Copper Study Group (ICSG).

Graph 15
COPPER: NON-COMERCIAL CONTRACTS



Note: The Copper Speculative Net Positions of the Commodities Futures Trading Commission (Commodity 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).

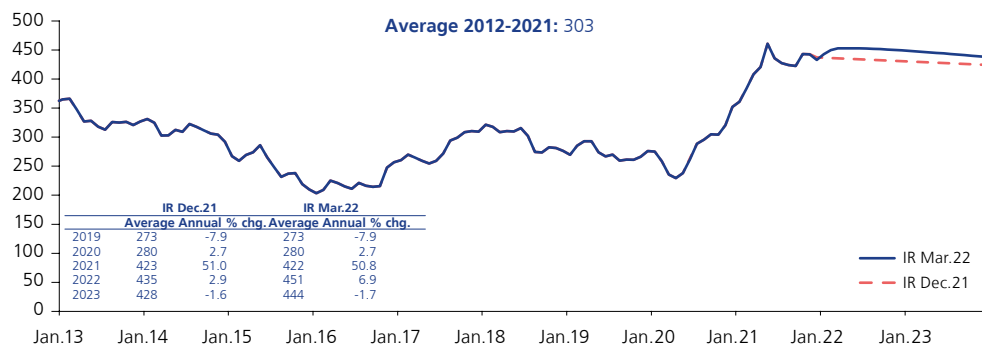
Source: Comex.

These developments in recent weeks have coincided with a slight recovery in non-commercial demand. The number of non-commercial copper contracts has recovered from the lows reached in early December 2021, although it remains below the highs it had reached during the first half of 2021.

Therefore, and due to signs of a tighter market, the copper price projection has been revised upwards with respect to the estimate considered in the December Inflation Report. Nonetheless, a slight moderation in demand is expected in the following months, in line with recent developments in China and in some developed economies and, on the supply side, with an increase in the supply of concentrates in the projection horizon.

Uncertainty factors include the future development of the Russia-Ukraine conflict, demand from the electric car industry, the possible entry of new supply capacity, and Chinese policies regarding the consumption of recycled copper.

Graph 16
COPPER: JANUARY 2013 - DECEMBER 2023
(US\$. cents/pd.)



Source: Reuters and BCRP.

Zinc

13. After showing a cumulative increase of 23 percent in 2021, the average international price of zinc reached US\$ 1.65 the pound in February 2022, the highest price level observed since December 2006 and 6 percent higher than in December 2021.

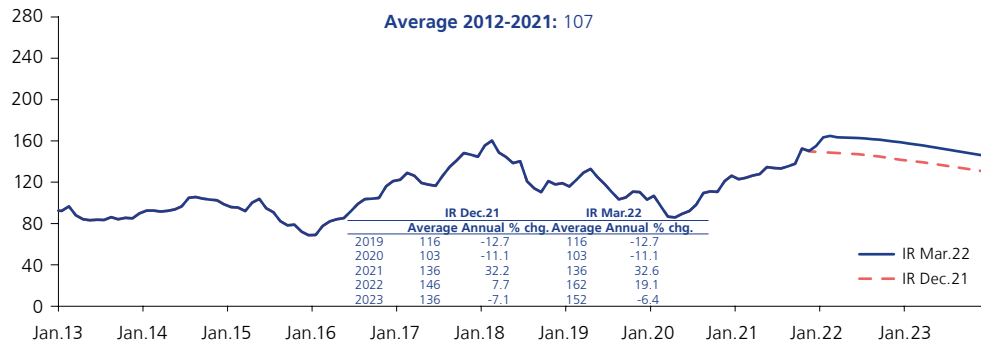
The price of zinc reached its highest levels in more than fifteen years, supported by the aggravation of supply shocks, particularly in Europe where higher energy costs have caused the temporary closure of production plants or a significant reduction of production of refined zinc in some plants of companies such as Nyrstar and Glencore. Likewise, higher energy prices and environmental constraints have caused a reduction in China's production of refined zinc. In addition, there are also delays in the entry of additional mine capacity. On the demand side, factors standing out include the robust recovery in the United States and Europe and recent Chinese government announcements of increased infrastructure spending.





In line with these developments, the projection of the average zinc price has been revised up with respect to the forecast in the December Report, due to higher supply cuts and increased demand associated with higher infrastructure spending in the major economies. It should be pointed out, however, that in the medium term, the normalization of production and the increase in mine supply would generate downward pressure on the price of this metal.

Graph 17
ZINC: JANUARY 2013 - DECEMBER 2023
(US\$ cents/pd.)

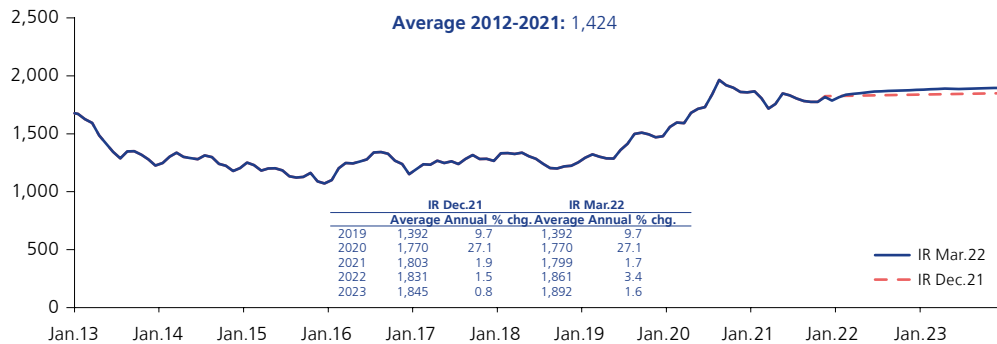


Source: Reuters and BCRP.

Gold

- 14. In February, the average price of gold registered US\$ 1,856 the troy ounce, a level 4 percent higher than that observed in December 2021.

Graph 18
GOLD: JANUARY 2013 - DECEMBER 2023
(US\$/tr. ounce)



Source: Reuters and BCRP.

The price of gold increased, in line with higher demand for safe haven assets associated with the Russia-Ukraine conflict, which added to the strong increase in global demand resulting mainly from an increase in gold jewelry purchases, especially since the fourth quarter of 2021, and the sharp rise in purchases from China. Other bullish factors were the recovery in gold purchases by central banks (particularly noteworthy were

the purchases carried out by the central banks of Hungary, Thailand, and Brazil). However, the prospect of a more accelerated withdrawal of monetary stimulus by the Fed offset upward pressures.

In line with these developments, the gold price projection has been revised up from the December report estimate. The main factors of uncertainty include the pace at which the Fed will reduce its stimulus, the evolution of inflation in developed economies, and geopolitical developments (in particular those linked to the war between Russia and Ukraine).

Gas

- 15. The average Henry Hub **natural gas** price increased 16 percent in the first two months of the year, reaching an average of US\$ 4.5/MMBtu in February, after the gas price accumulated a 50 percent increase in 2021. It should be pointed out that, on the contrary, the prices corresponding to the European and Asian markets (e.g. the UK and Japan-Korea) decreased in the last two months (3 and 32 percent, respectively), after recording multi-year high prices in December 2021.

The increase in Henry Hub natural gas prices is explained by signs of a tight global market, supply being insufficient to meet demand. The situation in Europe is in stark contrast to that observed in the United States, and there is growing concern that European inventories will fall to critically low levels as a result of the Russia/Ukraine conflict, since the conflict has caused the Nord Stream 2 pipeline not to be granted permits and could also paralyze supply through the pipeline that passes through Ukraine.

Despite these upward pressures, the price of LNG in Europe declined due to higher LNG exports from the United States in recent months and to milder than expected weather conditions.

Graph 19
NATURAL GAS: JANUARY 2013 - DECEMBER 2023
 (US\$/bl)



Source: Reuters and BCRP.

The projection for the average Henry Hub natural gas price for the 2022-2023 forecast horizon has been revised up, in line with a tighter market globally than foreseen in the December Report. While energy prices are expected to be pressured upward in





the near term by recent geopolitical events, the projection scenario assumes a gradual normalization in European supply from the second half of 2022.

Oil

16. In February 2022 the average price of **WTI oil** increased 28 percent from the level recorded in December 2021, reaching a monthly average of US\$ 92 the barrel. The price of oil has continued to show the upward trend observed in 2021, year during which it registered an increase of 68 percent.

Oil prices increased, influenced by the conflict between Russia and Ukraine in a market that is already tight. An aspect worth pointing out has been the recovery in global demand, particularly as a result of reduced cross-border and international travel restrictions, and also as a result of an increase in purchases of oil and oil products by power generation companies in parts of Asia and Europe in view of higher gas and coal prices. On the other hand, OPEC+ is not complying with the production increases it has committed to. It should also be said that these commitments represent a gradual, but lower increase in what consumer countries expected in order to balance the market.

A significant drawdown in global inventories was observed amid this context of strong recovery in demand and restrained crude oil production levels among OPEC+ members. According to the U.S. Energy Information Administration, global oil inventories fell further in January while commercial inventories in the OECD ended the month at their lowest level since mid-2014. However, after recording a supply deficit of 1.9 million barrels per day in 2021, the U.S. Energy Information Administration estimates a slight global surplus of 0.4 million barrels per day in 2022, associated with the recovery in OPEC production estimated for this year. These estimates do not include the impact of recent developments between Russia and Ukraine on Russia's global oil market.

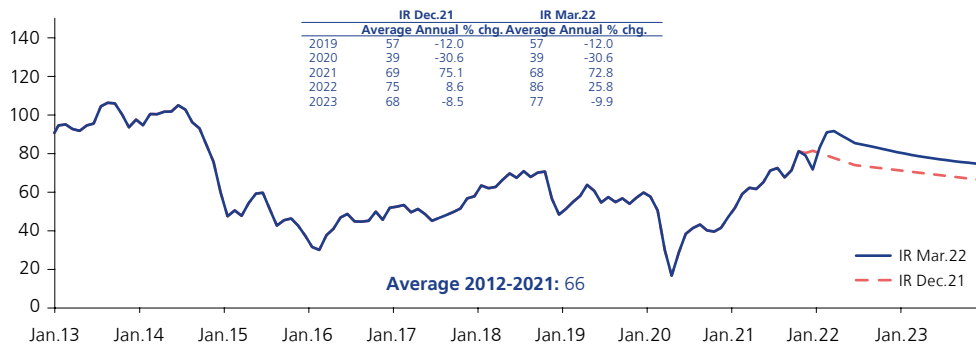
Table 10
GLOBAL SUPPLY AND DEMAND BALANCE FOR OIL AND OTHER LIQUIDS
(Million barrels per day)

	2017	2018	2019	2020	2021	2022	2023
Output							
OECD Output	27.4	29.9	31.5	30.6	31.0	32.9	34.5
Non-OECD production	70.4	70.6	68.9	63.3	64.5	68.1	68.5
<i>Of which: OPEC</i>	36.9	36.8	34.7	30.8	31.7	34.4	34.7
Total World Production	97.7	100.5	100.3	93.9	95.6	101.0	103.0
Consumption							
OECD Consumption	47.5	47.8	47.7	42.0	44.6	46.0	46.3
<i>Of which: United States</i>	20.1	20.7	20.7	18.4	20.0	20.8	21.0
OECD Consumption	51.6	52.3	53.0	50.0	52.9	54.6	56.2
<i>Of which: China</i>	13.2	13.6	14.0	14.4	15.3	15.7	16.2
Total World Consumption	99.1	100.1	100.7	92.0	97.5	100.6	102.6
Market Balance	-1.4	0.4	-0.3	1.9	-1.9	0.4	0.4

Source: U.S. Energy Information Administration.

In the forecast horizon, prices are projected to decline, although at higher levels than those estimated in the December Inflation Report. Prices are anticipated to decline as tensions between the West and Russia ease and supply continues to increase, both as a result of the normalization of OPEC+ production to pre-pandemic levels and also as a result of a greater supply response from non-OPEC countries. The main factors of uncertainty in this case are associated with the conflict between Russia and Ukraine, the future development of COVID-19, the agreements adopted by OPEC for 2022, a slower-than-expected return of U.S. production, and the negotiations between the United States and Iran, which could mean the return of exports from that country.

Graph 20
WTI OIL: JANUARY 2013 - DECEMBER 2023
 (US\$/bl)



Source: Reuters and BCRP.

Foodstuffs

17. After a brief correction, food prices resumed their upward trend and reached levels not seen since early 2011. This was influenced by the disruption in wheat exports from Russia and Ukraine, higher oil prices, higher fertilizer prices, and bottlenecks in the supply chain. The latter makes it difficult for farmers to obtain inputs, spare parts and equipment in the time and quantities needed for the production process, which raises the cost of crops. In addition, if the negative impact of the La Niña phenomenon on crops in South America and the United States materializes, prices could continue to be subject to upward pressure.
 - (a) The price of **maize** increased 10 percent in the last two months, reaching a monthly average price of US\$ 250/ton in February 2022, after accumulating an increase of 36 percent in 2021.

The sharp increase in the price of maize in the first months of 2022 is mainly explained by the dry weather conditions for the crop in southern Brazil and Argentina, which could reduce exportable surpluses. Other factors explaining the rise in maize prices were concerns that rising fertilizer costs will constrain next year's planting decisions. This was compounded by higher oil prices (which



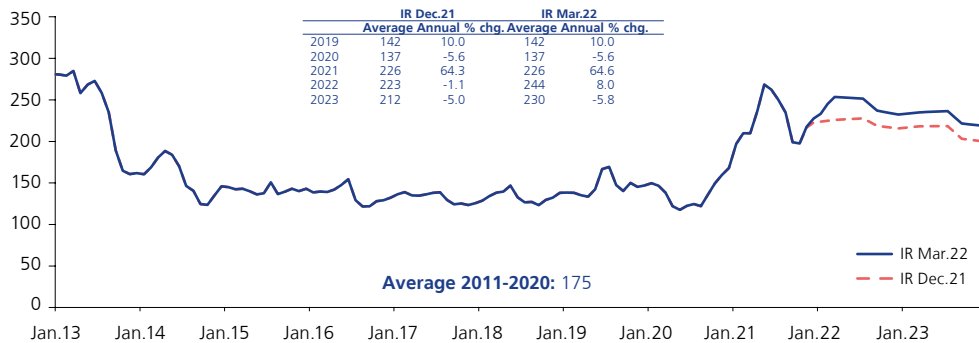


improved the ethanol industry’s profit margins) and the increase in the price of wheat, which serves as a substitute grain in the livestock feed industry.

At the close of this Report, the price of maize was also supported by the conflict between Russia and Ukraine. It is worth pointing out that Ukraine, which according to the USDA accounted for 13 percent of world exports in the 2020/2021 cycle, has halted exports and faces the destruction of key infrastructure that would make it difficult to immediately resume operations once the conflict is over.

In line with these developments, the average price of maize for 2022 and 2023 has been revised up. The world market remains tight, with inventories in major exporting countries at historically low levels. The main upside risks to the price are that La Niña event will last longer than expected and that the conflict between Russia and Ukraine will extend and affect Ukraine’s production for a longer period of time.

Graph 21
MAIZE: JANUARY 2013 - DECEMBER 2023
(US\$/ton)



Source: Reuters and BCRP.

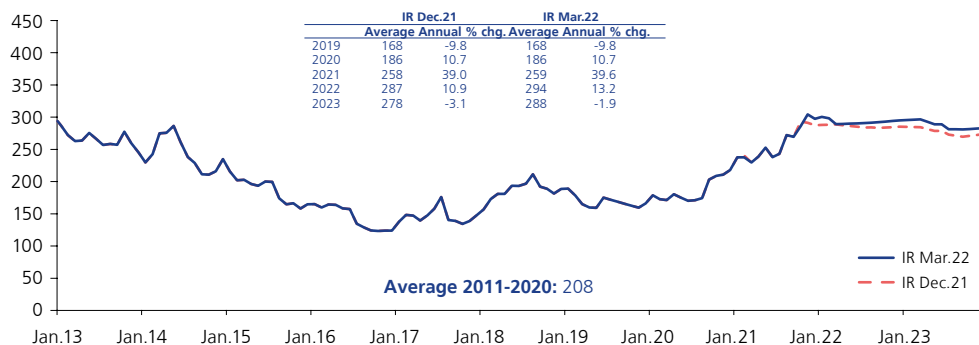
- (b) Since the release of our last Report, the price of **wheat** has increased 4 percent, reaching a monthly average of US\$ 314/MT in February 2022 after having accumulated an increase of 39 percent in 2021.

The strong increase in wheat prices in the last two months is mainly explained by the risk that the conflict between Russia and Ukraine would cause a significant disruption in world trade. According to the USDA, the two countries together account for 28 percent of world exports in the 2021/2022 cycle. This factor comes at a time when exporter supplies are at historically low levels. Excluding China and India, the inventories of the eight largest exporters will decline for the fourth consecutive year in 2021/22, falling 23 percent below the previous five-year average and reaching their lowest level since late 2007/08. Only production in southern hemisphere exporting countries, e.i. Australia and Argentina, have partially alleviated upward pressures and reduced concerns

about a possible supply crunch in the months leading up to the next northern hemisphere harvests.

Wheat prices would continue to be under pressure due to tight inventories and high prices of substitute grains (e.i. maize and soybeans) used as livestock feed. Therefore, the wheat price projection has been revised up from that considered in the previous Inflation Report. Moreover, among the main factors of uncertainty for wheat are the evolution of the conflict between Russia and Ukraine and the uncertainty regarding the duration and intensity of La Niña episode on winter wheat production in the United States.

Graph 22
WHEAT: JANUARY 2012 - DECEMBER 2022
(US\$/ton)



Source: Reuters and BCRP.

- (c) In February, the average soybean oil price was US\$ 1,529/MT, 9 percent higher than in the previous Inflation Report. This performance reinforces the upward trend shown by soybean oil in 2021 (up 58 percent).

In line with the rise in oil prices, the price of soybean oil recorded a significant increase in the last two months, which improved margins in the biodiesel industry, boosting demand for this industry in the United States and Brazil. Another factor contributing to the recovery in soybean oil prices was higher global import demand, particularly from India, China, and Bangladesh. In addition, shortages of other vegetable oils (such as palm oil and sunflower oil) have driven the substitution of a small portion of demand for soybean oil.

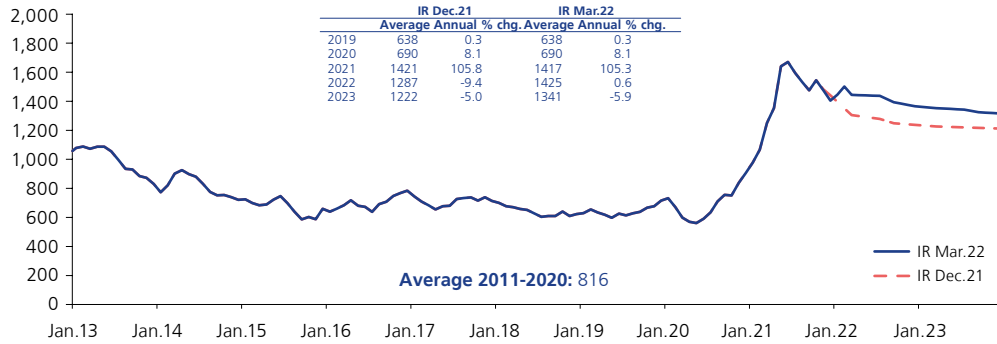
A major factor behind the rise in soybean oil prices was drought concerns in South America. In addition, growing concerns that an episode of La Niña would occur in Latin America caused production forecast downgrades for Brazil, Argentina, and Paraguay, which together account for 57 percent of world soybean exports and 59 percent of world soybean oil exports in the 2021/22 cycle according to the USDA.





Considering these recent developments, prices are projected to be above those estimated in our previous Report. The main uncertainty in this projection is the final impact that hot and dry weather conditions in South America will have on grain production.

Graph 23
SOYBEAN OIL: JANUARY 2012 - DECEMBER 2022
(US\$/ton)



Source: Reuters and BCRP.

Box 1
THE RUSSIA-UKRAINE CONFLICT: TRANSMISSION CHANNELS
ON THE GLOBAL ECONOMY

The conflict between Russia and Ukraine implies a series of impacts on global markets that will depend on the duration of the conflict. First of all, there are direct impacts associated with interruptions in the trade flows of goods produced by these countries (mainly energy and grains), which have generated upward pressures on international prices. In the case of foodstuffs, at the close of this report, Ukraine and Russia have limited their food exports and they have also banned fertilizer exports. These pressures may continue, even after the end of the conflict, due to the damage to infrastructure caused (particularly in Ukraine) and due to difficulties in production and international trade as a result of trade and financial sanctions. Similar pressures have been observed in energy prices, even more so in a context where supply from OPEC producer countries has grown below expectations. Furthermore, Russia's participation in other products –palladium, platinum, nickel, gold, aluminum, and refined copper, among other products– could accentuate existing problems in the global supply chain, particularly if sanctions against Russia persist for a prolonged period of time.

As a result of these shocks, inflationary pressures would remain high beyond what was anticipated in the previous report. On the growth side, the impact would be reflected through higher energy and food costs, supply chain disruptions, the impact of inflation on consumer purchasing power, and deteriorating investor confidence. Apart from Russia and Ukraine, given trade linkages (in particular heavy energy dependence), the biggest impact is expected in the major European economies.

On the financial side, as in similar episodes of uncertainty, there is an increase in global risk aversion that may lead to the liquidation of emerging economies' assets and to the search for assets perceived as risk-free. This generates greater pressures in those emerging economies facing greater external vulnerability (associated with high current account deficits, high external debt, or weak international reserve positions).

Direct impacts: the energy market

In the wake of the conflict between Russia and Ukraine, fears of further supply shocks in commodity markets have increased, with energy and food being the most sensitive groups.

RUSSIA'S SHARE IN WORLD PRODUCTION OF COMMODITIES
 (%)

	2018	2019	2020
Oil	12.2	12.3	12.1
Natural gas	17.4	17.1	16.6
Coal	5.6	5.5	5.2
Copper	4.3	4.3	4.3
Aluminum	5.9	6.2	6.1
Nickel	6.8	6.3	6.1
Zinc	1.9	1.5	1.5
Gold	8.1	9.1	9.5
Silver	5.1	5.3	5.4
Platinum	10.8	11.7	14.1
Palladium	39.4	41.0	43.9
Wheat	9.8	9.7	11.0

Source: JP Morgan.

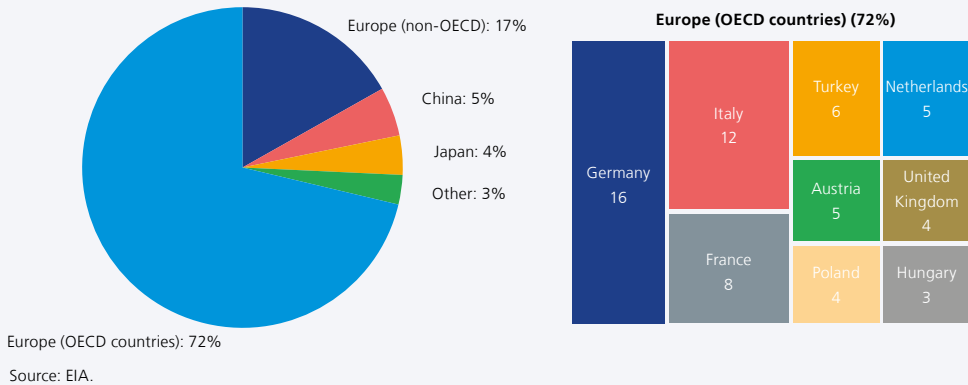




In the case of **energy**, Russia is an important producer of **natural gas, oil and coal**, with shares of 17, 12 and 5 percent. Production and trade activities have been affected both by direct sanctions, as in the case of gas, or indirectly through the sanctions imposed on Russia, which could generate difficulties in the production process, in logistics operations, or in trade transactions abroad (which could eventually be offset in part through redirection to third markets). The impacts on the production and export of these goods would occur in markets that already face a tight supply and demand balance.

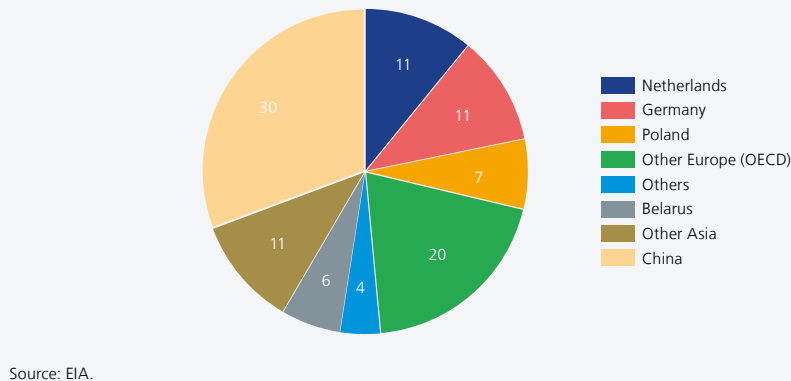
In the particular case of **gas**, Germany postponed certification and the United States announced sanctions against the operator Nord Stream 2 AG, the company in charge of transporting gas directly from Russia to Germany through a pipeline built under the sea. It should be pointed out that approximately 40 percent of the gas consumed by the European Union comes from Russia. In turn, Europe represents the largest share of the market for Russia (89 percent), given the size of the European market and its geographical proximity. According to 2020 data, 16 percent of Russian gas exports went to Germany, 12 percent to Italy, and 8 percent to France. China accounted for only 5 percent of Russian gas exports.

RUSSIAN NATURAL GAS EXPORTS BY DESTINATION (%)



The European market's dependence on Russian energy sources is lower in the case of oil and its condensates. Russian exports of this product account for 30 percent of exports to China, a higher share than that of Germany and the Netherlands (11 percent). However, as a bloc, the European Union remains the most important partner with about half of the market.

RUSSIAN EXPORTS OF OIL BY DESTINATION (%)



The food market

Maize and wheat are the most sensitive products in the case of foodstuffs. Ukraine and Russia account for 25 percent of global **wheat** production and 28 percent of global trade. There is a high probability that the conflict between Russia and Ukraine will cause significant disruption to production or trade in these countries and affect the global supply and demand balance.

In the case of **wheat**, the greatest risk lies in the proximity of the start of **spring wheat** sowing, which begins in April. In Ukraine, there would be a direct impact on planting due to the geographical location of the producing areas (directly affected by the conflict), labor shortages, and lack of inputs (particularly fertilizers). In Russia, planting could be adversely affected by uncertainty about effective access to export markets and the timely availability of inputs (such as some fertilizers and pesticides).

In the case of **winter wheat**, whose planting ended in December 2021 and whose harvests would begin in May and be concentrated in June and July, there is the risk that production entering the market will encounter difficulties due to the deterioration of infrastructure (canals, roads, and ports). Moreover, as with wheat, the greatest risk in the case of **maize** lies in the proximity of the start of planting in Ukraine (which begins in March and is concentrated in April and May). Ukraine accounts for about 15 percent of total world exports of this crop.

Sanctions to Russia and potential impacts on the supply chain

As a result of the worsening of the conflict, many countries and organizations have imposed a series of trade and financial restrictions to Russia that affect the normal performance of Russian banks, companies, and entrepreneurs.

These restrictions could affect Russian companies producing both raw materials and manufactured goods. Even in the case of some products excluded from the sanctions, such as oil, for example, Russian oil importers are experiencing difficulties in making payments, or fear that logistical problems may delay or prevent shipments, or encounter difficulties in obtaining financing or insurance coverage. These obstacles may lead buyers to switch suppliers, putting further pressure on the timely supply of these goods¹.

Trade measures against Russia

- Certification of the Russian gas pipeline Nord Stream 2 postponed by Germany.
- Airspace closed to Russian flights by G7 countries, Finland, Switzerland, and Singapore.
- Shipments to and from Russia suspended by shipping companies (Mersk and MSC).
- Participation and business with Russian companies closed by oil companies (BP, Shell and Equinor).
- Financing for commodities operations with Russia suspended (Société Générale, Credit Suisse and ING).
- U.S. banned imports of oil and its derivatives, gas and coal from Russia. A similar measure was adopted by the United Kingdom, but only in the case of oil.
- Blockade of Russian exports of technology to the United States (semiconductors, encryption security, lasers, sensors, navigation, avionics and maritime technologies).

Financial measures taken against Russia

- Immobilization of foreign currency assets of the Central Bank of Russia (CBR). Measure would affect 82 percent of Russian reserves, excluding gold.
- 7 Russian banks excluded from the SWIFT financial messaging network. Sberbank and Gazprombank, the largest payment channels for Russian oil and gas exports were not included in this measure.
- Veto of any Western financing to be applied to new Russian bonds issued after March 1.
- Restriction on the use of cards in Russian banks by credit operators (Visa and Mastercard).
- Removal of 61 Russian companies from their asset indices (Stoxx).
- Inclusion of Russian banks and businessmen in the SDN list (Specially Designated Nationals List), prohibiting transactions with them and blocking their assets in the USA.
- Removal of all Russian assets owned by the Norwegian sovereign wealth fund.
- Sberbank is prevented from making payments in pounds sterling. Freezing of assets of several Russian banks.
- Sanctions on 14 other Russian businessmen, suspension of relations with the CB of Belarus and three other Belarusian commercial banks (measures adopted by the European Union).

1 The Economist, March 5, 2022, "How Europe's commodities traders took a gamble too far on Putin's regime"



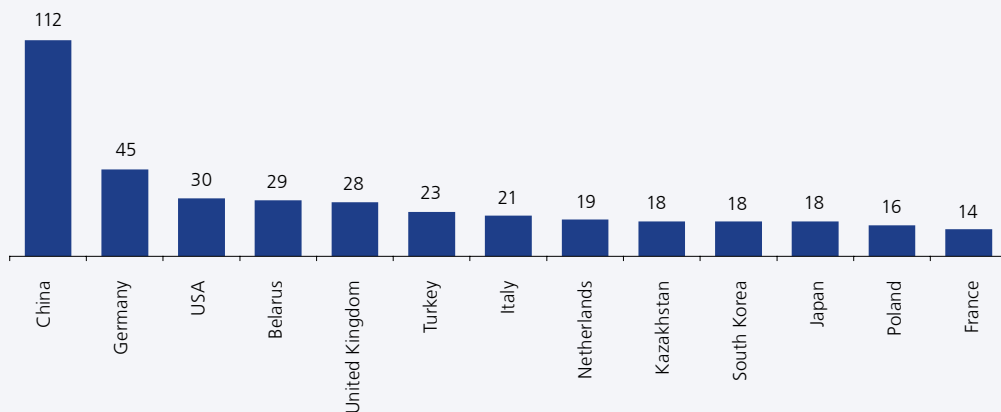


Despite Russia's low weight in world trade (1.9 percent), similar supply chain problems could be significant in several activities. Russia is the leading producer of palladium (44 percent of world production and 38 percent of global trade). It also has a share of world trade in platinum (14 percent) and nickel (13 percent), as well as a share of close to 10 percent in the gold, platinum, aluminum and refined copper markets.

For example, if palladium production were to be interrupted, a number of industries (jewelry, medical devices and appliances, electrical contacts and watches, among others) could be seriously affected by Russia's strong participation in that market. A similar situation could arise in the case of fertilizers (Russia is the world's second largest producer of ammonia, urea and potassium and the fifth largest producer of processed phosphates), aluminum (Russia is the largest exporter of primary aluminum), and sunflower oil (Russia is the leading exporter of this product globally).

This would accentuate the supply chain problems that arose as a result of the pandemic and simultaneously generate upward price pressures and recessionary pressures on global economic activity.

TRADE WITH RUSSIA BY COUNTRIES (2020)
(Exports plus imports, in billions US\$)



Changes in global risk aversion

In addition, the conflict has led to an increase in global risk aversion. Economic agents tend to demand more risk-free assets (US and other developed economies' treasury bonds and gold, among others) and to liquidate assets considered to be of higher relative risk (such as equities and sovereign bonds of emerging economies, among others).

In similar episodes, emerging economies not only have experienced lower capital inflows (both in equity and fixed-income markets), but have also seen their currencies depreciate and faced less favorable external financing conditions. On those occasions, the greatest impacts have been observed in economies facing imbalances in their external accounts or weak fiscal positions, among other macroeconomic fundamentals.

However, in the current episode, depreciation pressures on the region's currencies have been lessened by the almost generalized rise in commodity prices. Unlike other episodes of greater global

risk aversion, where commodity prices showed strong downward pressures, this time commodity prices show the opposite trend: concerns have focused more on a worsening of supply shocks than on the fall in demand due to lower global growth.

Changes in global growth and global inflation

Supply shocks are estimated to persist beyond what was foreseen in the December Inflation Report through the aforementioned transmission channels. On the one hand, these shocks would reinforce upward pressures on inflation and, on the other hand, they could accentuate the slowdown observed in the world economy during the first months of the year.

- a. As regards inflation, **inflationary pressures** have intensified in recent months, as previously mentioned in this Report. Many of the factors that explain this upward trend, such as the rise in food and energy prices and problems in the supply chain, are reinforced and made more persistent by war tensions. According to the IMF, supply shocks, particularly those associated with the supply chain, would have had an impact of approximately 1 percentage point on inflation in 2021. It should be pointed out that the items directly affected by the rise in food and energy prices (food consumed within the home, energy, and transportation) have a significant weight within the consumer basket.

WEIGHT OF FOOD AND ENERGY IN THE CONSUMER BASKET

	United States	Eurozone	United Kingdom	Peru
Food consumed within the home	7.2 ^{1/}	5.0 ^{2/}	10.4 ^{1/}	24.5
Energy	7.4	10.9	3.6	4.8
Transportation	5.6	6.6	7.0 ^{3/}	9.1

^{1/} Food consumed within the home excluding drinks.

^{2/} Unprocessed food.

^{3/} Includes transportation expenses and transportation equipment maintenance expenses.

Source: National institutes of statistics.

- b. On the **growth** side, geopolitical tensions have translated into a greater persistence of the negative supply shocks that have been affecting the global economy and that, according to the forementioned IMF estimates, have implied an impact of approximately 0.5 to 1.0 percentage point of lower growth in 2021. In addition, there would also be a greater decrease in consumer purchasing power as a result of higher inflation considering the weight of energy and food consumption in the consumer basket. Finally, growth prospects beyond the short term would also be affected by a drop in consumer and investor confidence.

At the level of economic blocs, Europe registers the largest downward revisions in growth given its greater trade links with Russia, particularly due to its greater dependence on energy. At the level of specific activities, those intensive in the use of energy are the most sensitive, which includes refineries, fertilizer companies, the chemical and paper industry, among other activities. On the other hand, the largest downward revisions in growth in the emerging economies include those countries that import commodities and those that will face the current international situation with weak macroeconomic fundamentals.



**Box 2****COVID-19 PANDEMIC: EMPIRICAL OBSERVATIONS DURING THE OMICRON WAVE**

The omicron wave appears to be waning worldwide, although there is still uncertainty about the end of the pandemic and about the possibility that new variants or subvariants of the virus may appear, spread, and prevail among the infected population.

The omicron wave, which was first detected in South Africa in late November 2021, is prevalent in most countries today. So far, the most common subvariant has been the one known as BA.1, although BA.2 is gaining increasing importance, especially in Europe and Asia.

A particularity of the omicron variant is that it is highly transmissible and infectious, that it overcomes the natural defenses of those who have already had COVID-19 (re-infections), that it is more resistant to vaccines, and that it is prone to mutate rapidly (Mostafavi et al., 2022).

The table below provides a summary of the status of infections recorded before the start of the omicron wave by continent as well as the particular situations of Peru, Israel, and Australia. A total of 126 countries were considered in this analysis. The table also provides data on the percentage growth in the number of infections from the beginning of the omicron wave until the first week of March (March 7) and the average number of days from the start of the wave to the peak date of infection in each country.

CUMULATIVE CASES BEFORE THE OMICRON WAVE, GROWTH OF CASES DURING THE OMICRON WAVE DURING THE OMICRON WAVE AND DURATION OF THE OMICRON WAVE OF INFECTION

Continent	Average number of accumulated cases per million inhabitants	Growth of cases during the omicron wave	Average number of days between onset and peak of infection
Africa	13,128	27%	18
Asia	59,984	45%	30
Europe	134,454	62%	28
Oceania	5,968	172%	24
North America	71,689	35%	28
South America	76,182	40%	27
Peru	68,851	43%	24
Israel	151,213	96%	21
Australia	10,050	255%	23

Source: Our World in Data (as of 2022-02-18).

Notes: North America involves 9 countries including Canada and USA. South America includes Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay and Venezuela, for Oceania 3 countries are considered, Africa involves 29, Asia 36 and Europe 39.

The first thing that stands out is the great variability of the data, both in the count of cases before the onset of the omicron wave and in the growth of cases during the wave. African countries have the lowest cumulative infection levels, while European countries and Israel exceed 100,000 infections per million inhabitants.

African countries and Oceania have the lowest number of cases and the lowest infection growth rates. In Oceania this is explained by their strict policies against COVID-19, while in the case of Africa this may be due to the small scale of COVID-19 testing in these countries. Something similar may be the case of South American countries.

The duration of the wave of infection, measured as the distance in days between the onset of the omicron wave and the date of the peak of infection, is three and a half weeks on average and there is no major variability between countries and continents. In contrast, the duration in previous waves of the pandemic, including the delta wave, was between five and seven weeks.

Official COVID-19 mortality statistics may be somewhat more accurate than statistical data on infections, although it is known that there are problems in quantifying COVID-19 deaths in many countries. Therefore, the following table shows the mortality situation before the onset of the omicron wave and the growth in the number of deaths during the wave.

CUMULATIVE DEATHS BEFORE THE OMICRON WAVE, GROWTH OF DEATHS DURING THE OMICRON WAVE AND DURING THE OMICRON WAVE AND DURATION OF THE OMICRON DEATH WAVE

Continent	Average number of accumulated cases per million inhabitants	Growth of cases during the omicron wave	Average number of days between onset and peak of infection
Africa	307	10%	22
Asia	649	14%	28
Europe	2,119	15%	27
Oceania	53	40%	22
North America	1,276	10%	27
South America	2,389	8%	27
Peru	6,076	4%	22
Israel	888	22%	17
Australia	84	92%	22

Source: Our World in Data (as of 2022-02-18).

Notes: North America involves 9 countries including Canada and USA. South America includes Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay and Venezuela, for Oceania 3 countries are considered, Africa involves 29, Asia 36 and Europe 39.

Peru stands out as the country with the highest number of deaths at the beginning of the omicron wave (6,076 per million inhabitants or 0.6 percent of the population). Despite this, however, Peru is one of the countries in which the omicron wave has had the lowest increase in mortality. This may be due to two facts: (i) the high number of previous infections which means that a high percentage of the population is immunized and (ii) the high proportion of the population vaccinated with two doses (65 percent of the total population at the beginning of the omicron wave).

To further understand the effect of a higher level of infections (and also the effect of a higher number of deaths) at the beginning of the omicron wave and to understand the role of mass vaccinations, the following regression is defined:

$$dm = \alpha_0 + \alpha_1 m_0 + \alpha_2 X + \alpha_3 vax + \alpha_4 vax \times m_0 + \mu$$

Where dm is the growth in the number of deaths during the omicron wave, m_0 is the total level of deaths before the wave began, X are additional controls such as median age in each country, the mortality rate of cardiovascular disease, the prevalence of diabetes, and continent dummy variables. The variable vax represents the percentage of the population vaccinated with at least two doses of COVID-19 vaccine and the term $vax \times m_0$ is the interaction term between vaccines and initial deaths.

The term $(\alpha_3 + \alpha_4 m_0)$ represents the marginal effect of the vaccines, which is determined by the baseline mortality. The sign of this term then depends on the signs of the coefficients α_3, α_4 as well as how large m_0 is. The regressions carried out are summarized in the following table. Model [1] is a typical regression including the 126 countries of the sample. Model [2] excludes the African countries from the sample and model [3] considers all 126 countries, but is a parametric regression that considers that the errors follow a Weibull distribution under the GAMLSS approach (Stasinopoulos et al., 2018); in other words, both the mean and the variance are modeled. The latter regression is the most plausible given heterogeneity in the sample.

It is observed that the initial mortality balance has a negative effect on the growth of deaths during the omicron wave (Model 3). As previously mentioned, the effect of vaccines in the sample of countries



studied depends on the initial mortality balance. The initial mortality threshold, above which vaccination has had a negative impact on mortality growth, is calculated in the second to last row. In the case of the regression [3], this value is 5.85 (in logarithm), which is equivalent to about 347 deaths per million inhabitants. This means that countries with high mortality before the onset of the omicron wave are those in which mass vaccination has been most effective in controlling mortality during the omicron wave.

MORTALITY GROWTH REGRESSION DURING THE OMICRON WAVE

	[1]	[2]	[3]
Initial mortality balance (m_0) [α_1]	-0.003 (0.01)	0.009 (0.02)	-0.096 ** (0.03)
Median age	0.006*** (0.002)	0.006*** (0.002)	0.069 *** (0.035)
Cardiovascular disease mortality rate	-0.0001 (0.0001)	-0.0002* (0.0001)	0.0003 *** (0.000)
Prevalence of diabetes	-0.004 (0.003)	-0.006* (0.003)	-0.005 * (0.011)
Percentage of complete vaccination (vax) [α_3]	0.002 (0.001)	0.003 (0.002)	0.033 *** (0.008)
Asia	-0.042 (0.032)		-0.864 *** (0.159)
Europe	-0.032 (0.044)	-0.007 (0.036)	-0.352 * (0.128)
Oceania	0.197*** (0.065)	0.252*** (0.063)	-0.017 (0.336)
North America	-0.038 (0.043)	-0.004 (0.037)	0.014 (0.128)
South America	-0.039 (0.042)	-0.010 (0.041)	0.109 (0.109)
Interaction: m_0 :vax [α_4]	-0.0004 (0.0002)	-0.005 (0.0003)	-0.0056 *** (0.001)
Constant	0.057 (0.060)	-0.038 (0.131)	-3.249 *** (0.252)
Number of observations	124	95	124
Mortality threshold for vaccine effect to be as expected	5.85	5.80	5.85
Vaccination threshold for the initial mortality effect to be as expected	-9.18	17.89	-16.77

Note: The adjusted R-squared in model [1] and [2] are 0.34 and 0.38 respectively. Significance codes are: *** = 0%, ** = 0,1% * = 1 %.

In conclusion, Peru is in the group of countries with a high mortality rate prior to the onset of the omicron wave. High mortality levels are compatible with high levels of infection and, therefore, with high seroprevalence. This means that the population as a whole would have reached a higher level of natural immunization. In addition, Peru also achieved a high vaccination rate among its population. Both of these factors explain that the wave of the epidemic in Peru is not as adverse for the country as a whole in comparison to the situation experienced in previous waves of the pandemic.

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II. Balance of Payments

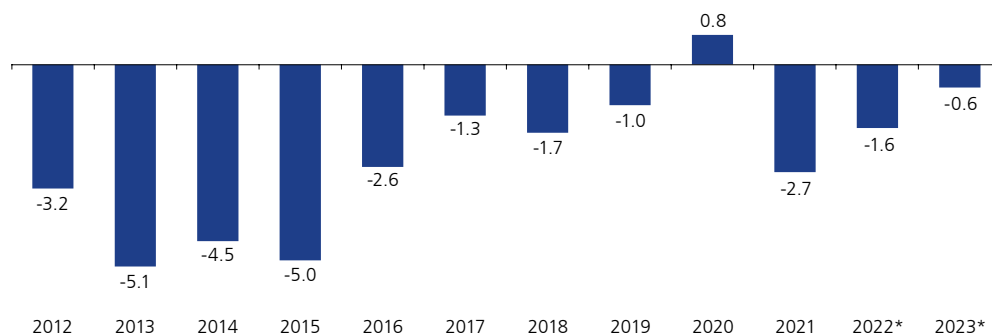
Current account

12. The **current account balance** went from a surplus of 0.8 percent of GDP in 2020 to a deficit of 2.7 percent of GDP in 2021, a result equal to the historical average deficit (1980-2021). The widening of the deficit is explained by: (i) higher imports of goods, reflecting higher input prices; (ii) higher profits of companies with foreign direct investment in the country, and (iii) higher payments abroad for international freight.

These factors were offset by the robust expansion of the value of exports, which reached 28.1 percent of GDP, above the 1980-2021 historical average of 20.4 percent. Furthermore, increased remittances from abroad, associated with the recovery of employment in the main countries where remittances originate, also limited the widening of the current account deficit.

The current account deficit is projected to decline to 1.6 percent of GDP in 2022 due to a higher surplus in goods trade, driven by higher export prices and a lower primary income deficit. This year's deficit projection is higher than that estimated in the previous Report due to persistent supply shocks to international trade, which would widen the services deficit. On the other hand, in 2023 the deficit projection (0.6 percent of output) is lower than in the previous year, following the start of the correction in freight rates which would reduce the services deficit, as well as with the continued increase in the goods trade surplus. Compared to the December Report, the deficit would be smaller due to the gradual reduction in average import prices.

Graph 24
CURRENT ACCOUNT: 2012-2023
(% GDP)



* Forecast.
Source: BCRP.





13. The **financial account** in 2021 rose to US\$ 16,002 million (7.1 percent of GDP), this rise being explained by: (i) higher sales of net portfolio external assets, mainly by the AFPs (to meet liquidity requirements); (ii) higher portfolio investment following the issuance of Government global bonds (to address the crisis associated with COVID-19) and Petroperu bonds (for the Talara Refinery project); (iii) higher net foreign direct investment (FDI) due to reinvestment of profits, as a result of high prices for our commodities and the recovery of local activity, and (iv) higher external loans to the General Government. On the other hand, purchases of net short-term external asset amounted to 7.3 percent of GDP in the year.

In comparison with the projection in the previous Report, the current projection of the financial account in 2022 considers greater external financing (increase in the debtor position) due to the increase in direct investment, which is mainly explained by the reinvestment of profits and higher net loans on the liabilities side. Moreover, greater purchases of external portfolio assets by the AFPs are projected on the assets side.

The projection for 2023 assumes lower external financing, with a greater recovery of investment in external assets by the AFPs, which would compensate for the higher direct investment on the liabilities side, after the end of the pandemic scenario.

Table 11
BALANCE OF PAYMENTS
(Million US\$)

	2021	2022*		2023*	
		IR Dec.21	IR Mar.22	IR Dec.21	IR Mar.22
I. CURRENT ACCOUNT BALANCE	-6,148	-3,182	-3,955	-2,154	-1,533
% GDP	-2.7	-1.3	-1.6	-0.8	-0.6
1. Trade Balance	14,800	15,592	16,395	16,320	17,847
a. Exports	63,106	66,836	71,104	70,324	74,671
<i>Of which:</i>					
i) Traditional	46,541	49,028	52,729	51,093	54,916
ii) Non-Traditional	16,372	17,618	18,151	19,043	19,569
b. Imports	48,307	51,244	54,709	54,004	56,824
2. Services	-6,874	-6,995	-8,054	-6,102	-6,716
3. Primary income (similar to factor income)	-18,178	-15,879	-16,683	-16,620	-16,931
4. Secondary income (transfers)	4,104	4,100	4,387	4,248	4,267
Of which: Remittances	3,592	3,704	3,735	3,853	3,885
II. FINANCIAL ACCOUNT 1/	-16,002	-3,183	-3,954	-2,154	-1,534
1. Private Sector	-409	-301	-875	-577	42
a. Long-term	-16,861	-301	-875	-577	42
b. Short-term	16,451	0	0	0	0
2. Public Sector 2/	-15,592	-2,882	-3,079	-1,577	-1,575
III. NET ERRORS AND OMISSIONS	-5,443	0	0	0	0
IV. BALANCE OF PAYMENTS	4,410	0	0	0	0
IV= (I+III) - II = (1-2)					
1. Change in NIR balance	3,789	0	0	0	0
2. Valuation effect	-622	0	0	0	0

1/ The financial account and its components (private and public sector) are expressed as assets net of liabilities. Therefore, a negative sign implies an inflow of external capital.

2/ Considers the purchase and sale between residents and non-residents of government bonds issued abroad or in the local market.

IR: Inflation Report.

* Forecast.

In this table, the Balance of Payments and External Assets and Liabilities Position accounts are presented under a new format, due to the adoption of the Sixth Edition of the Manual of the Balance of Payments and External Assets and Liabilities Position.

The **surplus in the trade balance of goods** totaled US\$ 14.8 billion in 2021, a figure US\$ 6.603 billion higher than that recorded in the same period of 2020 (US\$ 8.196 billion). This result is mostly explained by the expansion of the terms of trade, associated with the increase in industrial metal prices, which had a positive impact on the higher price paid for our exports of traditional products (40.5 percent). Other factors that contributed to this higher balance were the recovery of global demand for our non-traditional exports and the advantages for our products resulting from trade restrictions between the United States and China (bottlenecks in maritime transportation) and the new conditions associated with the pandemic.

The trade balance recorded a monthly surplus of US\$ 1,030 million in January 2022. Exports totaled US\$ 5,269 million, a figure 16.2 percent (US\$ 734 million) higher than in January 2021, as a result of high metal prices and the recovery of activity. On the other hand, imports amounted to US\$ 4,239 million, a sum 25.9 percent (US\$ 871 million) higher than in January 2021, with widespread increases being recorded mainly due to higher import prices and, to a lesser extent, higher volumes of imports.

As a result of this evolution, the trade balance is projected to reach a surplus of US\$ 16,395 million in 2022, a balance US\$ 803 million higher than forecast in the previous Report, supported by higher average export prices, especially for traditional exports of mining products. In 2023, the trade surplus is expected to widen to US\$ 17,847 million –a figure US\$ 1,527 million higher than projected in the previous Report–, reflecting a greater drop in average import prices relative to the average prices of exported products. This projection is supported by the significant impact in the short term of the conflict between Russia and Ukraine on commodity prices, which will be gradually corrected.

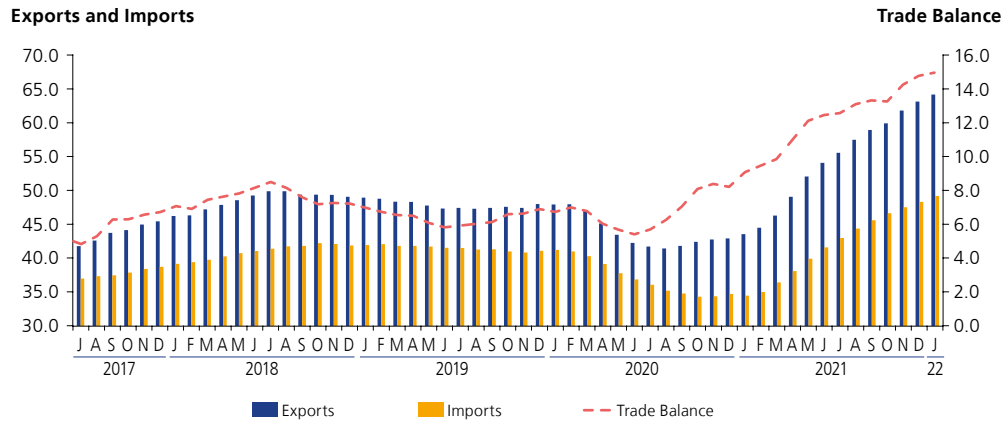
The projection of **export volumes** in 2022 incorporates higher growth due to the upward revision of non-traditional products (mainly agricultural and textile products). On the other hand, the volumes of exports in 2023 are in line with the production projection, after overcoming the logistical difficulties of international trade. Expected **import volumes** in 2022 and 2023 remain in line with the projections in the December Report, with higher purchases of industrial inputs, food, consumer goods and, to a lesser extent, capital goods being anticipated.

In 2022, average **export prices** would be supported by high commodity prices (copper, gold, zinc, and gas), although they are foreseen to show some contraction towards the end of the projection horizon. Import prices in 2022, on the other hand, have been revised up, following the upward evolution of oil prices which have been further exacerbated by geopolitical tensions following Russia's incursion into Ukraine. In 2023, **import prices** would contract more than export prices.



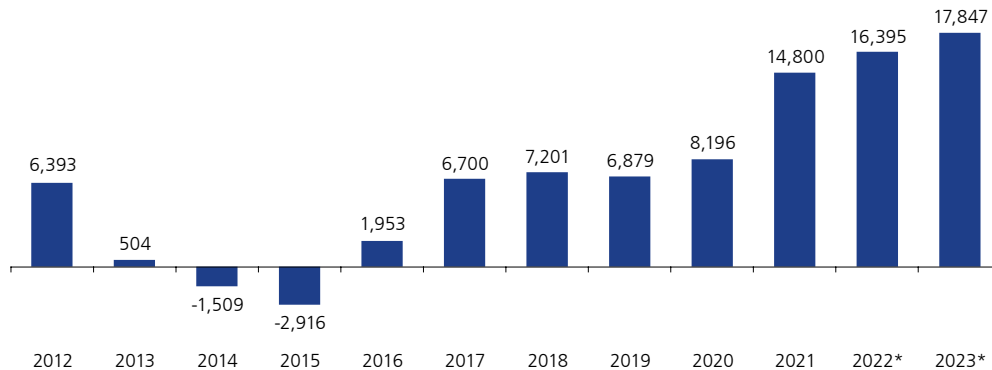


Graph 25
TRADE BALANCE, EXPORTS AND IMPORTS
(Accumulated 12 months - Billion US\$)



Source: BCRP and SUNAT.

Graph 26
BALANCE OF TRADE IN GOODS
(Million US\$)



* Forecast.
Source: BCRP.

14. **Exports** amounted to US\$ 63,106 million in 2021, a figure US\$ 20,201 million higher than in 2020 (growth of 47.1 percent) and the highest level reached as a percentage of output (28.1 percent). The year's outcome resulted from an increase of US\$ 16,528 million in the value of our traditional exports and, to a lesser extent, from an increase of US\$ 3,602 million in exports of non-traditional products. The increase in the former was due to a 40.5 percent increase in the average price of our exports, mainly in the prices of minerals such as zinc and copper, while the expansion of non-traditional exports was due to a 20.2 percent increase in the volume shipped.

The value of exports estimated for 2022 has been revised up due to the higher prices of the country's traditional exports, such as coffee, zinc, copper, and gold, as well as by the fact that mining exports would be supported by the start of Quellaveco's commercial operations. This upward projection of exports is due to the recovery of world activity, although this recovery is more limited as it is affected by continued supply shocks associated with bottlenecks in global supply chains, social conflicts

affecting local extractive activities, geopolitical tensions with Russia's invasion of Ukraine, and high energy and grain costs.

The growth in exports of traditional and non-traditional products in 2023 is expected to be similar to that estimated in the previous report, as it would be favored by a context of normalization of local mining production and supply, as well as by the end of logistical restrictions on international trade. The projection incorporates a downward revision in the projection of metal prices in 2023.

15. **Imports** totaled US\$ 48,307 million in 2021, up US\$ 13,598 million (39.2 percent) from the previous year. This result mainly reflects higher input prices and the recovery of imported volumes of consumer goods, inputs, and capital goods.

In 2022, imports are expected to register the same volumes as forecast in the December Report, following the evolution of domestic demand. Likewise, as projected in the previous Report, an increase in imports would be seen in 2023, especially in the case of most industrial inputs, food, and consumer goods and, to a lesser extent, capital goods.

Moreover, an increase in import prices is projected for 2022 as a result of the increase in oil and gas prices, reflecting the energy crisis, and coupled with the geopolitical tensions generated by the conflict between Russia and Ukraine.

Table 12
TRADE BALANCE
(% change)

	2021	2022*		2023*	
		IR Dec.21	IR Mar.22	IR Dec.21	IR Mar.22
1. Value:					
Exports	47.1	8.0	12.7	5.2	5.0
<i>Traditional products</i>	55.1	7.6	13.3	4.2	4.1
<i>Non-traditional products</i>	28.2	9.0	10.9	8.1	7.8
Imports	39.2	8.5	13.3	5.4	3.9
2. Volume:					
Exports	12.8	5.8	5.7	5.9	5.9
<i>Traditional products</i>	10.4	6.2	5.5	6.5	6.4
<i>Non-traditional products</i>	20.2	5.0	6.4	5.0	5.0
Imports	19.4	4.7	4.7	5.4	5.4
3. Price:					
Exports	30.3	2.1	6.6	-0.6	-0.9
<i>Traditional products</i>	40.5	1.4	7.3	-2.2	-2.1
<i>Non-traditional products</i>	6.7	3.8	4.2	2.9	2.7
Imports	16.6	3.6	8.1	0.0	-1.5

* Forecast.
Source: BCRP.

Terms of trade

16. The **terms of trade** of goods registered an increase of 11.8 percent in 2021, supported by higher metal prices, which outpaced increases in energy, fuel and food prices,





amid a context of recovering global demand, supply shocks, and lower inventories of some commodities. It is worth pointing out that the 2021 increase in the terms of trade has been the largest in the last ten years.

In **2022**, the terms of trade are estimated to fall by 1.4 percent, less than projected in the December Report (-1.5 percent). This projection incorporates the rise in metal prices resulting from global economic recovery and supply constraints. This fall would be more than offset by the upward revision of the average import price, led by the increase in oil and food prices, mainly wheat and maize.

In the case of basic metals, the projection has been revised on the upside with respect to the estimate in the December Inflation Report. However, the recent upward pressures would be offset by the lower dynamism expected in China and in some developed economies as well as with an expected increase in supply. As for import prices, the prices of food (mainly wheat), oil and fertilizers have been revised upwards due to the impact of the Russia-Ukraine conflict on these products given the importance of these countries in the world supply. In general, industrial input prices would continue to be affected by bottlenecks in the supply chain. In addition, should the negative impact of the La Niña episode materialize affecting crops in South America and the United States, prices could continue to be under upward pressure.

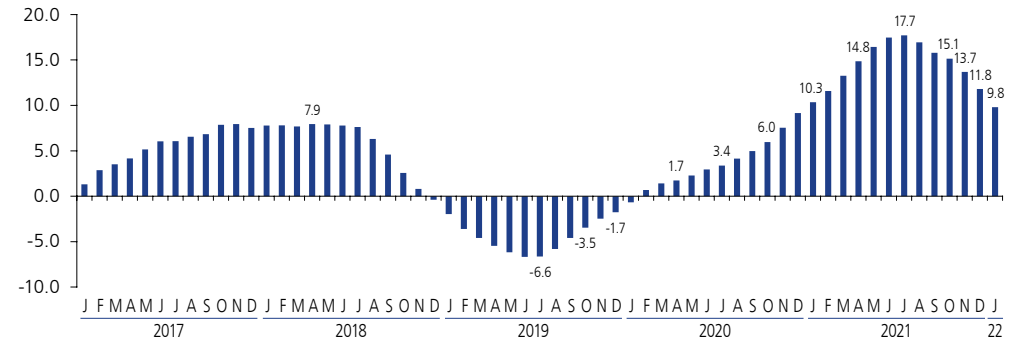
The terms of trade would recover by 0.6 percent in **2023**, with this projection contrasting with the 0.7 percent contraction rate forecast in the December Report. Despite the energy crisis and rising gas prices due to recent geopolitical events, supply is expected to start showing a gradual recovery in 2023. Oil prices are expected to decrease with respect to the previous year towards the end of the horizon, although food prices are expected to remain high, affected by supply constraints, particularly in Ukraine.

Table 13
TERMS OF TRADE: 2021 - 2023

	2021	2022*		2023*	
		IR Dec.21	IR Mar.22	IR Dec.21	IR Mar.22
Terms of Trade					
Annual average % chg.	11.8	-1.5	-1.4	-0.7	0.6
Price of exports					
Annual average % chg.	30.3	2.1	6.6	-0.6	-0.9
Copper (US\$ cents per pound)	422	435	451	428	444
Zinc (US\$ cents per pound)	136	146	162	136	152
Lead (US\$ cents per pound)	100	105	104	102	101
Gold (US\$ per troy ounce)	1 799	1 831	1 861	1 845	1 892
Price of imports					
Annual average % chg.	16.6	3.6	8.1	0.0	-1.5
Oil (US\$ per barrel)	68	75	86	68	77
Wheat (US\$ per ton)	259	287	294	278	288
Maize (US\$ per ton)	226	223	244	212	230

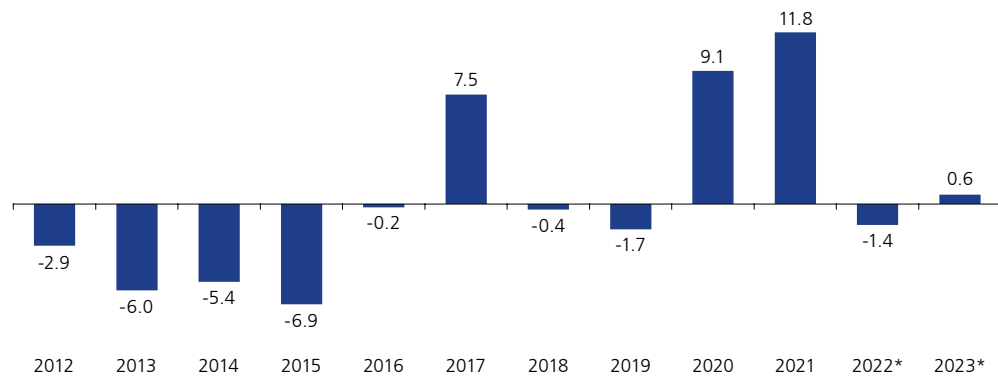
* Forecast.
Source: BCRP.

Graph 27
TERMS OF TRADE
(Accumulated 12 months % change)



Source: BCRP.

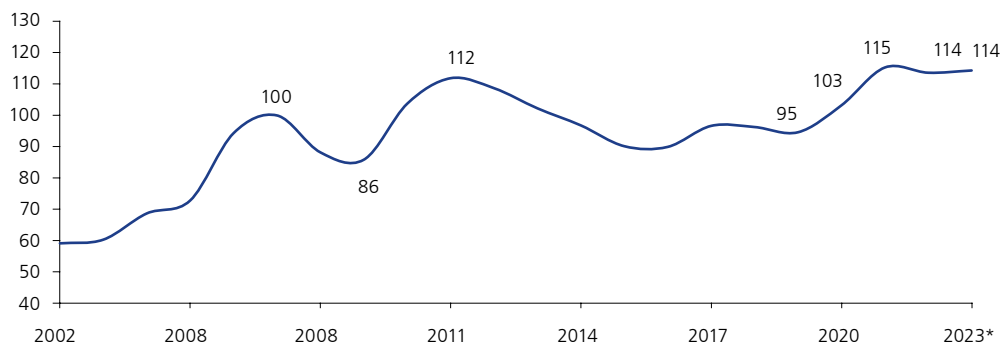
Graph 28
TERMS OF TRADE: 2012-2023
(Annual average % change)



* Forecast.
Source: BCRP.

With the current projection, the average level of the terms of trade between 2020 and 2023 would continue to be the highest in the last 20 years.

Graph 29
TERMS OF TRADE, 2002-2023
(Index 100 = 2007)



* Forecast.
Source: BCRP.



**External financing**

17. **External financing to the private sector**, which was US\$ 17,957 million higher than in 2020, totaled US\$ 16,861 million in 2021 (amount equivalent to 7.5 percent of GDP, higher than the historical average of 3.7 percent). This increase is explained by higher direct investment (reinvestment of profits) and higher net long-term loans, on the liabilities side, and by lower portfolio investment abroad (mainly liquidation of mutual fund and AFP assets to meet authorized withdrawals), on the assets side.

The long-term financial account of the private sector in 2022 would imply a lower net debtor position with respect to the previous year, due to the resumption of purchases of foreign portfolio assets by the AFPs, lower FDI, and higher net loan repayments. Compared to the previous Report, a higher pace of foreign portfolio asset purchases is expected, along with lower amortizations and higher FDI.

Table 14
FINANCIAL ACCOUNT OF THE PRIVATE SECTOR 1/
(Million US\$)

	2021	2022*		2023*	
		IR Dec.21	IR Mar.22	IR Dec.21	IR Mar.22
Private Sector (A + B)	-409	-301	-875	-577	42
% GDP	-0.2	-0.1	-0.4	-0.2	0.0
A. Long-term (1 -,2)	-16,861	-301	-875	-577	42
1. ASSETS	-9,121	2,012	2,616	2,208	3,991
Direct investment	1,371	0	-4	0	-3
Portfolio investment 2/	-10,492	2,013	2,620	2,208	3,995
2. LIABILITIES 3/	7,740	2,314	3,491	2,785	3,949
Direct investment	7,514	5,138	6,037	5,708	6,422
Portfolio investment 4/	1,152	1,199	1,000	719	930
Long-term loans	-925	-4,023	-3,545	-3,642	-3,403
B. Short-term	16,451	0	0	0	0

1/ Expressed in terms of assets net of liabilities. Therefore, an inflow of capital has a negative sign. An increase (a fall) in an external asset has a positive (negative) sign.

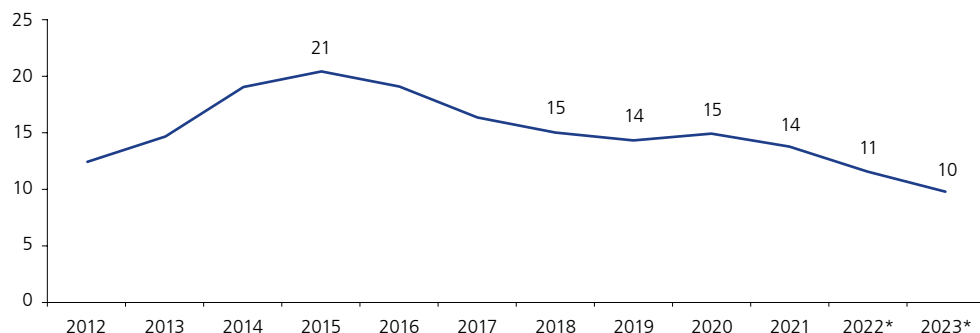
2/ Includes equities and other foreign assets of the financial and non-financial sector. Includes financial derivatives.

3/ A positive sign corresponds to an increase in external liabilities.

4/ Considers the net purchase of shares by non-residents through the Lima Stock Exchange (BVL), registered by CAVALL. Includes bonds and similar.

* Forecast.

Graph 30
**BALANCE OF MEDIUM- AND LONG-TERM PRIVATE
EXTERNAL DEBT: 2012 - 2023**
(% GDP)



* Forecast.
Source: BCRP.

In 2023, the long-term private financial account would reduce its net debtor position given that a recovery of foreign asset purchases is expected. This element also explains the revision compared to the previous report.

18. The **public sector external financing** in 2021 amounted to US\$ 15,592 million as a result of higher external debt (issuance of global bonds for US\$ 10.2 billion), credits from international organizations (US\$ 2.8 billion), the allocation of Special Drawing Rights (SDR) by the IMF (US\$ 1,811 million), and the reopening of Petroperu's corporate bond maturing in 2047 (US\$ 1 billion). On the other hand, this trend in financing was offset by the sale of sovereign bonds held by non-residents (US\$ 313 million). This higher indebtedness was associated with the financing requirements to reverse the impact of the COVID-19 crisis in the country.

In the projection horizon, the public sector's external financing requirement would decline, in line with lower pandemic-related expenditures. Compared to the previous Report, the 2022 public financial account incorporates a slight increase in liabilities, which is explained in part by a slightly higher demand from non-resident investors for global bonds.

Table 15
FINANCIAL ACCOUNT OF THE PUBLIC SECTOR 1/
(Million US\$)

	2021	2022*		2023*	
		IR Dec.21	IR Sep.21	IR Dec.21	IR Dec.21
I. ASSETS	15	140	88	140	140
II. LIABILITIES (1 + 2 + 3) 2/	15,608	3,022	3,167	1,717	1,715
1. Portfolio investment	11,525	3,364	3,417	2,030	2,030
Issuance	11,240	1,500	1,500	500	500
Amortizations	0	-136	-136	-650	-650
Other operations (a - b) 3/	285	2,000	2,053	2,180	2,180
a. Sovereign bonds purchased by non-residents	-313	2,000	2,000	2,180	2,180
b. Global bonds purchased by residents	-598	0	-53	0	0
2. Loans	2,271	-342	-250	-314	-315
Disbursements	2,780	710	807	740	741
Amortizations	-509	-1,053	-1,057	-1,054	-1,056
3. BCRP: other operations 4/	1,811	0	0	0	0
III. TOTAL (I - II)	-15,592	-2,882	-3,079	-1,577	-1,575

1/ Expressed in terms of assets net of liabilities. Therefore, an inflow of capital has a negative sign. An increase (a fall) in an external asset has a positive (negative) sign.

2/ Medium and long-term debt. A positive sign corresponds to an increase in external liabilities.

3/ For the purchase and sale between residents and non-residents of government bonds issued abroad or in the local market.

4/ Includes Special Drawing Rights (SDR) allocations.

* Forecast.

19. The soundness of the country's balance of payments in the face of negative external events can be assessed by considering the position of international reserves in relation to the balance of short-term external liabilities or the sum of these liabilities and the current account deficit. In addition to the high levels of support thanks to the precautionary accumulation of international reserves, Peru has an automatic freely available credit line (FCL) from the IMF for approximately US\$ 11.2 billion to face eventual contingencies.





Table 16
INTERNATIONAL INDICATORS

	2017	2018	2019	2020	2021	2022*	2023*
International Reserves as a percentage of:							
a. GDP	29.7	26.7	29.6	36.4	34.9	32.1	30.0
b. Short-term external debt 1/	414	343	498	561	518	502	502
c. Short-term external debt plus current account deficit	351	281	424	635	368	401	458

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

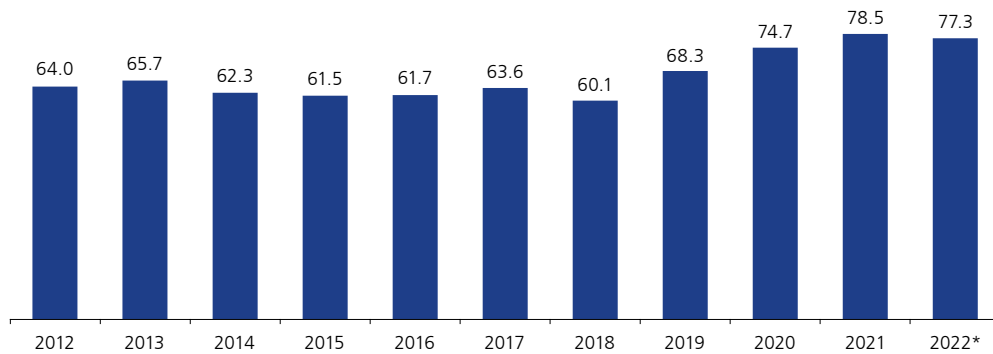
* Forecast.

Source: BCRP.

20. At the end of 2021 the level of **Net International Reserves (NIRs)** was US\$ 78,495 million, US\$ 3,789 million higher than at the end of 2020. The accumulation of NIRs during 2021 was mainly due to foreign exchange operations with the public sector for a total of US\$ 11,752 million and to an increase in deposits of financial intermediaries in the BCRP (US\$ 3,159 million). This was in part offset by net sales of US\$ 11,626 million, aimed at mitigating exchange rate volatility.

As of March 16, international reserves have decreased by US\$ 1,182 million compared to the end of last year, to US\$ 77,313 million. This result is explained by a US\$ 200 million drop in the financial system's deposits in the BCRP, as well as by a US\$ 268 million drop in the public sector's deposits in the BCRP.

Graph 31
NET INTERNATIONAL RESERVES: 2012 - 2022
(Billion US\$)



* As of March 16.
Source: BCRP.

Box 3 FOREIGN TRADE WITH RUSSIA AND UKRAINE

This box describes the current situation of Peru's foreign trade with Russia and Ukraine as a result of the war between these two economies.

In 2021, exports to Russia and Ukraine accounted for only 0.3 and 0.01 percent of Peru's total value of exports. However, the fact that exports of non-traditional products accounted for a greater share of shipments to both countries is worth pointing out. In the case of Russia, exports of grapes (12.1 percent), avocados (12.1 percent), frozen squid (10.0 percent), and pomegranates (6.6 percent) stand out. In 2021 fruit exports to Russia did not exceed 5 percent of total exports of each product, except for pomegranates, which accounted for 16 percent of these exports. In the event of a prolongation of the conflict, because of seasonality (March-April-May), the most affected exports would be those of pomegranates, avocados, and mangoes.

EXPORTS TO RUSSIA (Million US\$)

	2019	2020	2021*	Part.21 (%)	
Total	212	134	195	100.0	
Traditional	92	12	46	23.6	
Concentrated lead	0	0	38	19.2	
Coffee not roaste	5	8	7	3.8	
Gold	0	0	1	0.5	
Cane sugar	0	0	0	0.0	
Copper	85	2	0	0.0	
Tin	2	2	0	0.0	
Oil	1	0	0	0.0	
Non-Traditional	119	123	149	76.4	
Fresh grapes	16	19	24	12.1	
Fresh avocado	9	23	24	12.1	
Frozen squid	9	10	20	10.0	
Fresh pomegranates	12	10	13	6.6	
Fresh mangoes	4	10	9	4.7	
Fresh tangerine	7	12	11	5.7	
Cuttlefish, balloons, squid and pot	13	7	7	3.5	
Pigment lacquers	5	5	6	2.9	
Brazil nuts	3	1	4	1.9	
Ginger	1	3	3	1.7	
Res	41	22	30	15.3	

2021: % of Russia in Total	
Fresh grapes	2
Fresh avocado	2
Fresh pomegranates	16
Fresh mangoes	3
Tangerine	5
Coffee	1

Source: Sunat.
* Preliminary.

In the case of Ukraine, exports of frozen squid (29.3 percent) and frozen trout (22.3 percent) stand out.



**EXPORTS TO UKRAINE**

(Million US\$)

	2019	2020	2021*	Part.21 (%)
Total	3.2	4.9	8.6	100.0
Traditional	0.0	0.1	0.2	2.6
Coffee not roasted	0.0	0.1	0.2	2.6
Fish oil	0.0	0.0	0.0	0.0
Non-Traditional	3.2	4.8	8.3	97.4
Frozen pot	0.8	1.3	2.5	29.3
Frozen trout	0.0	0.9	1.9	22.3
Self-propelled	0.0	0.0	0.6	7.0
Brazil nuts	0.1	0.2	0.5	6.3
Ginger	0.0	0.3	0.5	5.7
Rest	2.4	2.1	2.3	26.8

Source: Sunat.

* Preliminary.

On the other hand, in 2021 imports from Russia and Ukraine accounted for 1.1 percent and 0.3 percent of Peru's total imports, respectively. Imports from Russia are mostly industrial inputs, such as fertilizers (61.2 percent), iron and steel (7.6 percent), and plastics (5.1 percent) and, to a lesser extent, capital goods such as aircraft (7.1 percent). Fertilizers from Russia account for more than 50 percent of total imports of this product, while wheat imports from Russia only represent 3.0 percent in Peru's total wheat imports, behind wheat imports from Canada, the United States, and Argentina.

IMPORTS FROM RUSSIA

(Million US\$)

	2019	2020	2021*	Part.21 (%)
Total imports	319	238	545	100.0
Inputs	306	227	489	89.7
Fertilizers	222	175	333	61.2
Iron and steel	26	12	42	7.6
Plastics	3	5	28	5.1
Paper and carton	13	6	16	2.9
Inorganic chemicals	11	11	12	2.3
Raw rubber	7	4	9	1.7
Organic chemicals	4	3	9	1.7
Rest	22	10	40	7.3
Capital goods	11	9	54	9.9
Aircrafts and related equipment	4	3	39	7.1
Tubes, pipes, hollow profiles and accessories	0	0	7	1.2
Motor vehicles for the transportation of merchandise	0	1	2	0.3
Tools for manual use or machine use	3	1	2	0.3
Instruments and measuring devices	1	0	1	0.1
Rest	3	3	5	0.8
Consumer goods	2	2	2	0.4
Cleaning products	1	0	1	0.1
Perfumery and cosmetics	1	1	1	0.1
Musical instruments and its parts	0	0	1	0.1
Rest	0	1	0	0.1

Source: Sunat.

* Preliminary.

In the case of Ukraine, Peru's main imports are imports of iron and steel (77.2 percent) and non-alloy iron bars and profiles (14.6 percent).

IMPORTS FROM UKRAINE

(Million US\$)

	2019	2020	2021*	Part.21 (%)
Total imports	29	75	139	100.0
Inputs	23	69	111	79.7
Iron and steel	22	68	107	77.2
Paper and carton	-	-	1	0.5
Non-metallic mineral manufactures	0	0	1	0.4
Chemical products	0	1	0	0.3
Fertilizers (urea)	-	-	-	n.a.
Rest	0	0	2	1.4
Capital goods	4	2	24	17.5
Non-alloy iron bars and sections	-	0	20	14.6
Internal combustion engines	1	0	1	0.8
Instruments and devices for medicine and surgery	0	0	1	0.6
Liquid pumps	0	0	0	0.3
Telecommunications equipment	2	0	0	0.2
Rest	1	1	1	1.0
Consumer goods	2	4	4	2.7
Sunflower oil	1	3	3	2.2
Milk, cream and milk products	0	0	0	0.1
Printed articles	0	0	0	0.0
Rest	1	1	1	0.5

Source: Sunat.

* Preliminary.





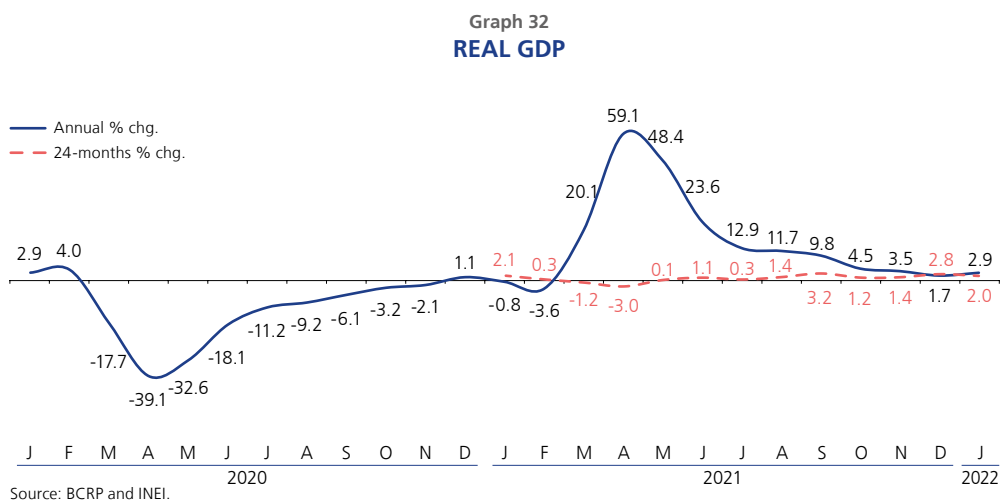
III. Economic Activity

Sectoral GDP

- 18. Economic activity in 2021 showed a level slightly above the 2019 level (0.8 percent) and registered a year-on-year increase of 13.3 percent, which is explained mainly by expansionary fiscal and monetary policies, a low comparative base, and the easing of sanitary measures following the progress of the local and global vaccination process.

Despite political uncertainty and its negative impact on expectations about the future of the economy, the monthly GDP rate shows a continuous growth since May 2021 with respect to 2019 levels. The sectors that recorded the greatest dynamism were construction, non-primary manufacturing, trade, and some branches of the services sector, including telecommunications and financial and insurance services.

Construction stands out as the first non-core sector whose activity recovered since the second half of 2020 and continued to grow in 2021, driven by self-construction and private construction projects. The recovery of services also stands out in 2021 and at present, this recovery having also been observed in recent months in some branches of services with high people interaction, such as restaurants and hotels. The latter, which is attributed to the progress of the vaccination process, has offset the recent moderation seen in construction growth.

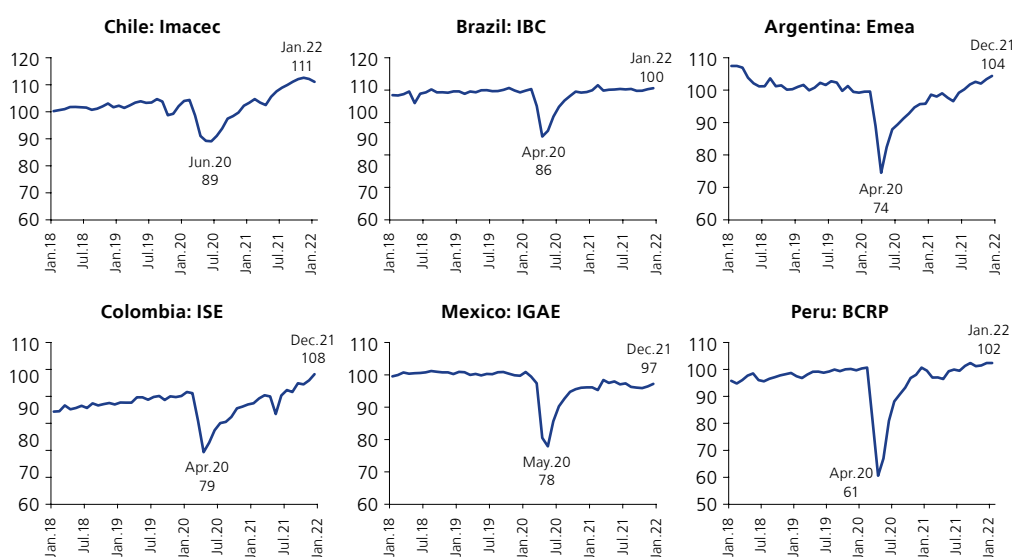


On the other hand, the dynamics of some sectors continued to be affected by the restrictions that remained in force until January 2022, such as services related to transportation and entertainment. Likewise, primary production in the last months of the year was constrained by the results seen in the sectors of fishing (compliance with

catch quotas for species such as bonito, mackerel, and jack mackerel), mining (social problems registered in departments mainly located in the south of the country), and hydrocarbons (stoppage of operations in some lots due to maintenance and plant failures).

19. Since August 2021, the seasonally adjusted GDP index has exceeded its pre-crisis level (fourth quarter 2019) for six consecutive months. In January it was 2.4 percent above its pre-pandemic level, increasing slightly from the previous month. On a quarterly basis, GDP in the fourth quarter of 2021 was 1.8 percent above the level it recorded in the same quarter of 2019.

Graph 33
SEASONAL ADJUSTED INDEX OF ECONOMIC ACTIVITY IN THE REGION
 (Base 100 = Q4.19)



Source: Central banks and national statistical institutes.

Table 17
REAL GDP
 (% change respect to the same quarter of 2019)*

	2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Germany	-1.9	-11.3	-3.7	-2.9	-4.5	-2.1	-0.9	-1.2
France	-5.5	-18.6	-3.6	-4.3	-3.9	-3.1	-0.2	0.9
Italy	-5.8	-18.2	-5.2	-6.5	-6.5	-4.3	-1.5	-0.5
Spain	-4.3	-21.5	-8.7	-8.8	-8.4	-7.6	-5.6	-4.1
Netherlands	-0.2	-9.2	-2.6	-2.9	-2.6	0.2	2.5	3.1
United Kingdom	-2.1	-21.2	-7.8	-6.4	-7.0	-1.8	-1.3	-0.3
United States	0.6	-9.1	-2.9	-2.3	1.1	2.0	1.9	3.2
Argentina**	-5.0	-19.0	-10.2	-4.3	-2.2	-4.5	0.5	3.6
Brazil	-0.1	-10.7	-3.7	-0.9	1.2	0.3	0.2	0.7
Chile	0.2	-14.2	-9.0	0.0	0.8	1.3	6.7	12.0
Colombia	0.6	-15.8	-8.4	-3.6	1.4	-1.1	4.0	6.8
Mexico	-1.0	-18.7	-8.5	-4.4	-4.8	-2.5	-4.4	-3.3
Peru	-3.9	-29.9	-8.8	-1.3	0.4	-0.6	1.6	1.8

* Variations in 2021 compared to 2019 are own calculations based on interannual variations to one decimal place.

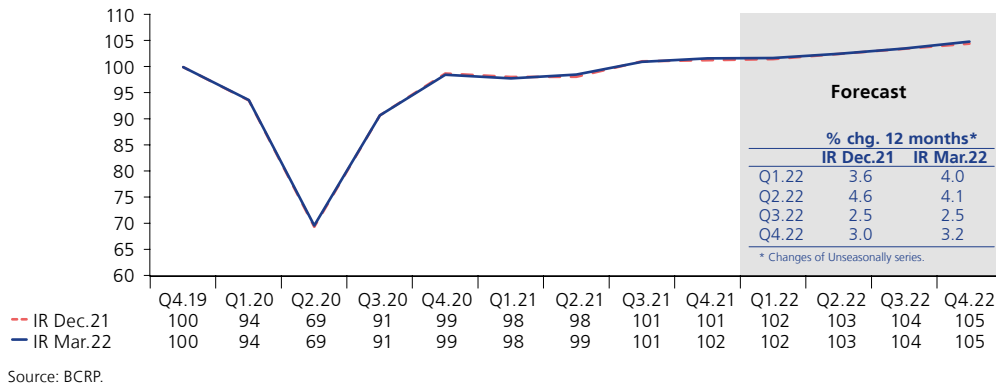
** Data for the fourth quarter of 2021 are estimated from monthly activity indices.

Source: Central banks and statistical institutes of each country.





Graph 34
FORECAST OF GDP, 2019-2023
 (Seasonally adjusted index Q4.19=100)



20. The economy is expected to grow 3.4 percent in 2022, since the vaccination of most of the population would allow economic activity to continue recovering this year through 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. In addition, normal conditions for fishing, the normalization of hydrocarbon production, and the entry into operation of the Quellaveco project are expected during the year.
21. On the other hand, the normalization of local and global activity, together with that of consumption habits, would be partially offset by the effect of agents' lower confidence regarding the future of the economy. Lower business confidence would affect investment decisions and, consequently, future production plans. This negative impact was also taken into account in the previous Report, which is why the 2022 growth projection has remained unchanged. Moreover, based on the expected pace of recovery, tourism and restaurant-related activities would reach their pre-crisis levels in 2023.

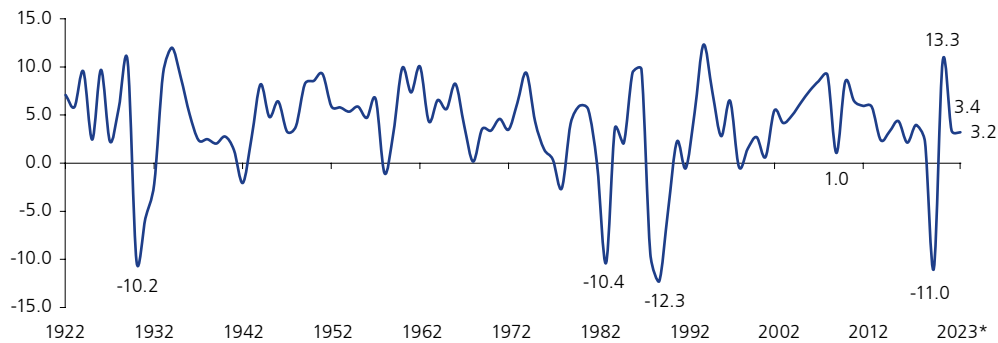
Table 18
GDP BY ECONOMIC SECTORS
 (Real % change)

	2021	2022*			2023*	
		January	IR Dec.21	IR Mar.22	IR Dec.21	IR Mar.22
Primary GDP	5.5	1.7	5.3	5.3	5.8	5.8
Agriculture and livestock	3.8	5.0	2.7	2.7	2.8	2.8
Fishing	2.8	-30.3	4.4	4.4	4.4	4.4
Metallic mining	9.7	3.6	5.9	5.9	8.4	8.4
Hydrocarbons	-4.6	9.8	13.4	13.4	4.0	4.0
Manufacture	1.9	-6.8	4.1	4.1	3.5	3.5
Non-Primary GDP	15.6	3.2	2.9	2.9	2.5	2.5
Manufacture	24.6	0.5	1.4	1.4	3.3	3.3
Electricity and water	8.6	3.1	1.7	2.3	5.0	5.0
Construction	34.9	-0.6	0.5	0.5	2.5	2.5
Commerce	17.8	2.3	2.4	2.4	2.5	2.5
Services	11.8	4.3	3.7	3.7	2.3	2.3
GDP	13.3	2.9	3.4	3.4	3.2	3.2

IR: Inflation Report.
 * The last two columns correspond to the annual projection of the previous and current IR.
 Source: BCRP.

The economy would continue to grow at a rate of 3.2 percent in 2023, supported by a context that promotes an appropriate business environment and preserves macroeconomic and financial stability, which would boost the implementation of investment projects and the generation of new jobs.

Graph 35
TOTAL GDP, 1922-2023
(Annual % change)



* Forecast.
Source: BCRP.

- a) The **agricultural sector** grew 3.8 percent in 2021. The sector maintained its dynamism as a world supplier of fresh fruits (blueberries, grapes, and avocados) and responded to the incentive of higher commodity prices –as in the case of vegetable oils– by increasing the harvests of oil palm and the planting of hard yellow maize. In addition, potato and rice production recovered from delays in the rainy season, which affected plantings. The supply of poultry meat to supply domestic demand also increased. With these results, the sector accumulated seventeen years of continuous growth.

The growth projection for 2022 and 2023 is maintained, with growth rates of 2.7 and 2.8 percent, respectively. Growth in agro-exports (blueberries, grapes, avocados, and cocoa) is expected to continue in both years, and a recovery is foreseen in the livestock subsector (poultry meat) to supply restaurant demand, in a context of better control of the pandemic. Additionally, the recovery of rice production, which was affected by the water deficit in the previous season, will contribute to the recovery of the sector in 2022.

- b) The **fishing sector** grew 2.8 percent in 2021 due to a higher catch of anchovy for industrial consumption (19.7 percent). This growth rate was partially offset by lower fish catch for human consumption (-5.2 percent), associated with lower annual fishing quotas for various species, such as bonito, mackerel, and jack mackerel.

The sector's output is expected to increase 4.4 percent in 2022 and 2023, as projected in the previous report. This is consistent with favorable weather conditions for the catch of anchovy due to negative temperature anomalies in early 2022, as well as with normal weather conditions and historically average fishing seasons for anchoveta in 2023.



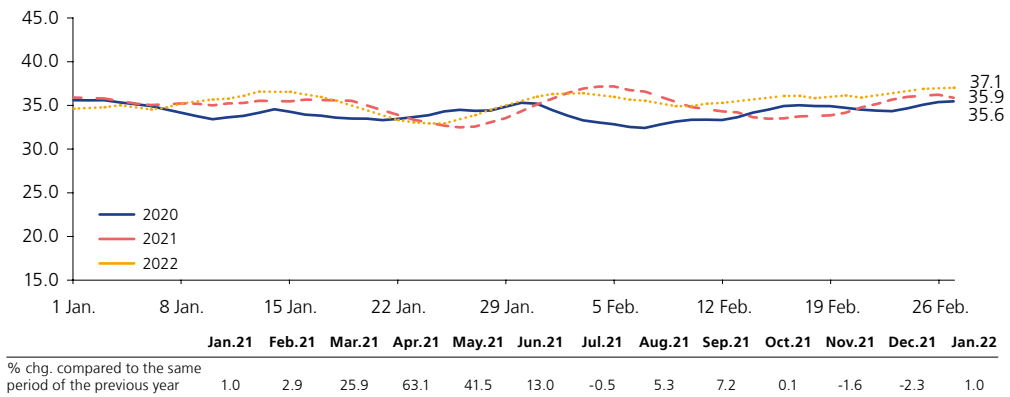


- c) In **2021**, the **metal mining sector** grew 9.7 percent due to higher extraction of all metals, especially copper (6.5 percent), zinc (14.8 percent), and silver (21.5 percent), mainly as a result of the statistical effect of 2020 given that the sector’s operations were restricted and suspended throughout the year.

The sector’s production contracted 4.2 percent year-on-year in the fourth quarter of 2021, with a slowdown being observed mainly due to the social conflicts registered in Ancash, Ayacucho, Cusco, Apurimac, among other regions. Copper production in the quarter fell 3.6 percent, while zinc production dropped by 17.5 percent, iron ore fell 9.4 percent, and lead production contracted by 6.5 percent. In addition, gold production was affected by the lower record of artisanal mining, and silver and lead production was affected by the stoppage of Raura mining company.

During the first months of the first quarter of 2022, electricity consumption registered positive rates, mostly due to the increase in demand from most mines.

Graph 36
MINING COMPANIES’ DAILY ELECTRICITY CONSUMPTION
 (Gwh - Average 7 days)

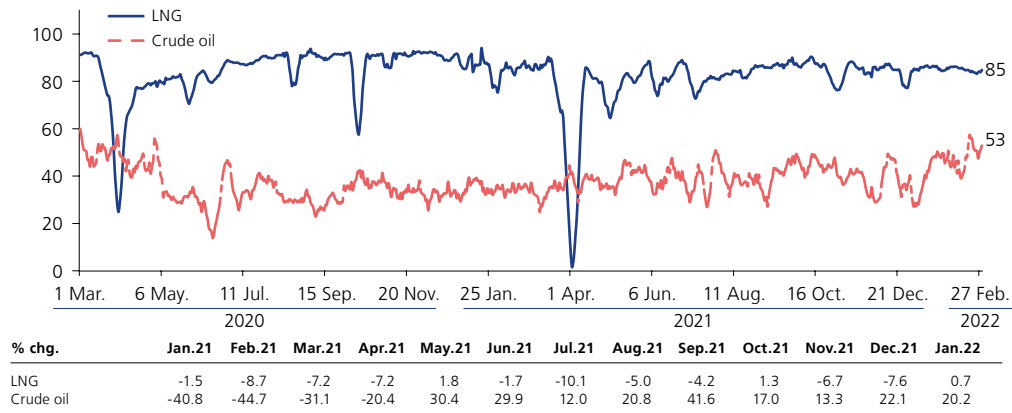


Source: COES.

In **2022**, production in the metal mining sector is expected to increase 5.9 percent due to higher production from mines Toromocho, Mina Justa and Constancia (Pampacancha), as well as due to the start-up of the Quellaveco project. In 2023, output in the sector is expected to grow 8.4 percent, mainly as a result of higher production from Quellaveco.

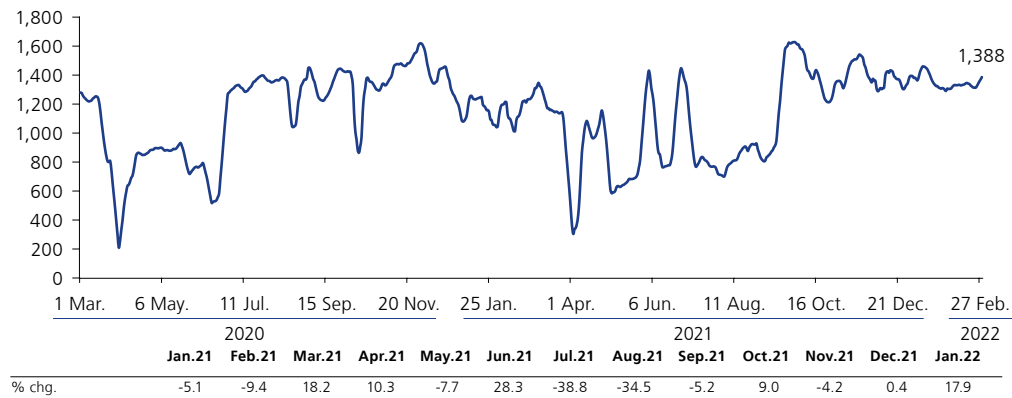
- d) Activity in the **hydrocarbons sector** in 2021 registered a 4.6 percent drop compared to the same period in 2020, due to lower oil production (-3.5 percent) as a result of the halt in the extraction of jungle lots (lots 192 and 8) after the termination of contracts. The production of natural gas and natural gas liquids also fell 5.4 and 4.8 percent, respectively, due to various maintenance periods and some plant failures, which affected the production of lots 56 and 57.

Graph 37
LIQUID HYDROCARBON PRODUCTION
 (Thousands of barrels per day, 7-day moving average)



Source: Perupetro.

Graph 38
NATURAL GAS PRODUCTION
 (12-months % change of 7-days moving average)



Source: Perupetro.

So far in the first quarter of 2022, oil production has been favored by an increased extraction of lot 95 due to the drilling of new wells. Since February 28, however, this lot has reduced its production due to the blockage of the fluvial access to the lot by the communities. In addition, production in lots 192 and 8 continue to be paralyzed. On the other hand, compared to the same quarter of 2021, the extraction of natural gas and natural gas liquids increased due to higher domestic demand and to the statistical effect of the maintenance period carried out in lots 56 and 57 in the previous year.

In **2022**, the sector would grow 13.4 percent due to the normalization in the production of natural gas and natural gas liquids as well as due to a higher oil extraction expected from the lots located in Loreto. In **2023**, the sector is expected to grow 4.0 percent, this projection being associated with a normalization of oil production.

- e) Activity in the **primary manufacturing** subsector fell by 13.1 percent in the fourth quarter of 2021. This decrease was mainly due to lower metal refining





due to the maintenance carried out at Southern's plant in November, as well as due to lower oil refining and lower fish catch for the production of fishmeal and fish oil. As for oil refining at the La Pampilla refinery, after the oil spill in the Ventanilla sea, the company has been given temporary authorizations for unloading fuels during a limited number of days in order to prevent shortages, so the production of refined products is not estimated to be affected. With this result, the sector's production accumulated a growth of 1.9 percent in the year.

The growth projection of 4.1 percent in the sub-sector in **2022** remains unchanged, which is explained by the start of operations of the Talara Refinery and the expected catch of fish species to produce canned and frozen fish products. Moreover, a year-on-year increase of 3.5 percent is expected in **2023**.

- f) Activity in **non-primary manufacturing** increased 7.3 percent in the last quarter of 2021, mainly as a result of a higher production of mass consumption goods and investment-oriented goods. The greater production seen in the branches of furniture, alcoholic beverages, bakery, and pharmaceutical products stand out among the former, while the growth of the iron and steel industry, metal products, machinery and equipment, and cement stand out among the latter. With this, non-primary manufacturing registered a growth rate of 24.6 percent in 2021.

The recovery of non-primary manufacturing would continue in **2022** with a growth rate of 1.4 percent, above pre-pandemic levels. Furthermore, a growth rate of 3.3 percent is also expected in **2023**.

- g) Activity in the **construction sector** grew 34.9 percent in 2021, mainly due to self-construction projects and the continuation of public and private works. The domestic consumption of cement during this year –the main indicator of the sector's activity– increased 36.9 percent with respect to 2020.

It is worth noting that construction contracted 5.8 percent year-on-year in the fourth quarter of 2021, this deceleration being associated mainly with a lower execution of public works and lower domestic consumption of during this period.

Construction activity is estimated to increase 0.5 percent in **2022** and 2.5 percent in **2023**, driven by higher public and private investment.

- h) In 2021, output in the **commerce** sector grew 17.8 percent, in line with higher sales in all branches given the lower operating restrictions recorded during the year in comparison to 2020. Wholesale trade grew 18.4 percent, while retail sales grew 13.4 percent, and activity in the area of vehicle sales and repair grew 32.6 percent, driven by higher delivery services.

Activity in this sector is expected to increase 2.4 and 2.5 percent in **2022** and **2023**, respectively.

- i) The **services** sector grew 11.8 percent in 2021 compared to 2020, exceeding the 2019 pre-pandemic level by 0.3 percent. The sector's recovery was boosted by the reduction of curfews, higher capacity in establishments, and mass vaccination. Moreover, the branches showing greater dynamism were (i) telecommunications (7.6 percent), due to the greater need for remote activities; (ii) financial and insurance services (5.9 percent), due to higher credit placements; (iii) public administration services (4.2 percent), (iv) accommodation and restaurants (43.3 percent), associated with the reactivation of the tourism sector, and (v) transportation and storage services (17.7 percent), due to greater passenger transportation by land and air, given the reduction of travel-related restrictions.

The sector is expected to grow 3.7 percent in **2022**. This projection takes into account a more prolonged impact of the pandemic on tourism-related branches, such as transportation, restaurants, and lodging, compared to the other subsectors. In **2023**, the sector would grow 2.3 percent and tourism-related sectors are expected to reach pre-pandemic levels.

Expenditure-side GDP

- 22. The Peruvian economy closed 2021 showing a growth of 13.3 percent compared to 2020 and 0.8 percent compared to 2019. This economic recovery was supported by the easing of sanitary restriction measures and the progress of the vaccination process, both factors allowing to reverse most of the negative impact of the lockdown of non-essential activities in 2020. The reestablishment in 2021 of pre-crisis activity levels (2019) can be mostly attributed to private investment, especially with the strong increase observed in activity in the construction sector. On the other hand, public consumption, private consumption, and public investment contributed to a lesser extent to this increase, offset by exports of services, particularly inbound tourism.

The vaccination process continued to show a faster pace in recent months. From December 30, 2021 to March 16, 2022, the number of people who received the first two doses increased from 21.9 million to 25.4 million, while the number of people with the third booster dose increased from 4.1 million to 11.5 million. Thus, 78 percent of the population was immunized with two doses, while 35 percent had received three doses. Despite the third wave of COVID-19 due to the omicron variant at the beginning of 2022, the progress achieved in terms of vaccination ensured limiting the increase in the number of deaths and ICU beds occupied. Consequently, the third wave of COVID-19 did not have significant impacts on the economy.

In the projection horizon, the growth of economic activity in 2022 is foreseen to be equal to that expected in the previous Report (3.4 percent). Furthermore, activity is expected to continue above its pre-pandemic level, supported by the recovery of





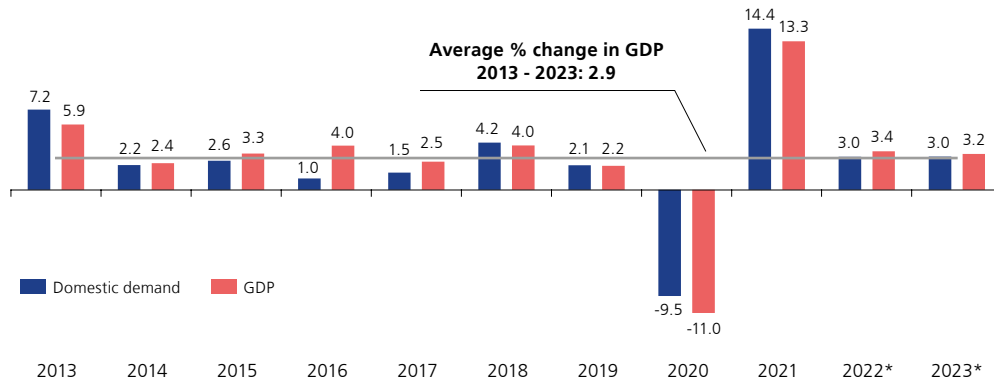
external demand and the normalization of spending habits, under an assumption of social and political stability. However, this projection would be dampened by the stagnation of private investment, in a context of low business expectations. In 2023, GDP would grow 3.2 percent, a similar rate to that expected in the previous Report.

Table 19
DOMESTIC DEMAND AND GDP
(Real % change)

	2021	2022*		2023*	
		IR Dec.21	IR Mar.22	IR Dec.21	IR Mar.22
Domestic demand	14.4	3.0	3.0	3.0	3.0
Private consumption	11.7	4.0	4.1	3.5	3.5
Public consumption	10.7	1.5	1.5	2.0	2.0
Private investment	37.6	0.0	0.0	2.0	2.0
Public investment	23.7	4.5	4.0	1.6	1.6
Change on inventories (contribution)	-2.4	0.0	0.0	0.0	0.0
Exports	14.0	7.5	7.5	7.6	7.6
Imports	18.8	5.6	5.6	6.7	6.7
Gross Domestic Product	13.3	3.4	3.4	3.2	3.2
Memo:					
Public expenditure	13.8	2.2	2.1	1.9	1.9
Domestic demand excluding inventories	16.6	2.9	2.9	2.9	2.9

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

Graph 39
DOMESTIC DEMAND AND GDP: 2013 - 2023
(Real percentage changes)

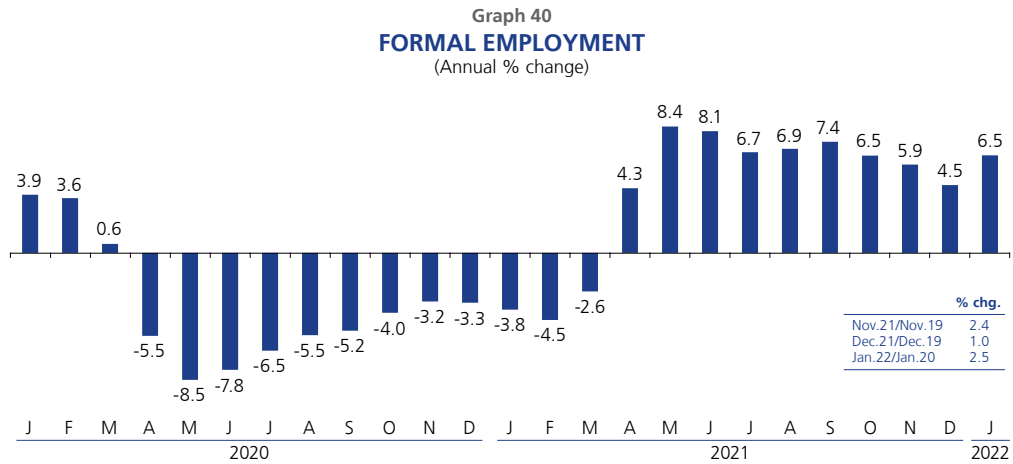


* Forecast.
Source: BCRP.

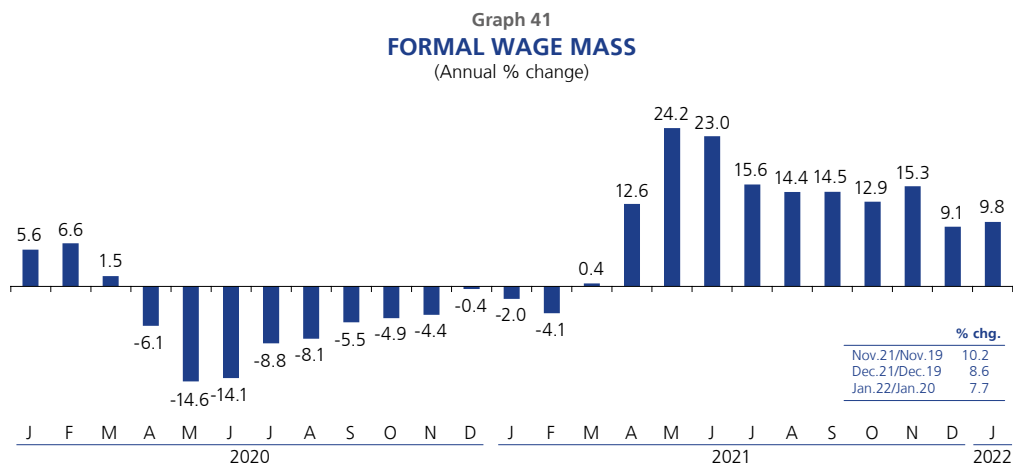
23. **Private consumption** indicators, particularly those related to the labor market, accelerated in February, driven by the relaxation of sanitary measures and the progress achieved in the vaccination of the population. Other indicators such as consumer confidence and imports of consumer durables also improved in the last month.

a) Formal jobs continued to increase as restriction measures in response to the pandemic were gradually eased. Thus, in January they increased 6.5

percent year-on-year (2.5 percent with respect to the same month in 2020).



- b) The formal wage bill increased 9.8 percent year-on-year in January. In recent months this variable has shown a favorable dynamics with positive expansion rates, supported by the recovery of workers’ average income and the increase in jobs. Furthermore, the dynamism of the formal wage bill has increased in the last month, in line with the increase in formal employment.

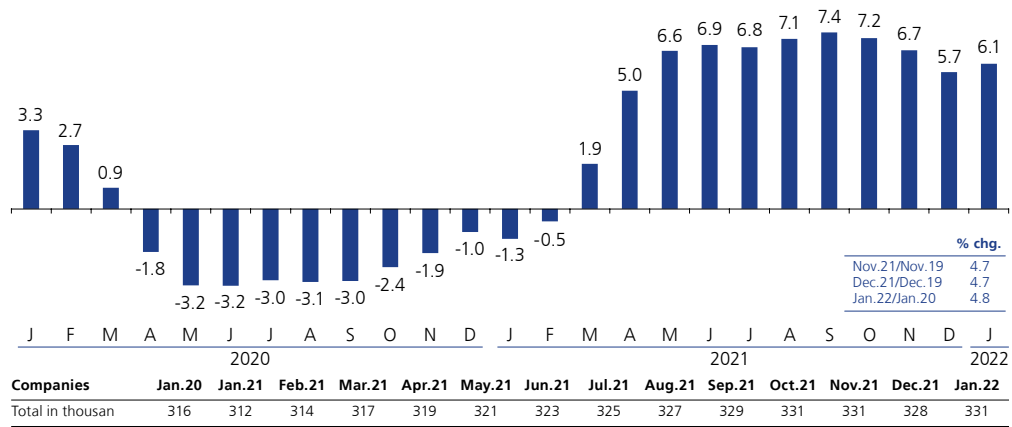


- c) In January, 331 thousand private sector companies reported employment information, which increased the number of companies by 6.1 percent year-on-year (4.8 percent compared to the same month of 2020). This growth was mainly driven by companies in the mining sector.





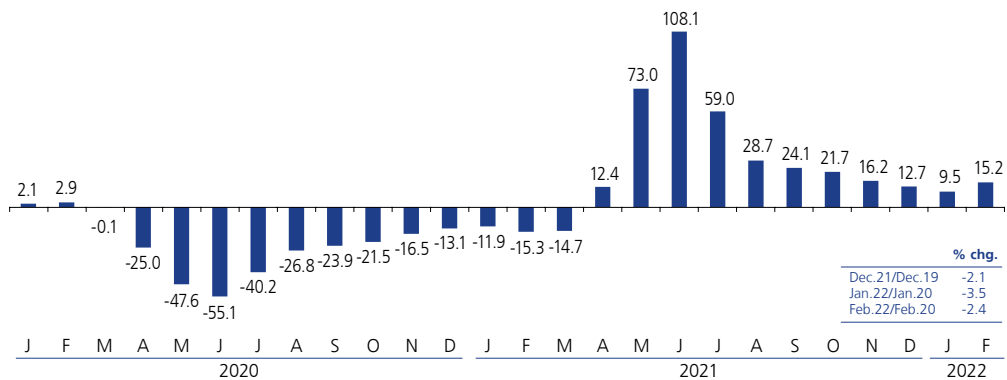
Graph 42
PRIVATE SECTOR COMPANIES REPORTING FORMAL EMPLOYMENT
 (Annual % change)



Source: SUNAT – Payroll.

- d) According to the Permanent Employment Survey, the employed workforce in Metropolitan Lima continued to grow compared to the previous year’s levels. Thus, in February it registered a 15.2 percent year-on-year growth rate, although it decreased 2.4 percent compared to February 2020.

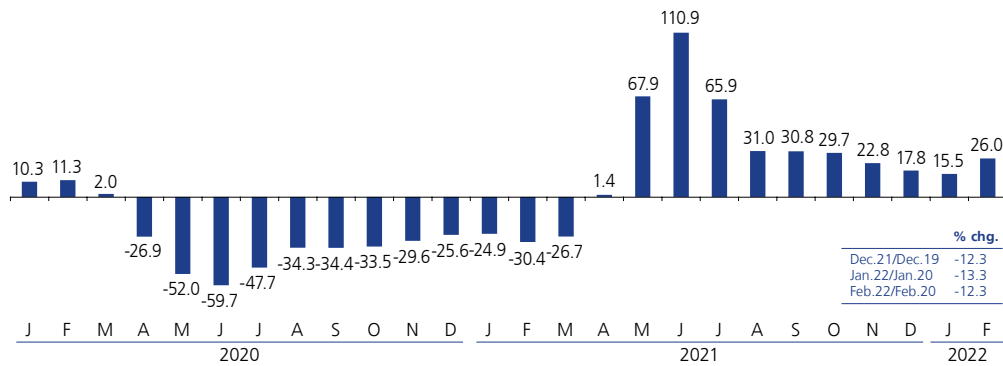
Graph 43
EMPLOYED POPULATION OF METROPOLITAN LIMA, MOVING QUARTER
 (Annual % change)



Source: INEI.

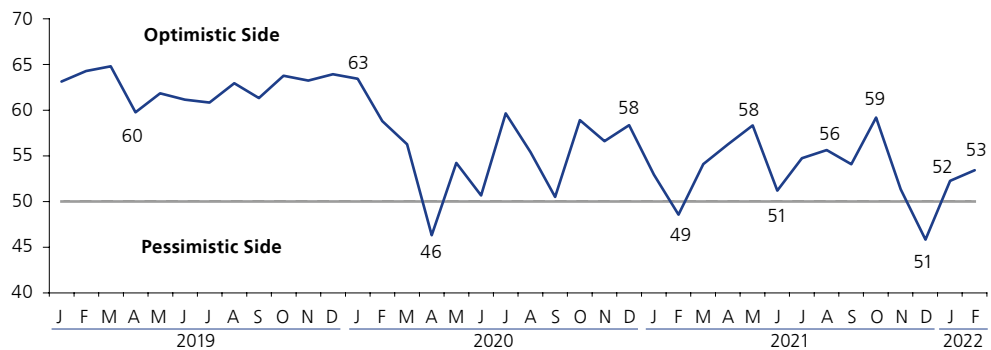
- e) The higher year-on-year growth rate of the number of workers led the nominal wage bill in Metropolitan Lima to accelerate and grow 26.0 percent year-on-year in the quarter to February (15.5 percent year-on-year in January).

Graph 44
WAGE MASS OF METROPOLITAN LIMA, MOVING QUARTER
 (Annual % change)



- f) Consumer confidence, measured through agents' expectations about their family's economic situation for the next 12 months, increased for the second consecutive month and was in the optimistic range.

Graph 45
EXPECTATIONS ABOUT THE HOUSEHOLD SITUATION IN 12 MONTHS AHEAD INDICCA, METROPOLITAN LIMA
 (Index)

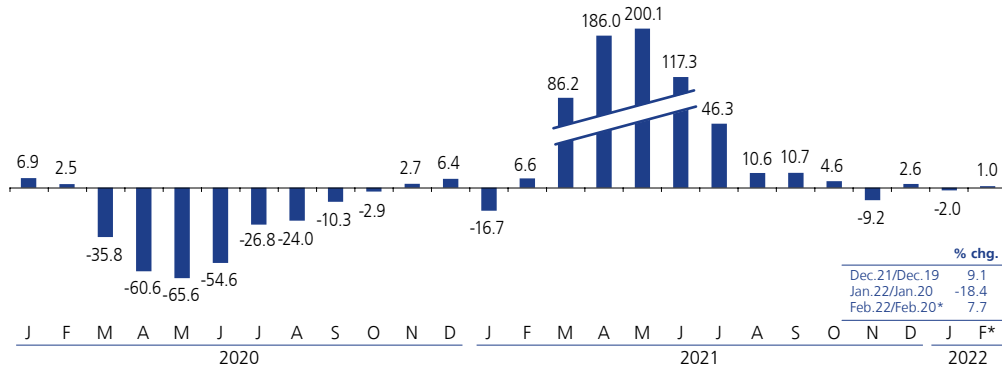


- g) In January, the volume of imports of consumer durables fell 2.0 percent year-on-year (-18.4 percent with respect to the same period in 2020). Despite this, however, it is estimated to have increased 1.0 percent year-on-year in February, registering a 7.7 percent growth rate compared to the same month in 2020.



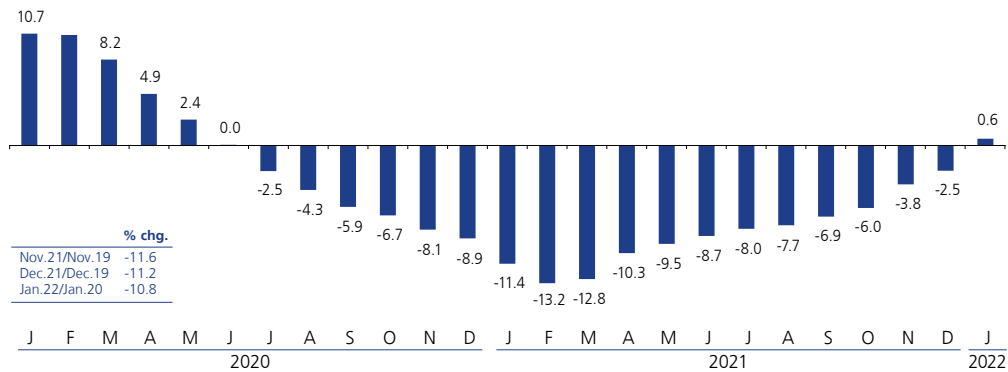


Graph 46
VOLUME OF IMPORTS OF DURABLE CONSUMER GOODS
 (Annual % change)



- h) Consumer credit in real terms showed an expansion for the first time after 18 consecutive months of declines, growing 0.6 percent year-on-year in January (-10.8 percent with respect to the same month in 2020). This year-on-year growth rate was associated with the recovery seen in the use of credit cards and vehicle loans.

Graph 47
REAL CONSUMER LOANS
 (Annual % change)

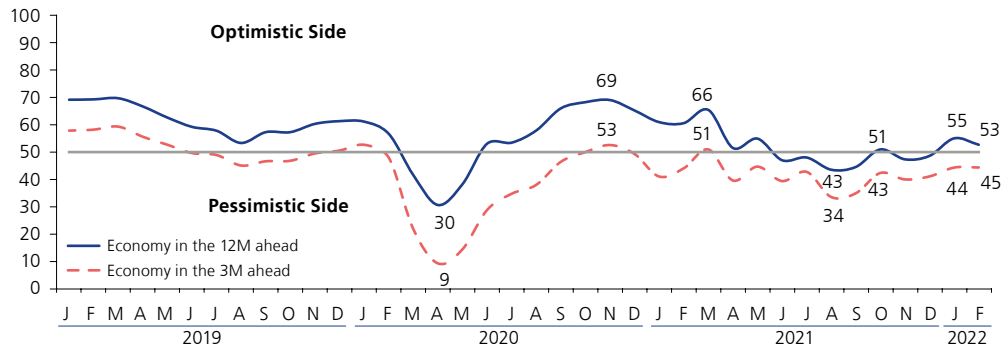


24. After having recorded a positive evolution since May of last year, most leading indicators related to private investment deteriorated in the last two months. This is mostly due to political uncertainty and its negative impact on investment decision making.

- a) Business expectations about the future of the economy recovered in December and January, in line with a better political context. However, in February,

the 3-month indicator remained practically unchanged and remained in the pessimistic range, while the 12-month indicator fell slightly, mostly as a result of the new potential risks related to the political scenario.

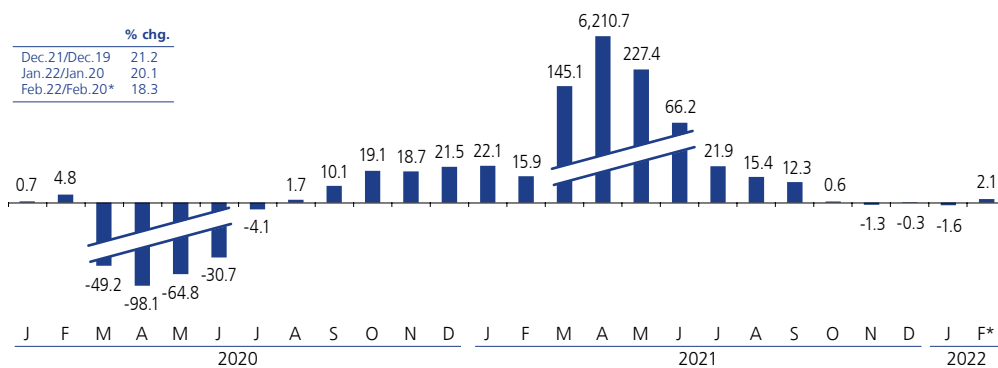
Graph 48
EXPECTATIONS ABOUT THE ECONOMY IN 3 AND 12 MONTHS AHEAD
(Index)



Source: BCRP.

- b) Domestic cement consumption –an indicator related to construction investment– accelerated its year-on-year contraction in January. However, it is estimated to have grown 2.1 percent year-on-year in February 2022 (18.3 percent growth compared to the same month in 2020).

Graph 49
DOMESTIC CEMENT CONSUMPTION
(Annual % change)



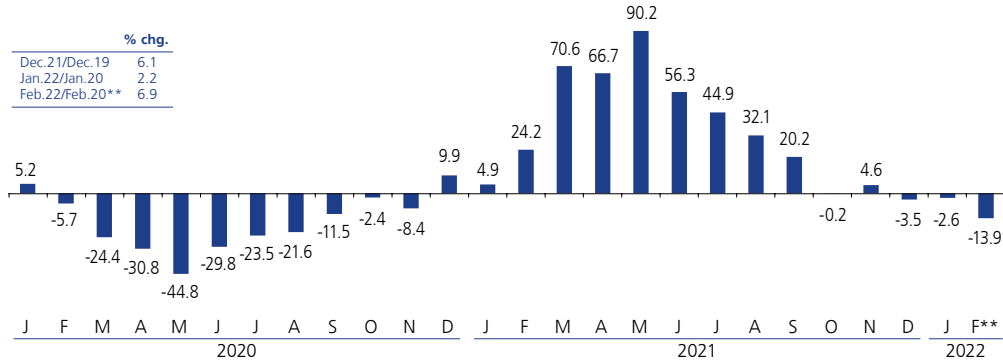
* Preliminary.
Source: Cement companies.

- c) The volume of imports of capital goods, excluding construction materials and cell phones, is estimated to have fallen 13.9 percent year-on-year in February (6.9 percent growth with respect to the same month of 2020).





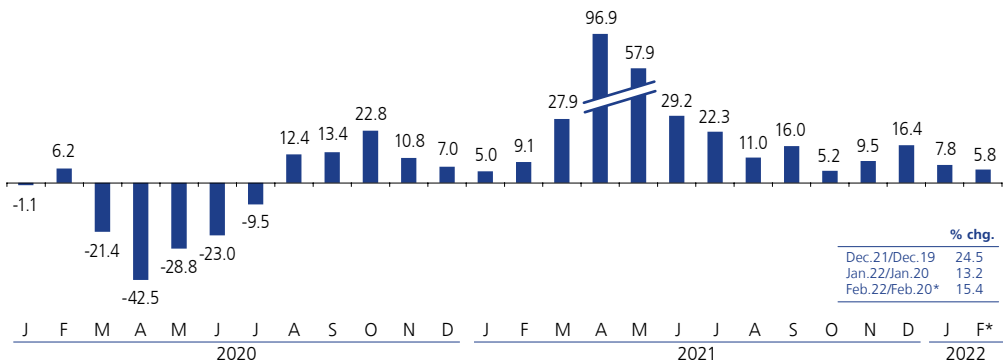
Graph 50
VOLUME OF IMPORTS OF CAPITAL GOODS*
 (Annual % change)



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

25. The volume of non-traditional exports continued to grow steadily and registered a year-on-year growth rate of 5.8 percent in February (15.4 percent compared to the same month in 2020). This increase is due to higher exports agricultural, fishing, chemical, textile, iron and steel, and non-metallic mining products.

Graph 51
VOLUME OF NON TRADITIONAL EXPORTS
 (Annual % change)



* Preliminary.
 Source: SUNAT-Customs.

26. Private sector expectations on GDP growth have been updated in line with economic developments in the first months of the year. The latest **Survey on Macroeconomic Expectations** shows that agents project a recovery between 2.5 and 3.0 percent for 2022 and a stable pace of growth with rates between 2.8 and 3.0 percent for 2023.

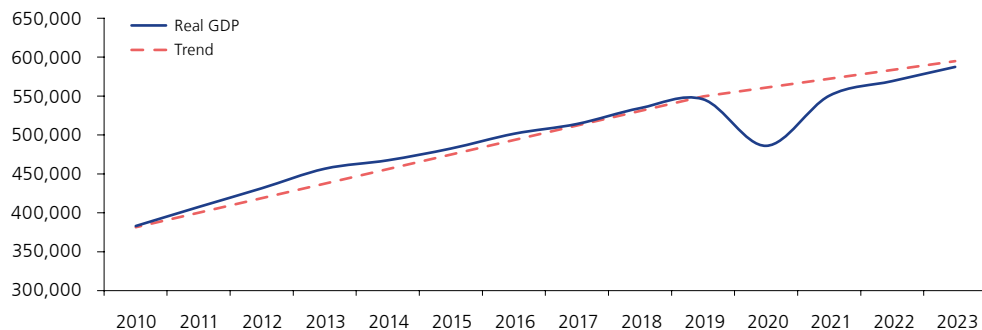
Table 20
MACROECONOMIC EXPECTATIONS SURVEY: GDP GROWTH
 (% change)

	IR Sep.21	IR Dec.21	IR Mar.22*
Financial entities			
2022	3.0	2.3	2.5
2023	-	2.7	3.0
Economic analysts			
2022	3.6	3.0	2.7
2023	-	2.8	2.8
Non-financial firms			
2022	4.0	3.1	3.0
2023	-	3.2	3.0

* Survey conducted on February 28.
 Source: BCRP.

27. The output gap, calculated as the difference between GDP and trend GDP (or long-term GDP) after the COVID-19 shock, is estimated at -2.4 percent for 2022, partially recovering from the previous year (-3.7 percent). The demand gap is defined as the difference between GDP and potential output. This gap measures inflationary demand pressures on the level of activity, since potential GDP characterizes the short and medium-term productive capacity of the economy throughout the economic cycle. A negative demand gap of 0.6 percent is estimated in 2021, with the gap closing in 2023, in line with the normalization of the economy’s spending habits and labor market conditions.

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

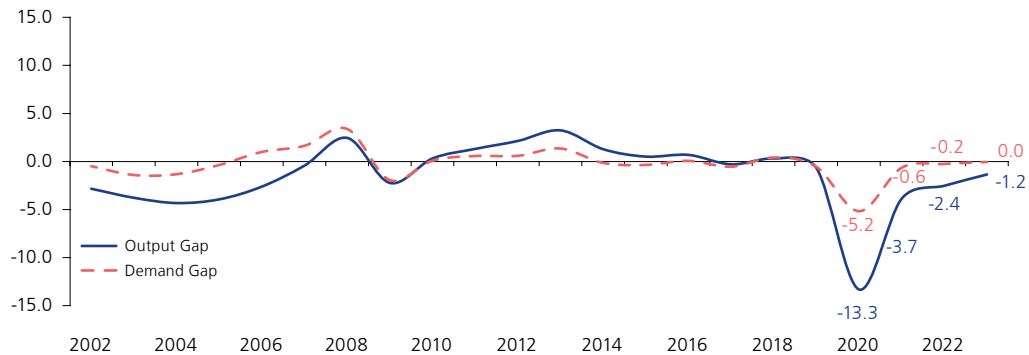


* Long-term trend of GDP is calculated using Hodrick-Prescot filter in annual frequency.
 Source: BCRP.





Graph 53
OUTPUT GAP AND DEMAND GAP*
(As a percentage of trend and potential GDP, respectively)



* Long-term trend of GDP is calculated using Hodrick-Prescott filter in annual frequency.
Source: BCRP.

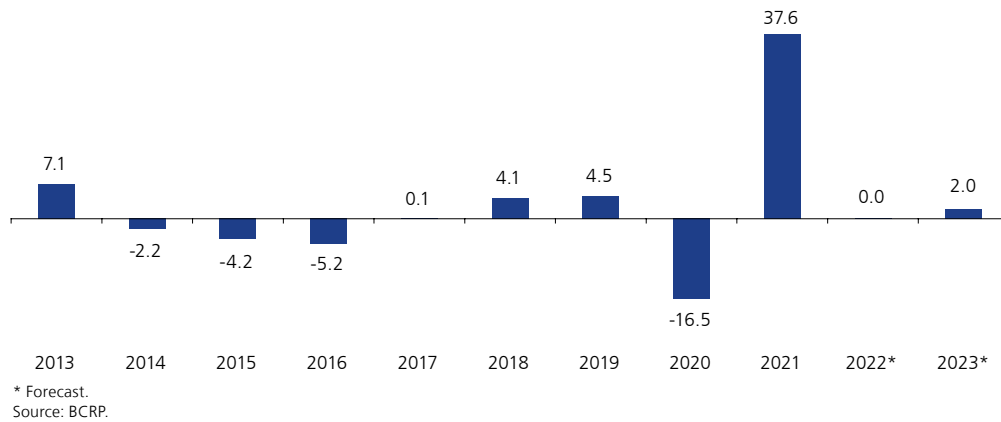
28. **Private consumption** in 2021 grew 0.8 percent compared to 2019 and 11.7 percent year-on-year. This result is explained by the recovery of the labor market, the easing of restrictions on access to certain goods and services, and by an increase in the dynamics of sales due to consumers' greater willingness to go to establishments following the progress of the vaccination process. In addition, the government also continued to provide new subsidies to households in 2022. In January, the Government began to distribute the Wanuchay Bonus, which grants S/ 350 to producers who manage farming properties of less than two hectares, and the 210 Bonus, which transfers S/ 210 to formal workers with monthly salaries of less than S/ 2,000.

Families are expected to continue to return to their pre-pandemic spending habits in 2022 as current sanitary restrictions are lifted and as labor market conditions improve. The growth projection of private consumption in 2022 has been revised up from 4.0 percent in the previous report to 4.1 percent, in line with the improved labor market performance observed year-to-date. On the other hand, a growth rate of 3.5 percent is forecast for 2023, in a context in which an adequate business environment is expected to be promoted to boost the creation of new jobs.

29. **Private investment** grew 14.8 percent in 2021 compared to 2019 and 37.6 year-on-year, driven mainly by the dynamism of self-construction and home improvement projects, sales of new homes, and the increased execution of large infrastructure projects. This was reflected in domestic consumption of cement and in the volume of imports of capital goods –excluding construction materials and cell phones–, which grew 36.9 percent and 31.8 percent, respectively, during the year.

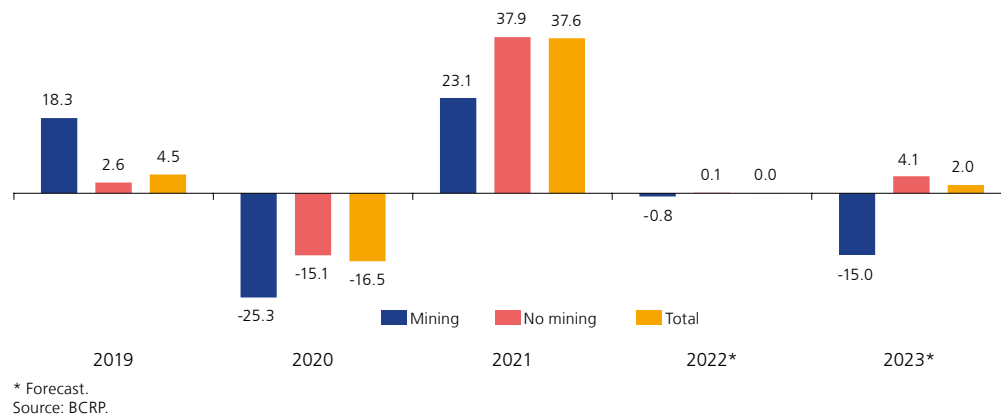
On the other hand, lower business expectations are expected to lead to stagnation in non-mining investment during 2022, while mining investment is expected to decline slightly. With this, private investment would register zero growth in 2022. Investment in 2023 would grow 2.0 percent amid a more favorable political and social context. The projection for the latter year considers a drop in the mining component, as large projects such as Quellaveco and Toromocho will complete their disbursements in 2022.

Graph 54
PRIVATE INVESTMENT: 2013 - 2023
(Real % change)



- a. Investments in the **mining sector** in 2021 totaled US\$ 5,238 million, this balance being explained mainly by the investments made by Anglo American Quellaveco (US\$ 1,312 million), Antamina (US\$ 481 million), and Southern Peru Copper Corporation (US\$ 339 million). The construction of the Mina Justa project was completed in the first half of 2021 (with a total investment of US\$ 1.6 billion). The projection for the 2022-2023 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) in 2022. Moreover, projects such as Yanacocha Sulfuros (US\$ 2.1 billion), San Gabriel (US\$ 0.4 billion) and Corani (US\$ 0.6 billion) are also expected to start construction in the projection horizon.

Graph 55
PRIVATE INVESTMENT
(Real annual % change)



- b. In **infrastructure**, progress in the construction of the main projects continues. Line 2 of the Lima Metro² stands out, showing as of January 41 percent

2 As of January 2022, the total projected investment for Line 2 and Ramal Avenida Faucett is US\$ 5,347 million, of which US\$ 3,695 million corresponds to public investment and the rest to private investment.





progress according to OSITRAN, and the first stage (Evitamiento, Óvalo Santa Anita, Colectora Industrial, Hermilio Valdizán and Mercado Santa Anita) is expected to be operational in the first half of 2022. In addition, the expansion of Jorge Chávez International Airport continues with the works for the second runway and taxiways are more than 50 percent complete, so the asphaltting works for the second runway are expected to be finished in April 2022. As for the Marcona Port Terminal, SENACE approved the investment planned by Shougang and expects the project to be completed by the end of 2022. The modernization of the Callao North Pier is 47 percent complete as of January 2022. It is worth mentioning that no agreement was reached between the concessionaire and the Government to improve the design of the next project phases, which would have increased the investment from US\$ 895 million to US\$ 1,095 million. On the other hand, DPWorld said that the Muelle Bicentenario project started construction works, beginning with dredging works. This pier is expected to be completed in 730 days and to begin operations from the first quarter of 2024.

Table 21
MAIN ANNOUNCEMENTS OF PRIVATE INVESTMENT PROJECTS: 2022-2023

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 Perú	Wide-Scale Use of Natural Gas
	Promigas Surtigas	Wide-Scale Use of Natural Gas in Piura
ELECTRICITY	ISA Perú	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	Chancay Port Terminal
	Lima Airport Partners	Expansion of International Airport (Jorge Chavez)
	Shougang Hierro Perú	Marcona Port Terminal
	APM Terminals	Modernization of Muelle Norte
	DP World Callao	Expansion of Muelle Sur
	Consorcio Transportadora Salaverry	Salaverry Port
	Covi Perú	Pucusana-Ica road network

Source: Information on companies, newspaper and specialized media.

- c. **Proinversion** reports a portfolio of more than US\$ 8.7 billion in investment projects to be awarded in the 2022-2023 period.

Table 22
PROYECTOS DE INVERSIÓN: CONCESIONES EN, 2021-2023
(Million US\$)

	Inversión estimada
To be called	8,703
Peripheral Ring Road	2,38
500 kV Transmission Line Huanuco –Tocache - Celendín - Trujillo and 500 kV Transmission Line Celendín - Piura link	788
Ancon Industrial Park	762
Longitudinal of the Sierra road project, Section 4	709
New San Juan de Marcona Port Terminal	520
Headworks and Conduction for the Drinking Water Supply in Lima	480
Broadband AWS-3 and 2.3 GHz	289
Huancayo - Huancavelica Railway	263
Improvement of Tourist Services in the Choquequirao Archeological Park, Cusco-Apurimac Regions	260
National Hospital Hipólito Unanue	250
Schools in risk: Metropolitan Lima	227
500 kV Transmission Line and Piura Nueva - Frontera Substation	177
Treatment system for wastewater Huancayo	172
Schools in Risk: Ate-San Juan de Lurigancho	158
Essalud Piura	144
IPC- Wastewater Treatment for effluent dumping or reuse - Trujillo	129
Central Military Hospital	115
Essalud Chimbote	109
220 kV Transmission Line Ica - Poroma and 220 kV Transmission Line Caclic - Jaen Norte	107
Schools at Risk: Comas - San Martín de Porres	99
IPC -Wastewater Treatment for effluent dumping or reuse, Chinchá province, Ica, Peru	70
Schools at Risk: Villa María del Triunfo	63
IPC -Wastewater Treatment System for Puerto Maldonado	59
High Performance Schools: COAR Centro	58
Improvement and enlargement of the sewage and wastewater treatment system in Cajamarca	55
Improvement of Schools in Cusco	44
IPC- Wastewater Treatment for effluent dumping or reuse, Cusco province	42
Transmission Line Reque Nueva Carhuaquero and Substation Tumbes	38
Ilo desalination plant	37
IPC - Wastewater treatment for effluent dumping or reuse, Cañete province	34
IPC - Wastewater Treatment Plant for the city of Tarapoto	26
Solid Waste Management of Health Establishments Minsa	24
Tourist Project Cable Car Historic Center Lima-San Cristobal	15
Rural sanitation in Loreto	*
Wide-Scale Use of Natural Gas in Central and 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 East Piura	*
Lambayeque desalination plant	*

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

30. **Public investment** in 2021 increased 4.6 percent compared to 2019 and 23.7 percent year-on-year, overcoming the 15.5 percent drop of the previous year. During the year, public investment was mainly marked by the execution of reconstruction projects under the Government-to-Government Agreement with the United Kingdom, projects linked to the Reconstruction and Arranca Peru programs, projects in response to the health emergency, and other projects among which the Lima and Callao Metro Line 2, Chinchero International Airport, and the acquisition of tablets stand out.

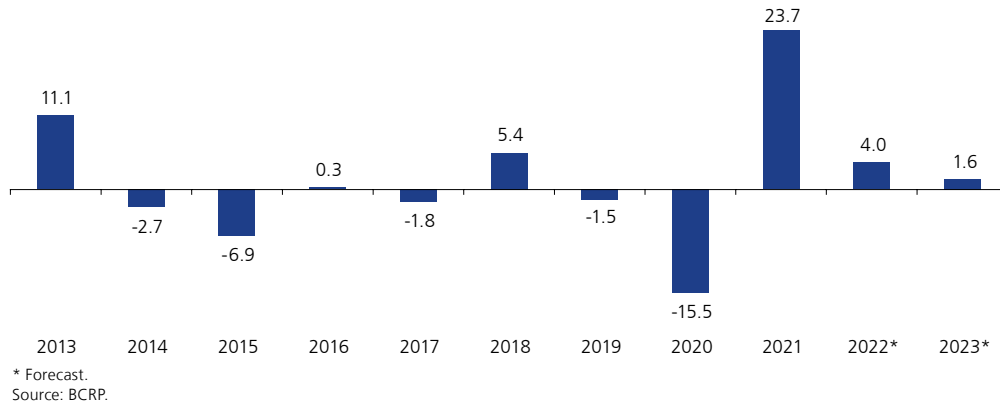
Public investment in 2022 is projected to grow 4.0 percent –a lower rate than expected in the previous Report (4.5 percent)– due to lower project execution during





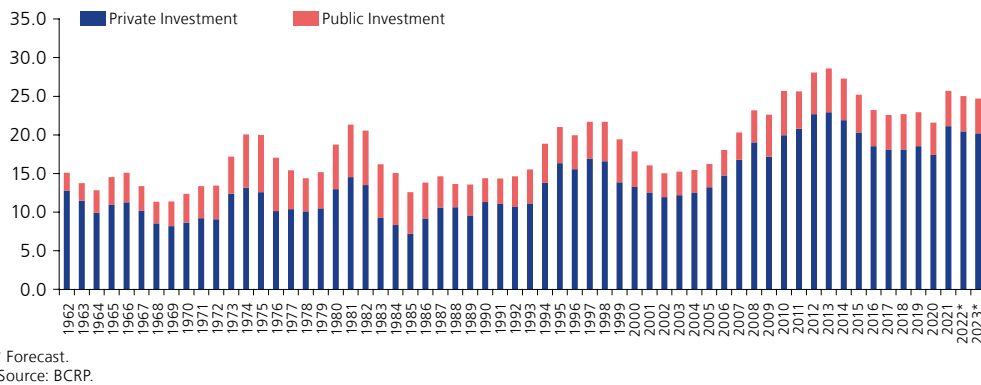
the first two months of the year. Investment is expected to increase thereafter, driven mainly by the reconstruction works carried out under the Government to Government Agreement with the United Kingdom, projects within the framework of the National Infrastructure Plan for Competitiveness (PNIC), and Special Public Investment Projects. Another aspect that would contribute to increase public investment is that this is the last year in office of current subnational authorities, which usually increases the execution of public spending. In 2023, on the other hand, public investment would register a lower growth rate and increase 1.6 percent, as the change of regional and local authorities usually involves a learning cost in the execution of spending.

Graph 56
PUBLIC INVESTMENT: 2013-2023
(Real % change)



- 31. **Gross fixed investment**, as a percentage of real GDP, would fall 0.7 percentage points of output in 2022 compared to the level recorded in 2021, so it would register a slightly lower level than in 2015. Investment is expected to fall again in 2023 to 24.7 percent of real GDP as a result of the reduction of business expectations. In order for investment to increase, it is necessary to preserve economic and financial stability, consolidate an adequate business environment, and carry out reforms to support the economy’s productivity.

Graph 57
GROSS FIXED INVESTMENT: PRIVATE AND PUBLIC, 1962-2023
(% of real GDP)



32. **Domestic savings** are projected to increase from 18.6 percent of GDP in 2021 to 19.2 percent in 2022 due to a slight increase in public and private savings. Public savings are projected to increase by 0.2 percentage points of GDP between 2021 and 2022, due to the lower use of government resources to address the pandemic. On the other hand, private sector savings would increase by 0.3 percentage points of GDP due to higher local interest rates after the withdrawal of monetary stimulus. Gross domestic investment would decrease by 0.5 percentage points due to the weakening of business expectations, which would affect the execution of private projects. In sum, requirements of external financing would decline from 2.7 percent of GDP in 2021 to 1.6 percent of GDP in 2022.

In 2023, following the normalization of the global health scenario and the recovery of economic activity, public savings would continue to increase due to a lower fiscal deficit, while private savings would increase by 0.6 percentage points of GDP. As a result, the external gap would be equivalent to -0.6 percent of GDP.

Table 23
SAVING-INVESTMENT GAP
(% of nominal GDP)

	2021	2022*		2023*	
		IR Dec.21	IR Mar.22	IR Dec.21	IR Mar.22
1 Domestic Gross Investment 1/	21.3	20.9	20.8	20.8	20.5
2 Domestic Saving	18.6	19.5	19.2	19.9	19.9
External Gap (=2-1)	-2.7	-1.3	-1.6	-0.8	-0.6
1.1 Private Domestic Gross Investment 1/	16.7	16.2	16.1	16.2	15.9
1.2 Private Saving	16.6	17.6	16.9	17.8	17.5
Private Gap (=1.2-1.1)	-0.1	1.4	0.8	1.5	1.6
2.1 Public investment	4.6	4.6	4.7	4.5	4.6
2.2 Public Saving	2.0	1.9	2.2	2.2	2.4
Public Gap (=2.2-2.1)	-2.6	-2.8	-2.5	-2.4	-2.2

IR: Inflation Report

* Forecast

1/ Includes change on inventories.

Source: BCRP

Labor market

Participation rate

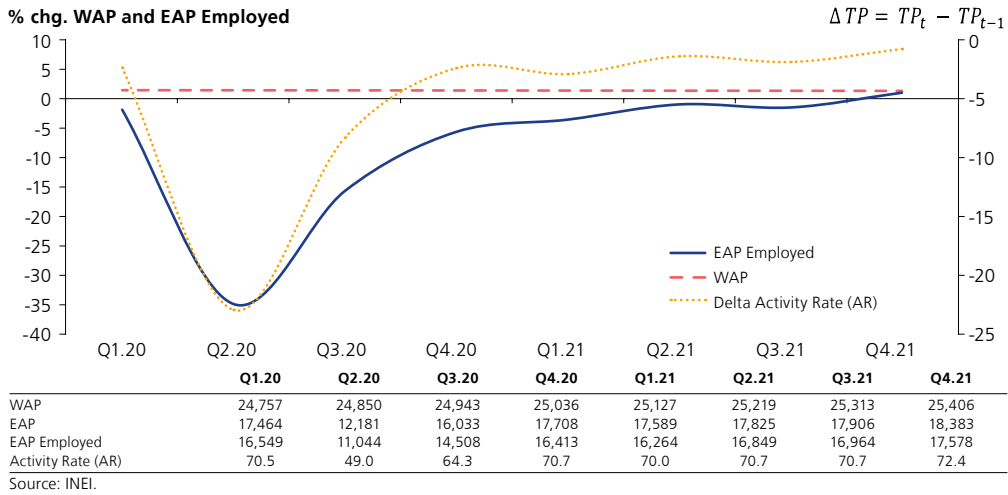
33. The labor market was strongly affected in 2020 by the measures taken to address the COVID-19 pandemic. Mandatory social immobility made it difficult to find a job, so the labor participation rate³ went from 70.5 percent in the first quarter of 2020 to 49.0 percent in the second quarter (5.3 million people stopped working or looking for a job). In the fourth quarter of 2021, the labor participation rate (72.4 percent) has practically recovered its pre-pandemic level (180 thousand people have yet to re-enter the labor force).

3 Defined as the proportion of the Working Age Population (WAP) that participates in the labor market looking for a job or as employed labor force.



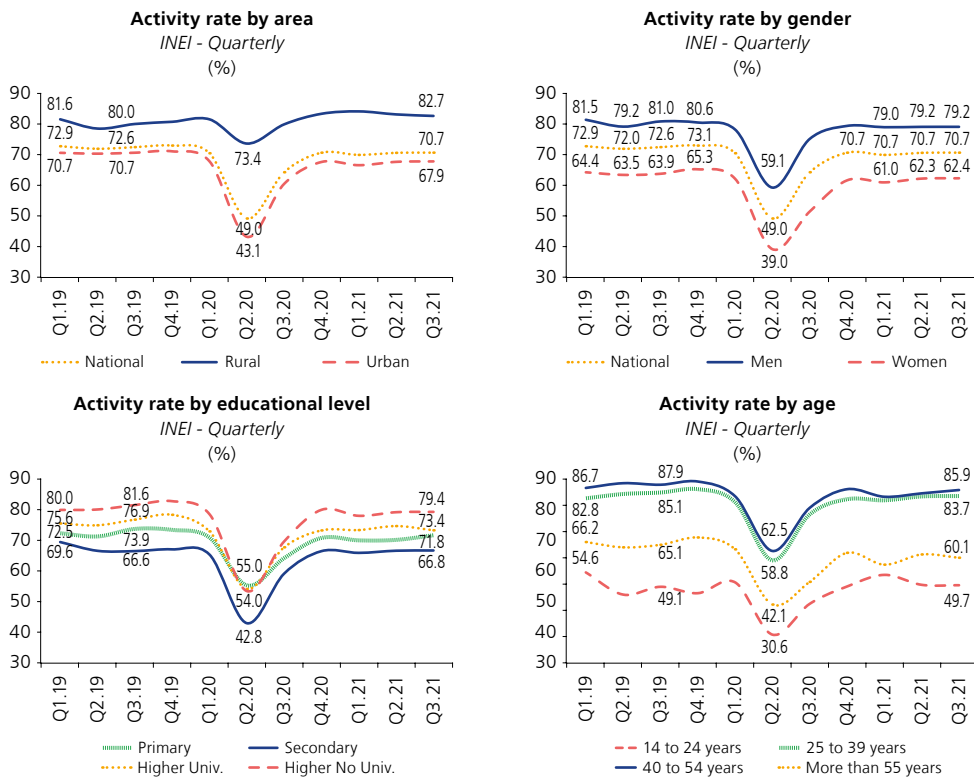


Graph 58
WAP, ACTIVITY RATE, AND EAP EMPLOYED
 (In % change respect to the same period of 2019 and percentage points)



34. Information up to the third quarter reflects that, although the labor participation rate has been recovering its pre-pandemic level, there is some heterogeneity. Particularly, lower rates are observed among women, in urban areas, among the population with higher education, and among those aged 55 years and older (-1.5 p.p, -2.8 p.p, -3.5 p.p and -5.0 p.p, respectively).

Graph 59



With the progress in the vaccination process, fewer health restrictions, and the return to face-to-face classes, the participation rate is expected to recover in these groups,

especially among women and among the population over 55 years of age, with which the labor force would surpass its pre-pandemic level in 2022.

Employed Population

35. The lifting and easing of health restrictions and the restart of most labor-intensive activities resulted in an increase in the employed population from 16.4 million in the fourth quarter of 2020 to 17.0 million in the same period of 2021. Moreover, compared to the same period in 2019, the employed population grew by 0.2 million people, thereby exceeding the pre-pandemic level. In addition, the unemployed population decreased by 0.5 million in the same period, bringing the unemployment rate down to 4.4 percent, a rate 2.9 percentage points lower from the 2020 unemployment rate.

Table 24
NATIONAL EMPLOYMENT INDICATORS
(In millions of people)

	2019		2020				2021			
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
A. Working-Age Population (WAP)	24.6	24.7	24.8	24.9	24.9	25.0	25.1	25.2	25.3	25.4
B. Economically Active Population (EAP)	17.8	18.0	17.5	12.2	16.0	17.7	17.6	17.8	17.9	18.4
C. Activity Rate	72.6	73.1	70.5	49.0	64.3	70.7	70.0	70.7	70.7	72.4
D. Employed EAP	17.2	17.4	16.5	11.0	14.5	16.4	16.3	16.8	17.0	17.6
1. Urban	13.4	13.5	12.7	7.5	10.7	12.4	12.3	12.9	13.0	13.6
a. Formal dependents 1/	5.1	5.3	5.1	4.6	4.8	5.0	4.9	5.0	5.1	5.3
b. Informal and independent	8.2	8.2	7.6	2.9	5.9	7.4	7.3	7.9	7.8	8.3
2. Rural	3.8	3.9	3.9	3.5	3.8	4.0	4.0	4.0	4.0	3.9
E. Unemployed EAP (B-D)	0.6	0.6	0.9	1.1	1.5	1.3	1.3	1.0	0.9	0.8
F. Unemployment rate (E/B)	3.5	3.6	5.2	9.3	9.5	7.3	7.5	5.5	5.3	4.4

1/ Based on the formal employment information from the Electronic Payroll. Informal and independent workers are obtained by the difference.
Source: INEI. SUNAT.

In 2020, employment was hit the hardest in the sectors of services and trade due to the severe restrictions adopted to control the pandemic. However, even though employment in the services sector has recovered significantly as of the fourth quarter of 2021, it still remains below its 2019 level.

Table 25
NATIONAL EMPLOYMENT : EAP EMPLOYED
INEI - Moving quarter (Thousands of people)

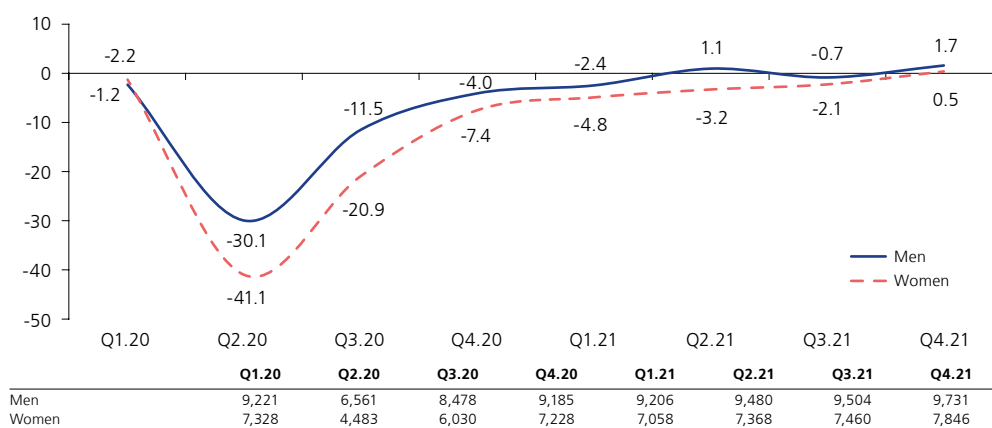
	IV Quarter						
	2019	2020	2021	Chg.2021/2020		Chg.2021/2019	
				%	Thousand	%	Thousand
EAP Employed	17,376	16,413	17,578	7.1	1,164	1.2	201
By gender							
Men	9,568	9,185	9,731	6.0	546	1.7	163
Women	7,808	7,228	7,846	8.6	618	0.5	38
By sector							
Primary sector	4,275	4,591	4,654	1.4	62	8.8	378
Agriculture and Livestock	3,997	4,309	4,360	1.2	51	9.1	363
Fishing	70	73	82	12.7	9	17.9	13
Mining	209	209	212	1.0	2	1.3	3
Manufacturing	1,485	1,442	1,554	7.8	112	4.6	69
Construction	1,070	1,106	1,257	13.7	151	17.5	187
Commerce	3,356	3,277	3,337	1.8	60	-0.6	-20
Services	7,190	5,998	6,776	13.0	779	-5.8	-414

Source: INEI.



36. During the months of strict quarantine, employment among women recorded a larger drop. As of the fourth quarter of 2021, female employment is 0.5 above the level recorded in 2019.

Graph 60
EAP EMPLOYED BY GENDER - INEI - QUARTERLY
 (% change respect to the same period of 2019)



Source: INEI.

37. In terms of the formal and informal sectors, the drop in employment in 2020 was differentiated and affected mainly informal and self-employed workers in urban areas who work in sectors such as commerce and services⁴. Dependent formal employment recovered its pre-pandemic level in August 2021, while informal and self-employment recovered its pre-pandemic level in the fourth quarter of 2021.

Table 26
EMPLOYED POPULATION BY FORMAL SITUATION
 (In million people and % change)

	2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
EAP Employed	16.5	11.0	14.5	16.4	16.3	16.8	17.0	17.6
Dependent formals 1/ Informal and independent	5.1 11.5	4.6 6.4	4.8 9.7	5.0 11.4	4.9 11.3	5.0 11.9	5.1 11.8	5.3 12.2
(% change respect to 2019)								
EAP Employed	-1.8	-35.0	-15.7	-5.5	-3.4	-0.8	-1.4	1.2
Dependent formals 1/ Informal and independent	2.6 -3.6	-7.3 -46.6	-6.9 -19.3	-5.4 -5.6	-0.5 -4.7	-0.5 -1.0	0.5 -2.2	1.5 1.0

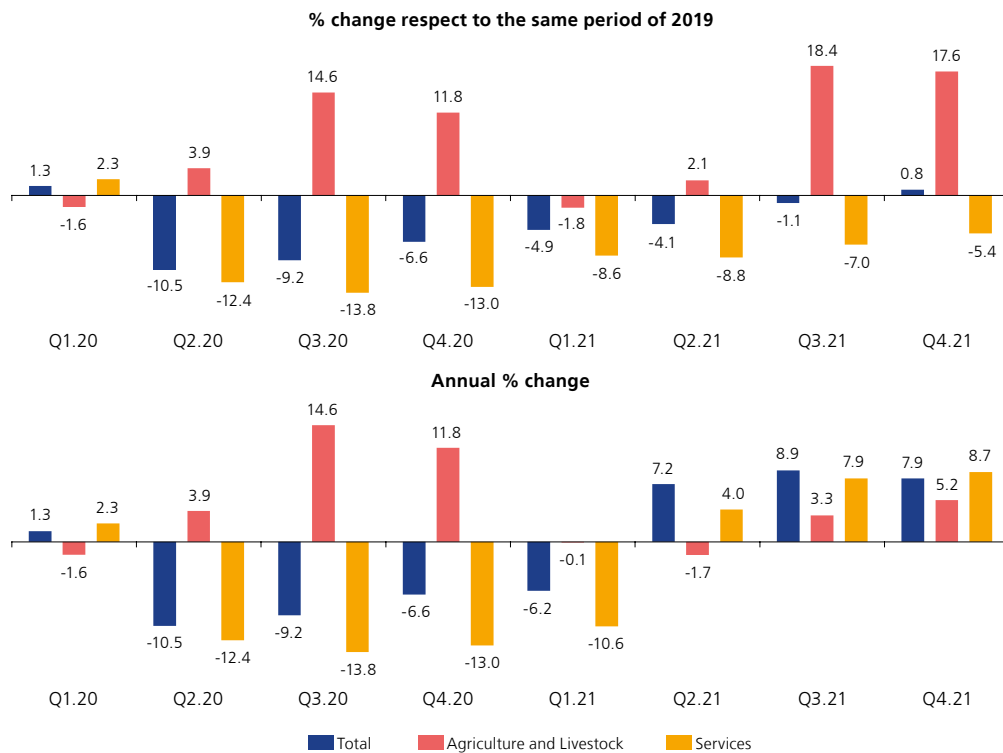
1/ Based on the formal employment information from the Electronic Payroll. Informal and independent workers are obtained by the difference.
 Source: INEI. Sunat.

38. In the private formal sector, on the other hand, the data reported in the Electronic Payroll register values above pre-pandemic levels since September 2021 and an

4 These variations are estimated on the basis of the total employed population considered in the ENAHO survey and the total number of people with formal jobs included in the electronic payroll. The difference is used to calculate the informal population, which includes both informal dependent workers and self-employed workers.

increase of 0.8 percent in employment in the fourth quarter of 2021 with respect to the same period of 2019. It is worth highlighting that this recovery has occurred in a heterogeneous manner. On the one hand, an increase of 92 thousand jobs was seen in the modern agricultural sector compared to the fourth quarter of 2019, whereas 103 thousand jobs have yet to be recovered in the services sector. The elimination of curfews, the elimination of capacity limits, and the return to face-to-face classes should generate a greater recovery in formal employment in the services sector during 2022.

Graph 61
FORMAL JOBS IN THE PRIVATE SECTOR



Source: SUNAT - Electronic Payroll.





Box 4 EMPLOYMENT INDICATORS

Two types of data sources are used to follow the evolution of employment in Peru: surveys and administrative records. Surveys can be conducted on households or firms, while administrative records, such as the electronic payroll, refer to the information provided by formal firms to the government on a mandatory basis. This box analyzes these two sources.

The following table provides a comparison of available data sources by product, geographic scope, method, sample, frequency, and sector.

COMPARISON BETWEEN DATA SOURCES

	Electronic Payroll	Permanent Employment Survey - INEI	National Household Survey - INEI	National Labor Market Survey - INEI 1/
Product	Electronic Payroll Sunat	EPE	ENAHO	ENAMEL
Geographic scope	National	Metropolitan Lima	National	National
Method	Census of formal companies and institutions (public and private)	Household survey	Household survey	Household survey
Sample	Universe: 317 thousand companies and institutions (Includes 34 thousand private companies with 10 or more workers)	16 200 households per year	37 103 dwellings per year	105 964 dwellings per year
Frequency	Monthly	Monthly	Quarterly	Monthly
Sector	Formal	Formal/Informal	Formal/Informal	Formal/Informal

1/ New employment survey available as of this year.

Formal employment

In order to follow the evolution of formal employment on a monthly basis, Peru has the information of the Electronic Payroll of SUNAT –Superintendencia Nacional de Aduanas y Administración Tributaria (National Superintendence of Customs and Tax Administration–, **to which all formal companies report information each month**. The Electronic Payroll⁵ is an administrative registry that collects monthly information on jobs and the average income⁶ of the universe of formal companies, and is therefore the best source of data on formal employment. Based on these data, the Ministry of Labor (MTPE)⁷, Sunat⁸ and BCRP publish indicators of the formal labor market. BCRP publishes series on the number of jobs and average income for total formal employment⁹, as well as for employment in the private and public sectors.

According to the Electronic Payroll, formal employment shows significant growth in recent years, this pace of growth being closely linked to the dynamism of non-primary economic activity (83 percent correlation in the 2013-2019 period).

5 The payroll spreadsheet has two components: Labor Information Record (T-Registro) and Monthly Payment Schedule (PLAME).

6 Average income includes the payment of salaries, bonuses, utilities and others.

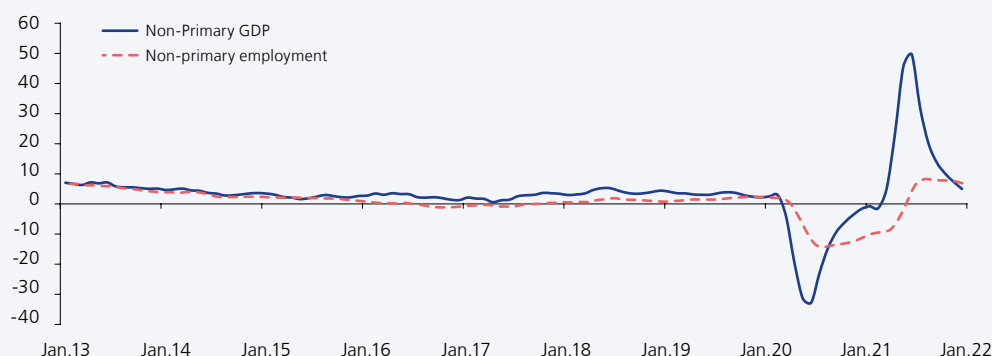
7 The Ministry of Labor (MTPE) publishes information on the Electronic Payroll in its annual report as well as on its monthly report on formal employment.

8 SUNAT publishes information on the Electronic Payroll in its Tax Note Tables.

9 The number of formal jobs differ from the number of workers since a person may have more than one job.

FORMAL EMPLOYMENT AND GDP OF NON-PRIMARY SECTORS

(Var. % 12 months, Moving Quarter)



Correlation 2013-2019: 0.83.
Source: SUNAT and BCRP.

However, although Sunat, MTPE and BCRP use the same data from the Electronic Payroll, there is no homogeneity in the results published by each institution. The variation in formal private sector jobs published by BCRP is more in line with the growth in the number of private sector jobs published by Sunat. The differences between the BCRP and Sunat series of data are basically due to the number of workers with more than one job. On the other hand, the MTPE's series are different from those published by BCRP because they apply several concepts (business rules) that do not take into account certain jobs that appear in the Monthly Payroll.

INDICATORS OF FORMAL EMPLOYMENT IN THE PRIVATE SECTOR

(In thousands of jobs and workers)

	MTPE 1/		Sunat 2/		BCR	
	Jobs	12-months % chg.	Jobs	12-months % chg.	Jobs	12-months % chg.
2018	3,500	4.9	3,510	3.9	3,662	4.3
2019	3,642	4.1	3,643	3.8	3,797	3.7
2020	3,323	-8.8	3,414	-6.3	3,559	-6.3
J.21	3,390	-8.7	3,435	-5.9	3,562	-6.3
F	3,280	-9.4	3,355	-6.8	3,442	-7.4
M	3,349	-5.5	3,553	-3.2	3,731	-4.8
A	3,393	10.6	3,502	3.9	3,642	3.8
M	3,434	22.2	3,449	9.5	3,539	9.2
J	3,480	19.6	3,472	9.9	3,558	9.0
J	3,551	13.8	3,526	9.3	3,617	8.0
A	3,677	13.6	3,613	9.7	3,732	8.9
S	3,675	10.2	3,706	10.4	3,864	9.9
O			3,701	7.1	3,940	8.9
N			3,788	8.2	3,971	7.9
D			3,743	5.9	3,917	7.0
2021			3,570	4.6	3,710	4.2

1/ Corresponds to the series published in the monthly report on private formal employment.

2/ Corresponds to the series published in Table 6 of the Tax Note.

Source: BCRP, Sunat and MTPE.

Household Surveys: ENAHO and EPE

The National Institute of Statistics and Informatics (INEI) publishes employment information based on two surveys: The National Household Survey (ENAHO), which has nationwide





coverage¹⁰, but is not specifically an employment survey. and the Permanent Employment Survey¹¹ (Encuesta Permanente de Empleo - EPE), which follows the labor market only in Metropolitan Lima. Based on the information of both surveys, it is possible to construct the main labor market indicators: Working Age Population (WAP), Economically Active Population (EAP), and Employed and Unemployed Economically Active Population, or labor force. One of the advantages of the surveys is that they provide information on both the formal and informal labor market, data on the quality of employment (if the labor force is adequately employed or underemployed), and on other socioeconomic variables linked to employment that are not available in other sources of information. However, there is a percentage of indirect responses (22.3 percent at the national level and 37 percent in Metropolitan Lima, according to INEI's 2020 Survey Quality Report) that could affect the results.

NATIONAL EMPLOYMENT INDICATORS. INEI - ANUAL

(Thousands of people)

	2016	2017	2018	2019	2020	2021
A. Working age population	23,402	23,772	24,142	24,511	24,882	25,251
B. Labor force	16,904	17,216	17,463	17,830	16,095	18,149
C. Participation rate (B/A)	72.2	72.4	72.3	72.7	64.7	71.9
D. Employed	16,197	16,511	16,776	17,133	14,902	17,120
E. Employment rate (D/A)	69.2	69.5	69.5	69.9	59.9	67.8
F. Unemployed (B-D)	707	705	686	697	1,193	1,029
G. Unemployment rate (F/B)	4.2	4.1	3.9	3.9	7.4	5.7
H. Out of the labor force (A-B)	6,498	6,556	6,680	6,681	8,787	7,101

Source: INEI.

Limitations in the survey data

The ENAHO survey fails to capture the growth registered in the PET, EAP, and employed EAP resulting from the strong Venezuelan migration that took place between 2018 and 2019.

According to data from the Venezuelan Population Survey (ENPOVE) and the Superintendencia de Migración, around 0.5 million Venezuelans entered the Peruvian labor market during those years. The ENAHO does not register additional growth in its labor indicators between those years because surveys in general do not collect information on dwellings with more than 5 households (collective dwellings), which was the type of dwelling most used by migrants in those years¹².

FLOW OF VENEZUELAN MIGRANTS

(Thousands of people)

Year	Venezuelan Population 1/	PET 2/	PEA 2/	PEAO 2/
2014	1	1	1	1
2015	2	2	2	2
2016	8	6	6	5
2017	54	44	40	37
2018	428	346	316	296
2019	771	623	570	533
2020	793	644	589	551

1/ Annual average of the Venezuelan population estimated with the entries and exits of the Superintendencia Nacional de Migraciones.

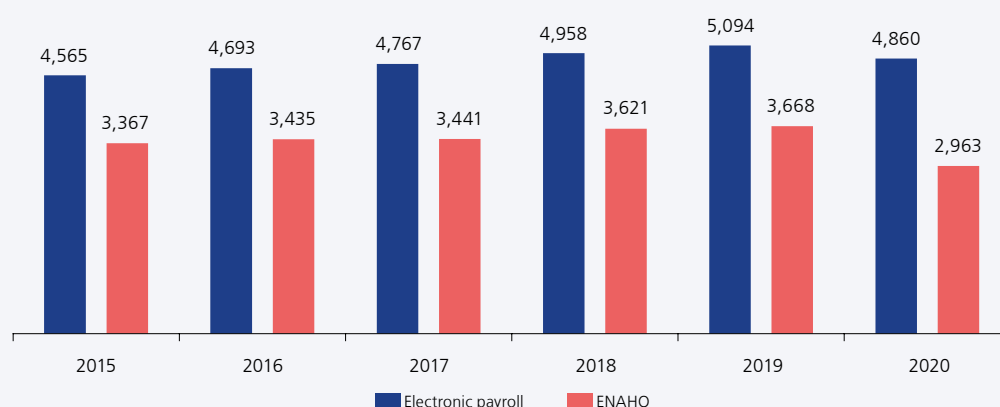
2/ With information from the ENPOVE, it is estimated that 80.8 percent of Venezuelans belong to the PET and 73.9 percent to the EAP. Of the total EAP, 93.5 percent are employed.

Source: SNM and ENPOVE.

- 10 The ENAHO survey is conducted among people of 14 years of age and older and is carried out at the national level, which provides information by geographic area: urban and rural areas. In 2020, the survey was carried out in a total of 37,103 households (23,895 in urban areas and 13,208 in rural areas).
- 11 The EPE survey is conducted among people aged 14 and older living in the area of Metropolitan Lima and Callao. In 2020, the survey was carried out in a total of 19,200 households.
- 12 Starting in 2021, the new National Labor Market Survey (Encuesta Nacional del Mercado Laboral - ENAMEL) will collect information from these households in order to capture information about the migrant population as well.

The ENAHO survey fails to reflect the size of the formal dependent labor market: the Electronic Payroll records 1.9 million more formal dependent workers with health insurance (Essalud) than the ENAHO. According to Sunat data, between 2015 and 2019 the number of formal dependent workers with Essalud¹³ health insurance grew by an annual average of 2.8 percent (from 4.6 to 5.1 million), while the ENAHO survey records a growth of 2.2 percent (from 3.4 to 3.7 million) in the same period. Moreover, in 2020, ENAHO records a 19.2 percent decrease in formal dependent employment, while according to data from the Electronic Payroll it decreased by 4.6 percent.

FORMAL DEPENDENT WORKERS
(In thousands)



Source: SUNAT and INEI.

In order to have more accurate information on the labor market, INEI has designed a specific monthly employment survey with national coverage for a sample of 106 thousand homes compared to the 37 thousand homes of the ENAHO. The National Labor Market Survey (Encuesta Nacional del Mercado Laboral - ENAMEL) is currently in the data collection stage¹⁴ and when the results are ready, the following information will be available:

- Representative monthly series (moving quarters) at the national, departmental and city levels.
- Household panel samples, both within the year (which will allow to follow one household in two quarters) and between years (one household in two consecutive years).
- Information about homes shared by multiple households to capture the Venezuelan migrant population.
- The new survey asks respondents for their ID number, so it is possible to cross-reference data with the information of the electronic payroll, which would contribute to improve the estimation of formal dependent employment.

Finally, it is worth pointing out that it is expected that the ENAMEL survey will provide higher quality labor market indicators and will therefore contribute to research and to the better design of public policies.

13 ENAHO classifies a dependent worker as formal if he/she declares to have health insurance paid by his/her employer.

14 According to INEI's website, face-to-face ENAHO, EPE, ENAMEL and other surveys are being carried out and they are complemented by telephone interviews,.





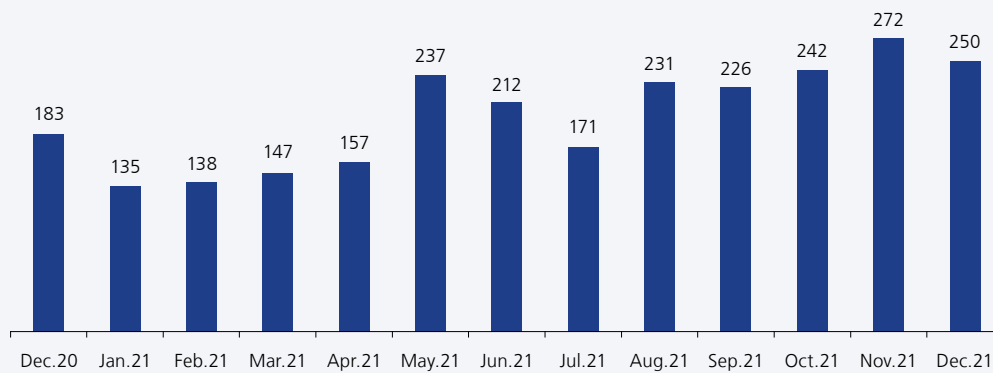
Box 5 CONFLICTS AND MINING PRODUCTION

Direct impact of conflicts on mining GDP in 2021

In 2021, activity in the metal mining sector grew 9.7 percent compared to the previous year. However, compared to 2019 it contracted 5.5 percent, because the production of some mines remained restricted due to biosafety protocols against the spread of COVID-19 as well as due to lower ore grades and social conflicts.

According to the Ombudsman's Office, in December 2021 there were 98 active socio-environmental conflicts, of which 63 were related to the mining sector and 23 to the hydrocarbons sector. Moreover, collective protest actions in Peru, such as sit-ins, chaining, road blockades, marches, and mobilizations, which reached a peak in November, totaled 250 in the year.

COLLECTIVE PROTEST ACTIONS (Number)



Source: Ombudsman's Office.

In 2021, road blockades were carried out against large and medium-sized mining companies, such as Antamina, Las Bambas, Constancia, Antapaccay, Apumayo, Ares, and Buenaventura (Uchucchacua unit), negatively affecting the production of copper, gold, zinc, molybdenum, lead, and silver. Some of the conflicts seen during that year include the following:

1. On January 20, residents of Chumbivilcas (Cusco) blocked the access and exit road to mine Constancia because, after 4 years, they still had not reached an agreement on the terms of the framework agreement that specifies the company's annual contribution. Leaders demanded S/ 50 million, while the mine proposed S/ 40 million.
2. On March 8, the organizations of Espinar (Cusco) began an indefinite strike against Glencore-Antapaccay company in protest against the Coroccohuayco expansion project.
3. On July 24, members of the Chumbivilcas community began an indefinite strike against Las Bambas mining company requesting, among other things, that the ministerial resolution

declaring the road that passes through their communities as a national road be cancelled. A two-month truce was agreed upon as a negotiation period between the two parties on August 2, but then the conflict was reactivated in September and the corridor was blocked again for about 20 days.

4. The Cotabambas community members held protests from October 19 to 27, demanding compensation payments for their land and environmental liabilities, among other claims. An agreement was reached on October 27 after a meeting with the manager of Las Bambas was scheduled for Tuesday, November 9. However, 10 communities of Chumbivilcas resumed the blockade of the southern mining corridor on November 19, denouncing Las Bambas for not having complied with the agreed commitments¹⁵. Since no agreement was reached, the blockade continued until December 31, when a budget was agreed with the Ministry of Transportation and Communications to clean up the mining corridor and a future date was set to discuss the possibility of the community participating in the mine's value chain.
5. Compañía Buenaventura's mining unit of Uchucchacua, which produces silver, zinc and lead, suspended its production activities from September 13 due to the strike carried out in the Oyón Campesino Community since that month. Another reason for the suspension of activities was to achieve a more efficient and profitable operation, implementing actions during the stoppage to reduce fixed costs, focus exploration activity in areas with higher ore grades, among other actions. It should be pointed out that the company does not expect the suspension of production at the unit to affect the start-up of the Yumpag silver project in 2024.
6. Similarly, since October 25, residents of the Livitaca district (Chumbivilcas) have been blockading areas of the mining corridor in protest against Hudbay (mine Constancia), requesting an increase in the framework agreement in view of the expansion of its operations with the Pampacancha pit. The communities request an annual transfer of S/ 50 million to close gaps in health, sanitation and education.
7. On October 28, the communities of the provinces of Lucanas, Parinacochas, and Paucar del Sara Sara in Ayacucho, announced an indefinite strike against the Apumayo and Ares mining companies, which they accuse of contaminating the region's water resources, requesting the withdrawal of the companies from the area. Approximately 500 people invaded and set fire to the Apumayo Mining Company's facilities.
8. On October 31, Antamina announced the suspension of its operations in response to the protests and road blockades carried out by the community of Aquia, who accused the company of usurping their land. The company's presence in this region is focused on the pipeline that transports copper concentrate production.

15 The communities also demanded that they be given approximately 75 concentrate transport units (about 20 percent of the units used by the company), MMG Limited offered them 12.





MAIN AREAS OF MINING CONFLICTS IN PERU



Source: Ombudsman's Office.

In 2021, **copper** production¹⁶ totaled 2.2 million metric tons. It is estimated that around 68 thousand metric tons were not produced due to the constant blockades in the southern mining corridor and in Antamina in November. The impact on the metallic mining sector GDP is estimated at -1.9 percentage points.

Moreover, around 12 thousand FMT of **zinc** and 488 FMT of **molybdenum** were not produced in 2021, the impact of the lower production of each mineral being estimated at -0.1 percentage point. Similarly, the lower extraction of **gold** and **silver** would have contributed negatively by -0.04 and -0.1 percentage points, respectively, to the sector's GDP.

16 Copper concentrate obtained by flotation process.

MINING PRODUCTION LOST DUE TO SOCIAL CONFLICTS, ACCORDING TO MINERAL

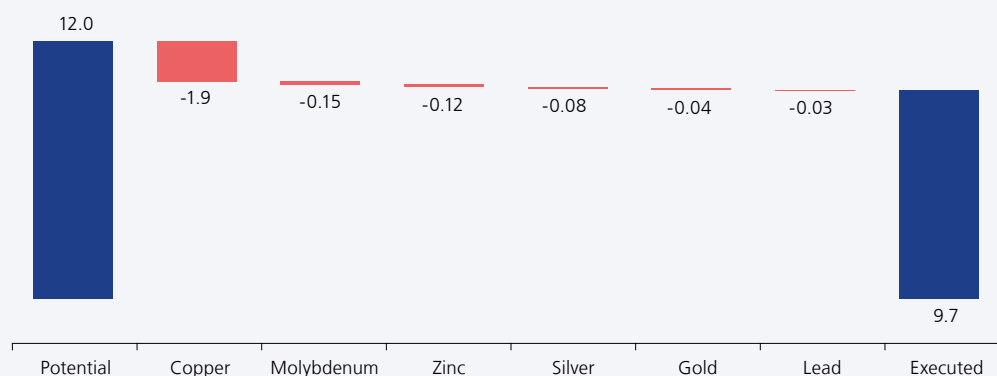
Metal	Mines	Units
Copper	Las Bambas. Constancia. Antapaccay. Antamina	68 thousand FMT
Gold	Antapaccay. Apumayo. Constancia. Ares	13 thousand troy ounces
Zinc	Antamina. Buenaventura (Uchucchacua)	12 thousand FMT
Lead	Antamina. Buenaventura (Uchucchacua)	3 thousand FMT
Silver	Constancia. Antamina. Antapaccay. Ares. Apumayo. Buenaventura (Uchucchacua)	1,276 thousand troy ounces
Molybdenum	Constancia. Las Bambas. Antamina	488 FMT

Memo: In Las Bambas and Constancia, the lost production is the difference between the upper limit of their 2021 production plan and the executed one. For the other units, the lost production in each month is the difference between the average production during the months without conflict in 2021 and the executed.
Source: BCRP.

In total, the conflicts affecting large and medium sized mining companies would have a negative impact of 2.3 percentage points on the GDP of the metal mining sector. This would have had a direct impact on total GDP of -0.2 percentage points in 2021.

GDP LOSS OF THE METALLIC MINING SECTOR DUE TO SOCIAL CONFLICTS

(% change and % points)



Source: BCRP.

Impact of conflicts on medium-term and long-term mining investment

The recent conflicts between the community of Chumbivilcas (Cusco) and the company MMG Las Bambas, whose operations are located in the border area of Apurimac and Cusco, reveal that the conflict situation could escalate until the operations are closed (no production activity is carried out) and until the companies, whether involved in the conflict or not, review their investment plans and future operations in these areas. From the perspective of the mining sector, socio-environmental conflicts¹⁷ in this sector could reduce investment in the future (Chirinos, 2015).

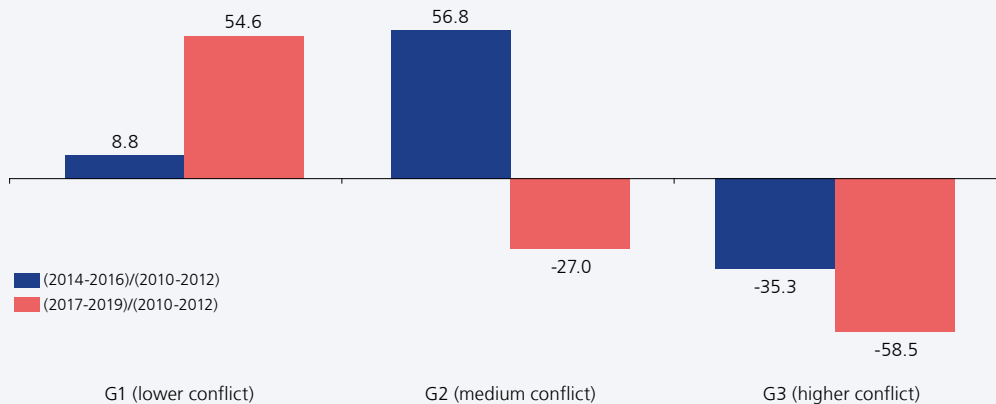
17 The Ombudsman's Office defines social conflict as "a complex process in which sectors of society, the State, and companies perceive their objectives, interests, values or needs as contradictory with those of other sectors and that this contradiction may lead to violence".





A first approximation in the analysis of this medium- and long-term relationship is made by dividing the nine regions with the largest share of mining GDP (together accounting for 76 percent of mining value added) into three groups (G1, G2 and G3) according to the average number of mining socio-environmental conflicts reported by the Ombudsman’s Office¹⁸ between 2008 and 2012. A correlation is then observed between the regions that had a higher number of social conflicts in this period and those that registered significant reductions in future mining investment (up to 10 years later). For example, mining investment in the G3 group –the regions with the highest number of social conflicts, comprising Ancash, Cajamarca and Cusco– fell by 35.3 and 58.5 percent in the 2014-2016 and 2017-2019 periods, respectively, in comparison to mining investment between 2010 and 2012.

GROWTH OF MINING INVESTMENT ACCORDING TO GROUPS OF MINING REGIONS*
(%)



* Made up of the number of mining social conflicts.
Source: BCRP and Ombudsman’s Office.

At the departmental level, Ancash, a region that contributes with close to 17 percent of mining GDP, recorded mining investment decreases of 41.5 and 49.4 percent in the 2014-2016 and 2017-2019 periods, respectively. These reductions in mining investment coincide in the fact that Ancash was the region with the greatest number of socio-environmental mining conflicts in the 2008-2012 period (close to 10 conflicts on average). On the other hand, the regions where there were fewer social conflicts did register positive growth in mining investment. For example, mining investment in La Libertad and Moquegua increased by 8.7 and 54.1 percent, respectively, between 2014-2016, both regions recording fewer than 2 social conflicts between 2008-2012.

Lower private investment (20 percent of GDP) as a result of lower future investment plans and mining operations following the socio-environmental conflicts not only reduces the current level of activity, but also the growth of potential output in the medium- and long-term, which would be reflected in lower generation of employment, lower production, and lower revenue collection. For example, according to Instituto Peruano de Economía (IPE, 2012), every job created in mining would generate nine additional jobs in the rest of the economy. Similarly, IPE also highlights that mining

18 The socio-environmental mining conflicts reported by the Ombudsman’s Office are mostly linked to (possible) environmental contamination and to the authorization for the use of resources, among other factors. According to the III Mining Expert Panel Survey of January 2015, these factors are perceived as the third most important cause for the delay of mining investment projects. This cause prevails over those related to possible lower prices and administrative obstacles.

activity in the last 10 years accounted for about 16 percent of tax revenues from companies¹⁹. Thus, due to the national and regional importance of mining activity, it is important to have timely and informed citizen participation (Tanaka et al, 2005) to avoid the escalation of social conflicts. Furthermore, such participation would be essential in the process of an environmental controversy, as it would allow quick and appropriate decision-making in the case of responsible and sustainable mining projects so that they are not affected.

MAIN MINING REGIONS: SOCIAL CONFLICTS, ADDED VALUE AND GROWTH OF MINING INVESTMENT

	Average of conflicts	Share of mining in the departmental GAV* (in %)	Share of the department in the mining GAV* (in %)	Average % change of mining investment	
		2008-2012		[2014-2016] / [2010-2012]	[2017-2019] / [2010-2012]
Fewer conflict (G1)					
La Libertad	1.4	15.5	5.1	8.7	-25.7
Moquegua	1.0	35.7	5.8	54.1	289.3
Piura	1.4	17.2	5.1	-72.0	-82.2
Medium conflict (G2)					
Arequipa	2.0	27.9	11.1	154.6	-12.0
Lima	1.6	1.8	6.0	-11.1	-20.5
Pasco	2.4	68.4	6.7	-38.9	-53.7
Greater conflict (G3)					
Áncash	9.4	51.1	16.8	-41.5	-49.4
Cajamarca	7.4	33.9	6.9	-73.9	-70.6
Cusco	4.8	40.7	12.3	30.2	-48.5

* Gross Added Value.
Source: BCRP and Ombudsman Office.

The last report of the Ombudsman's Office of January 2022 registers a total of 66 active mining conflicts (the same number of conflicts as in January 2021). It is therefore necessary to continue implementing the policies of monitoring and prevention of social conflicts in order to preserve both the national economy and the fundamental rights of people in the area of influence of the conflict.



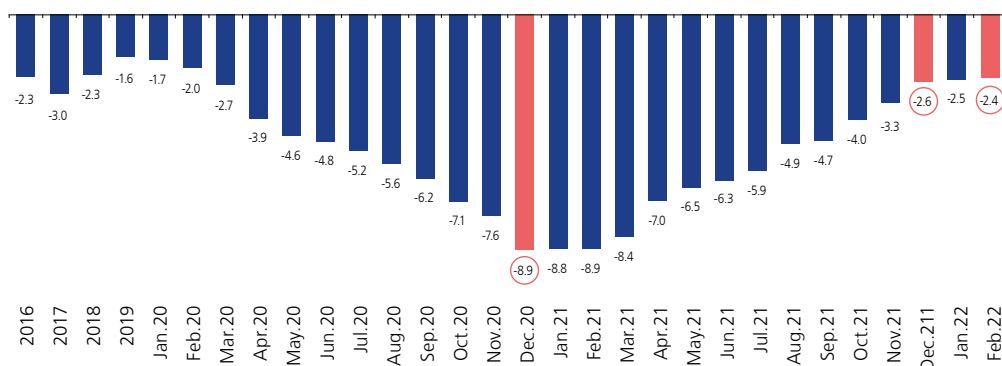
IV. Public Finances

39. After showing an increasing trend in 2020 as a result of the pandemic, the fiscal deficit in annual terms decreased from 2.6 to 2.4 percent of GDP between December 2021 and February 2022, thus registering twelve consecutive months of reduction. The decrease in the fiscal deficit with respect to the end of 2021 was associated with the increase in the current revenues of the General Government and with lower non-financial expenditures, although offset in part offset by the lower primary balance of state-owned enterprises.

In GDP terms, the increase in annualized current revenues of the General Government reflected mainly higher tax revenues of the National Government. By components, the latter are explained by higher revenues from the value added tax (VAT), mainly from import duties, as well as by revenues from the income tax, mostly from domiciled legal entities and individuals. Higher revenues from the Special Tax on Mining (IEM) contributed to this increase as well, but to a lesser extent, together with revenues from the amnesty and regularization of tax payments, the road tax and other revenues, among others.

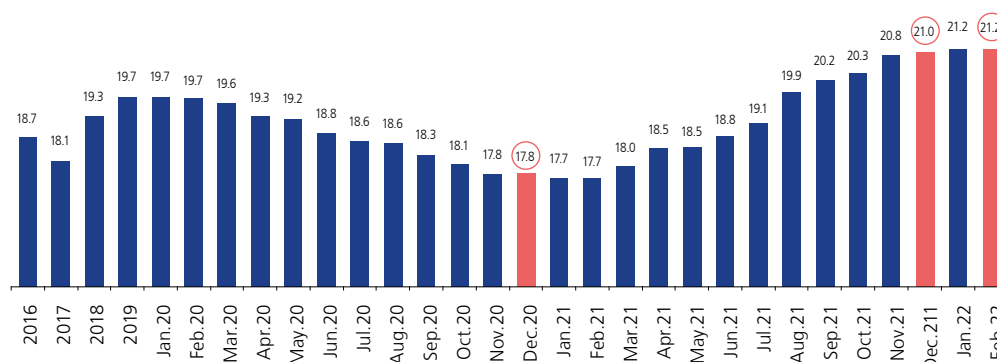
On the other hand, the contraction of the General Government's non-financial expenditures in the last twelve months to February 2022 as a percentage of GDP was due both to the reduction in current expenditures, mainly due to lower transfers, and to the fall in gross capital formation at the three levels of government. The lower current expenditures are explained by the gradual withdrawal of the extraordinary spending measures adopted to face the health emergency and to contribute to economic reactivation. By functions, the contraction in gross capital formation is due to a lower execution of projects in the sectors of Transportation, Sanitation, and Education.

Graph 62
ECONOMIC BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2016 - 2022
(Accumulated last 12 months - % GDP)



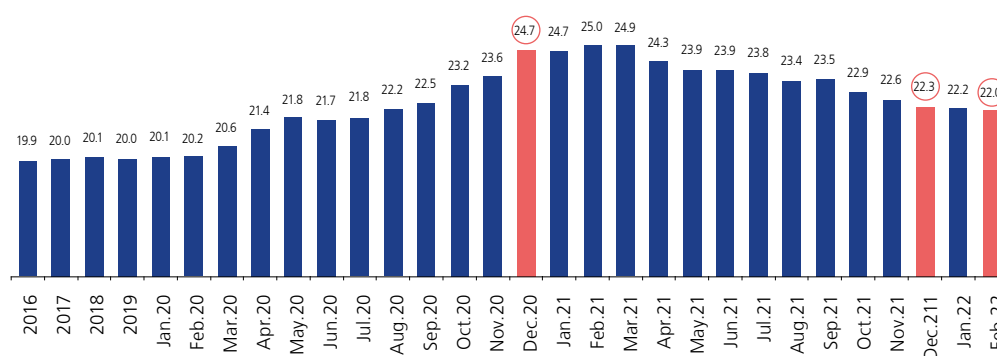
Source: MEF, SUNAT and BCRP.

Graph 63
CURRENT REVENUES OF THE GENERAL GOVERNMENT: 2016 - 2022
 (Accumulated last 12 months - % GDP)



Source: SUNAT and BCRP.

Graph 64
NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT: 2016 - 2022
 (Accumulated last 12 months - % GDP)



Source: MEF and BCRP.

40. The **fiscal deficit** would decline from 2.6 to 2.5 percent of GDP between 2021 and 2022, a level 1.2 percentage points lower than the 3.7 percent of GDP established by the fiscal rule (Emergency Decree No. 079-2021). Revenues would continue to show positive growth rates this year due to higher tax revenues, while expenditure would continue to slow down due to the gradual withdrawal of the measures adopted to address the health emergency.

In 2023, the deficit is expected to decline to 2.2 percent of GDP, continuing the fiscal consolidation process. This reduction in the deficit would be explained by lower current expenditure, mainly in current transfers (cash subsidies to households), goods and services (lower medical supplies and fewer contracts of CAS personnel), and salaries (health emergency). On the other hand, current revenues remain constant in terms of GDP compared to the previous year.

Compared to the December Report, the fiscal deficit projection has been reduced from 2.8 to 2.5 percent of output for 2022 and from 2.4 to 2.2 percent for 2023. The reduction in the projected deficit for both years is explained by an increase in the





projection of revenues given the favorable evolution observed in 2021. Expenditure projections, on the other hand, remain relatively similar.

Table 27
NON-FINANCIAL PUBLIC SECTOR
(% GDP)

	2021	2022*		2023*	
		IR Dec.21	IR Mar.22	IR Dec.21	IR Mar.22
1. General government current revenues	21.0	20.6	20.7	20.6	20.7
Real % change	37.7%	2.0%	1.1%	3.6%	3.8%
2. General government non-financial expenditure	22.3	21.8	21.8	21.4	21.3
Real % change	5.0%	0.7%	0.5%	1.7%	2.0%
Of which:					
Current expenditure	17.2	16.8	16.6	16.5	16.3
Real % change	-0.6%	-0.7%	-0.9%	1.5%	2.1%
Gross capital formation	4.2	4.4	4.4	4.3	4.4
Real % change	30.6%	8.5%	7.9%	2.1%	2.5%
3. Other 1/	0.1	0.1	0.2	0.1	0.2
4. Primary balance (1-2+3)	-1.1	-1.2	-0.9	-0.7	-0.5
5. Interests	1.5	1.6	1.5	1.6	1.6
6. Overall Balance	-2.6	-2.8	-2.5	-2.4	-2.2

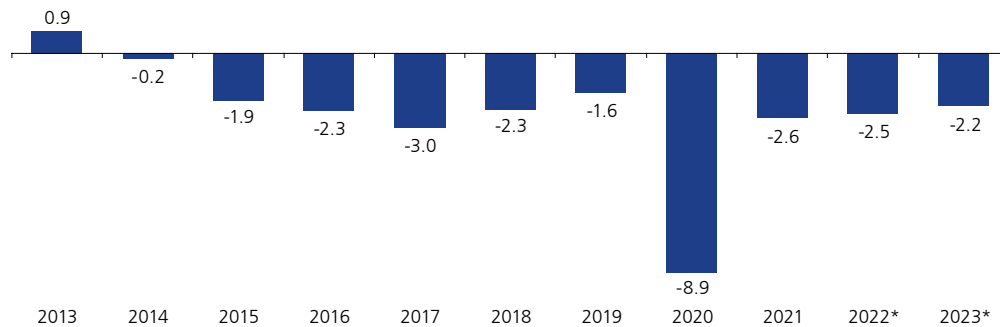
1 / Includes capital income of the general government and primary balance from state-owned companies.

* Forecast.

IR: Inflation Report.

Source: BCRP.

Graph 65
ECONOMIC BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2013 - 2023
(% GDP)



* Forecast.
Source: BCRP.

Current Revenues

- Current revenues** would represent 20.7 percent of GDP in 2022, a level 0.3 percent lower than that recorded at the end of 2021, given that no extraordinary revenues of similar magnitude to those recorded in the second half of the previous year are expected. The projection for 2022 considers both higher payments by mining and hydrocarbon companies, an effect that would be reflected in higher revenues from corporate income tax, and higher revenues from oil *canon* and oil royalties. On the other hand, the increase in private consumption would translate into higher revenues from the VAT.

Compared to the previous report, the revenue projection has been revised from 20.6 to 20.7 percent of GDP due to expected higher tax revenues, which would reflect higher export prices and higher fuel prices.

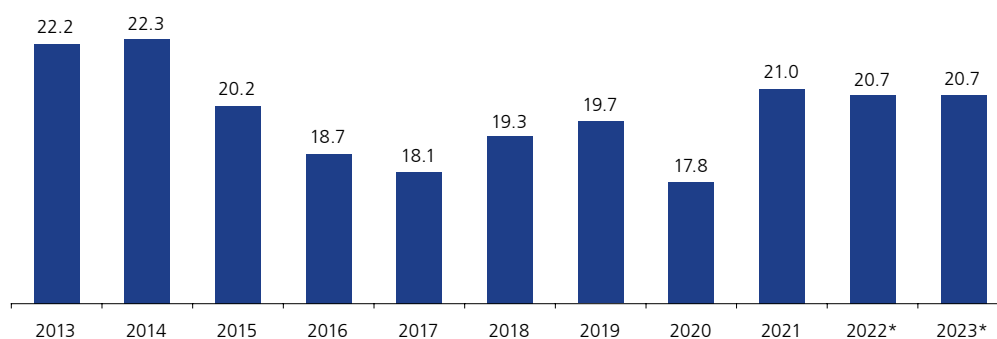
Current revenues in 2023 would represent 20.7 percent of GDP, a rate 0.1 percent higher than that considered in the previous Report. This correction in the projection for 2023 is also associated with higher international prices.

Table 28
CURRENT REVENUES OF THE GENERAL GOVERNMENT
(% GDP)

	2021	2022*		2023*	
		IR Dec.21	IR Jan.22	IR Dec.21	IR Jan.22
TAX REVENUES	16.4	15.9	16.1	15.9	16.1
Income tax	6.3	6.4	6.4	6.3	6.4
Value Added Tax (VAT)	9.0	8.8	9.0	8.9	9.1
Excise tax	1.0	1.0	1.0	1.0	1.0
Import duties	0.2	0.2	0.2	0.2	0.2
Other tax revenues	2.2	2.0	1.9	2.0	1.9
Tax returns	-2.3	-2.4	-2.4	-2.4	-2.4
NON-TAX REVENUES	4.6	4.6	4.6	4.6	4.5
Contributions to social security	2.1	2.1	2.1	2.1	2.1
Own resources and transfers	1.3	1.4	1.3	1.4	1.3
Royalties and likely	0.9	0.9	1.0	0.8	0.9
Rest	0.3	0.3	0.3	0.3	0.3
TOTAL	21.0	20.6	20.7	20.6	20.7

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

Graph 66
CURRENT REVENUES OF THE GENERAL GOVERNMENT: 2013 - 2023
(% GDP)



* Forecast.
Source: BCRP.

Non-financial expenditure

42. **Non-financial expenditure** would register real growth of 0.5 percent in 2022, while as a percentage of output it would be equivalent to 21.8 percent, 0.5 percentage points





of output lower than in 2021. This evolution is in line with the expected consolidation of public spending. The lower dynamism would be explained by the reduction in public spending related to COVID-19, mainly due to a lower level of current transfers and lower expenditure in goods and services. On the other hand, an increase is expected in the salaries of teachers and health professionals in March and November.

Expenditure as a percentage of GDP would continue to decline and reach 21.3 percent of GDP in 2023, since expenditure during that year would reduce its dynamism due to lower spending associated with COVID-19. This ratio would still be higher than that recorded before the pandemic, but equivalent to that recorded in 2015.

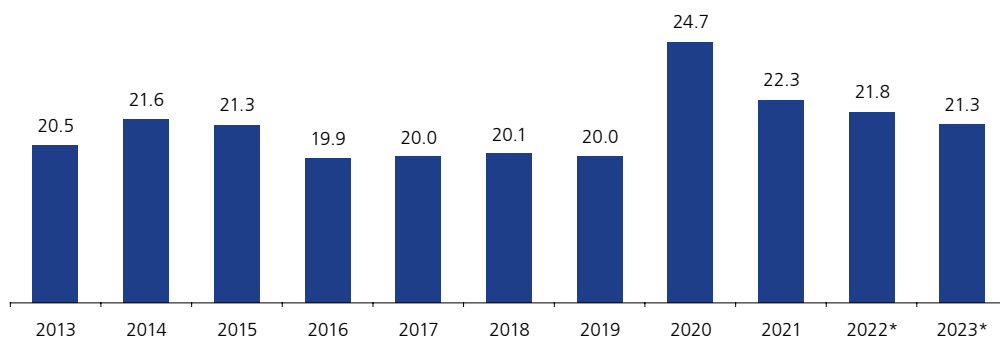
The expenditure projection for 2022 in GDP terms remains unchanged compared to that foreseen in the last Report, while the projection for 2023 has been slightly reduced. The estimates for both years consider lower current expenditures as a percentage of GDP.

Table 29
NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT
(% GDP)

	2021	2022*		2023*	
		IR Dec.21	IR Mar.22	IR Dec.21	IR Mar.22
Current expenditure	17.2	16.8	16.6	16.5	16.3
National Government	11.6	11.5	11.3	11.3	11.2
Regional Governments	3.8	3.5	3.4	3.4	3.3
Local Governments	1.8	1.9	1.9	1.8	1.8
Capital expenditure	5.0	5.0	5.1	5.0	5.0
Gross capital formation	4.2	4.4	4.4	4.3	4.4
National Government	1.6	1.7	1.7	1.7	1.7
Regional Governments	0.8	0.8	0.8	0.8	0.8
Local Governments	1.8	1.9	1.9	1.8	1.8
Other	0.8	0.7	0.7	0.7	0.7
TOTAL	22.3	21.8	21.8	21.4	21.3
National Government	14.0	13.8	13.7	13.6	13.5
Regional Governments	4.6	4.3	4.3	4.2	4.2
Local Governments	3.6	3.8	3.8	3.7	3.7

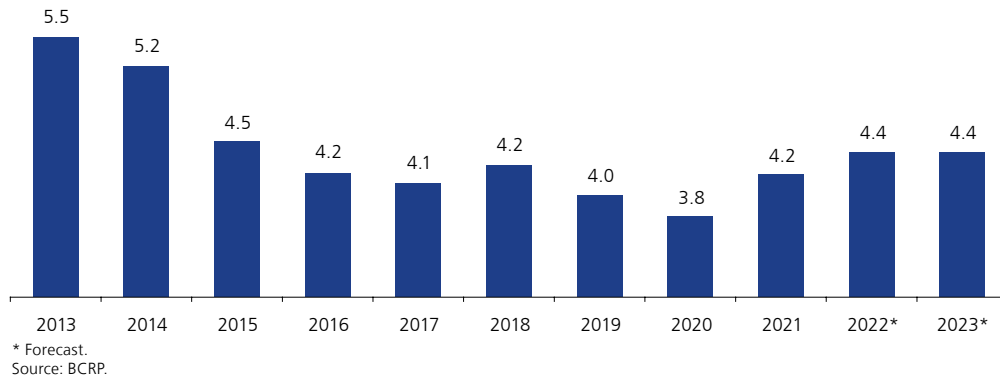
* Forecast.
IR: Inflation Report.
Source: BCRP.

Graph 67
NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT: 2013 - 2023
(% GDP)



* Forecast.
Source: BCRP.

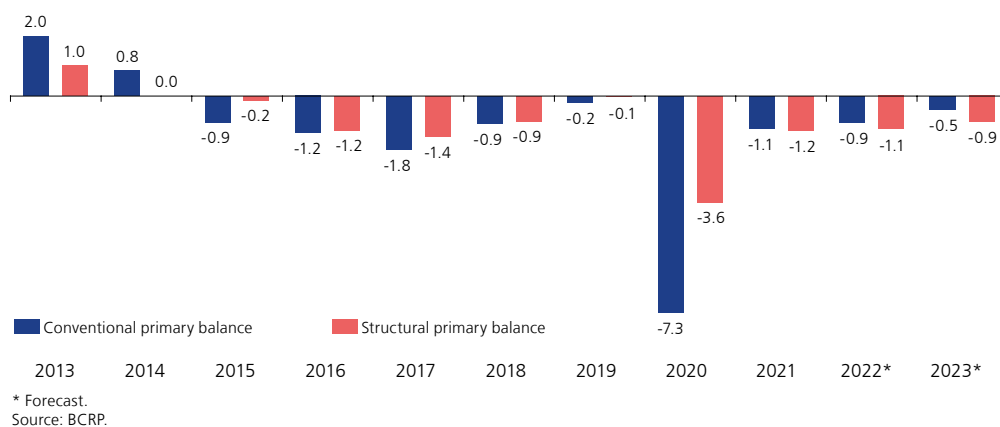
Graph 68
GROSS CAPITAL FORMATION OF THE GENERAL GOVERNMENT: 2013 - 2023
 (% GDP)



Fiscal Stance

43. The **structural primary balance** is an indicator that excludes the effects of discretionary fiscal policy decisions and of cyclical and transitory components that affect the economy on government revenues and expenditures. The structural primary deficit is estimated at 1.2 percent of trend GDP in 2021 and is foreseen to be equivalent to 1.1 and 0.9 percent of trend GDP in 2022 and 2023, respectively. These rates are in line with the consolidation of public finances, but reflect a still expansionary fiscal position compared to the pre-pandemic situation (structural primary deficit of 0.1 percent in 2019).

Graph 69
CONVENTIONAL AND STRUCTURAL PRIMARY BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2013 - 2023
 (% GDP and Trend GDP)



Financing and debt

44. The projections of **financing requirements** for 2022 and 2023 have been lowered compared to those considered in the last Report due to the lower nominal fiscal deficits estimated for both years. On the side of **financing sources**, the adjustment would be associated with a lower use of assets in both years.





Table 30
FINANCIAL REQUIREMENT AND FINANCING OF THE NON-FINANCIAL PUBLIC SECTOR
 (Million Soles)

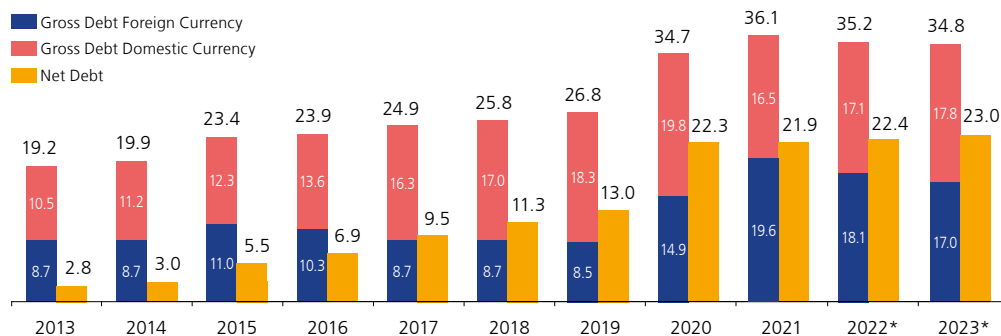
	2021	2022*		2023*	
		IR Dec.21	IR Mar.22	IR Dec.21	IR Mar.22
I. USES	25,990	30,573	27,802	29,439	27,575
1. Amortization	3,235	4,705	4,664	5,939	5,899
a. External	1,852	3,984	3,894	3,919	3,879
b. Internal	1,383	721	770	2,020	2,020
<i>Of which: recognition bond</i>	627	550	556	550	550
2. Economic balance 1/	22,756	25,868	23,138	23,499	21,676
II. SOURCES	25,990	30,573	27,802	29,439	27,575
1. Disbursements and others	59,378	26,377	26,504	25,398	25,329
a. External	14,799	2,825	3,109	2,888	2,849
b. Bonds	44,579	23,552	23,394	22,510	22,480
2. Variation in deposits and others 2/	-33,387	4,196	1,299	4,041	2,246
Memo:					
<u>Percentage of GDP</u>					
Gross public debt balance	36.1	35.9	35.2	35.6	34.8
Net public debt balance	21.9	23.7	22.4	24.4	23.0
Balance of public deposits	14.2	12.2	12.8	11.2	11.8

1/ Negative sign indicates surplus.
 2/ Positive sign indicates reduction of deposits.
 * Forecast.
 IR: Inflation Report.
 Source: BCRP.

The **gross debt** of the non-financial public sector would fall from 36.1 to 35.2 percent of GDP between 2021 and 2022, to finally stand at 34.8 percent at the end of the projection horizon, in line with the expected consolidation of public finances. The gross debt projection for 2022 would be lower than the maximum established by the macro-fiscal 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 21.9 to 22.4 percent of GDP between 2021 and 2022, and would represent 23.0 percent of output in 2023. Projections of fiscal deficits and the expected management of public deposits explain the increasing trend of the net debt.

Graph 70
NON-FINANCIAL PUBLIC SECTOR DEBT: 2013 - 2023
 (% GDP)

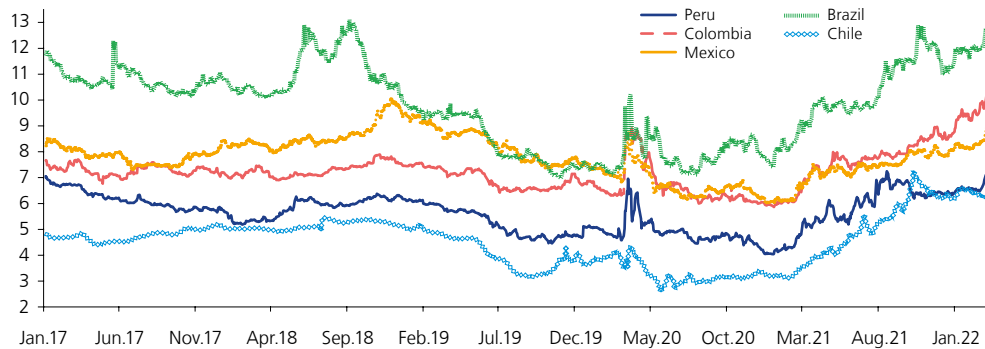


* Forecast.
 Source: BCRP.

Between December 2021 and March 2022, the interest rates on government bonds of countries in the region increased due to: i) the tightening of monetary conditions worldwide to reduce inflation; ii) the escalation of geopolitical tensions between Russia and Ukraine, and iii) fears regarding the pace of economic recovery. It should be pointed out that the performance of bonds has been differentiated because some countries have benefited from the upward trend in commodities and others from more dovish stances of their central banks. Thus, 10-year bonds in local currency in Chile, Peru, Mexico, Colombia, and Brazil have higher interest rates (9, 85, 107, 153, and 176 basis points, respectively).

Similarly, the yields on 10-year bonds in dollars rose too, in line with higher U.S. bond rates. The bonds of Brazil, Mexico, Peru, Chile, and Colombia showed increases of 73, 78, 79, 89 and 106 basis points, respectively, while the U.S. bond rose by 63 basis points, from 1.51 percent in December 2021 to 2.14 percent in March 2022. The outlook for the coming months is negative due to expected interest rate hikes in the United States.

Graph 71
10 YEAR SOVEREIGN BOND YIELDS IN LOCAL CURRENCY
 (%)



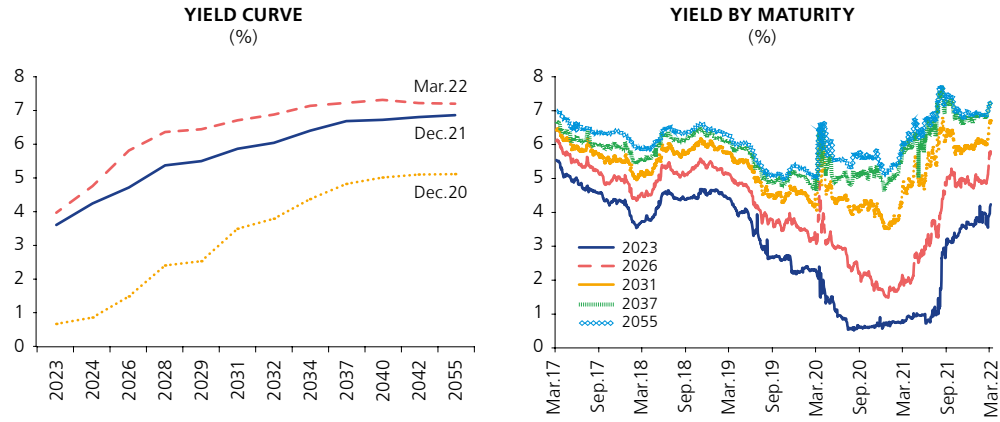
As of March 14.
 Source: MEF and Reuters.

In the first quarter of the year, the yield curve of nominal Public Treasury Bonds (BTP) showed an average increase of 69 basis points, mainly in the middle tranche (2026 and 2028 BTP), associated with the increase of 150 basis points in the BCRP benchmark rate between January and March of this year and with short-term inflationary expectations. The 2029 BTP reached a new historical high in March (6.45 percent), while the 2028, 2032 and 2034 BTPs are trading, as of March 14, less than 30 basis points below their historical highs. The spread between nominal BTPs and the VAC bonds –(Valor Adquisitivo Constante)– with 10-year maturity terms has risen from 2.51 percent to 3.10 percent between December 2021 and March 2022. The volatility of BTPs has also increased in the first quarter of 2022, mainly in the case of short- and medium-tranche bonds. This increase is associated with uncertainty about the duration of the geopolitical conflict between Russia and Ukraine and also with increased political noise in the first week of February following the change of the cabinet of ministers.





Graph 72

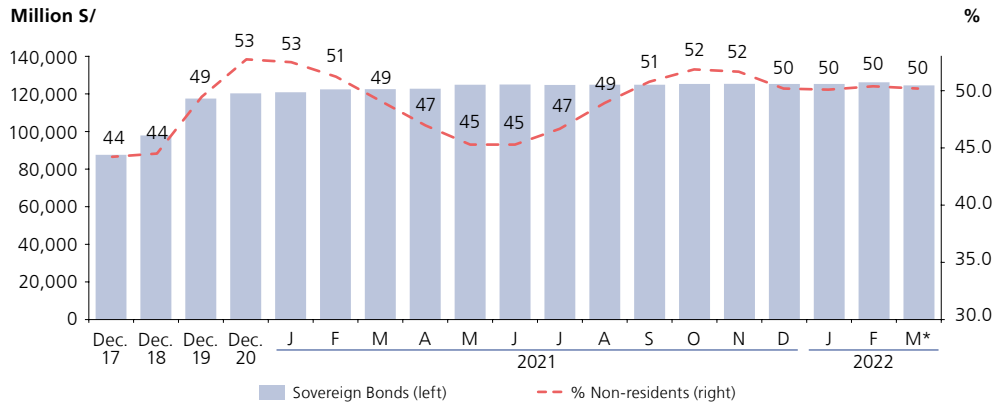


* As of March 14.
Source: MEF

The balance of sovereign bonds amounted to S/ 124.3 billion on March 16, 2022. Since non-resident investors decreased their holdings of sovereign bonds by S/ 396 million, their share remained relatively constant at around 50 percent between December 2021 and March 2022.

Graph 73
SOVEREIGN BOND BALANCE AND PARTICIPATION OF NON-RESIDENT INVESTORS

(Amounts in millions of soles and participation in %)



* As of March 16.

Note: Participation of non-resident investors includes nominal sovereign bonds and inflation-indexed bonds. Also, it excludes the amount of Global Depository Notes (GDN) of the BTP assigned to the portfolio of the Pension Funds.

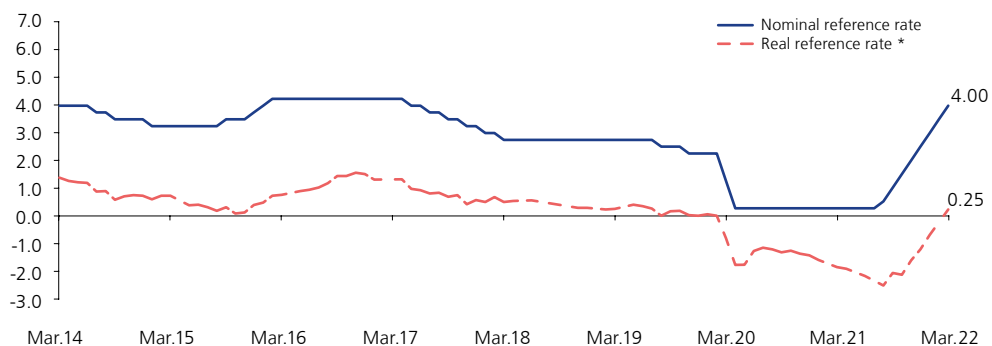
Source: BCRP, CAVALI, MEF, and SBS.

V. Monetary Policy and Financial Conditions

Monetary policy actions

45. Between January and March 2022, the Board of Directors of BCRP continued with the normalization of the monetary policy stance initiated in August 2021. After having increased the benchmark rate by a total of 225 basis points during the monetary policy sessions held between August and December 2021, so far this year the BCRP Board has raised the monetary policy interest rate by an additional 150 basis points (50 basis points in each session), thus accumulating eight rate hikes in total. Thus, the benchmark interest rate went from 0.25 percent in July 2021 (historical minimum) to 4.0 percent in March 2022. It is worth mentioning that the benchmark real interest rate is at a slightly positive level (0.25 percent in March 2022), after having reached a historical low of -2.53 percent in August 2021.

Graph 74
REFERENCE INTEREST RATE
(%)



* With expectation on inflation.
Source: BCRP.

46. The monetary policy decisions taken between January and March 2022 were made in light of the following factors:





- The twelve-month inflation rate in February was 6.15 percent, standing transitorily above the target range.
 - The factors behind the increase in inflation were higher international food prices (grains) and fuel prices, as well as the exchange rate.
 - In February 2022 the twelve-month inflation rate, excluding food and energy prices, was above the upper limit of the target range.
 - With the significant increase in international energy and food prices recorded so far this year, and recently accentuated by international conflicts, inflation is projected to return to the target range in the first half of next year. The downward trend in year-on-year inflation is expected to begin in July of this year due to the reversal of the effect of transitory factors on the inflation rate (exchange rate, international fuel and grain prices) and to the fact that economic activity will still be below its potential level.
 - Expectations of inflation in twelve months increased from 3.73 percent in January to 3.75 percent in February, above the upper limit of the inflation target range.
 - Most indicators of economic expectations are in the pessimistic range.
 - World economic activity has been recovering, although at a slower pace than expected due to the impact of COVID-19, the persistence of bottlenecks in the global supply of goods and services, and a relative uncertainty associated with the pace of the reversal of monetary stimuli in advanced economies. However, recent international conflicts have increased uncertainty regarding the recovery of the world economy and the magnitude of upward pressures on commodity prices.
47. The Board's decision on the benchmark interest rate takes into account projections of inflation and its determinants, such as the evolution of the output gap, changes in international prices, the exchange rate, and supply factors, including changes in relative food prices, which may affect the formation of economic agents' expectations²⁰. When inflation responds to significant and persistent supply shocks, economic agents may begin to give greater weight to past inflation data as a predictor of future inflation. Therefore, central banks' monetary policy actions should seek to prevent inflation expectations from deviating from their target range, as this could turn a temporary rise in inflation into a more prolonged process.

20 Inflation expectations refer to the rate at which economic agents expect the price level of an economy to increase. 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 the Central Bank's inflation target range.

48. In its meetings between January and March, the Board of Directors also agreed to modify the interest rates of the BCRP window facility operations with financial entities in domestic currency. In addition, in order to encourage greater use of the interbank market by financial institutions, the Board reestablished similar limits for BCRP's lending window operations (direct repo operations and rediscount operations) to those in force until March 2020. Thus, the current rates are the following:
- i. Overnight deposits: 2.50 percent per year.
 - ii. Direct security/currency repo and rediscount operations: i) 4.50 percent per annum for the first 10 transactions carried out by a financial entity in the last 3 months as from March 11, 2022, and ii) the interest rate set by the Monetary and Exchange Operations Committee for additional transactions to these 10 transactions in the last 3 months. Moreover, the Monetary and Exchange Operations Committee may establish higher rates depending on the amount of the operations.

Given that window 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 do so.

In terms of communication regarding the increase in the benchmark interest rate, the BCRP Board of Directors has pointed out since its January 2022 Policy Statement that BCRP is "*continuing with the normalization of the monetary policy stance*". Moreover, in addition to stating that "*the Board is particularly attentive to new information referring to inflation and its expectations and to the evolution of economic activity in order to consider, if necessary, making changes in the monetary policy stance...*", the Board has added "**to ensure the return of inflation to the target range in the forecast horizon**".

As for forward guidance, it is worth noting that the following text in the policy statement "Based on available information, it is considered appropriate to maintain the expansionary monetary policy stance for an extended period of time, through the gradual withdrawal of monetary stimulus" was replaced in the January 2022 Policy Statement by the following one: "Based on available information, **it is considered appropriate to continue with the normalization of monetary policy in the coming months**". This text was not included again in the February 2022 Policy Statement.

The BCRP Board of Directors has also reiterated between January and March 2022 that "*financial markets have continued to show volatility in a context of uncertainty and that BCRP actions have been aimed at mitigating such volatilities*"



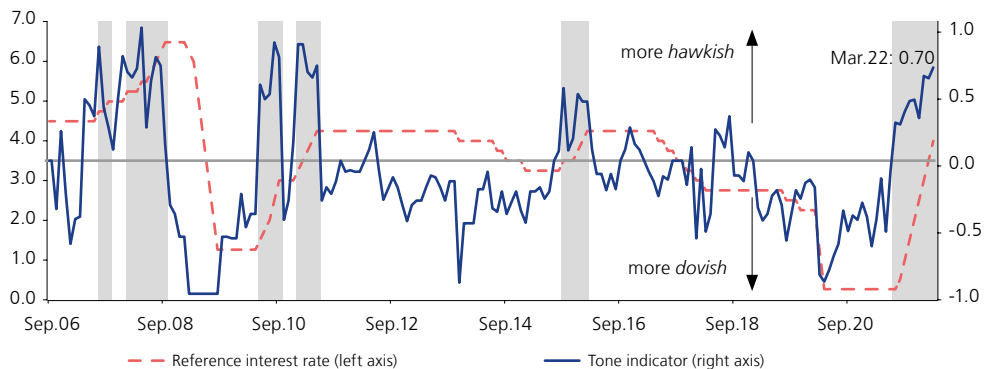


Table 31
MESSAGES FROM THE MONETARY POLICY DECISIONS OF THE BCRP

Session	Information Note Message
December 2021	<ul style="list-style-type: none"> The Board of Directors of the Central Reserve Bank of Peru (BCRP) decided to raise the reference interest rate by 50 bps to 2.50 percent. Monetary policy is still expansionary and the current decision does not necessarily imply a cycle of successive increases in the reference rate. The Board is particularly attentive to new information on inflation expectations and economic activity, with an aim to consider, if necessary, changes in the monetary stance. Based on the available information, the Board sees the convenience of maintaining an expansionary stance for an extended period through a gradual withdrawal of monetary stimulus. The BCRP will continue to take the necessary steps to sustain the payments system and credit flows. In a context of uncertainty, financial volatility persists, with BCRP policies aiming at mitigating it.
January 2022	<ul style="list-style-type: none"> The Board of Directors of the Central Reserve Bank of Peru (BCRP) decided to raise the reference interest rate by 50 bps to 3.00 percent, continuing the normalization of the stance of monetary policy. The Board is particularly attentive to new information on inflation expectations and economic activity, with an aim to consider, if necessary, changes in the monetary stance so that inflation returns to the target range. Based on the available information, the Board sees the convenience of continuing the normalization of monetary policy in the next months. In a context of uncertainty, financial volatility persists, with BCRP policies aiming at mitigating it.
February 2022	<ul style="list-style-type: none"> The Board of Directors of the Central Reserve Bank of Peru (BCRP) decided to raise the reference interest rate by 50 bps to 3.50 percent, thus continuing to normalize its monetary policy stance. The Board is particularly attentive to new information on inflation expectations and economic activity, with an aim to consider, if necessary, changes in the monetary stance so that inflation returns to the target range over the forecast horizon. In a context of uncertainty, financial volatility persists, with BCRP policies aiming at mitigating it.
March 2022	<ul style="list-style-type: none"> The Board of Directors of the Central Reserve Bank of Peru (BCRP) decided to raise the reference interest rate by 50 bps to 4.0 percent, thus continuing to normalize its monetary policy stance.” The Board is particularly attentive to new information on inflation expectations and economic activity, with an aim to consider, if necessary, changes in the monetary stance so that inflation returns to the target range over the forecast horizon. In a context of uncertainty, financial volatility persists, with BCRP policies aiming at mitigating it.

49. As for the tone of monetary policy communication, the tone indicator used by BCRP shows a stance of withdrawal of monetary stimulus since July 2021, one month before the August interest rate increase. The indicator also shows a more favorable stance to the withdrawal of monetary stimulus in the following months.

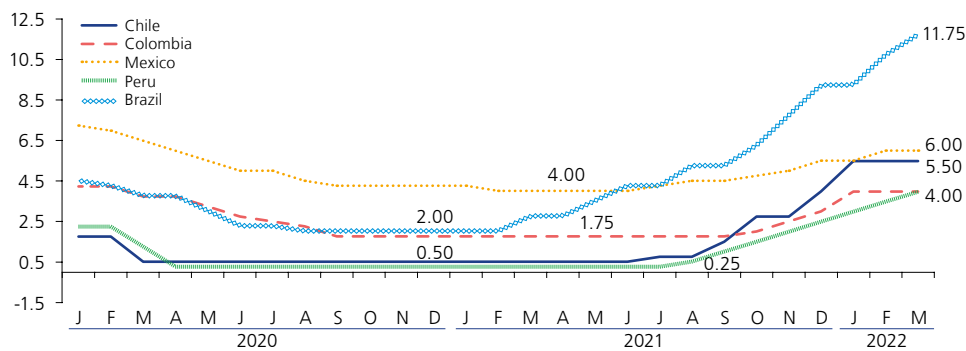
Graph 75
REFERENCE INTEREST RATE AND MONETARY POLICY TONE INDICATOR*
 (% and index value)



* For the monetary policy tone indicator, the positive values of the index mean a tone in favor of a contractionary position (hawkish), while negative values imply communication with an expansive position (dovish). Shaded areas correspond to periods of rising interest rates. Source: BCRP.

50. Peru’s monetary policy differs from that of other economies in the region where the transition to a less expansionary stance has been more accelerated, in a context of inflationary pressures and a faster recovery of economic activity than initially expected. In fact, Peru’s monetary policy interest rate of 4.0 percent is one of the lowest rates in the region.

Graph 76
MONETARY POLICY INTEREST RATE IN LATIN AMERICA: MARCH 2022
(%)



Source: Central banks.

Each central bank has chosen to begin a cycle of monetary policy rate hikes based on its projections for inflation and economic activity. In most cases, this involved a balance of risks analysis between slowing down the economic recovery after COVID-19 or allowing a misalignment of inflation and inflation expectations with respect to the target level. This took place in a context in which inflationary pressures were progressively appearing at a global level due to the increase in fuel and food prices and, in general, due to the crisis in the post-pandemic global supply chain (depreciation pressures on local currencies due to external and internal factors were also observed in some cases).

Additional BCRP actions

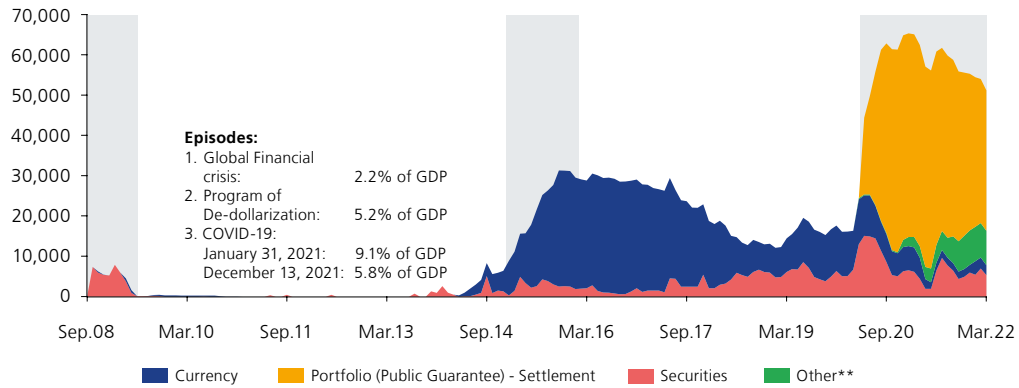
51. The balance of liquidity injection operations in domestic currency decreased from S/ 56.7 billion at the end of December to S/ 50.5 billion on March 14, mainly due to the amortization of government-guaranteed portfolio repos under the Reactiva Peru program (S/ 4.0 billion). This balance of liquidity injection operations is equivalent to 5.8 percent of GDP, of which S/ 34.8 billion corresponds to the amount settled of government-guaranteed credit portfolio repos.

In comparative terms, the total balance of liquidity injection operations is 6.4 times higher than the maximum balance of these operations recorded during the 2008-2009 international financial crisis (S/ 7.9 billion) and 1.6 times the balance reached during the period of falling commodity prices (2013-2016) and the de-dollarization program (S/ 31.8 billion).





Graph 77
BALANCE OF MONETARY INJECTION OPERATIONS OF BCRP*
 (In mill. S/)



* As of March 14.

** The item "Other" includes the purchase of Public Treasury bonds, in line with article 61 of the BCRP Organic Law, and Repos operations of portfolio loans.

Source: BCRP.

Table 32
BALANCE OF INJECTION OPERATIONS OF BCRP
 (Million S/)

Episode	Date	Values	Currency (Regular)	Currency (Expansion)	Currency (Substitution)	Portfolio	Other**	Total
						(Government-backed) - Settlement		
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
	Sep.20	8,604	5,895	0	0	47,002	304	61,805
	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
	Mar.21	4,454	2,430	0	0	49,907	2,812	59,603
	Jun.21	6,476	1,922	0	0	47,968	4,408	60,774
	Sep.21	6,470	1,842	0	0	43,770	6,590	58,672
	Oct.21	4,383	1,902	0	0	42,283	7,489	56,057
	Nov.21	4,913	1,942	0	0	40,475	8,251	55,581
	Dec.21	5,963	3,342	0	0	38,827	8,519	56,651
	Jan.22	5,462	2,742	0	0	37,095	8,514	53,813
Feb.22	6,989	2,452	0	0	35,745	8,505	53,691	
Mar.22	5,362	1,822	0	0	34,804	8,503	50,491	

* As of March 14.

** 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.

52. Injection operations registered their maximum balance at the end of January 2021. The balance has decreased thereafter given that the amortizations of the Reactiva Perú program imply a reduction in the balance of government-secured credit repos. This dynamic has been offset in part by other programs such as those of loan rescheduling repos and long-term credit expansion repos, in addition to purchases of Treasury bonds. On the other hand, the rescheduling of the loans granted under the Reactiva Perú program has served to extend the term of the injection operations.

Table 33
LIQUIDITY INJECTION PROGRAMS
(Billion S/)

Program	Dec.19	Dec.20	Jan.21	Jun.21	Sep.21	Dec.21	Mar.22*
Repos of loans with Government-backed	0	50.7	50.5	48.0	43.8	38.8	34.8
Of which: balance of repos for rescheduling	0	0	0	0	9.2	14.3	15.0
Credit rescheduling repos	0	0.5	1.1	2.5	4.2	4.8	4.8
Long-term credit expansion repos	0	0	0.2	0.2	2.2	5.5	5.5
Purchasing of Public Treasury Bonds	0	1.3	1.3	2.1	2.1	2.1	2.1
Rest***	17.4	12.2	12.1	8.0	6.3	5.4	3.3
Total	17.4	64.8	65.3	60.8	58.7	56.7	50.5

* As of March 14.

** At acquisition value.

***Regular Repos as currency and security repos.

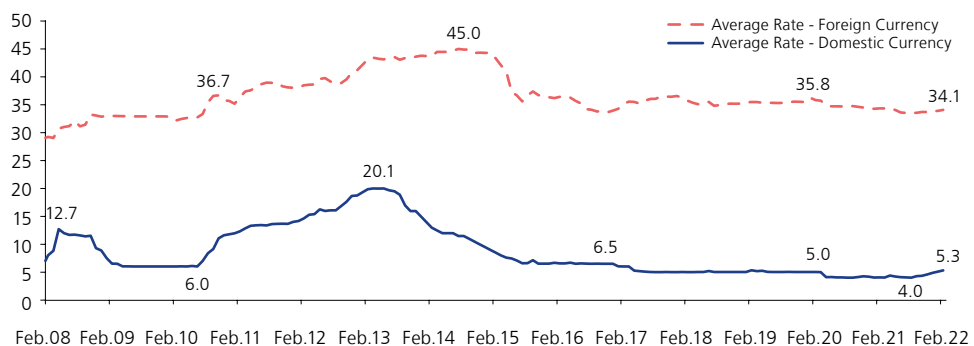
53. Additionally, BCRP continued placing interest rate swaps (IRS) with maturity terms between 3 and 9 months. These instruments, created in December 2020, are derivative instruments denominated in domestic currency, in which BCRP undertakes to pay a variable interest rate in exchange for the commitment 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), while 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 of the IRS. These operations contribute to match the maturities in a context of expectations of rising interest rates, as well as to the development of the swap market in soles. The balance of IRS on March 14 amounted to S/ 16,445 million, of which S/ 650 million corresponds to 3-month IRS, S/ 8,775 million to 6-month IRS. and S/ 7,020 million to 9-month IRS.
54. On the monetary sterilization side, BCRP has continued to place variable rate certificates (CDV BCRP). This instrument, which was originally created in 2010, was reactivated on August 18, 2021 for the first time since 2015, to offer financial institutions a hedge against the risk of interest rate increases. On March 14, the balance of CDV BCRP was S/ 21,518 million.
55. Since August 2021, BCRP has issued three circulars modifying the reserve requirement regime in domestic currency with the aim of complementing the hikes in the benchmark interest rate and strengthening monetary control. It is worth remembering that in March 2020 BCRP lowered the rate of reserve requirements in soles from 5.0 to 4.0 percent and the minimum current account requirement of obligations subject to reserve requirements from 1.0 percent to 0.75 percent to ease financial conditions in soles, as part of the monetary policy actions taken in response to the COVID-19 crisis.





- Circular 024-2021-BCRP, dated August 31, 2021, established the increase of the reserve requirement as of the reserve requirement period of September 2021. It was established that the reserve requirement in local currency would be the greater of: (i) the amount resulting from a marginal reserve requirement rate of 25 percent on the increase in Total Obligations Subject to Reserve Requirements with respect to July 2021, and (ii) that resulting from applying the minimum average reserve requirement rate of 4.0 percent in September, 4.25 percent in October, and 4.50 percent since November 2021. Likewise, as from October 2021, the minimum current account requirement was raised from 0.75 percent to 1.0 percent of Total Obligations Subject to Reserve Requirements, a measure that remains in force.
- Circular 031-2021-BCRP, published on October 26, 2021, raised the rate of reserve requirements in local currency as from November 2021. Through this circular, the Board approved the increase of the minimum legal reserve requirements to 4.5 percent in November 2021, to 4.75 percent in December 2021, and to 5.0 percent as from January 2022. Thus, the reserve requirement would be the maximum between (i) the amount resulting from applying the reserve requirement rate of the base period (July 2021) to the obligations subject to reserve requirements up to the level of the base period, and a marginal reserve requirement rate of 25 percent on the increase of Total Obligations Subject to Reserve Requirements with respect to the base period and (ii) the minimum legal reserve corresponding to the evaluation period. Additionally, as of November 2021, a maximum average reserve requirement equivalent to 6.0 percent of the flow of Total Obligations Subject to Reserve Requirements in the evaluation period is in force, which allows maintaining a low dispersion in the average reserve requirement rates among financial institutions. This maximum average reserve requirement remains in effect.
- Circular 003-2022-BCRP dated January 20, 2022, approved the increase of the rate of minimum legal reserve requirements to 5.25 percent in February, to 5.5 percent in March, to 5.75 percent in April, and to 6.0 percent since May of this year. The criteria of the previous circular remain in force to calculate reserve requirements.

Graph 78
RESERVE REQUIREMENTS IN DOMESTIC AND FOREIGN CURRENCY
(As % banks' liabilities)



Source: BCRP.

Table 34
INCREASE IN RESERVE REQUIREMENT RATES IN SOLES
 (%)

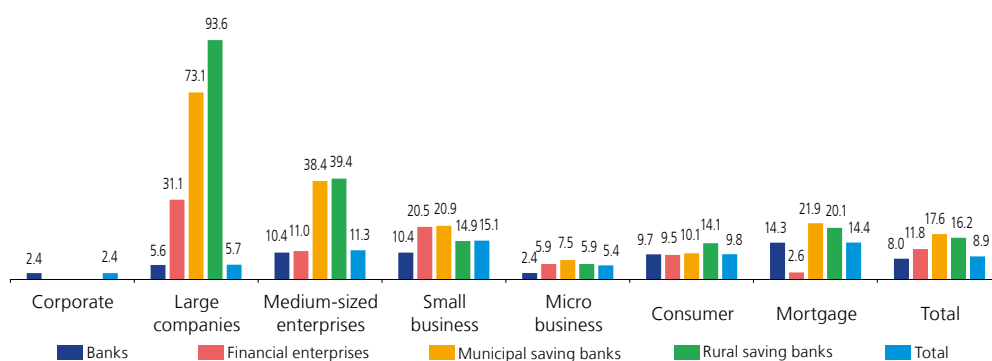
	Aug.21	Sep.21	Oct.21	Nov.21	Dec.21	Jan.22	Feb.22	Mar.22	Apr.22	May.22
Minimum legal reserve requirement rate	4.0%	4.0%	4.0%	4.50%	4.75%	5.0%	5.25%	5.5%	5.75%	6.0%
Minimum reserve requirement rate for current account level	0.75%	0.75%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Marginal reserve requirement rate	-	25%	25%	25%	25%	25%	25%	25%	25%	25%
Minimum average reserve requirement rate	4.0%	4.0%	4.25%	-	-	-	-	-	-	-
Average maximum rate of the General Scheme	-	-	-	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%

Source: BCRP.

56. The balance of loan rescheduling by depository corporations has continued to decrease. In fact, the total balance of rescheduled loans as of October 2021 is S/ 105 billion lower than that observed in June 2020 (S/ 128 billion, equivalent to 35.6 percent of the portfolio), which is explained by the repayment of rescheduled loans, in line with the reopening of economic activities.

As of January 31, 2022, the depository corporations –banking companies, financial companies, municipal savings banks, and rural savings banks– have rescheduled loans for around S/ 23 billion, which is equivalent to 5.9 percent of the total portfolio of the depository companies. Likewise, as of January 2022, 11.1 percent of the small business portfolio, 3.6 percent of the microbusiness portfolio, and 5.0 percent of the consumer portfolio had been rescheduled. Moreover, entities specializing in microfinance have rescheduled at least 8 percent of their portfolios.

Graph 79
RESCHEDULED CREDITS OF DEPOSITORY COMPANIES:^{1/} JANUARY 2022
 (As % of total credits)



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

Monetary Operations

57. The **Central Bank's operations** continued to be aimed at ensuring adequate liquidity levels in the interbank market between December 2021 and February 2022. To do so, BCRP sterilized liquidity through the net placement of BCRP CDVs (S/ 7,253 million) and time and overnight deposits (S/ 4,993 million), the amortization of government secured portfolio repos (S/ 3,082 million) and portfolio repos (S/ 13 million), and the net maturity of currency repos (S/ 890 million). These operations were in part offset





by the net maturity of BCRP CDs (S/ 8,224 million) and CDR BCRP (S/ 155 million) and the net placement of security repos (S/ 1,026 million).

As a result, the balance of repo transactions went from S/ 54,573 million in December 2021 to S/ 51,614 million at the end of February 2022, while the balance of CD BCRP, CDV BCRP and CDR BCRP went from S/ 28,361 million in December 2021 to S/ 27,236 million in February 2022.

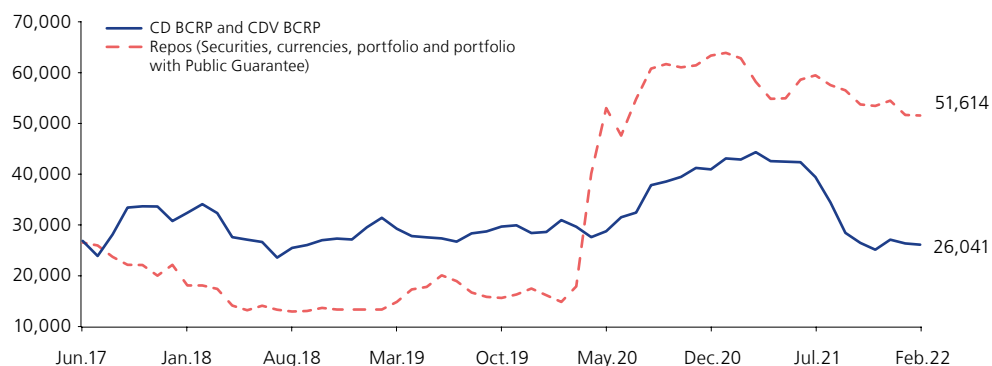
Table 35
BALANCE OF BCRP MONETARY OPERATIONS

	Balance (Mill. S/)			Average interest rate of the balance (%)		
	Dec.20	Dec.21	Feb.22	Dec.20	Dec.21	Feb.22
Monetary sterilization						
1. CD BCRP	41,067	14,347	6,123	0.74	0.84	2.53
2. CDR BCRP	6,392	1,350	1,195	0.18	0.57	0.43
3. CDV BCRP	-	12,664	19,918	-	-	-
4. Term and overnight deposits	43,714	15,110	20,103	0.23	2.35	3.27
Monetary injection						
5. Currency repos	5,970	3,342	2,452	2.80	2.29	2.39
6. Security repos 1/	6,309	5,963	6,989	1.09	1.81	2.24
7. Portfolio repos	464	6,441	6,427	0.50	1.26	1.27
8. Government-backed portfolio repos *	50,729	38,827	35,745	0.50	0.50	0.50
9. Public Treasury fund auctions	200	4,632	4,632	3.18	2.37	3.05
Memo						
Repos of loans with Government-backed	-	14,230	14,939	0.50	0.50	0.50
Credit rescheduling repos	497	4,803	4,789	0.50	0.71	0.72
- Security repos	34	657	656	0.50	0.76	0.76
- Portfolio repos	463	4,146	4,132	0.50	0.71	0.71
Long-term credit expansion repos	-	5,540	5,540	-	2.11	2.11
- Security repos	-	3,045	3,045	-	2.00	2.00
- Portfolio repos	-	2,295	2,295	-	2.26	2.26
- Currency repos	-	200	200	-	2.00	2.00
Interest rate swaps	-	37,777	18,645	-	0.45	1.95
FX Swaps-sell (Fixed rate)	-	19,391	23,731	-	0.53	1.14
FX Swaps-sell (Variable rate)	8,135	18,386	17,363	0.20	0.36	0.07

* The disbursed amount of the instrument is considered as of November 30, 2021. The rates correspond to the operations Repos with the ESF, and the credits linked have a rate of 1.40 percent.

1/ Not consider the Securities Repo to provide foreign currency.

Graph 80
BALANCE OF REPO OPERATIONS, CD BCRP AND CDV BCRP
(Million S/)

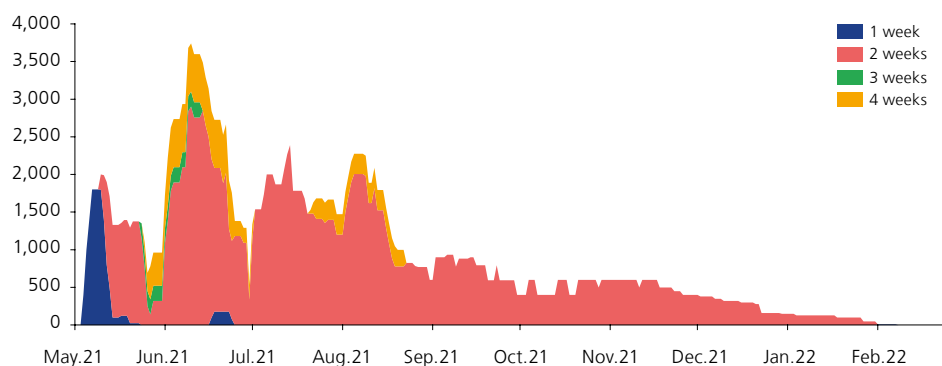


Source: BCRP.

As an additional measure to meet liquidity requirements in dollars, in May 2021 BCRP reinstituted 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. Moreover, the balance of these operations has been gradually decreasing in recent months and, as of February 28, 2022, shows a zero balance.

Graph 81
BALANCE OF SECURITY REPOS - FOREIGN CURRENCY*
(Million US\$)



* As of February 28.
Source: BCRP.

As of February 28, 2022, the balance of repo operations represented 15.1 percent of the BCRP's net assets (14.8 percent in December 2021). On the side of BCRP liabilities, public sector deposits increased their share from 26.0 percent in December 2021 to 26.5 percent in February 2022, while BCRP instruments (CDBCRP, CDV BCRP, CDR BCRP, and term and overnight deposits) increased their share of BCRP net liabilities from 11.8 percent in December 2021 to 13.8 percent in February 2022. In addition, currency in circulation increased its share from 22.6 percent in December 2021 to 23.1 percent in February 2022.

Table 36
SIMPLIFIED BALANCE SHEET OF THE BCRP*
(As % of Net Assets)

	Dec.20	Dec.21	28 Feb.22
I. Net assets	100%	100%	100%
Net International Reserves	80.7%	84.6%	84.3%
	(US\$ 74,706 mills.)	(US\$ 78,495 mills.)	(US\$ 76,851 mills.)
Repos	18.9%	14.8%	15.1%
Sovereign bonds	0.4%	0.6%	0.6%
II. Net liabilities	100%	100%	100%
1. Total public sector deposits	20.7%	26.0%	26.5%
In domestic currency	17.4%	23.9%	24.6%
In foreign currency	3.3%	2.1%	1.9%
2. Total financial system deposits	19.3%	22.2%	21.8%
In domestic currency	4.3%	3.9%	4.2%
In foreign currency	15.0%	18.4%	17.6%
3. BCRP instruments	27.2%	11.8%	13.8%
CD BCRP	12.3%	3.9%	1.8%
CDV BCRP	0.0%	3.4%	5.8%
CDR BCRP	1.9%	0.4%	0.3%
Term deposits	10.6%	3.2%	5.2%
Overnight deposits	2.4%	0.9%	0.7%
4. Currency	21.4%	22.6%	23.1%
5. Other*	11.4%	17.4%	14.7%

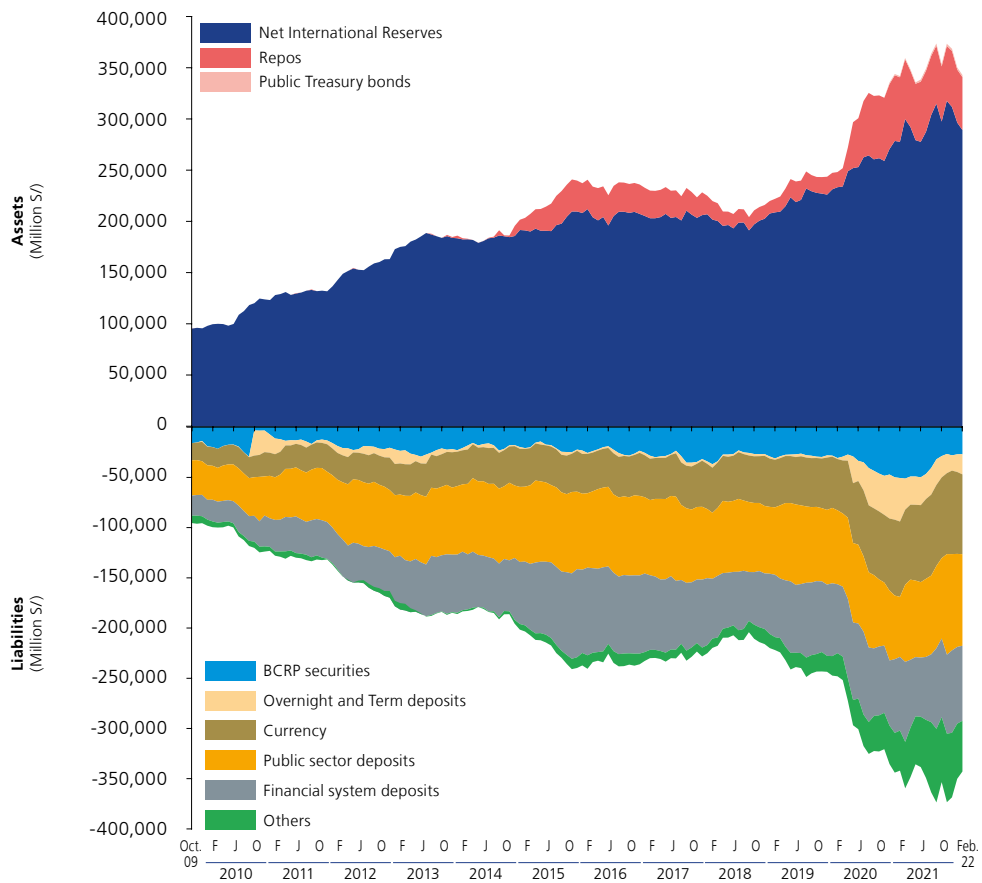
* Includes assets and other accounts.
Source: BCRP.





The result of these operations is reflected in the change in the size and composition of the Central Bank's balance sheet. Thus, as of February 28, 2022, BCRP assets amounted to S/ 342,652 million, a sum equivalent to 39.3 percent of GDP, a similar amount to that observed in 2015 during the de-dollarization program (39.3 percent of GDP). The greater injection of liquidity carried out in recent months is reflected in the growing contribution of repo operations in BCRP assets.

Graph 82
EVOLUTION OF THE BCRP BALANCE SHEET: 2009 - 2021



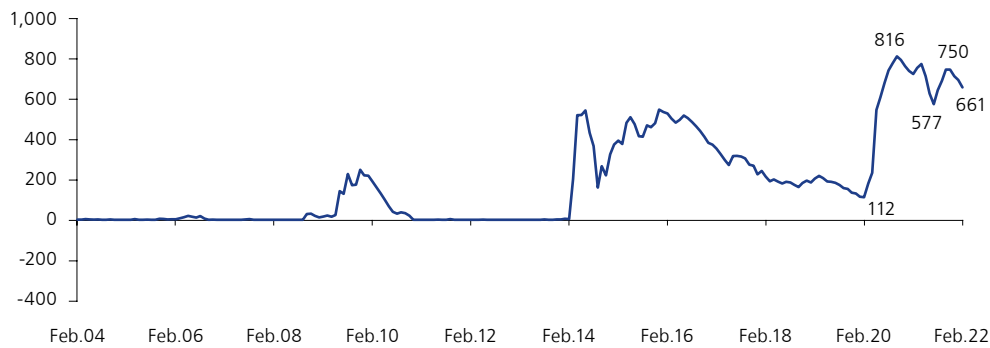
The greater injection of liquidity at longer maturity terms is reflected in the higher residual term of these operations after the state of emergency was declared. Placements of government-guaranteed repos with maturity terms of up to 4 years as part of the Reactiva Peru program in 2020 have resulted in an increase in the residual term of the injection operations from 112 days in February 2020 to a maximum of 816 days in October 2020.

After the completion of the program, the residual term of these operations began to gradually decrease until mid-2021, increasing thereafter again due to higher placements of security and portfolio repos at longer maturity terms (between 1 and 4 years). The latter were associated with the operations conditioned to the expansion of long-term credit and the loan rescheduling established by Reactiva Peru. As a result, the residual

term of these operations increased to a maximum of 750 days in November 2021, after which it has been decreasing, recording 661 days in February 2022.

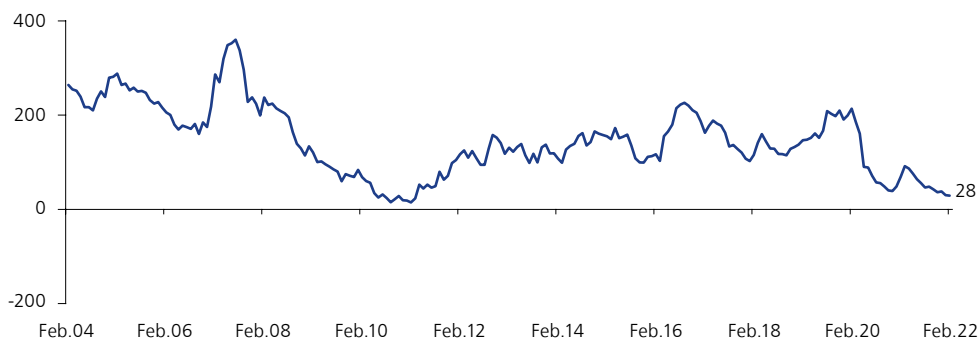
In addition, BCRP has been conducting liquidity sterilization operations at shorter maturity terms, which have reduced the residual term of sterilization operations from 214 days in February 2020 to 28 days in February 2022.

Graph 83
RESIDUAL TERM OF BCRP INJECTION OPERATIONS
(In days)



Source: BCRP.

Graph 84
RESIDUAL TERM OF BCRP STERILIZATION OPERATIONS
(In days)



Source: BCRP.

Financial markets

- Interest rates in soles in the money market continued to increase in the first quarter of 2022, influenced by the last three increases in the BCRP monetary policy interest rate as well as by the new increases in the rates of minimum legal reserve requirements established in January 2022 with the aim of supporting monetary sterilization mechanisms and strengthening banks' levels of liquidity. The overnight interbank interest rate remained at its benchmark level (3.0 percent in January, 3.50 percent in February, and 4.0 percent in March), while the corporate prime rates on lending and on deposits for overnight and twelve-month terms increased by an average





of 128 and 127 basis points, respectively, between December 2021 and March 2022.

Moreover, most credit segments showed higher interest rates between December 2021 and March 2022, with the interest rates for the segments of micro businesses and medium-sized companies, whose credit costs are more related to credit risk, registering the largest increases in their interest rates (282 and 185 basis points, respectively). Since the period of consecutive rate increases started in August 2021, the 3-month corporate prime rates on lending operations and deposits have increased due to the pass-through effect of the benchmark rate.

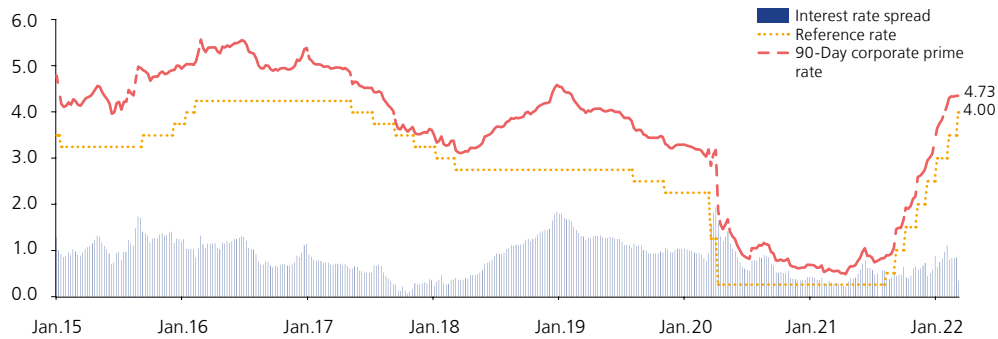
Deposit rates have also incorporated the impact of the gradual increase in the benchmark interest rate, but at a slower pace than lending rates. Thus, the prime rates on overnight to twelve-month operations have increased by an average of 127 basis points, while the rates on corporate term deposits have risen by an average of 145 basis points, especially in the 6-month to 12-month maturity terms (173 basis points). In the case of individuals, the rates paid on their deposits increased by an average of 74 basis points for terms between 1 and 12 months, while the average rate for CTS deposits rose from 2.29 to 3.07 percent between December 2021 and March 2022, this rise being associated with competition among banking companies to capture this type of deposits.

Table 37
INTEREST RATE IN DOMESTIC CURRENCY ^{1/}
(%)

	Dec.19	Dec.20	Mar.21	Jun.21	Sep.21	Dec.21	Mar.22	Historical average ^{2/}
90-day corporate prime	2.8	0.2	0.1	0.4	0.9	2.6	4.2	3.2
TIPMN	2.3	1.0	0.9	0.8	0.8	1.1	1.5	2.2
FTIPMN	1.5	0.1	0.1	0.2	0.3	1.0	1.9	2.0
Deposits up to 30-day	2.3	0.0	0.0	0.2	0.4	1.9	3.2	2.9
Individuals	1.6	0.2	0.1	0.2	0.3	0.7	1.3	2.3
Business	2.3	0.0	0.0	0.2	0.4	1.9	3.2	3.0
On 31 to 90-day term deposits	2.7	0.2	0.2	0.4	0.7	2.2	3.4	3.2
Pasives Individuals	1.8	0.5	0.4	0.4	0.4	0.8	1.6	1.7
Business	2.8	0.2	0.2	0.4	0.8	2.2	3.5	3.3
On 91 to 180-day term deposits	3.0	0.4	0.3	0.5	1.0	2.4	3.8	3.3
Individuals	2.3	0.5	0.5	0.5	0.5	0.9	2.0	2.3
Business	3.1	0.3	0.2	0.5	1.0	2.6	4.0	3.5
On 181 to 360-day term deposits	3.3	0.7	0.7	0.8	1.6	2.9	4.3	3.6
Individuals	3.3	1.3	1.3	1.4	1.4	2.9	3.4	3.5
Business	3.3	0.4	0.5	0.6	1.6	2.9	4.6	3.7
CTS	2.2	1.9	2.5	2.4	2.9	2.3	3.1	3.1
90-day corporate prime	3.3	0.7	0.5	0.9	1.5	3.1	4.7	4.0
TAMN	14.4	12.1	11.2	10.7	10.5	11.2	11.5	15.8
FTMAN	18.2	17.6	18.0	14.7	16.7	20.9	22.7	20.1
Corporates	3.8	2.5	2.2	1.4	2.1	3.2	4.7	4.9
Large companies	6.0	4.6	3.9	3.7	4.2	5.7	6.5	6.5
Medium-sized enterprises	9.3	6.1	8.0	7.3	7.9	8.8	10.6	9.7
Small business	18.0	17.2	18.2	17.6	18.1	19.3	20.2	20.0
Micro business	31.3	30.1	32.8	32.4	31.6	32.3	35.2	32.2
Consumer	40.9	39.5	38.6	38.7	38.8	41.8	41.8	41.4
Mortgage	7.0	6.4	5.9	5.9	6.4	6.9	7.1	8.3

^{1/} Annual rates for operations in the last 30 working days.
^{2/} Average since September 2010. Corresponds to banking companies.
As of March 14.
Source: BCRP and SBS.

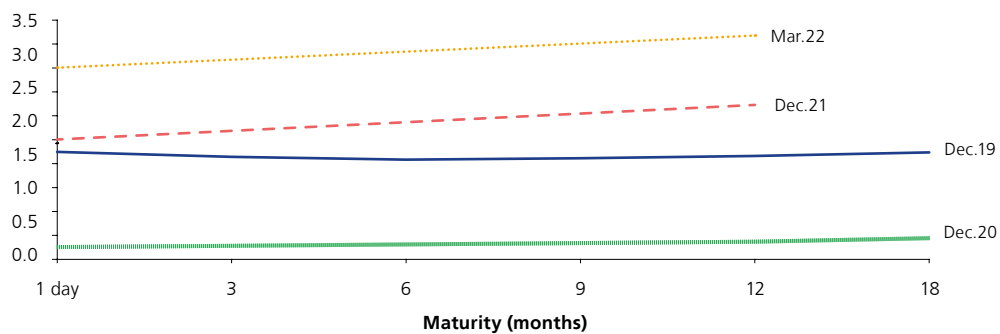
Graph 85
INTEREST RATE IN S/: 90-DAY CORPORATE PRIME
AND REFERENCE RATE
 (%)



As of March 16.
 Source: BCRP and SBS.

59. The yield curve of BCRP securities increased 153 basis points on average between December 2021 and March 2022, in line with the 150 basis point increase in the BCRP benchmark rate in the first quarter, as well as with expectation of future increases. The rates on securities with 3-month, 6-month, 9-month and 12-month maturities rose by 160, 155, 150, and 145 basis points, respectively.

Graph 86
YIELD CURVE OF CENTRAL BANK SECURITIES ^{1/}
 (%)



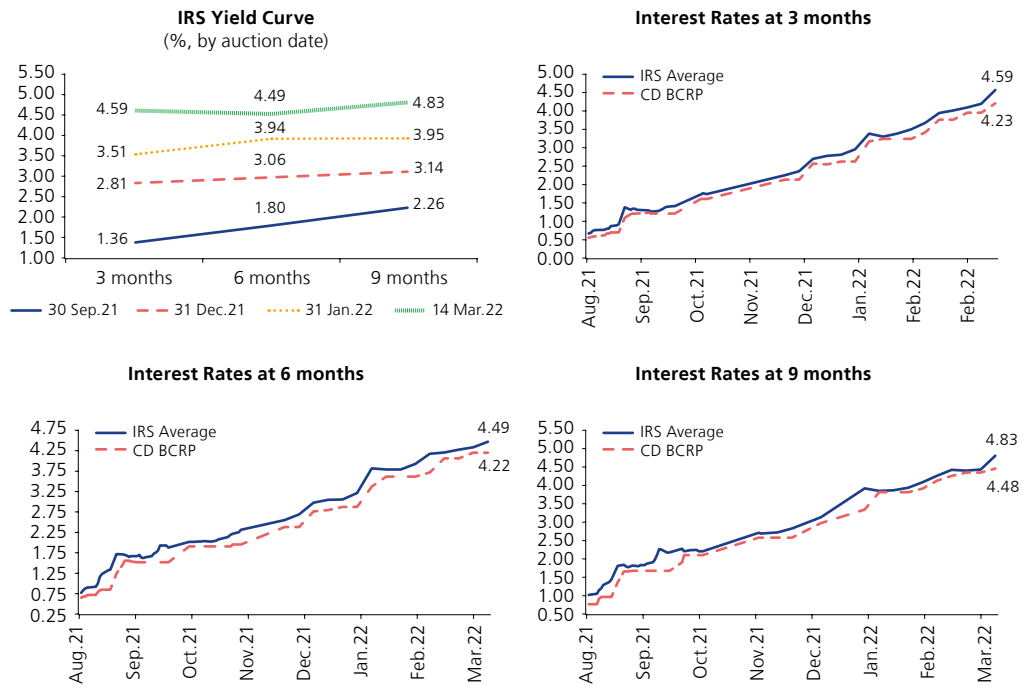
^{1/} Yield rate in the primary and secondary market of CD BCRP.
 As of March 14.
 Source: BCRP.

Between August 23, 2021, and March 14, 2022, the fixed rates of the auctions of Interest Rate Swaps (IRS) increased in the 3-month, 6-month and 9-month maturity terms by 394, 374 and 383 basis points, respectively, in line with market expectations of further increases in the benchmark interest rate. On March 14, the balance of IRS was S/ 16,445 million and a total of S/ 7,100 million, approximately 43 percent of the current balance, matures in March.





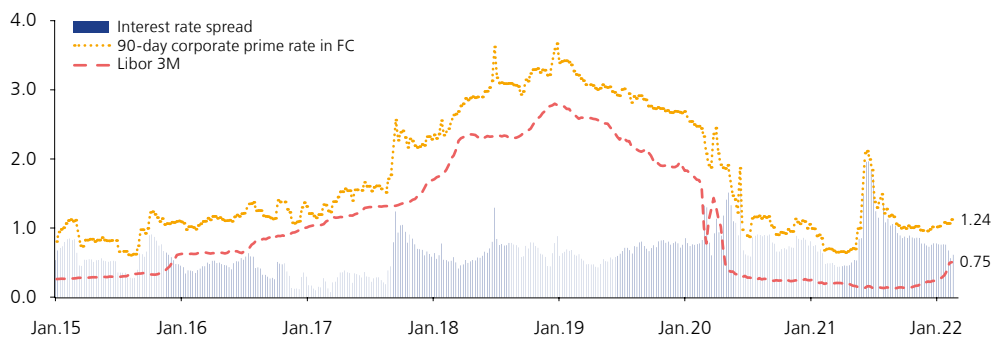
Graph 87
INTEREST RATE SWAP (IRS) RATES 1/
(%)



Average rate of IRS auctions.
As of March 14.
Source: BCRP.

60. On the other hand, interest rates in the dollar money market remained relatively stable in the first quarter of 2022. The overnight interbank interest rate remained at 0.25 percent, while the overnight and 6-month prime lending and deposit rates rose by an average of 26 and 17 basis points, respectively. The spread between the 3-month prime lending rate and the Libor rate decreased from 78 basis points in December 2021 to 29 basis points in March 2022. On the other hand, the spread between the deposit rate and the 3-month Libor rate decreased from 12 to -45 basis points in the first semester of the year.

Graph 88
INTEREST RATE IN US\$: 90-DAY CORPORATE PRIME
AND LIBOR 3-MONTH
(%)



As of March 16.
Source: BCRP.

The interest rates paid to companies and individuals for time deposits, for terms between 1 and 12 months, have risen by an average of 4 basis points in each case.

Table 38
INTEREST RATE IN FOREIGN CURRENCY ^{1/}
(%)

	Dec.19	Dec.20	Mar.21	Jun.21	Sep.21	Dec.21	Mar.22	Historical average ^{2/}
Passive								
90-day corporate prime	1.6	0.2	0.1	0.7	0.4	0.3	0.5	0.9
TIPMEX	0.8	0.3	0.2	0.2	0.3	0.2	0.2	0.5
FTIPMEX	1.2	0.1	0.1	0.2	0.2	0.1	0.1	0.6
Deposits up to 30-day	1.4	0.1	0.1	0.4	0.3	0.1	0.1	0.7
Individuals	1.3	0.0	0.1	0.1	0.1	0.1	0.1	0.6
Business	1.4	0.1	0.1	0.4	0.3	0.1	0.1	0.7
On 31 to 90-day term deposits	1.5	0.3	0.2	0.3	0.3	0.2	0.3	0.9
Individuals	1.0	0.2	0.1	0.2	0.2	0.2	0.2	0.6
Business	1.6	0.3	0.2	0.3	0.3	0.2	0.3	1.0
On 91 to 180-day term deposits	1.3	0.3	0.3	0.4	0.6	0.5	0.4	0.9
Individuals	1.0	0.2	0.2	0.2	0.3	0.3	0.3	0.7
Business	1.6	0.3	0.3	0.5	0.6	0.6	0.5	1.0
On 181 to 360-day term deposits	1.4	0.3	0.3	0.4	0.7	0.6	0.7	1.0
Individuals	1.2	0.3	0.3	0.3	0.4	0.4	0.5	1.0
Business	1.8	0.3	0.3	0.5	0.9	0.7	0.9	1.1
CTS	1.3	1.0	1.2	1.2	1.2	0.9	1.1	1.5
Active								
90-day corporate prime	2.7	1.0	0.6	2.0	1.0	1.0	1.2	1.9
TAMEX	7.6	6.1	6.3	6.1	6.7	6.7	7.0	7.6
FTAMEX	7.1	6.3	6.0	5.7	7.8	7.6	7.9	7.4
Corporates	3.2	2.0	1.8	1.6	2.1	2.1	2.0	2.9
Large companies	5.5	4.5	4.3	4.3	5.0	4.3	4.2	5.3
Medium-sized enterprises	6.6	5.9	5.9	5.9	6.1	5.9	6.6	7.7
Small business	8.8	5.3	7.1	9.7	9.4	10.3	9.2	11.4
Micro business	11.0	8.5	4.4	17.6	12.2	7.4	14.2	16.3
Consumer	36.1	35.1	34.7	31.7	34.2	33.4	34.6	30.1
Mortgage	5.6	5.4	5.0	5.2	5.6	5.0	5.0	6.8

^{1/} Annual rates for operations in the last 30 working days.

^{2/} Average since September 2010.

As of March 14.

Source: BCRP and SBS.

Fixed-income market

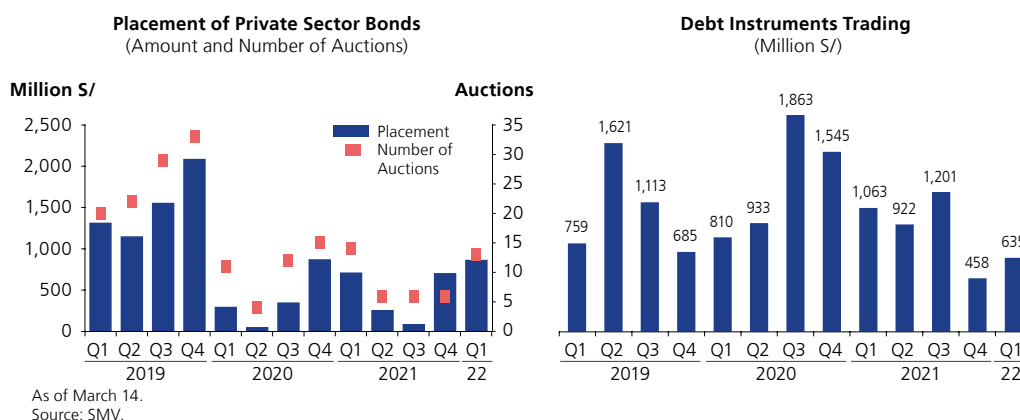
61. In the first quarter of 2022, Peruvian companies only had access to financing in the local capital market. Securities for a total of S/ 866 million were placed through public offerings in thirteen auctions. It is worth highlighting that this amount is higher than that recorded in the four quarters of 2021 and higher than the quarterly average observed since 2019 (S/ 794 million). A greater dynamism is expected in the local and foreign capital markets in the coming months, in anticipation of the increase in the cost of financing due to the more restrictive monetary policies at the global level.

Moreover, the trading of debt securities in the secondary market on the Lima Stock Exchange (BVL) carried out in the first quarter of 2022 until March 14 totaled S/ 635 million, a figure below the quarterly average traded in 2021 (S/ 911 million) and in 2020 (S/ 1,288 million).





Graph 89
FIXED INCOME MARKET OF THE PRIVATE SECTOR



On the other hand, international placements by non-resident entities in soles continued, totaling S/ 669 million in the first quarter of 2022 (as of March 14), a higher amount than the total seen in the fourth quarter of 2021 (S/ 390 million). The placements were made at terms between 3 and 20 years by seven external issuers. In annual terms, the total issued in 2021 (S/ 1,606 million) is lower than the historical maximum level of 2020 (S/ 1,801 million).

The value of the portfolio managed by institutional investors decreased in the first quarter of 2022 amid a context with greater risk aversion vis-à-vis the assets of emerging economies. In the case of AFPs, the investment portfolio decreased from S/ 133,310 million to S/ 132,261 million between December 31, 2021 and March 2, 2022, influenced by the negative performance seen in local and external securities. It is worth mentioning that the annual reduction in the value of the investment portfolio in 2021 (19.1 percent) is the largest since the creation of the AFPs, which is explained by lower member contributions, the liquidation of local and external securities, and the devaluation of the assets comprising the investment portfolio.

It is worth highlighting that the facilities granted by BCRP for the approved withdrawals of funds from pension funds prevented undesirable impacts on interest rates and on the stability of financial markets due to the liquidation of significant amounts of securities in a short period of time. In 2020, the AFPs had access to liquidity from the BCRP through repos with BTP to mitigate the effect of the withdrawal of funds for a total of S/ 6,137 million. In addition, between January and July 2021, direct repos for S/ 6,221 million for a term of 3 months were made at a rate of 0.33 percent. There is currently no outstanding balance of repos with the AFPs.

In the case of mutual funds, the assets under management and the number of participants continue to decrease, with assets decreasing by 5.8 percent between December 2021 and February 2022, while the number of participants decreased by 2.0 percent. Investors maintain their preference for debt funds in an environment of high volatility in the external market due to geopolitical tensions between Russia and Ukraine. On the other hand, the investment portfolio of insurance companies increased

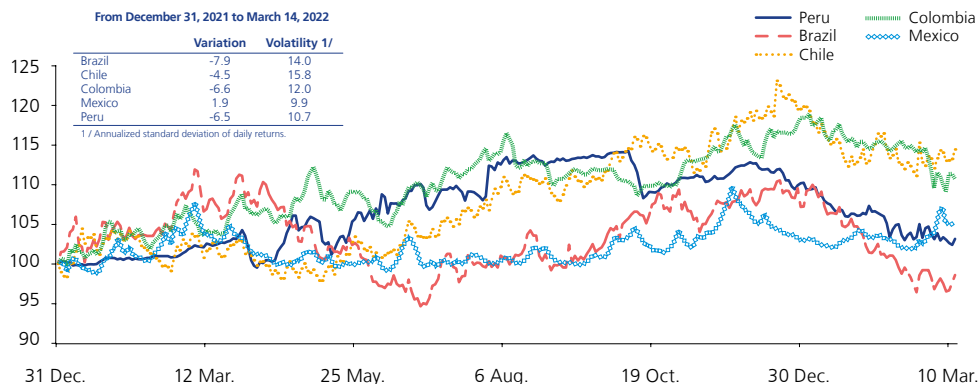
from S/ 53,762 million to S/ 54,920 million between September and December 2021.

Foreign exchange market

62. In the first quarter of 2022, the PEN exchange rate showed a downward trend and high volatility associated with both global and local factors. The reduction in the level of the exchange rate of the Peruvian currency started on December 7, 2021, reflecting the dynamics of foreign exchange flows in the local market. On the other hand, in January the PEN appreciated 3.6 percent against the dollar, supported by a more favorable environment locally due to lower demand for foreign currency, but with an external environment of greater risk aversion due to global inflation concerns, expected changes in the Fed’s asset purchase program, and political noise due to the conflict between Russia and Ukraine. In February, the exchange rate was under upward pressure at the beginning of the month due to higher local political risk. Moreover, in the last week of February, risk aversion towards emerging assets increased due to the escalation of geopolitical tensions between Russia and Ukraine. On February 24, the sol depreciated by 1.60 percent (the highest daily increase since July 30, 2021), while in March, the sol appreciated by 0.8 percent after the US dollar/PEN exchange rate decreased from S/ 3.782 per dollar on February 28 to S/ 3.733 per dollar on March 14.

Latin American currencies showed mixed behaviors between the end of December 2021 and March 2022, in line with the evolution of the main commodities exported by each country and influenced by different local political risks. The currencies of Brazil, Chile, Colombia, and Peru showed appreciations, while the Mexican currency showed a slight depreciation. Likewise, volatility in the region has increased in most countries, with the exception of Brazil and Mexico, which shows that, although exchange rate volatility in the region is highly synchronized, idiosyncratic factors also explain exchange rate variations.

Graph 90
EXCHANGE RATE INDEX 1/
(Dec 31, 2020=100)

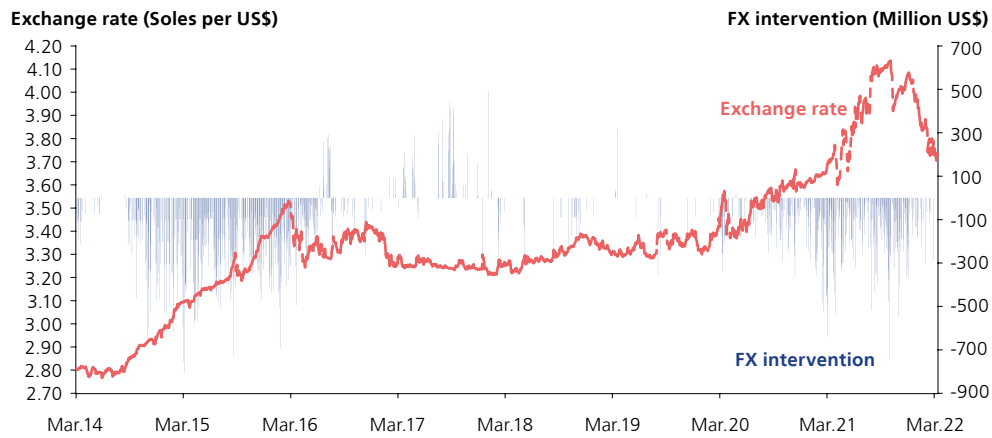


1 / An index increase indicates the depreciation of the currency.
Data as of March 14.
Source: BCRP and Reuters.





Graph 91
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 March 14.
Source: BCRP.

In a context of high local and external volatility, BCRP intervened in the foreign exchange market through the auction of foreign exchange swaps (FX swaps-sale), the placement of Certificados de Depósito Reajustables (CDR BCRP), and sales of currency at the trading desk to minimize volatility in the price of the PEN. Thus, from January to March, FX swaps amounting to S/ 4,740 million (US\$ 1,229 million) were placed at terms between 3 and 12 months, while, on the other hand, S/ 1,423 million (US\$ 355 million) matured. As a result, the balance of FX swap-sale on March 14 was S/ 41,094 million (US\$ 10,436 million), reaching a new historical high since the one recorded on February 28 (S/ 41,094 million). In the case of BCRP CDRs, S/ 1,195 million (US\$ 310 million) were placed for terms between 2 and 3 months and S/ 1,350 million (US\$ 340 million) matured, bringing the balance to S/ 1,195 million (US\$ 310 million) on March 14. Additionally, BCRP sold US\$ 277 million through the trading desk. The percentage of the number of days in which foreign exchange intervention actions have been carried out in 2022 is lower than that recorded in 2021.

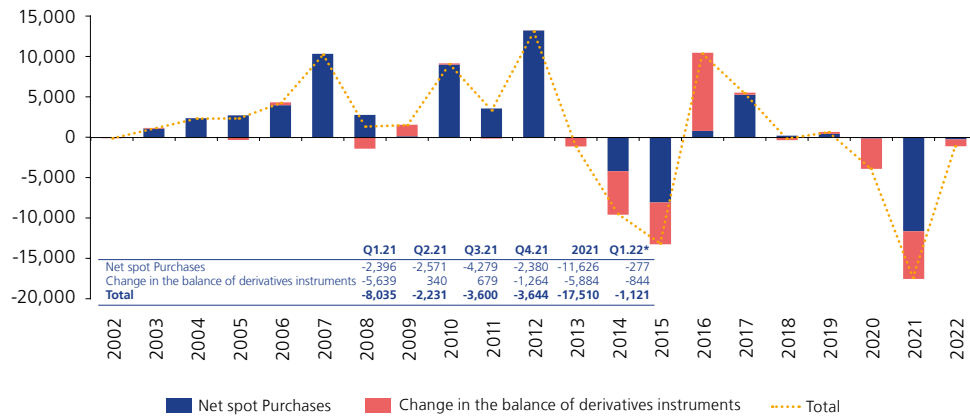
Table 39
NUMBER OF DAYS OF INTERVENTION

	Trading days	Number of intervention days						SD of the Exchange Rate (Annual % change)
		Spot Market	Placement of derivatives and indexed instruments	Total (spot and/or placement)	Spot	Instrumentos	Total	
2015	248	98	203	207	40%	82%	83%	3.9%
2016	250	50	119	134	20%	48%	54%	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	251	141	183	206	56%	73%	82%	9.4%
2022 1/	51	6	13	14	12%	25%	27%	10.7%

1/ As of March 14.

Year-to-date as of March 14, BCRP has offered US\$ 1.1 billion in the foreign exchange market through sales in the spot market (US\$ 0.3 billion) and through net placement of foreign exchange derivatives and BCRP CDRs (US\$ 0.8 billion).

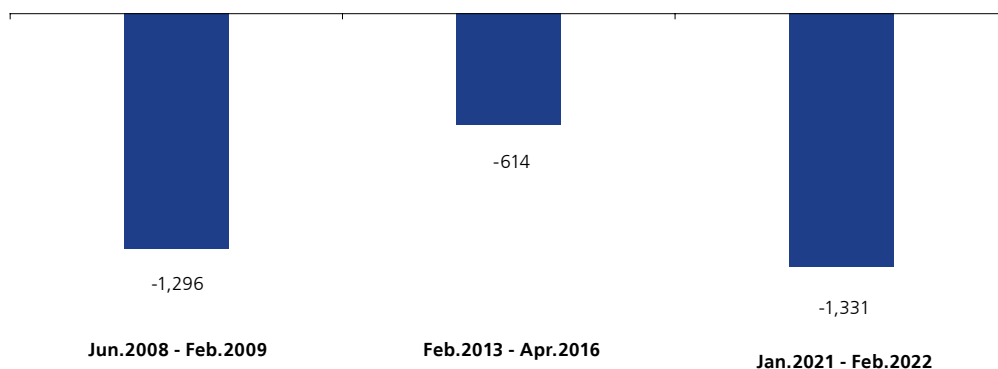
Graph 92
FX INTERVENTION OF THE BCRP
(Million US\$)



As of March 14.
Source: BCRP.

Moreover, the average monthly amount of intervention in the foreign exchange market in the current episode of volatility (from January 2021 to February 2022) has been US\$ 1,331 million, higher than that observed during the period of the global financial crisis (US\$ 1,296 million) and between February 2013 and April 2016 (US\$ 614 million).

Graph 93
MONTHLY AVERAGE FX INTERVENTION OF THE BCRP
(Million US\$)



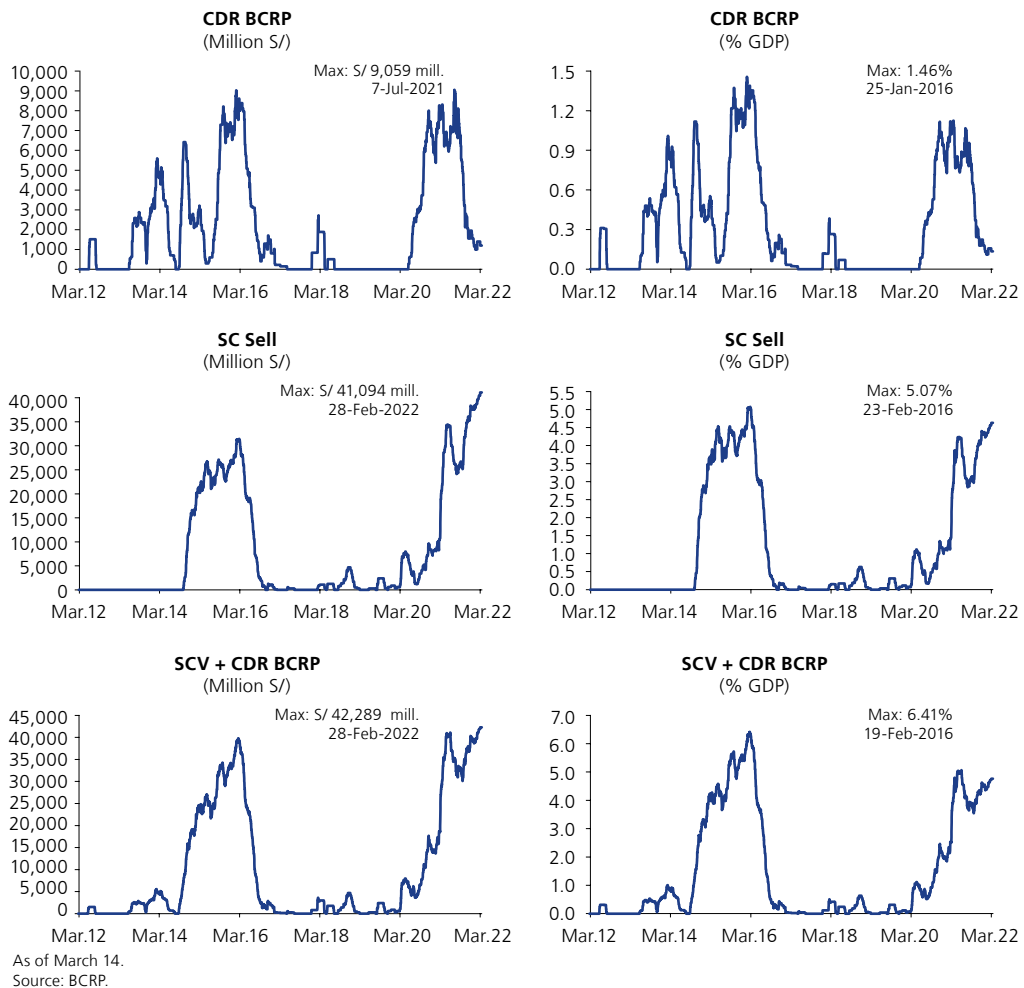
Includes Net purchases of US\$ in the spot market and the gross placement of instruments in the negotiation table.
As of March 14.
Source: BCRP.





The accumulated balance of FX swaps-sale and CDR BCRP as of March 14 was S/ 42.3 billion (4.8 percent of GDP), a new maximum level. 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 62 to 289 days between December 2019 and March 2022.

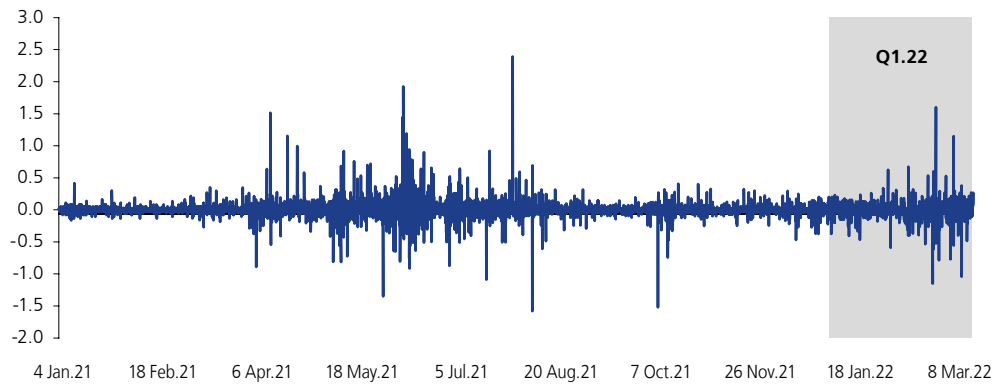
Graph 94
EXCHANGE INSTRUMENTS BALANCE



In the first quarter of 2022, the PEN shows a higher level of volatility than in the fourth quarter of 2021: the annualized daily percentage change of the exchange rate in January was 6.1 percent; in February 14.7 (the highest since June 2021: 16.3 percent) and in March 10.0 percent. Considering the evolution of the exchange rate for every 10 minutes between 9:30 a.m. and 1:30 p.m., the intraday variation has fluctuated between a 1.60 percent depreciation (February 24, 2021) and a 1.15 percent appreciation (February 23, 2022). As shown in the graph below, the intraday variation shows greater persistence and sensitivity to new information since February

2022 compared to what was observed in the fourth quarter of 2021 and January 2022.

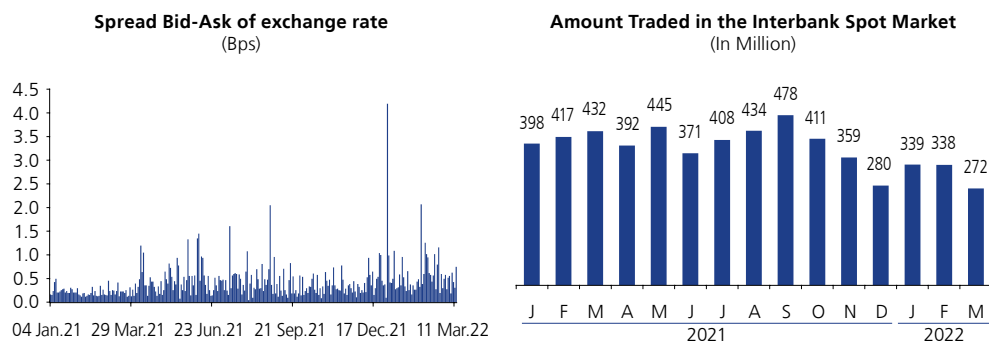
Graph 95
INTRADAY VARIATION OF EXCHANGE RATE ^{1/}



^{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.
As of March 14.
Source: Reuters.

The higher volatility registered in the first quarter of 2022 was also reflected in the bid-ask spreads of the exchange rate. The increase occurred in the first week of January and February, and until the latest available data, volatility had not returned to the levels recorded prior to the first presidential round in 2021, although a reduction was observed. The average daily trading in the spot interbank foreign exchange market remained relatively stable from January to November 2021 with a daily average of US\$ 413 million, while the amounts traded since December 2021 have decreased. Moreover, the average amount traded in the first quarter of 2022 has been US\$ 316 million, a figure below the average traded in 2021 (US\$ 402 million), which is associated to the lower demand for dollars from the corporate sector.

Graph 96
SPREAD AND EXCHANGE RATE NEGOTIATION



As of March 14.
Source: Reuters and BCRP.





Comparatively, the historical volatility of the Peruvian exchange rate in 30-day moving periods observed in February 2022 was one of the highest in the region. 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 a reduction in the variability of the PEN in January and an increase in February and March, associated with high volatility in international financial markets.

Graph 97
1-MONTH ANNUALIZED HISTORICAL VOLATILITY

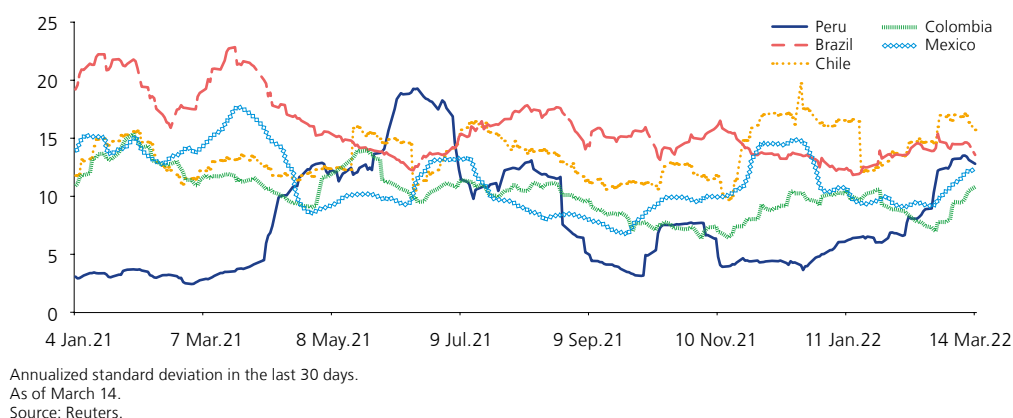


Table 40
LATAM VOLATILITY

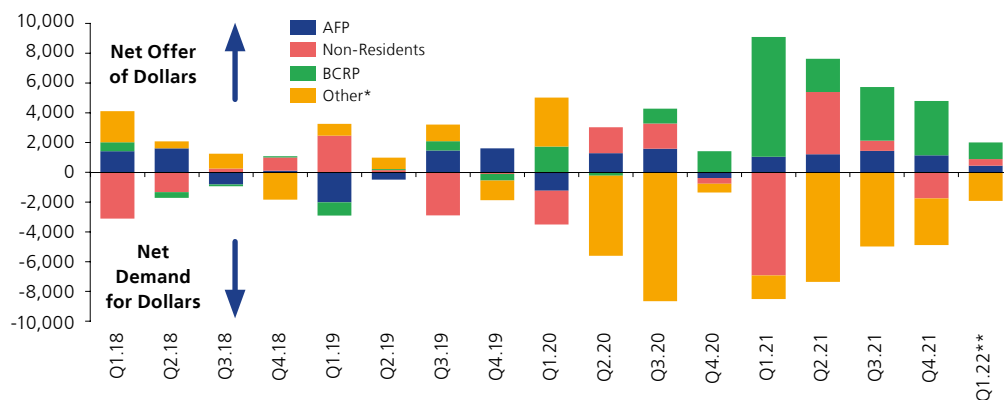
	Historical (SD) 1/					Implicit 2/					GARCH(1,1) 3/				
	Brazil	Chile	Colombia	Mexico	Peru	Brazil	Chile	Colombia	Mexico	Peru	Brazil	Chile	Colombia	Mexico	Peru
Jan.21	22.6	17.3	14.5	14.4	2.6	18.4	13.8	13.6	15.3	6.5	22.0	13.9	16.5	18.1	5.7
Feb.21	13.7	11.2	10.9	14.8	1.8	19.2	12.3	13.4	17.1	5.0	22.0	14.2	13.5	20.8	4.5
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	6.1
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	9.8	18.0	12.4	12.5	12.6	15.4
Jul.21	17.0	12.7	9.8	9.2	14.7	16.5	13.5	13.5	10.5	11.9	17.9	12.2	13.8	11.9	10.8
Aug.21	15.1	11.7	12.6	7.8	5.9	16.3	13.4	13.6	9.9	10.7	17.5	12.1	12.7	11.7	9.8
Sep.21	14.8	9.1	4.8	6.3	2.4	16.3	13.7	12.4	11.0	10.6	15.7	11.4	9.4	11.3	6.8
Oct.21	14.9	11.0	6.2	10.1	9.4	18.1	17.7	11.2	9.3	8.6	17.2	11.1	12.3	10.0	8.9
Nov.21	14.2	16.6	7.8	13.7	3.9	16.6	19.4	12.6	14.8	7.2	16.5	13.1	12.9	13.4	7.0
Dec.21	13.6	16.4	10.7	8.5	3.9	15.8	17.2	12.5	11.2	9.7	16.5	13.4	12.8	9.7	8.2
Jan.22	14.8	11.8	10.8	5.6	6.1	16.2	14.5	14.1	10.5	8.9	15.2	12.8	13.8	8.9	7.7
Feb.22	13.3	20.1	6.0	8.9	14.7	17.4	17.6	16.5	11.0	6.9	15.4	17.7	12.9	10.9	11.9
Mar.22	14.6	13.0	21.2	17.2	10.0	18.2	17.0	16.7	13.6	8.9	15.4	15.1	13.1	11.4	11.0

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 highest impact on the forecast.
As of March 14.
Source: BCRP and Reuters.

The aim of BCRP's intervention in the foreign exchange market has been to offset the high demand for dollars in the local market, particularly in 2021. This demand was significantly reduced since December 2021 and thus, on March 13, 2022, the foreign

exchange market registered a net demand of US\$ 1,233 million, which came mostly from non-financial sector participants, such as retailers and the corporate sector. On the other hand, the main suppliers of dollars in the first quarter of 2022 were mining companies, AFPs and non-resident investors. In the case of banking companies, the balance of Non-Deliverable Forward purchases (NDF) with non-resident investors increased by US\$ 1,395 million in the first quarter of 2022, while the balance of net sales rose by US\$ 298 million, a lower amount than in 2021 –when the balance increased by US\$ 2,448 million between December 2020 and December 2021–, reflecting the lower demand for dollars from non-resident investors.

Graph 98
FLows TO THE FOREIGN EXCHANGE MARKET (SPOT AND DERIVATIVES)
 (Million US\$)



* Other includes companies in the corporate sector, mining and retail sector.
 ** As of March 13.
 Source: BCRP.

In the first quarter of 2022, non-resident investors’ demand for dollars in the spot markets amounted to US\$ 655 million –a higher demand than that recorded in the fourth quarter of 2021 (US\$ 581 million)– and they bought Public Treasury Bonds for a total of US\$ 1,045 million. They also offered dollars in the derivatives market for a total of US\$ 1,088 million.

On their side, since January 2022 the Administrators of Pension Funds (AFP) have shifted their position from suppliers to net demanders of dollars. Between November 2020 and December 2021, the AFPs were exclusively net suppliers of dollars (US\$ 8,503 million), which was associated with their members’ extraordinary withdrawals of funds that caused the AFPs’ liquidation of their investments abroad²¹. On the other hand, as of March 13, the AFPs registered a net demand of US\$ 394 million. Between January and March, the AFPs bought and sold foreign securities for a total of US\$ 9,446 million and US\$ 9,224 million, respectively, with net purchases of foreign currency amounting to US\$ 152 million being the highest registered since the first quarter of 2020 (US\$ 499 million). In the case of the derivatives market, the AFPs recorded a net supply of dollars of US\$ 845 million, a figure slightly above that recorded in the fourth quarter of 2021 (US\$ 816 million).

21 As of October 29, 2021, AFP members have withdrawn funds for a total of S/ 32.2 billion under Law No. 31192 of May 2021.





Moreover, the net demand for dollars of the corporate and retail sectors in the first quarter of 2022 totaled US\$ 3,378 million and US\$ 1,107 million, respectively, amounts below those recorded in 2021 (quarterly average of US\$ 5,359 and US\$ 1,603 million, respectively), this demand reflecting an increase in economic agents' dollarization ratio due to precautionary reasons.

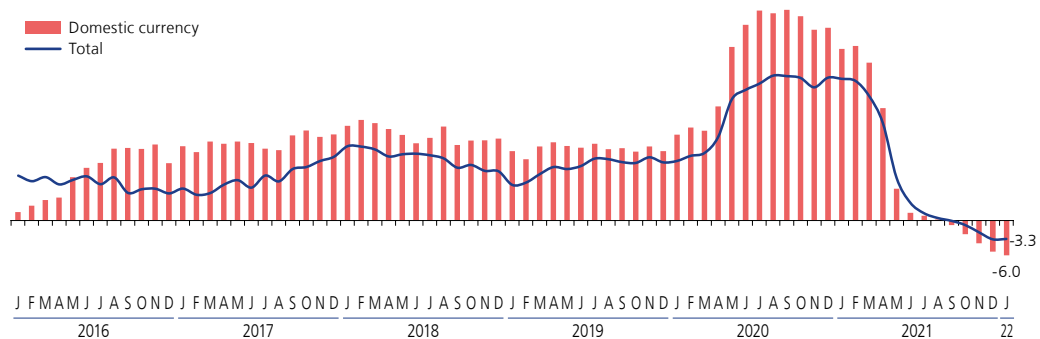
On the other hand, mining companies' net dollar supply amounts to US\$ 2,252 million, this supply being lower than that observed in the quarterly average of 2021 (US\$ 2,658 million) and higher than that recorded in 2020 (US\$ 1,504 million).

In this 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\$ 1,121 million net) between January and March 2022. It is worth pointing out that in addition to the adequate level of international reserves BCRP has, it 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

- 63. In January 2022, private sector deposits showed a year-on-year growth rate of -3.3 percent. By currency, deposits in soles decreased by 6.0 percent year-on-year, while deposits in dollars grew 2.6 percent in the last 12 months. The negative growth of deposits in domestic currency has accelerated since the last quarter of 2021 due to the statistical effect of high growth rates in 2020 and due to local uncertainty.

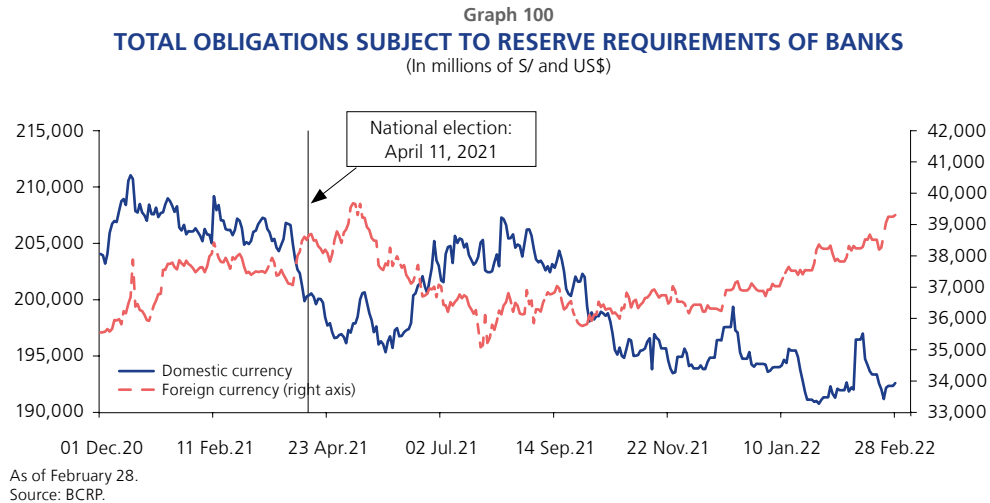
Graph 99
DEPOSITS OF THE PRIVATE SECTOR BY CURRENCY
 (Annual % change)



Source: BCRP.

The dollarization ratio of private sector deposits increased from 31.4 percent in December 2020 to 33.9 percent in January 2022. This increase is explained by an increase in the dollarization of corporate deposits (from 38.9 to 44.8 percent) and by an increase in the dollarization ratio of individual deposits (from 26.7 to 27.4 percent).

Banks' total obligations subject to reserve requirements in domestic currency continued with a more moderate decreasing trend in December, January, October, and February (S/ 2,649 million), while total obligations subject to reserve requirements in foreign currency increased by US\$ 3,004 million during the same period, showing a rising trend since December 2021.



In 2022, deposits in domestic currency are expected to grow at a slightly lower rate than credit to the private sector in domestic currency (5.1 and 5.6 percent, respectively)..

Table 41
MONETARY AND CREDIT ACCOUNTS OF THE DEPOSITORY CORPORATIONS
(END-OF-PERIOD)
(Annual % change)

	Dec.19	Dec.20	Mar.21	Jun.21	Sep.21	Dec.21	Jan.22	Dec.22*	Dec.23*
Currency in circulation (End-of-period)	4.7	37.3	42.5	20.6	20.9	16.0	8.1	3.0	1.5
Deposits in domestic currency	11.9	33.1	27.1	1.3	-0.8	-5.4	-6.0	5.1	8.3
Total deposits 1/	10.0	24.6	21.4	3.0	-0.1	-3.3	-3.3	3.6	5.8
Broad money in domestic currency	10.2	32.3	28.9	5.0	3.4	-0.7	-2.6	4.5	6.5
Total broad money 1/	9.4	25.9	23.9	5.5	3.0	0.1	-1.1	3.5	5.0
Credit to the private sector in domestic currency	9.8	19.7	17.5	7.7	3.9	5.2	7.3	5.6	6.8
Total credit to the private sector 1/	6.9	11.8	9.5	5.0	2.8	4.4	6.2	4.5	5.5

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

64. **Currency in circulation** grew by 16.0 percent in 2021 and 8.1 percent year-on-year in January 2022. It is expected to grow 3.0 percent in 2022 and to decline then to a rate of 1.5 percent in 2023. After growing at historically high rates during the state of emergency²², the growth of currency in circulation is expected to moderate as

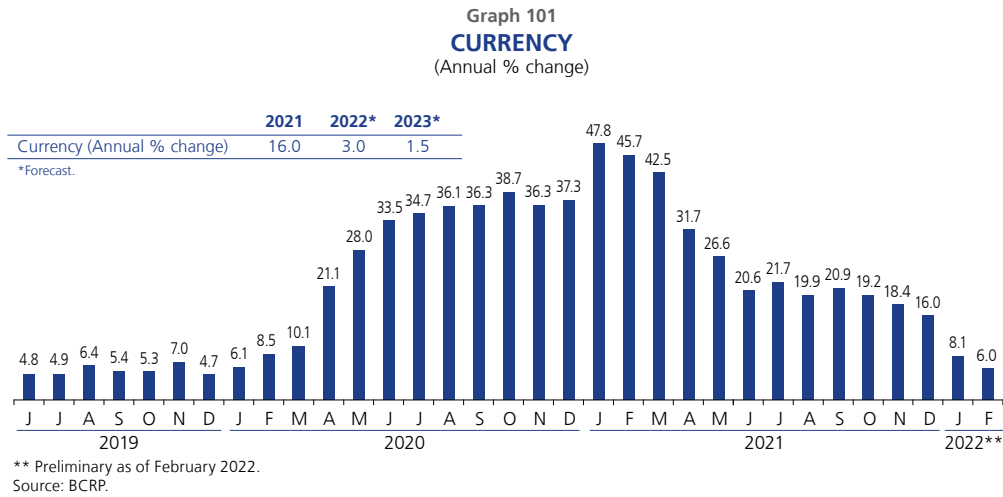
22 The growth of precautionary cash savings would have been driven mainly by transfers to families through the bonds granted by the State.



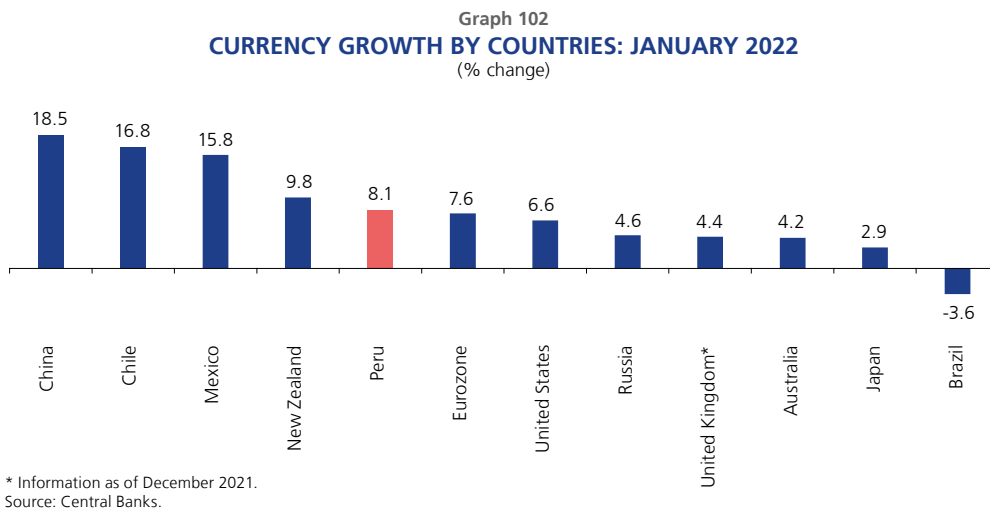


from the second quarter of 2022 after the factors that favored this increase in the preceding years subside. Thus, currency in circulation would grow at a slower pace than nominal GDP, returning to its pre-pandemic trend in the medium term.

After reaching historically high rates in 2020 and in the first half of 2021, the growth of currency has slowed down over the past four months after remaining stable at around 20 percent from June to October 2021.

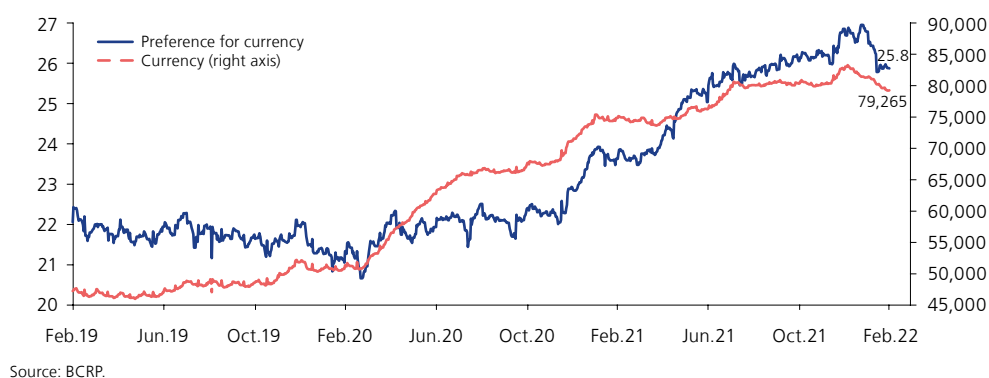


- 65. The annual growth rate of currency in circulation in January 2022 was 8.1 percent, higher than the growth rate observed in January 2020 (6.1 percent) and lower than the growth rate recorded in December 2020 (37.3 percent). The annual growth rate of money velocity in the fourth quarter of 2021 remains positive at a rate of 9.5 percent, a higher rate than the rate observed prior to the pandemic (-12.3 percent in the first quarter of 2020), but lower than that registered in the third quarter of 2021 (15.3 percent). The demand for cash remains high, but shows a more moderate pace of growth in recent months.



66. The preference for currency in circulation has been fluctuating around 26 percent since the fourth quarter of 2021. After increasing in December 2021 and January 2022, this trend reversed in recent weeks reaching a three-month low of 25.8 in February when it returned to October 2021 levels after peaking at 26.3 percent in mid-January.

Graph 103
CURRENCY AND PREFERENCE FOR CURRENCY
(In millions soles and %)



Credit to the private sector

67. 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 6.2 percent in January 2022 (12.1 percent without credit under the Reactiva program). By segment, credit to businesses grew 5.9 percent, less than the rate 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 6.7 percent in January 2022 as a result of the recovery of domestic demand. In the case of credit to individuals, there was an increase in vehicle loans (10.2 percent) and an increase in mortgage loans (7.3 percent). Moreover, on the side of credit to businesses, the segments with the highest growth rates were credit to corporations and large companies (12.0 percent), followed by credit to small and micro businesses (2.2 percent), whereas credit to medium-sized companies recorded a drop (1.1 percent).

Table 42
CREDIT TO THE PRIVATE SECTOR 1/
(Annual growth rate)

	Dec.19	Mar.20	Jun.20	Sep.20	Dec.20	Mar.21	Jun.21	Sep.21	Dec.21	Jan.22
Businesses	4.2	6.6	20.0	24.6	21.7	18.6	8.1	3.2	3.8	5.9
Corporate and large companies	4.4	9.6	21.8	14.2	8.3	3.3	-1.8	2.6	7.7	12.0
Medium-sized enterprises, Small business and Micro business	4.1	3.0	17.8	37.0	37.4	37.6	19.9	3.8	0.2	0.4
Individuals	11.3	9.3	2.8	-1.3	-3.1	-4.5	-0.4	2.1	5.4	6.7
Consumer	12.8	10.2	1.6	-4.2	-7.1	-10.6	-5.7	-2.0	3.8	6.3
Car loans	11.9	6.9	0.9	-3.1	-2.5	-8.3	-0.4	3.1	8.0	10.2
Rest	12.9	10.3	1.7	-4.2	-7.3	-10.6	-5.9	-2.1	3.7	6.2
Mortgage	9.0	8.0	4.6	3.1	3.2	4.8	7.5	7.8	7.6	7.3
TOTAL	6.9	7.6	13.2	14.3	11.8	9.5	5.0	2.8	4.4	6.2
Memo:										
Total without Reactiva Peru	6.9	7.6	3.8	-2.5	-5.1	-6.9	-1.4	5.4	9.4	12.1

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





68. Reclassifications were made in the business and consumer credit segments²³ during 2020 and early 2021. Therefore, it should be pointed out that the indicator of credit balance growth rates by business and consumer credit segment not only takes into account the effect of higher or lower credit activity, but also reflects the effect of changes in the base associated with reclassifications.

Thus, if the reclassification effect of credit to business is omitted for December 2021, credit to the segment of corporations and large companies would have grown at a lower rate (4.9 percent), while credit to medium-sized companies would have decreased by 2.9 percent and credit to the segments of small and microbusinesses would have expanded by 9.5 percent.

Table 43
TOTAL CREDIT TO THE PRIVATE SECTOR BY TYPE OF BUSINESS

	Million S/ Dec.21	Annual growth rate (%)					
		Oct.21/Oct.20		Nov.21/Nov.20		Dec.21/Dec.20	
		With Reclass.	Without Reclass.	With Reclass.	Without Reclass.	With Reclass.	Without Reclass.
Businesses	251,997	3.6	3.6	3.1	3.1	3.8	3.8
Corporate and large companies	122,001	5.1	2.7	5.3	3.0	7.7	4.9
Medium-sized enterprises	66,148	11.5	-0.7	3.8	-2.6	0.5	-2.9
Small business and Micro business	63,849	-7.3	9.6	-2.0	9.8	-0.1	9.5

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

As for consumer loans, credit in the segment of credit cards would have contracted much less (7.5 percent vs. -41.5 with the reclassification of credit), while other consumer loans would have grown by 8.4 percent.

Table 44
TOTAL CREDIT TO THE PRIVATE SECTOR BY TYPE OF CONSUMER

	Million S/ Dec.21	Annual growth rate (%)					
		Oct.21/Oct.20		Nov.21/Nov.20		Dec.21/Dec.20	
		With Reclass.	Without Reclass.	With Reclass.	Without Reclass.	With Reclass.	Without Reclass.
Consumer	77,660	-0.5	-0.5	1.7	1.7	3.8	3.8
Vehicles	2,481	6.1	6.1	9.9	9.9	8.0	8.0
Credit card	12,592	-45.3	-14.2	-44.9	-12.8	-41.5	-7.5
Rest	62,587	18.9	5.2	21.4	7.6	22.8	8.4

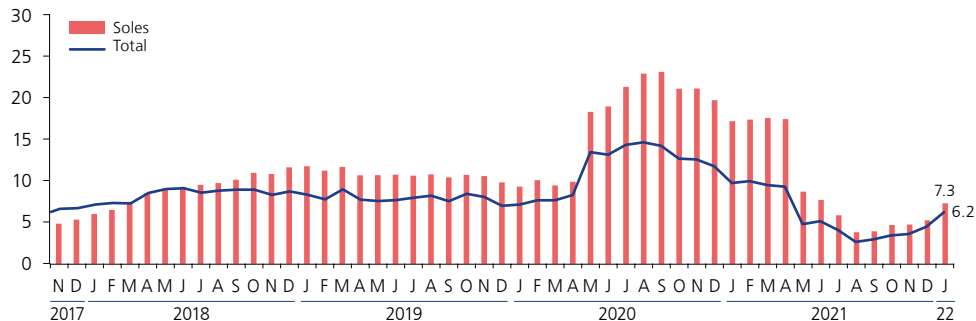
1/ Balances are valued at constant exchange rate (3.31).
Source: RCC and bank account.

The segment most affected by the reclassification in the case of loans to business was that of micro and small companies, the total amount of which increased by S/ 5,593 million. On the other hand, the total amount of loans to corporate and large companies and medium-sized companies decreased by S/ 3,323 million and S/ 2,270 million, respectively.

69. The growth of credit in soles has slowed down since March 2021, mainly due to the weakening of the statistical effect of the Reactiva Peru program. On the other hand, the growth of credit in dollars has been declining since June 2020, although this declining trend reversed thereafter since December 2021 when credit in dollar grew 1.1 percent. Thus, as of January 2022, credit in soles grew 7.3 percent, while credit in dollars grew by 1.9 percent in the same period.

23 For further detail on the reclassification of credit, see Nota de Estudio del BCRP N° 37-2021.

Graph 104
CREDIT TO THE PRIVATE SECTOR
 (Annual % change)



Source: BCRP.

Table 45
CREDIT TO THE PRIVATE SECTOR 1/
 (Annual % change)

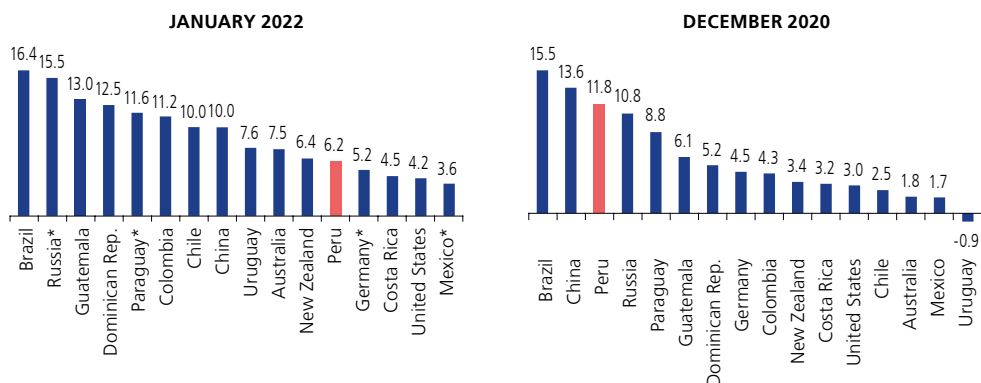
	Dec.19	Mar.20	Jun.20	Sep.20	Dec.20	Mar.21	Jun.21	Sep.21	Dec.21	Jan.22
Domestic Currency	9.8	9.4	18.9	23.1	19.7	17.5	7.7	3.9	5.2	7.3
Foreign Currency	-0.4	2.8	-2.1	-9.8	-10.6	-13.4	-3.6	-1.3	1.1	1.9
Total	6.9	7.6	13.2	14.3	11.8	9.5	5.0	2.8	4.4	6.2

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

70. Globally, the growth of credit to the private sector has had mixed results, with some countries showing a more moderated growth of this indicator, while others seem to have maintained high rates of credit to the private sector after high growth in response to the monetary stimulus measures adopted by central banks in 2020 and early 2021.

The actions taken by BCRP have favored a countercyclical behavior in credit during 2020 and early 2021, thus counterbalancing the negative effects of the pandemic on economic activity.

Graph 105
GROWTH OF CREDIT TO THE PRIVATE SECTOR
 (Annual % change)

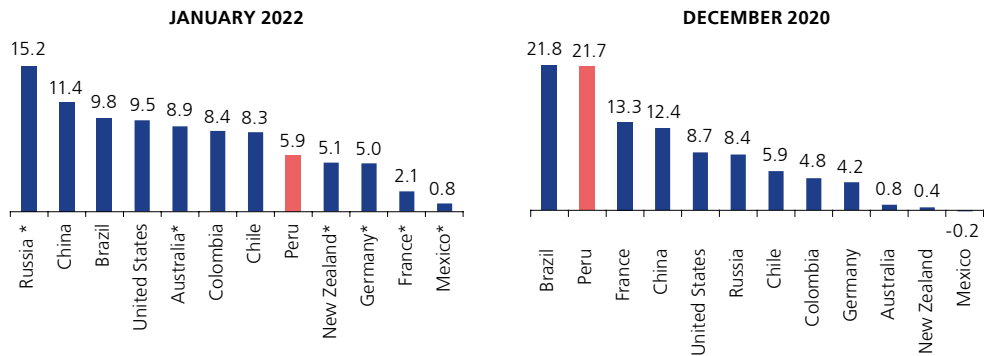


* Information as of December 2021.
 Source: Central Banks.





Graph 106
GROWTH OF CREDIT TO PRIVATE COMPANIES
(Annual % change)



* Information as of December 2021.
Source: Central Banks.

Dollarization of credit and liquidity

71. The ratio of dollarization of credit to the private sector measured at a constant exchange rate was 20.1 percent in January 2022, similar to the level observed in previous months and lower than that observed in December 2020 (20.7 percent). A slight reduction was observed in the dollarization ratio of credit to business, which fell from 27.4 to 27.3 percent in the same period. Similarly, the dollarization ratio of credit to individuals fell from 8.0 to 6.9 percent, with the dollarization ratio of the segment of mortgage loans declining from 11.6 percent in December 2020 to 9.0 percent in January 2022, while that of consumer loans decreased slightly, from 5.5 percent to 5.4 percent, in the same period.

Table 46
RATIO OF DOLLARIZATION OF CREDIT TO THE PRIVATE SECTOR 1/
(%)

	Dec.19	Mar.20	Jun.20	Sep.20	Dec.20	Mar.21	Jun.21	Sep.21	Dec.21	Jan.22
Business	37.3	37.5	31.8	27.8	27.4	27.2	28.4	26.8	27.1	27.3
Corporate and large companies	50.5	50.0	43.4	41.4	42.4	41.8	43.8	41.2	41.5	42.0
Medium-sized enterprises	38.5	38.7	30.0	24.4	22.0	21.2	20.6	20.0	20.6	20.8
Small business and Micro business	5.7	5.6	4.9	3.8	4.0	4.1	3.9	3.7	3.5	3.5
Individuals	8.9	8.5	8.3	8.2	8.0	7.9	7.9	7.5	7.0	6.9
Consumer	6.0	5.7	5.5	5.4	5.5	5.5	6.0	5.8	5.5	5.4
Car loans	14.8	14.9	14.9	16.0	16.7	16.8	16.0	14.7	12.8	12.2
Credit cards	7.1	6.6	5.6	5.3	5.7	8.3	11.5	12.0	11.4	11.4
Rest	5.0	4.9	5.0	5.0	4.8	4.4	4.3	4.2	4.0	3.9
Mortgage	13.3	12.7	12.5	12.1	11.6	11.0	10.4	9.7	9.1	9.0
TOTAL	25.9	26.0	23.4	21.1	20.7	20.6	21.5	20.2	20.1	20.1

1/ Balances are valued at constant exchange rate on December 2019.
Source: BCRP.

Non-performing loans

72. The NPL ratio was 3.87 percent in January 2022, 0.05 percentage points higher than in September 2021 (3.82 percent). This result is mainly explained by higher

delinquency rates in loans to businesses, with the increase in the segment of medium-sized companies and corporations being particularly noteworthy. In contrast, the NPL ratio of loans to individuals decreased in the same period, particularly in the case of those associated with credit cards and mortgage loans.

Table 47
NON-PERFORMING LOANS INDEX
(%)

	Dec.19	Mar.20	Jun.20	Sep.20	Dec.20	Mar.21	Jun.21	Sep.21	Dec.21	Jan.22
Business	3.57	3.81	3.49	3.52	3.72	4.02	4.03	4.40	4.58	4.81
Corporate and large companies	0.62	0.63	0.66	0.84	1.03	1.08	1.15	1.02	1.07	1.20
Medium-sized enterprises	8.24	9.00	7.53	6.81	6.26	6.44	6.76	8.59	9.45	9.87
Small business and Micro business	7.13	6.56	6.24	5.54	6.10	7.18	7.11	6.91	6.59	6.76
Individuals	3.15	3.04	3.43	3.72	4.93	4.20	3.58	2.98	2.57	2.52
Consumer	3.27	3.01	3.38	3.95	5.95	4.70	3.66	2.77	2.24	2.17
Credit cards	5.47	5.65	6.05	8.03	12.70	11.75	8.52	7.05	6.28	6.27
Car loans	3.75	3.86	4.78	5.58	5.85	5.74	5.51	4.42	3.72	3.74
Rest	1.68	1.63	2.05	2.03	3.10	2.96	2.47	1.83	1.36	1.29
Mortgage	2.98	3.08	3.51	3.39	3.52	3.57	3.47	3.24	3.02	2.98
Average 1/	3.28	3.37	3.34	3.47	3.99	3.96	3.76	3.82	3.76	3.87

1/ The non-performing loans index is the percentage of direct loans that are overdue or in the judicial collection. Likewise, this indicator includes credits to companies, natural persons, sovereign credits, to multilateral organizations, and to companies and public sector organizations.
Source: BCRP.

73. Financial entities have continued taking actions to mitigate the impact of the pandemic on the solvency of the financial system. The strengthening of the equity base, the better control of operating and financial expenses, and the establishment of voluntary provisions stand out among these measures.

Projection of credit to the private sector

74. After showing a significant increase in the credit-to-GDP ratio in 2020 and then a similar fall in this ratio in 2021, credit to the private sector in 2022 and 2023 is expected to moderate its growth rate and to grow at a slower pace than nominal GDP, due to a strong recovery of economic activity. Thus, while the ratio of credit to GDP was 44.5 in 2021 (after falling from 51.8 percent in 2020), it is expected to continue falling to 43.0 percent in 2022. This projection also assumes the recovery of economic activity to a level above pre-pandemic levels in 2022 (growth of 22.0 percent compared to 2019). In 2023, credit to the private sector would then resume its prepandemic trend, but would still continue to grow at a rate lower than that of nominal GDP. Thus, the credit-to-GDP ratio would decrease to 42.5 percent in 2023.

Credit to the private sector in domestic currency is projected to grow 5.6 percent in 2022 and 6.8 percent in 2023, taking into account the disappearance of the statistical effect of the strong increase of credit in 2020 and the beginning of the amortization of the loans granted under the Reactiva Perú program. Thus, total credit would grow 4.5 percent in 2022 (10.5 percent without the Reactiva program) and 5.5 percent in 2023 (9.5 percent without the Reactiva program). As a result, the dollarization ratio of credit would continue to decline, reaching a level of 18.2 percent by the end of 2023.

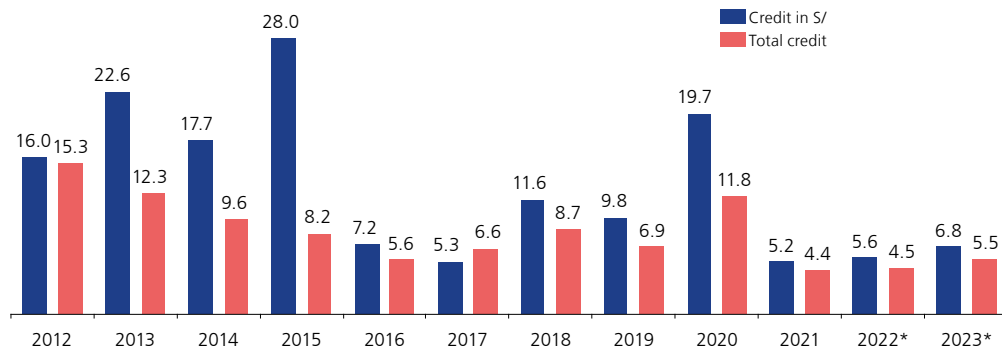
In line with the projections for credit to the private sector, the growth of liquidity would recover (after growing 0.1 percent in 2021) and the growth of currency in circulation





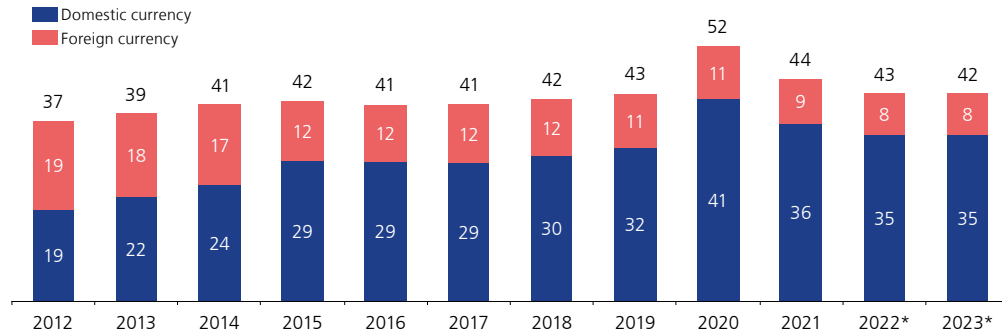
would moderate, although both would continue to grow at lower rates than those of nominal GDP in 2022 and 2023. The ratio of liquidity to GDP would decline from 59.3 percent in 2020 to 45.9 percent in 2023 and the corresponding ratio for currency in circulation would decrease from 10.0 percent in 2020 to 8.6 percent in 2023.

Graph 107
CREDIT TO THE PRIVATE SECTOR
(% change)



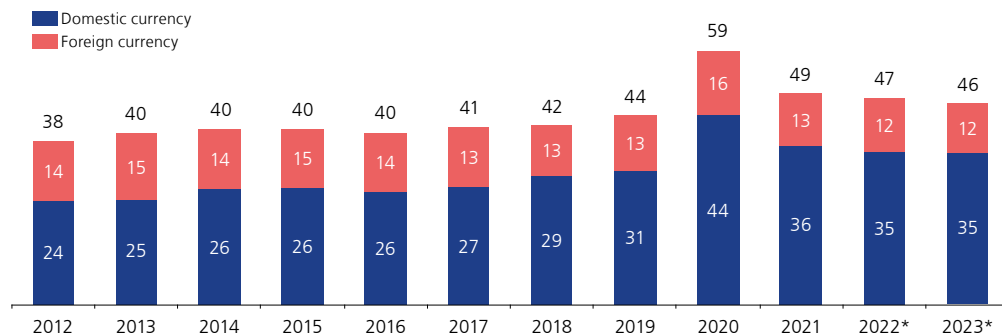
* Forecast.
Source: BCRP.

Graph 108
RATIO CREDIT/GDP
(%)



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

Graph 109
LIQUIDITY RATIO/GDP
(%)



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

Box 6**MONETARY POLICY RESPONSE TO SUPPLY SHOCKS**

Monetary policy has different mechanisms of action in response to different shocks in the economy (Christiano, Eichenbaum and Evans, 1999; Galí, 2015; Rudebusch and Svensson, 1999). For example, in the face of shocks to aggregate demand, the Central Bank modifies its monetary policy stance through changes in the benchmark interest rate, which affect the rate structure in the economy. Then, the real interest rate affects aggregate demand and the output gap, which affects inflation and the formation of expectations process. On the other hand, in the case of supply shocks, monetary policy must take their nature into account to respond. Monetary policy should not respond to transitory supply shocks because the lag with which monetary policy acts may be such that the response is transmitted to the economy after the shock itself has dissipated. In contrast, in the case of persistent supply shocks, a preemptive policy response is advisable, as these shocks can affect the formation of inflation expectations and take them outside the target range.

This box describes the transmission mechanisms of a potential scenario in which inflation expectations are de-anchored. Such de-anchoring could occur in the case of a supply shock associated with higher international food and energy prices, if the central bank does not make the necessary adjustments to its monetary policy stance to ensure that inflation expectations return to the target range within a reasonable time horizon.

In such a situation, if monetary policy does not respond in a timely manner by gradually withdrawing monetary stimulus, agents could internalize the monetary authority's passivity, adjusting their inflation expectations. Thus, the latter could persistently increase, generating additional inflationary pressures.

Therefore, the process of formation of inflation expectations can be rationalized as a learning process. If economic agents see that the central bank does not respond to persistent increases in inflation with a more restrictive monetary policy, they are likely to modify their expectations regarding the future evolution of inflation. As a result, the level of expected inflation would increase, thus generating a greater persistence of the impact of supply shocks on inflation.

There are factors that could amplify the impact of supply shocks on inflation, such as the reaction of the exchange rate and the degree to which higher production costs are passed through to final prices. Increases in the exchange rate, associated with both local and international financial conditions, could amplify the impact on inflation. Additionally, when import price increases are of greater magnitude, companies are less capable of absorbing such price increases through margins and the pass-through to consumer prices is greater.

In the event of a de-anchoring of expectations, the cost of reducing inflation in the future will be higher than when the monetary authority acts in a timely manner. If expectations become unanchored, the central bank will have to tighten monetary policy in the future in order to regain credibility with respect to inflation control. In other words, the increases in the benchmark rate necessary to control inflation will have to be greater and, as a result, the potential impact on economic activity will also be greater.

In the last two decades, there have been four episodes in which inflation expectations temporarily deviated from the target range. In all of these episodes, monetary policy acted in a timely manner, so inflation expectations returned to the target range after a few months. For example, in the 2008 Financial Crisis episode, inflation expectations were outside the target range as of January





2008 due to high international prices. In that context, BCRP steadily increased the monetary policy rate (MPR) from a level of 5 percent at the end of 2007 to a maximum of 6.50 percent between September 2008 and January 2009. Expectations returned to the target range after 14 months, while total inflation and inflation excluding food and energy returned to the target range in 18 and 11 months, respectively.

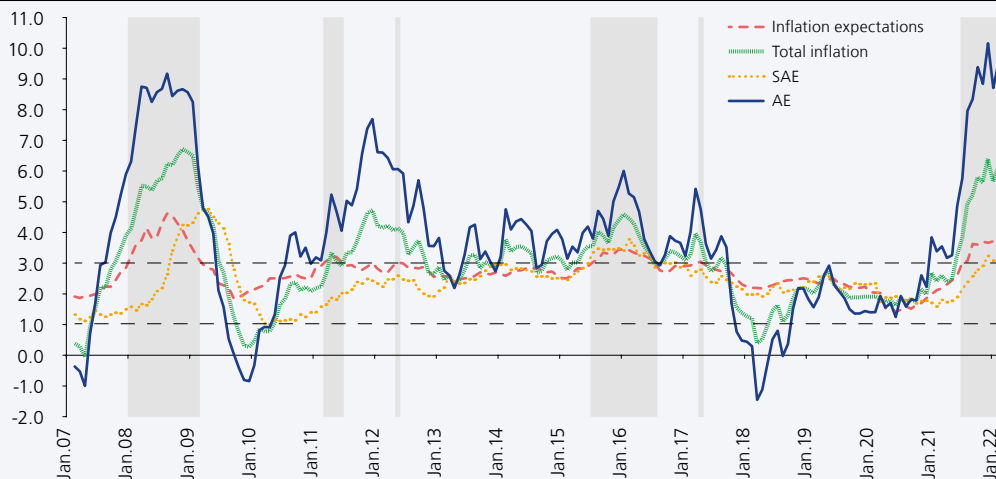
Another period of interest took place between July 2015 and July 2016. In this episode, inflation expectations were outside the target range for 13 months. This increase was due to the increase in the exchange rate observed since 2013 after the fall in commodity prices and the beginning of the withdrawal of the U.S. monetary stimulus, known as taper tantrum. The Central Bank responded to this situation with the withdrawal of its monetary stimulus, gradually increasing its MPR from 3.25 percent to 4.25 percent in the period under analysis. As a result, total inflation returned to the target range in 13 months while inflation excluding food and energy did so in 12 months.

Moreover, inflation expectations were highly volatile between March 2011 and June 2012. This period was characterized by various supply shocks, the end of the financial crisis, and appreciation pressures due to higher commodity prices. As a result, inflation peaked at 4.7 percent. In this scenario, BCRP raised the MPR three consecutive times, increasing the rate from 3.5 percent in February to 4.25 percent in April.

Another episode in which inflation and inflation expectations went outside the target range was that observed between March and April 2017, when the supply chain and primary sector activities were affected as a result of the Coastal El Niño event. The nature of this supply-side shock was transitory, which is why BCRP did not modify its monetary policy stance despite recording inflation levels of 4 percent.

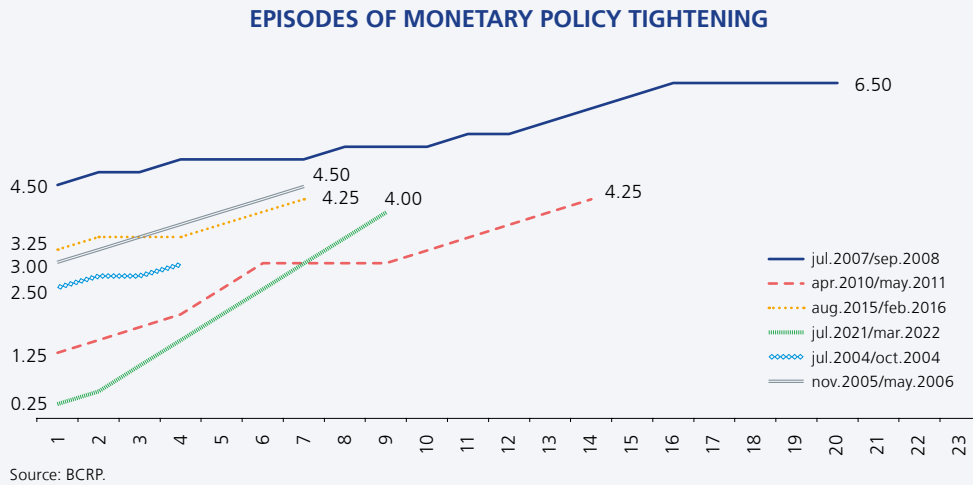
EPISODES OF INFLATION EXPECTATIONS OUTSIDE THE TARGET RANGE

Episodes	Dates	Duration	Max. Expectations Inflation	Max. Total Inflation	Max. Inflation SAE	Max. Inflation AE	Max. Exchange rate	Max. Depreciation 12 months
Episode 1	Jan08-Feb09	14 months	4.6	6.7	4.6	9.2	3.2	11.4
Episode 2	Mar11-Jun12	16 months	3.2	4.7	2.6	7.7	2.8	-0.9
Episode 3	Jul15-Jul16	13 months	3.5	4.6	3.8	6.0	3.5	15.1
Episode 4	Mar17-Apr17	2 months	3.1	4.0	2.8	5.4	3.3	-1.6
Episode 5	Jul21-Feb22	8 months	3.8	6.4	3.3	10.2	4.1	15.7



Source: BCRP.

As can be observed, the Central Bank reacted consistently and rapidly to such inflationary scenarios. The following graph shows the dynamics of increases in the MPR during the months in which the benchmark rate was raised in response to inflationary shocks, the tightening period being considered the period in which the MPR is continuously increased until its last increase. In episodes such as that of the 2008 financial crisis, the monetary policy stance contracted with increases of 200 bps in less than two years, while in the current scenario of high local and external inflation, increases of 375 bps have been registered in 9 months.



By way of conclusion, this box discusses the importance for the Central Bank to react in a timely manner to sudden high inflation events by comparing the costs of maintaining monetary stimulus in a counterfactual scenario. Recent history justifies the BCRP's actions taken to withdraw its monetary stimulus in the face of sudden increases in various measurements of inflation and the deviation of expectations from the target range, in line with monetary policy stability objectives.

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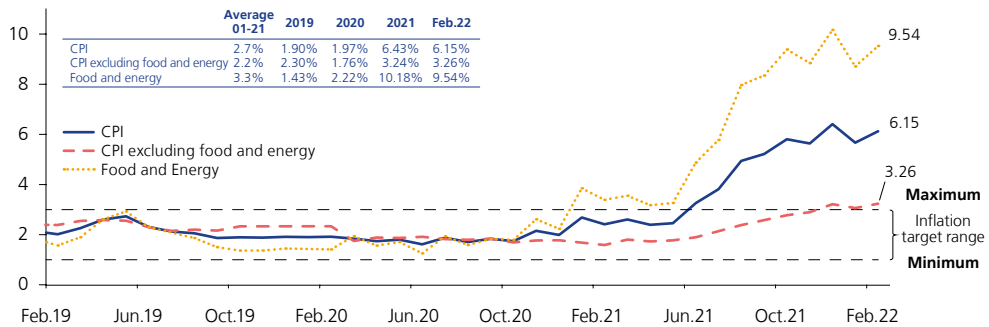


VI. Inflation and Balance of Inflation Risks

Recent inflation trends

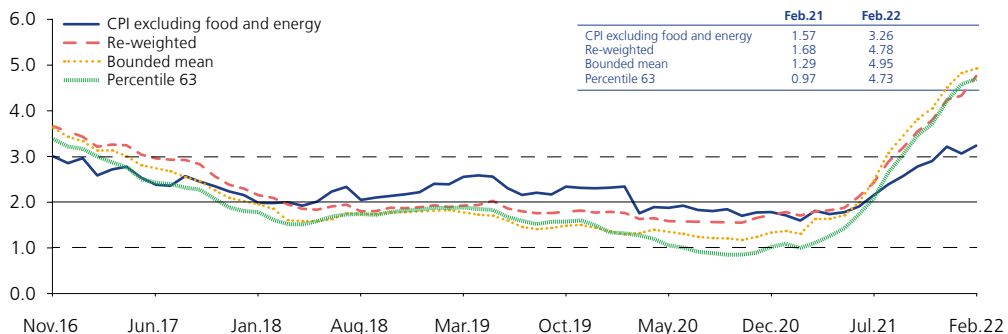
75. Year-on-year **inflation** rose to 6.15 percent in February, from 5.66 percent in November, due to the higher prices of food products with a high imported content, fuels, and the depreciation of the PEN. Inflation excluding food and energy rose from 2.91 to 3.26 percent, above the target range, in the same period. Moreover, the different indicators of trend inflation also show levels above the target range, although some moderation has been observed in their pace of growth between January and February.

Graph 110
INFLATION
(Last 12-month % change)



Source: INEI and BCRP.

Graph 111
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.

Source: BCRP.

76. The items most closely linked to the exchange rate, to international prices, and to WPI-linked contracts contributed with 3.63 percentage points to inflation in 2021, which reached 6.43 percent. It is worth mentioning as a reference that in December 2020, these same items contributed 0.7 percentage points to annual inflation, which registered 2.0 percent²⁴ at that time. However, it is also worth mentioning that the contribution to inflation of these items during the first two months of the year was negative (-0.16 percentage points to the accumulated variation as of February 2022, compared to December 2021).

Table 48

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

	Weight 2009=100	% chg 12 months Dec.20	Weighted contribution	% chg 12 months Dec.21	Weighted contribution	Weight Dec.21=100	% chg 12 months Jan.-Feb.22	Weighted contribution
CPI	100.00	1.97		6.43	6.43	100.00	0.35	
<u>Items linked to the exchange rate</u>	14.06	1.66	0.21	4.25	0.54	14.58	-0.39	-0.06
Appliances	1.29	-0.42	0.00	4.14	0.04	0.46	1.15	0.01
Personal care items	4.93	0.75	0.03	2.05	0.09	3.99	0.82	0.03
Cleaning articles	0.92	0.74	0.01	4.29	0.04	1.32	0.87	0.01
Medicinal products	2.08	5.53	0.11	1.61	0.03	1.62	0.09	0.00
Vehicle purchase	1.62	3.34	0.06	7.21	0.12	1.61	0.12	0.00
Spare parts and car wash	0.21	2.15	0.00	9.05	0.02	0.08	6.21	0.00
Vehicle repair	0.20	2.04	0.00	10.03	0.02	0.28	1.23	0.00
Rentals	2.41	0.50	0.01	1.76	0.03	4.45	-0.36	-0.02
Plane tickets	0.41	-3.32	-0.01	45.44	0.15	0.78	-13.08	-0.10
<u>Items linked to international prices and exchange rate</u>	9.83		0.19		2.51	7.99		-0.16
<u>Linked to food commodities</u>	7.03	4.83	0.30	21.32	1.35	5.84	-3.00	-0.17
Chicken meat	2.96	6.63	0.17	23.40	0.61	2.70	-11.68	-0.32
Bread	1.92	0.25	0.00	15.50	0.26	1.35	0.58	0.01
Sugar	0.53	16.41	0.08	12.70	0.07	0.37	3.57	0.01
Noodles	0.54	5.60	0.03	10.39	0.06	0.32	4.87	0.02
Oils	0.52	4.09	0.02	63.49	0.29	0.38	1.05	0.00
Eggs	0.58	0.00	0.00	12.31	0.06	0.71	14.18	0.10
<u>Fuels</u>	2.79	-4.20	-0.11	47.20	1.15	2.15	0.72	0.02
Gasoline and lubricants	1.30	-11.16	-0.14	46.41	0.49	1.06	2.39	0.03
Gas	1.40	1.97	0.02	50.97	0.64	0.84	-0.24	0.00
Other fuels	0.09	3.02	0.00	10.98	0.01	0.02	0.54	0.00
Consumption of natural gas for home	0.01	-5.26	0.00	26.98	0.00	0.23	-3.38	-0.01
<u>Items related to WPI</u>	1.64		0.06		0.22	1.37		0.00
Water consumption	1.64	3.03	0.06	11.57	0.22	1.37	0.00	0.00
<u>Items related to the exchange rate, WPI and prices</u>	2.95		0.24		0.35	2.62		0.02
Electricity	2.95	6.73	0.24	9.50	0.35	2.62	0.68	0.02
<u>Total items related to the exchange rate, WPI and prices</u>	28.47	2.58	0.70	13.31	3.63	26.56	-0.75	-0.20
<u>Rest</u>	71.54	1.75	1.27	3.86	2.81	73.44	0.75	0.55

Source: BCRP.

Inflation as a global phenomenon

77. The rise in inflation observed since mid-2021 is mainly a consequence of a global phenomenon, explained by supply problems and by the rapid recovery of the world economy after the lockdowns established due to the COVID-19 pandemic. Among the supply factors affecting inflation is the significant rise in the international prices of commodities, particularly the rises in the prices of oil and some foodstuffs imported by Peru, such as wheat, maize, and soybean oil, which has been compounded by the higher cost of maritime freight, chemical fertilizers, and other inputs.

24 The difference between the 2020 and 2021 contributions only represents the direct effects of supply shocks affecting inflation, and not the total effect that these increases imply (including second-order or indirect effects).





78. In addition, at the local level, the increase in the exchange rate put further upward pressure on the local prices of products with imported components during 2021. So far in 2022, however, the exchange rate has maintained a downward trend.
79. The risk of a rise in commodity prices has increased in recent weeks due to Russia's invasion of Ukraine, which has been reflected in future contract prices. Russia is one of the world's leading exporters of oil, gas, and fertilizers, while both Russia and Ukraine are among the world's leading exporters of wheat and maize.
80. The supply shocks affecting commodity prices since 2021 and their intensification as a result of the conflict have had a greater impact on the variation of food and energy prices, this variation having driven the growth of total inflation to a greater extent in 2021. Within the group, fuel prices increased the most last year (47.2 percent), followed by electricity rates (9.5 percent), while food prices grew 8.0 percent in 2021.
81. The longer duration of these supply shocks, which affect the Food and Energy component, may generate a greater persistence of total inflation. This would lead to a reduction in the population's purchasing power for a longer period of time, until the international shocks reverse, which, in turn, could generate pressure from workers to increase nominal wages. However, economic literature indicates that, in such a context, an increase in nominal wages could generate an inflationary wage-price spiral.
82. in the face of adverse supply shocks, an inflationary spiral can be initiated by the desire of workers to maintain their real wages and by firms' desire to maintain their profit margins. This would lead to sequential increases in nominal wages and prices, thus generating an inflationary spiral (Blanchard 1986). Empirical evidence shows that a wage shock generates an inflationary effect, as found by Agenor and Hoffmaister (1997) for the period 1979-1995 in Korea, Turkey, and Mexico, this effect being persistent in the case of the latter country. Moreover, in the cases of Chile, Mexico, and Turkey, it was also found that nominal wage fluctuations are mainly explained by nominal wage shocks over a short time horizon, and by inflation shocks over a longer time horizon (approximately one year after the shock).
83. In the case of Peru, the increase in nominal wages and its impact on higher inflation will depend on the negotiating power of workers and employers for wage increases, or on public policies, such as the increase in the minimum wage. In the latter case, empirical evidence does not show that the minimum wage plays a very important role in wage distributions, but it may have a limited impact on the wages of formal workers earning a level similar to the minimum wage (Jaramillo, 2012).

Inflation in 2022

84. As for the evolution of inflation during 2022, in the period from January to February, the general price level increased 0.35 percent. The CPI index excluding food and energy grew 0.05 percent in the same period, while the food and energy component grew at a higher rate (0.72 percent). The prices of food and beverages increased 0.72 percent, while energy prices rose 0.70 percent, reflecting a 0.72 percent rise in fuel prices and a 0.68 percent increase in electricity rates.

Table 49
INFLATION
(% change)

	Weight	2019	2020	2011	2022	
					Jan.-Feb.	12 months
CPI	100.0	1.90	1.97	6.43	0.35	6.15
1. CPI excluding food and energy	55.3	2.30	1.76	3.24	0.05	3.26
a. Goods	17.4	1.39	1.52	2.62	0.60	3.06
b. Services	37.9	2.86	1.91	3.61	-0.20	3.46
Education	8.6	5.22	1.98	1.60	0.00	1.88
Health	1.5	1.47	1.20	2.82	0.21	2.35
Other	27.8	1.79	1.91	5.45	-0.29	4.02
2. Food and energy	44.7	1.43	2.22	10.18	0.72	9.54
a. Food and beverages	40.0	1.00	2.24	7.97	0.72	7.90
Meals inside the home	24.5	0.63	2.89	9.76	0.31	8.85
Meals outside the home	15.5	1.69	1.00	4.53	1.38	5.86
b. Fuel and electricity	4.8	4.32	2.13	24.41	0.70	19.72
Fuel	2.1	-0.39	-4.20	47.20	0.72	32.57
Electricity	2.6	8.04	6.73	9.50	0.68	10.32

Source: BCRP.

85. At a disaggregated level, the items with the highest positive contribution to inflation in the January-February period were meals consumed away from home, potatoes, eggs, other fresh fruits, and evaporated milk, while the items with the highest negative contribution to inflation were chicken, fish, airplane tickets, and land transportation.

Table 50
ITEM WITH THE HIGHEST WEIGHTED CONTRIBUTION TO INFLATION: JANUARY - FEBRUARY 2022

Positive	Weight	% chg.	Contr.	Negative	Weight	% chg.	Contr.
Meals outside the home	15.5	1.4	0.21	Chicken meat	2.7	-11.7	-0.32
Potatoes	0.7	17.4	0.12	Fresh or frozen fish maritime	0.7	-22.0	-0.14
Eggs	0.7	14.2	0.10	National air transport	0.2	-30.4	-0.07
Other fresh fruits	0.6	8.4	0.05	National ground transportation	0.3	-16.4	-0.04
Evaporated milk	0.9	3.8	0.03	International air transport	0.5	-5.7	-0.03
Non-electrical appliances, items and personal care products	4.0	0.8	0.03	Telephone equipment, radio telephones and others	0.5	-3.5	-0.02
Papaya	0.2	12.8	0.03	Rentals	4.5	-0.4	-0.02
Fixed, mobile and group telecommunications service	4.3	0.6	0.03	Avocado	0.2	-5.0	-0.01
Vehicle fuels	1.1	2.4	0.03	Grapes	0.1	-10.4	-0.01
Pets and related products	0.6	3.4	0.02	Bird offal	0.1	-7.4	-0.01
Total			0.65	Total			-0.67

Source: BCRP.

Foodstuffs

During the January-February period, the price increases standing out were those observed in meals consumed away from home and in food products such as potatoes, eggs, and evaporated milk. In contrast, the prices of chicken meat and fish decreased.

Prices for meals consumed away from home, such as the “restaurant menu”, grew driven by increased demand as a result of higher permitted capacities and the progress made in the vaccination process. It is worth mentioning, however, that the price change for meals consumed away from home in 2021 (4.53 percent) was lower than that for food within the home (9.76 percent), so there could still be cost pressures for restaurants.





The increase in the price of potatoes was related to the lower supply of potatoes of the best quality, mainly due to changes in weather conditions in the central highlands. Above-normal rainfall was observed in October and November, followed by scarce rainfall during most of December and January, with rains returning in the last week of January and continuing into February. This was compounded by lower application of fertilizers due to the increase in the prices of these inputs since mid-2021.

In the case of eggs, the price rise reflected the increase in production costs, mainly due to the higher international price of hard yellow maize, the main poultry feed (this price showed 8 percent cumulative variation until February and 17 percent variation in the last twelve months). In addition, there has been a gradual exit of producers from the market since the end of last year as some of them have not been able to cope with the increase in the cost of inputs for chicken feed.

The rise in the price of evaporated milk was associated with the increase in production costs mainly due to the higher import price of dairy inputs and tinplate. The import price of skim milk powder increased 10 percent compared to January and 32 percent in the last twelve months, while the import price for tinplate increased 6 percent compared to January and 52 percent in the last twelve months.

As for price decreases, the price of chicken meat fell due to the decrease in demand after the end-of-year celebrations, in a context of greater supply of fish (i.e. bonito and jack mackerel), the main substitutes of poultry. Then, the price of chicken meat began to rise as a result of a lower supply as from the second week of February. On the other hand, the supply of bonito increased as a result of the lifting of the closed season for purse seine vessels. In the case of jack mackerel, the supply was greater in January, mainly due to the increased participation of the industrial fleet.

Energy

The price variation in motor fuels (2.4 percent) reflected the higher ex-plant prices of local refineries. This was associated with the increase in the price of gasohol in the U.S. Gulf Coast (international marker), which in turn was linked to the higher international price of oil in recent months.

The increase in electricity rates (0.7 percent) was due to the quarterly adjustments of generation and main transmission prices and the application of updating factors to the distribution component. In addition, the adjustment of the factor corresponding to the Electricity Social Compensation Fund (FOSE) in February also contributed to this increase as it had an impact on the distribution component.

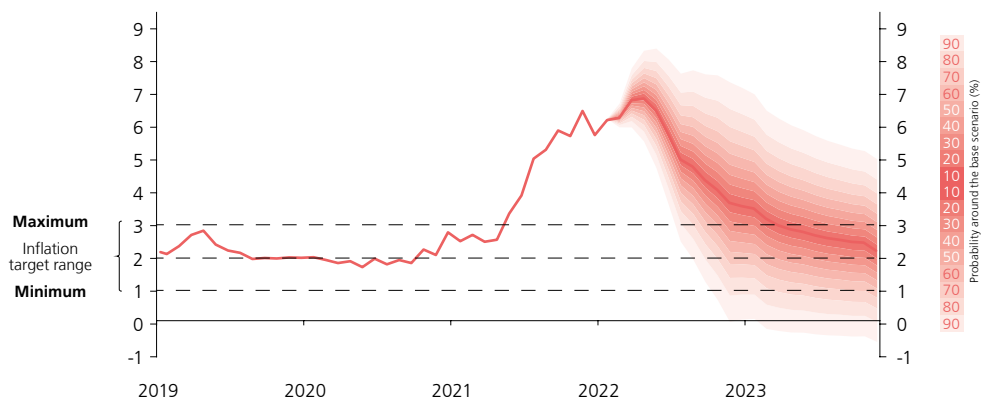
Forecasts

89. BCRP adopts monetary policy actions in advance in response to inflation forecasts and projections of inflation determinants, taking into account all available macroeconomic and financial information. 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.

Based on available information, and taking into account the gradual recovery of economic activity and the greater persistence of the higher international prices of energy and food,

year-on-year inflation is projected to return to the target range in early 2023 and to converge to its center value by the end of the forecast horizon. This projection assumes the reversal of the effect of transitory factors on the inflation rate (exchange rate, international fuel and grain prices) in a context in which the output gap will gradually close and where the gradual withdrawal of monetary stimulus continues and inflation expectations are foreseen to return to the target range in the following months.

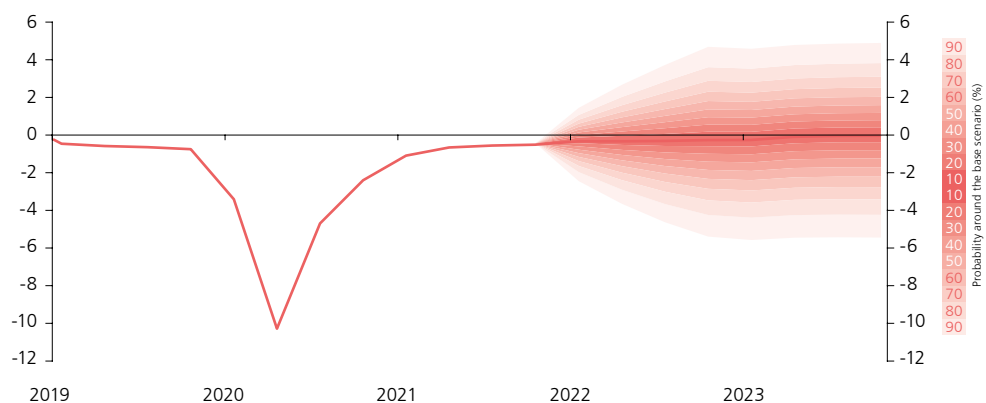
Graph 112
INFLATION FORECAST: 2022 - 2023
 (Last 12-month % change)



Source: BCRP.

- 90. A recovery of the demand gap is expected for 2022 and 2023, supported by the high prices of our exports as well as by the recovery of business confidence.

Graph 113
DEMAND GAP FORECAST: 2022 - 2023
 (in percentage of potential output, quarterly average)



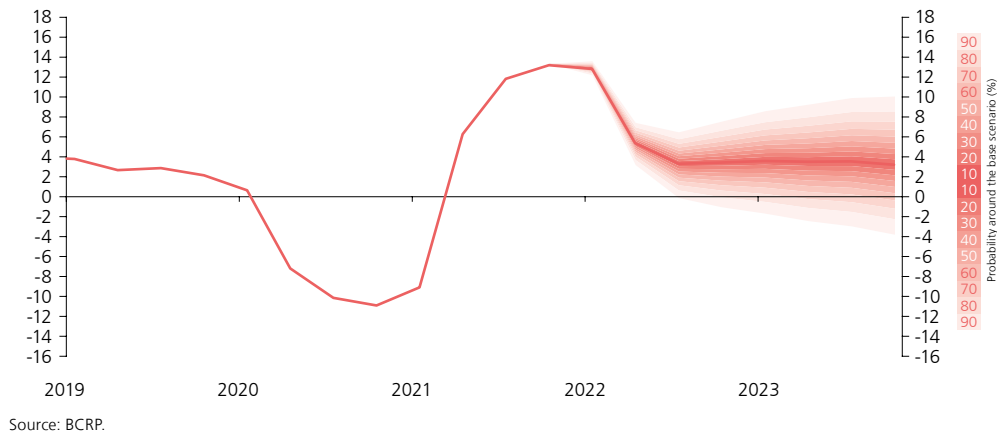
Source: BCRP.

- 91. The recovery of the demand gap, together with the normalization of economic activity, point to a gradual but sustainable recovery in the level of economic activity.





Graph 114
GDP GROWTH FORECAST: 2022 - 2023
 (Last 12-month % change)



92. Inflation expectations, calculated based on surveys conducted among representatives of financial entities and non-financial firms, as well as economic analysts, reveal an expected inflation rate for 2022 that ranges between 3.80 and 4.0 percent and an expected inflation rate for 2023 that ranges between 3.00 and 3.20 percent, indicating that inflation is expected to return to the target range by the end of the forecast horizon. It should be pointed out that twelve-month inflation expectations in February 2022 rose to 3.75 percent, temporarily above the upper limit of the inflation target range.

Graph 115
EXPECTATIONS OF INFLATION FOR THE NEXT YEAR
 (% points)

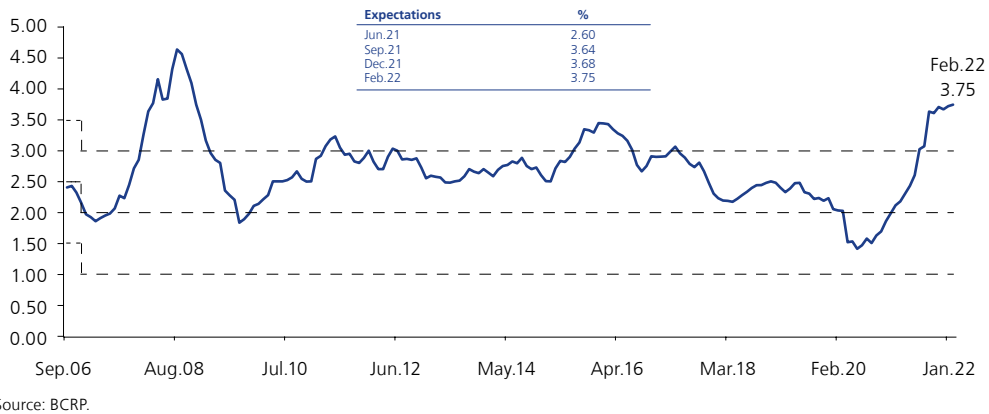


Table 51
SURVEY ON INFLATION EXPECTATIONS
 (%)

	IR Jun.21	IR Sep.21	IR Dec.21	IR Mar.22*
Financial entities				
2022	2.20	3.00	3.50	3.80
2023			3.00	3.00
Economic analysts				
2022	2.45	2.55	3.55	4.00
2023			2.80	3.00
Non-financial firms				
2022	2.30	3.00	3.21	4.00
2023			3.00	3.20

* Survey conducted as of February 28.
 Source: BCRP.

93. Another determinant of inflation is the imported component, which combines the effect of the international prices of the products that our country imports –e.g. crude oil, wheat, soybean, and maize– with the effect of the exchange rate variation (U.S. dollar/sol exchange rate).

Average import prices are projected to increase by 8.1 percent in 2022, mainly due to the increase in the price of crude oil and some foodstuffs, such as maize, wheat, and soybean. On the other hand, a 1.5 percent decrease in prices is expected in 2023, basically due to a partial reversal in the prices of these products. Moreover, the survey responses on the exchange rate expected in February show a level of S/ 3.90 per dollar in 2022 and levels between S/ 3.85 and S/ 3.93 per dollar in 2023.

Table 52
SURVEY ON MACROECONOMIC EXPECTATIONS: EXCHANGE RATE
(S/ per US\$)

	IR Jun.21	IR Sep.21	IR Dec.21	IR Mar.22*
Financial entities				
2022	3.50	4.00	4.12	3.90
2023			4.20	3.85
Economic analysts				
2022	3.72	4.25	4.20	3.90
2023			4.25	3.93
Non-financial firms				
2022	3.60	4.00	4.10	3.90
2023			4.01	3.90

* Survey conducted as of February 28.
Source: BCRP.

The aforementioned effects would contribute to maintain inflation around the center of the target range, even though the output gap is expected to register negative values during the projection horizon.

Balance of Risks of the Inflation Forecast

94. Based on the following shocks, the upward bias in the balance of risks of the inflation projection has been raised:

- **Domestic demand shocks**

If consumer and business confidence do not recover, this would generate a lower growth of private sector consumption and investment. On the other hand, delays in the execution of public spending, especially in investment, could also reduce the pace of economic recovery. In addition, the emergence of new variants of COVID-19 could still lead to new waves of infections, affecting consumer and business confidence as well. The short and medium-term impacts of these episodes would translate into a contraction of domestic demand and have a negative effect on inflation through a reduction in the output gap.

- **External demand shocks**

The persistence of inflation worldwide and its possible impact on inflation expectations could lead to a more accelerated withdrawal of monetary stimulus in the advanced economies, contracting demand at the global level.





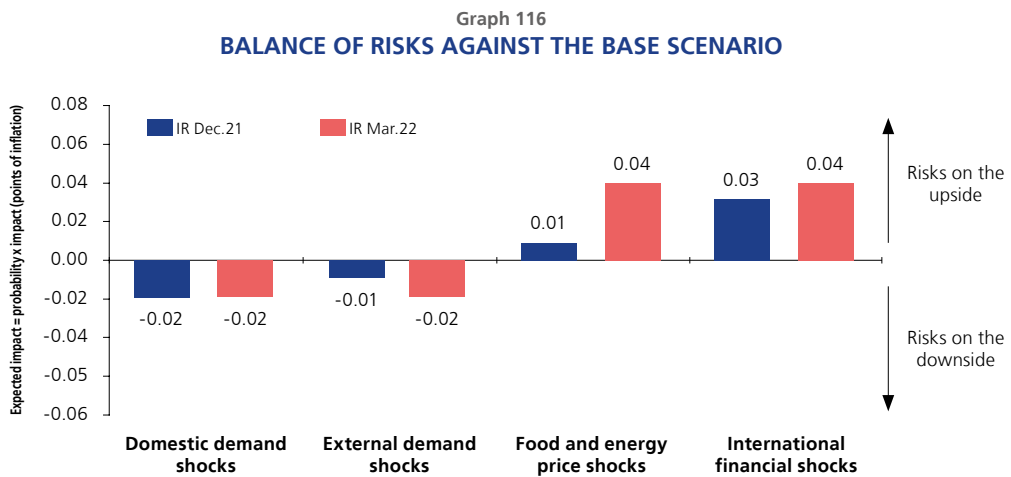
On the other hand, uncertainty about world economic growth, aggravated by geopolitical tensions in Eastern Europe, could further reduce external demand. These developments could be compounded by the possibility of a resurgence of infection waves due to the emergence of new strains of COVID-19.

- **Food and energy price shocks**

Despite the current increase in the international prices of food and fuel, there are still risks of further increases in the future due to production and supply problems generated by the economic recovery from the current health crisis. These risks would be exacerbated by recent geopolitical tensions in Eastern Europe, which would translate into higher fuel and food prices and higher transportation costs.

- **Financial shocks**

The faster pace of the early withdrawal of monetary stimulus in advanced economies, uncertainty about economic growth, and growing public and private indebtedness, especially in emerging economies, could generate episodes of capital outflows. Together with volatility in financial markets, these factors could generate upward pressure on the exchange rate and, therefore, higher inflation over the forecast horizon.



Box 7

FERTILIZERS: INTERNATIONAL CONTEXT, LOCAL IMPACT, AND IMPLICATIONS

Fertilizers, a crucial input in agricultural activity, affect the evolution of food production and prices. The production of fertilizers is related to energy markets, since oil and gas are the main inputs used to produce them. The price of fertilizers has increased worldwide in the last year due to higher demand associated with global economic recovery, as well as due to supply constraints of the inputs used for their production derived from the pandemic. In Peru, the most used fertilizers are imported, so the increase in fertilizer prices is likely to have an impact on the agricultural sector and on inflation.

International context

The use of fertilizers is part of the agronomic management of farming crops and contributes to productivity gains in the field. Fertilizers are classified as organic (including guano) and inorganic (including chemicals and minerals). Among the main families of nutrients are nitrates (nitrogen-based), which assist the plant's vegetative development, and phosphorus and potassium, which favor resistance and root development. Most of the fertilizers used in Peru are inorganic and they are imported mainly from countries such as Russia, the United States, and China²⁵. The most commonly used fertilizers include urea, diammonium phosphate (DAP), ammonium nitrate, ammonium sulfate, and potassium sulfate²⁶.

The fertilizer price index reported by the World Bank increased 163.9 percent in 2021, reaching its highest level since May 2012. However, a slight reversal was seen in January, with a monthly price drop of 3.6 percent. On the other hand, other noteworthy price increases seen in 2021 included the increase in urea prices by 263.3 percent, the price increase in triple super phosphate (TSP) by 114.6 percent, that in phosphorite²⁷ by 112.0 percent, and that in diammonium phosphate (DAP) by 91.8 percent.

FERTILIZER PRICES IN DOLLARS

(Index 2010=100)



Source: World Bank.

- 25 The average share of these supplier countries in the 2019-2020 imported value is 41.8 percent, 15.4 percent and 14.6 percent, respectively.
- 26 Urea, which contains a high percentage of nitrogen, must be transformed into nitrate so that it can be assimilated by plants. This transformation process occurs in the soil and is called nitrification. However, since up to 40 percent of nitrogen is lost in the soil and carbon dioxide is emitted, urea is considered a less environmentally friendly fertilizer than its peers.
- 27 Non-detrital sedimentary rock containing high amounts of phosphate minerals.





A European Commission analysis of the fertilizer market²⁸ points out that food prices influence the dynamics of the fertilizer market. There is a substantial co-movement between fertilizer and food prices, since, if the balance of food supply and demand is tight, this generates a higher demand for fertilizers, thus raising their prices.

Moreover, the interaction with the energy sector has the potential to trigger fertilizer price increases through the input cost channel. Oil and gas are the most important inputs for fertilizer production (gas accounts for about 80 percent of the cost of producing nutrients²⁹), so higher prices put pressure on costs. Thus, the volatility of energy, food, and fertilizer prices move closely together in a context of rising energy prices.

The same European Commission study finds that fertilizer supply is inelastic and that the supply chain is characterized as an oligopolistic market, because investment in new production plants can take 5 to 10 years, so supply cannot adjust quickly to price increases.

The current episode of increases in fertilizer prices is associated with higher energy prices and with the trade restriction measures adopted by main exporters. Europe has forced several nitrogen fertilizer plants to stop or reduce production due to the natural gas crisis (e.g. Yara International ASA of Norway and BASF SE –the main European chemical company), while the Russian Ministry of Finance has announced that it plans to temporarily restrict the export of nitrogen fertilizers and phosphates to reduce the domestic prices of both inputs. Russia is one of the world's largest exporters of nitrogen and phosphate fertilizers.

China has announced measures to reduce fertilizer exports that prohibit exports of fertilizers *de facto*, since inspection certificates will be required to ship fertilizers and related materials as from October 15, so the country's main fertilizer companies will temporarily suspend shipments. Chinese regulators have also announced the release of relevant chemical fertilizer stocks and that authorities will closely monitor the domestic and foreign fertilizer markets and import and export trends.

Impact on local production of perishable agricultural foodstuffs

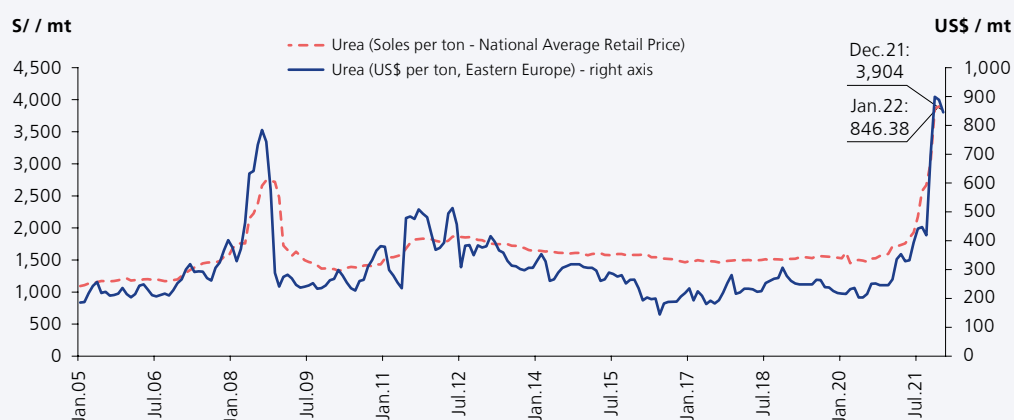
In Peru, the use of fertilizers is centered on inorganic fertilizers, which are almost entirely imported. Therefore, although fertilizer use is relatively low in relation to its use in other countries in the world³⁰, the impact on production and on the prices of agricultural perishable foodstuffs is significant. In addition, during this episode, the increase in international fertilizer prices is compounded by the increase in international shipping freight rates and by exchange rate depreciation. During 2021, the price of urea, the most widely used fertilizer, has increased 145.4 percent.

28 European Commission, JRC Scientific and Policy Reports (2012). Fertilizer markets and their interplay with commodity and food prices

29 According to the Fertilizers Europe industrial group.

30 According to World Bank data, average fertilizer consumption in Peru was 125 kilograms per hectare in 2018, below the world average of 137 kilograms per hectare, as well as below the average consumption of countries in the region, such as Chile (308 kg/ha), Brazil (305 kg/ha), and Colombia (182 kg/ha).

DOMESTIC AND EXTERNAL FERTILIZER PRICES



Source: Pink Sheet - World Bank, Monthly Statistical Bulletin "Agriculture in numbers" - MIDAGRI.

The higher price of fertilizers has led some regions of the country to reduce their use or replace them with natural alternative fertilizers, but these practices reduce crop yields. Moreover, in the cases when producers could not use an alternative fertilizer, their profit margins have decreased, which has affected planting intentions for the following months and led farmers to replace crops with higher costs by more profitable ones.

The impact on small family farming and export- or industry-oriented agriculture is different. In the case of small-scale agriculture, farmers would be opting for greater use of natural fertilizers, even though the supply of these fertilizers is limited, whereas in modern agriculture, there is more efficient crop management and product marketing, so the direct impact on production and prices is likely to be lower.

Impact on the local prices of perishable agricultural foodstuffs

The increase in production costs due to higher fertilizer prices has driven up consumer prices. Two episodes of fertilizer price increases have been observed recently: one, in 2007-2008 and the other, in 2010-2011. These episodes were compounded by additional factors, such as adverse weather disruptions associated with the La Niña event, which amplified the increase in agricultural food prices. However, the analysis carried out showed that an increase in the prices of these agricultural inputs would be associated with increases in consumer prices of products, such as potatoes, tomatoes, rice, onions, and carrots, among other crops.

The annual price increases that stand out in 2008 were those registered in the prices of potatoes (50.9 percent) and rice (12.8 percent), these crops being affected by changes in rainfall patterns and low temperatures that delayed harvests, respectively. Thus, the rise in fertilizer prices would reinforce supply problems by increasing costs. In the case of potatoes, for example, fertilizers at that time represented about 30 percent of the cost structure.

On the other hand, the increases in the prices of onions (58.4 percent) and carrots (22.3 percent) would have responded more directly to an increase in the price of fertilizers, although a lower supply was also observed in the case of onion due to a change of crops to crops for agro-exports. Another





product that was affected by the high cost of fertilizers, but only temporarily, was tomatoes, the price of which rose sharply between March and June (70.5 percent) of 2008.

In 2011, the effect of higher fertilizer prices was compounded by lower yields caused by an episode of La Niña. The most significant impact of fertilizers that year was the increase in the price of carrots (88.7 percent), with the increase in the price of these inputs affecting planting intentions in Lima. Other products that also saw significant, although smaller increases were tomatoes (14.2 percent), rice (10.8 percent), and potatoes (2.4 percent).

The impact of fertilizer price increases on food prices can be observed contemporaneously or with up to a 6-month lag depending on the product. To characterize the speed of adjustment of food prices, a correlation analysis was carried out using a 2-year window of the price indices of these products during the period 2007-2008 (when fertilizer prices reached historical peaks). A contemporaneous effect was found in the case of rice and tomatoes, while a lagged effect was found after 4 months in the case of potato and after 6 months in the cases of onions and carrots.

The challenge is to increase agricultural productivity

In November, the Government announced the implementation of a fertilizer subsidy to offset the impact fertilizer price increases on production and prices. Through Emergency Decree 106-2021, it authorized the Ministry of Agrarian Development and Irrigation (MIDAGRI) to grant economic subsidies to producers who purchase fertilizers, establishing a budget of S/ 251 million to implement this measure. In addition, 4 basic requirements were established for producers to be able to benefit from this subsidy: (i) they had to be included in the MIDAGRI producers' registry or register in it, prior validation by MIDAGRI; (ii) they had to have agricultural units between 2 and 10 hectares; (iii) they had to have purchased fertilizers in commercial houses duly registered by the National Superintendence of Tax Administration (SUNAT); and (iv) they had to have payment vouchers validly issued as of August 1, 2021 until March 31, 2022.

The operating procedure approved by Ministerial Resolution No. 0368-2021-MIDAGRI (December 17, 2021) established that it will be implemented in coordination with the Regional Directorates and Departments of Agriculture, AGRORURAL, AGROBANCO, and Banco de la Nación. A one-time economic subsidy of between S/350 and S/1,300 will be given to each farmer and the amount will depend on the range of fertilizer expenditure and on the size of the farmer's plot.

So far, MIDAGRI has extended the coverage for the registration of the beneficiaries of the subsidy. Registration can be carried out through the offices of the regional agrarian directorates, agrarian agencies, agrarian offices, and municipalities in 24 regions of the country. In addition, 116 agencies of the Ministry of Development and Social Inclusion provide this service in 5 regions of the country. The registration is being systematized on the SEFEAGRO platform (Economic Subsidy for the Purchase of Fertilizers). As a result of the registrations carried out since December 2021, MIDAGRI said in the last week of January that the subsidy will be given to 302 beneficiary producers with agricultural properties in the regions of Arequipa, Cajamarca, Huánuco, La Libertad, and San Martín and that beneficiaries will receive a total amount of S/ 259,920 through Banco de la Nación³¹.

31 <https://gestion.pe/economia/midagri-amplia-cobertura-de-registro-para-acceder-al-subsidio-de-fertilizantes-nndc-noticia/?ref=gesr>

While the implementation of subsidies may temporarily alleviate farmers' situation, one should not lose sight of the potential negative impacts they may have (FAO, 2011) as these subsidy programs could: (i) generate market distortions and discourage private investment, (ii) end up being distorted if used for political purposes, or (iii) fail to benefit the target groups (due to poor targeting or leakages). Moreover, in contexts of high price variability, subsidies will not be reflected immediately because there is a time window between the use of the input and the harvest of the food (which depends on the production cycle).

Furthermore, in addition to temporary measures, it is important to generate incentives to raise productivity, for example, by increasing the use of adequate fertilizers and contributing to the formalization of small farmers. A number of elements should be considered to strengthen the provision of adequate incentives, such as: (i) provide technical training on the proper use of fertilizers, (ii) promote the association of groups of small farmers (fostering associativity and reducing logistical costs), (iii) promote the formalization of the agricultural unit, (iv) foster participation in the collection of sector statistical data, and (v) promote farmers' incorporation into a productive chain in the country, among other elements. These conditions would also act as complements that will increase the attractiveness of fertilizer use by small and medium-scale producers.

Conclusions

The current episode of fertilizer price increases is mainly due to higher energy prices and to the trade restriction measures established by major fertilizer exporters. In Peru, although the use of fertilizers is relatively low, the fertilizers used are mainly imported, so the impact of an increase in international prices affects local production and consumer prices. The impact is transmitted through two channels: through a lower use of fertilizers, which affects crop yields, or through a direct transfer of costs to consumer prices.





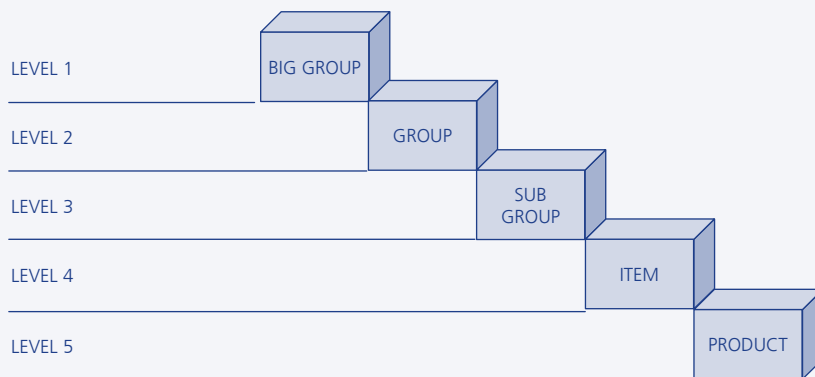
Box 8

CHANGE IN THE BASE YEAR USED TO CALCULATE INFLATION

As from January 2022, the base period that will be used to calculate the inflation rate will be December 2021. The previous Base Year was 2009. This update includes the change in the weights of the goods included in the consumption basket using the information collected through the Encuesta Nacional de Presupuestos Familiares (ENAPREF) –National Household Budget Survey– conducted between June 1, 2019 and March 15, 2020 (the previous ENAPREF survey was carried out during 2008-2009). Although the survey duration is usually a 1-year period, data collection was interrupted by the onset of the COVID-19 pandemic and by confinement. To complete the missing data, the values were imputed according to the seasonality of the corresponding products or services.

The new Base Year will be in line with the structure of the Classification of Individual Consumption by Purpose (COICOP), using 12 consumption divisions. The COICOP is a standard classification that facilitates international comparison. Even though INEI started collecting data following this new structure since 2009, reports and publications maintained the previous classification based on the National Accounts system, with a structure of 8 Major Consumption Groups. It should be pointed out that each of these two classification systems is independent and cannot be harmonized with each other, since they differ in terms of the products and variety of products included in each one.

STRUCTURE ACCORDING TO - SYSTEM OF NATIONAL ACCOUNTS 2009

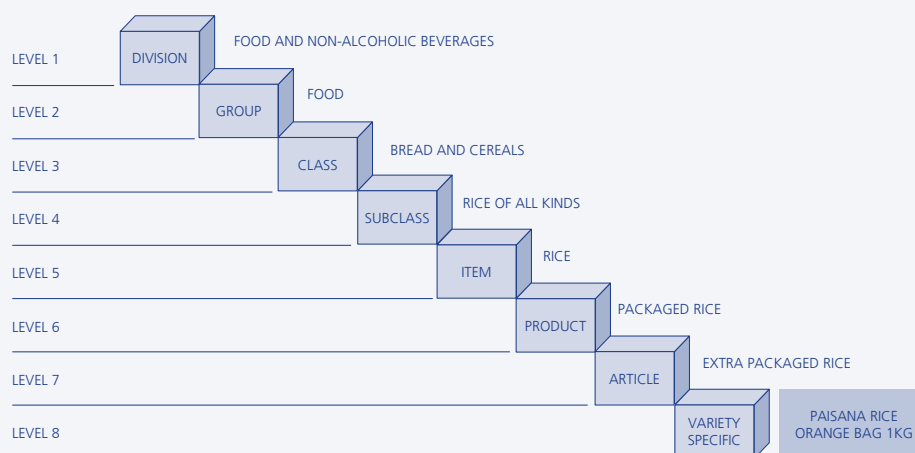


LARGE GROUPS

1. FOOD AND DRINKS
2. CLOTHING AND FOOTWEAR
3. HOUSING RENTAL, FUELS AND ELECTRICITY
4. FURNITURE, APPLIANCES AND HOME MAINTENANCE
5. CARE AND PRESERVATION OF HEALTH
6. TRANSPORT AND COMMUNICATIONS
7. LEISURE, AMUSEMENT, CULTURAL AND EDUCATIONAL SERVICES
8. OTHER GOODS AND SERVICES

Source: INEI.

CLASSIFICATION OF INDIVIDUAL CONSUMPTION BY PURPOSE - CCIF



DIVISIONS

1. FOOD AND NON-ALCOHOLIC BEVERAGES
2. ALCOHOLIC BEVERAGES, TOBACCO AND NARCOTIC DRUGS
3. CLOTHING AND FOOTWEAR
4. ACCOMMODATION, WATER, ELECTRICITY, GAS AND OTHER FUELS
5. FURNITURE, ITEMS FOR THE HOUSEHOLD AND FOR THE ORDINARY CONSERVATION OF THE HOME
6. HEALTH
7. TRANSPORTATION
8. COMMUNICATIONS
9. ENTERTAINMENT AND CULTURE
10. EDUCATION
11. RESTAURANTS AND HOTELS
12. MISCELLANEOUS GOODS AND SERVICES

Source: INEI.

STRUCTURE OF CONSUMPTION IN METROPOLITAN LIMA - 12 DIVISIONS

12 Consumption Divisions according to CCIF	Weighting		Dif.
	2009	Dec.21	
Food and Non-Alcoholic Beverages	25.1	23.0	-2.2
Alcoholic Beverages, Tobacco and Narcotics	1.1	1.6	0.5
Clothing and Footwear	5.5	4.2	-1.3
Accommodation, Water, Electricity, Gas and Other Fuels	9.2	10.6	1.4
Furniture, Household Items and Home Maintenance	5.7	5.1	-0.5
Health	3.4	3.5	0.1
Transport	12.6	12.4	-0.2
Communications	4.3	4.8	0.5
Entertainment and Culture	5.4	4.0	-1.4
Education	9.1	8.6	-0.5
Restaurants and Hotels	11.9	15.9	4.0
Miscellaneous Goods and Services	6.8	6.5	-0.3

Source: INEI.



**NATIONAL CONSUMPTION STRUCTURE - 12 DIVISIONS**

12 Consumption Divisions according to CCIF	Weighting		Dif.
	2009	Dec.21	
Food and Non-Alcoholic Beverages	27.5	23.9	-3.6
Alcoholic Beverages, Tobacco and Narcotics	1.1	1.7	0.5
Clothing and Footwear	5.8	4.6	-1.2
Accommodation, Water, Electricity, Gas and Other Fuels	8.3	9.6	1.3
Furniture, Household Items and Home Maintenance	5.2	4.9	-0.3
Health	3.2	3.5	0.3
Transport	12.4	12.2	-0.2
Communications	3.7	4.6	1.0
Entertainment and Culture	4.9	4.0	-0.9
Education	8.4	8.1	-0.3
Restaurants and Hotels	12.8	16.1	3.3
Miscellaneous Goods and Services	6.7	6.8	0.1

Source: INEI.

Compared to the classification based on 8 large groups, the new structure of the consumption basket gives a higher weight to the Food and Beverages group. This is due to the higher weight of Food and Beverages outside the Household (which increases from 11.7 percent using the 2009 Base Year to 15.5 percent using the December 2021 Base Year), partially offset by a lower weight of Food and Beverages inside the Household (which decreases from 26.1 percent to 24.5 percent). There is also an increase in the weighting of the category Housing Rent, Fuels and Electricity, which rises from 9.3 percent to 10.6 percent for housing rent (rising from 2.4 percent to 4.5 percent). On the other hand, the rate of Recreation, Amusement, Cultural and Educational Services falls from 14.9 percent to 12.9 percent. The rest of the groups have smaller variations.

STRUCTURE OF CONSUMPTION IN METROPOLITAN LIMA - 8 LARGE GROUPS

8 Large Consumer Groups - SCCNN	Weighting		Dif.
	2009	Dec.21	
Food and drinks	37.8	40.0	2.1
Food and Drinks within the Home	26.1	24.5	-1.6
Food and Drinks outside the Home	11.7	15.5	3.7
Clothing and Footwear	5.4	4.1	-1.3
Housing Rental, Fuels and Electricity	9.3	10.6	1.4
Furniture, Fixtures and Home Maintenance	5.8	5.2	-0.6
Health Care and Maintenance	3.7	3.7	0.0
Transport and Communications	16.5	16.8	0.3
Leisure, Miscellaneous, Cultural and Teaching Services	14.9	12.9	-2.1
Other Goods and Services	6.7	6.7	0.0

Source: INEI.

Between 1990 and 2009, the weight of food and energy maintained a downward trend and went from accounting for most of the consumption basket in 1990 (65.0 percent) to representing less than half of it in 2009 (43.6 percent). This result is estimated to be in line with global trends in the evolution of consumption patterns. As consumers increase their income levels, a smaller proportion of this income is devoted to satisfying their most basic needs, such as food. However, the break observed in the trend as of the December 2021 base period would be reflecting a change in consumption preferences, because the weight of food within the home has maintained a downward trend whereas the weight of food outside the home has increased sharply.

Inflation excluding food and energy would have grown in importance between 1990 (35 percent) and 2009 (56.4 percent). The weight of services stands out within this category as the share of services has continued to grow even in the December 2021 base period, more than doubling its weight (from 16.0 to 37.9 percent). This increase is mainly associated with the greater importance that expenditure on education services, housing rentals, transportation (with air transportation standing out) and public services (with telephone and internet services being noteworthy) have in the consumption basket.

WEIGHTS IN DIFFERENT BASES

	Base				
	90=100	94=100	Dec.01=100	09=100	Dec.21=100
CPI	100.0	100.0	100.0	100.0	100.0
1. CPI excluding food and energy	35.0	36.5	46.3	56.4	55.3
a. Goods	19.0	17.7	21.0	21.7	17.4
b. Services	16.0	18.8	25.3	34.8	37.9
2. Food and energy	65.0	63.5	53.7	43.6	44.7
a. Food and beverages	61.7	58.0	47.5	37.8	40.0
Food and beverages inside the home	46.9	42.7	35.5	26.1	24.5
Food and beverages outside the home	14.8	15.4	12.0	11.7	15.5
b. Fuels and electricity	3.4	5.5	6.2	5.7	4.8
Fuels	2.6	3.3	3.9	2.8	2.1
Electricity	0.7	2.2	2.2	2.9	2.6

Source: INEI.

In the case of the National CPI, the weight of Food and Beverages in the classification of 8 large groups has remained relatively stable, rising from 41.1 to 41.2. This is associated with a drop in the weight of Food and Beverages inside the Household, which is almost offset by an increase in Food and Beverages outside the Household. The weight of the Housing Rent, Fuels and Electricity category has increased the most, from 8.4 to 9.7 percent. On the other hand, the groups whose weights have decreased the most include Leisure, Entertainment, Cultural and Educational Services (down from 13.8 to 12.5 percent) and Clothing and Footwear (down from 5.7 to 4.5 percent).

NATIONAL CONSUMPTION STRUCTURE - 8 LARGE GROUPS

8 Large Consumer Groups - SCCNN	Weighting		Dif.
	2009	Dec.21	
Food and drinks	41.1	41.2	0.1
Food and Drinks within the Home	28.5	25.5	-3.0
Food and Drinks outside the Home	12.7	15.7	3.1
Clothing and Footwear	5.7	4.5	-1.2
Housing Rental, Fuels and Electricity	8.4	9.7	1.3
Furniture, Fixtures and Home Maintenance	5.4	5.0	-0.3
Health Care and Maintenance	3.4	3.7	0.3
Transport and Communications	15.6	16.4	0.8
Leisure, Miscellaneous, Cultural and Teaching Services	13.8	12.5	-1.3
Other Goods and Services	6.7	7.0	0.4

Source: INEI.

As for the coverage of the price index, both at the level of Lima and at the national level, the number of establishments surveyed and the number of products included in the monthly survey used to calculate the CPI index have increased. In the case of Metropolitan Lima, the number of establishments has increased by 24 percent, from 3,238 to 4,001, whereas the number of establishments in the case of the National CPI has increased by 35 percent, from 4,969 to 6,699.





Moreover, as for products, the number of products in the case of the CPI for Metropolitan Lima has increased by 10 percent, from 532 to 586, while the number of products for the National CPI index has increased by 4 percent, from 768 to 801 products. New services such as *streaming* and food *delivery* have been added.

Furthermore, a methodological revision of the price aggregation formulas used for elementary varieties has been carried out. In the case of variety aggregation, the arithmetic average was previously used for homogeneous varieties (Dutot Index) and the geometric average was used for heterogeneous varieties (Jevons Index). Today, with the new classification, all varieties will be treated as heterogeneous, since there may be great differences between the prices of varieties of a same product considered homogeneous (e.g., agricultural perishable food products), so using the arithmetic average could generate biases.

The index aggregation formula has been revised so that the Laspeyres formula is used in 2 stages, which allows immediate aggregation of items and informants. Moreover, to chain the indexes over time, the index value of each item in the previous period is taken as given, and only the variation in prices with respect to the previous period is imputed to it. In this way, in the event of changes in items and informants, these can be added without having to wait for a new update of the consumer's basket.

The new methodology also includes the use of explicit quality adjustment methods, such as the factor cost method and hedonic regressions. In the case of vehicles, the factor cost method is used, with the cost of any improvement made in a new model in comparison with the previous model being added to the price of the new model. As for quality adjustments of technological products, such as television sets, cell phones, laptops, among other products, hedonic regressions are used to capture the variation in price, excluding the impact of changes in product characteristics.

The new methodology does not consider the calculation of imputed rents, since this would imply a strong distortion in the calculation of inflation with respect to historical data. Some countries, such as the United States, include the calculation of imputed rents for people who live in their own homes. However, since this is not a widely accepted practice, INEI has chosen not to include it.