# Inflation Report

*June 2023*

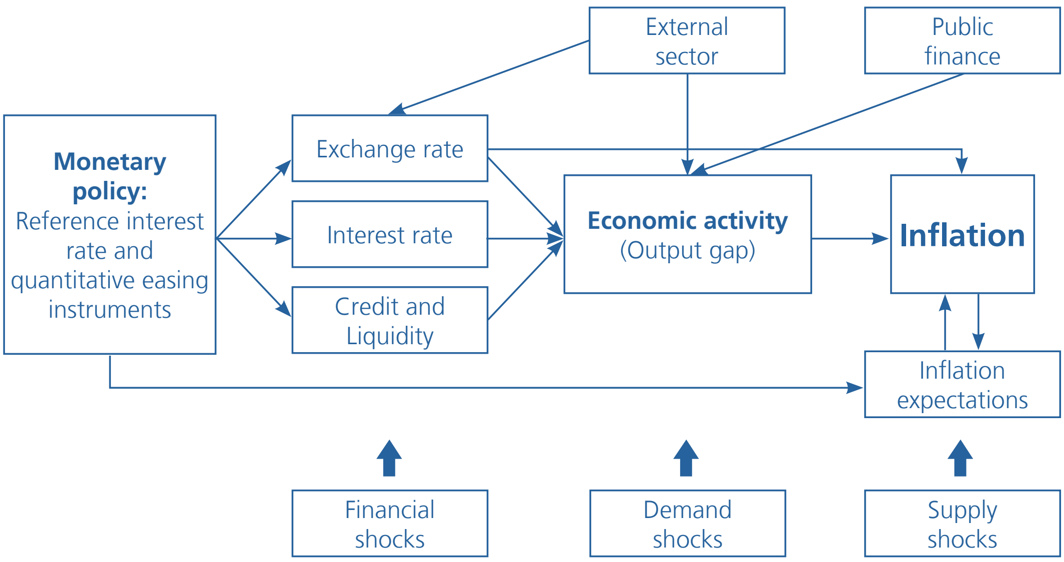
## Recent trends and macroeconomic forecasts 2023-2024

CENTRAL RESERVE BANK OF PERU

# INFLATION REPORT

## Recent Trends and Macroeconomic Forecasts 2023 - 2024

### *June 2023*





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# INFLATION REPORT
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# Recent Trends and Macroeconomic Forecasts 2023 - 2024

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This ***Inflation Report*** has been prepared with information as of the first quarter of 2023 for the balance of payments and gross domestic product; as of April 2023 for the monetary accounts; and as of May for the non-financial public sector operations, inflation, financial markets and the exchange rate.

# 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, managing international reserves and reporting on the country'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 seeks to anchor inflation expectations at a similar level to that of 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. This interest rate is the monetary operational operational target, which affects the inflation rate with time lags and through different channels. Therefore, this interest rate is set based on inflation forecasts and inflation determinants.

- Inflation may transitorily deviate outside 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 evaluated in terms of its success in maintaining inflation expectations within the target range and returning them to this range within a reasonable timeframe if deviations from it are observed due to some economic shock.

- In addition, the BCRP implements preventive actions to maintain macro-financial stability and thus preserve monetary policy transmission mechanisms. Thus, the benchmark rate is complemented by the use of other monetary policy instruments, such as injection and sterilization operations, reserve requirements and interventions in the foreign exchange rate, to ensure the proper functioning of markets, reduce excessive exchange rate volatility, and prevent significant fluctuations in the volume and composition of credit in the financial system by currencies and maturity terms.

- This Inflation Report includes the macroeconomic forecasts for the period 2023-2024 that support the monetary policy decisions of BCRP, as well as an analysis of the risk factors that may deviate these forecasts.

- The Inflation Report was approved by the Board of Directors of the BCRP on June 8, 2023.

- The following Inflation Report will be released on Friday, September 15, 2023.

# Summary

**i.** **Global economic activity** grew faster than expected in the first few months of the year, driven mainly by the expansion of the services sector. This is attributed to the increase in private consumption, the easing of restrictions in several developed economies, favorable conditions in supply chains, and the recovery in China following the reopening of its economy. Taking these factors into account, estimated global growth for 2023 has been revised up from 2.4 to 2.5 percent. For 2024, however, growth is revised down slightly to 2.8 percent, in line with expectations of a slowdown at the end of the fourth quarter of 2023 that would extend into the first quarters of the following year.

ii. The **terms of trade** declined by 4.9 percent year-on-year in the first quarter of 2023, although they remained above pre-pandemic levels. This decline occurred in the context of a deteriorating global demand outlook, concerns about a possible slowdown in China, and tighter monetary policy by major central banks.

The terms of trade are expected to recover by 3.7 percent in 2023 and 2.5 percent in 2024. Prices of industrial metals (copper and zinc) are expected to be lower in 2023 than estimated in the previous report due to lower growth in China's real estate sector and normalization of production. Similarly, prices of oil are expected to be lower due to the outlook for lower demand and high production levels, and prices of food products, such as soybean oil and maize, are expected to be lower due to fewer supply chain disruptions and the outlook for higher soybean production. It is worth noting that the main upside risk to the price of the latter is the occurrence of an El Niño event. A higher gold price is expected around 2024, which would increase the average export price. Lower oil and food prices are also anticipated.

iii. The annualized **current account** deficit narrowed from 4.0 percent of GDP at the end of 2022 to 2.9 percent in the first quarter of 2023. This is due to lower profits of foreign direct investment companies in the country and a lower deficit in services. As primary production is estimated to decline in 2023 and FDI profits are estimated to be higher than initially expected –based on performance to date–, the current account deficit is revised up to 1.9 percent of GDP in 2023 and 1.3 percent in 2024. The gradual narrowing of the current account deficit over the forecast horizon is in line with the recovery of private savings, lower import freight costs and the normalization of services exports (inbound tourism).

**iv.** **National economic activity** contracted 0.4 percent in the first quarter of 2023. This result is mainly explained by the contraction in private investment and the slowdown in private consumption, in a context of social conflicts and the absence of large mining projects. The reduction in private spending affected activity in the manufacturing, construction and services sectors, while at the same time there was a buildup of inventories in the period, mainly in mining and manufacturing companies.

The information observed to May reflects the negative impact of *El Niño Costero* (the Coastal El Niño event) and the delay in the first anchovy fishing season, which implies lower growth in the agricultural and fishing sectors. Similarly, private spending in the first quarter was lower than expected in the March Report, which, together with a slower recovery in business confidence, will translate into lower annual growth in non-primary GDP. As a result, growth forecasts for 2023 have been revised down from 2.6 to 2.2 percent.

GDP is projected to grow at a rate of 3.0 percent in 2024, supported by an improvement in domestic demand and non-primary sectors. The projection in this report assumes the occurrence of a weak global El Niño event and a scenario of socio-political stability that allows for a continued recovery in business confidence. Thus, observed GDP is expected to reach its potential level by the end of the projection horizon.

v. The cumulative **fiscal deficit** over the past twelve months increased from 1.7 to 2.4 percent of GDP between December 2022 and May 2023, reflecting the deterioration in current revenues. Given the outlook for lower economic growth and lower export prices, as well as the advance recorded so far this year, the budget deficit is revised upward to 1.9 and 1.8 percent of GDP in 2023 and 2024, respectively.

**Debt net** of non-financial public sector deposits is projected to decline from 21.0 to 20.9 percent of GDP between 2022 and 2023 and to increase to 21.4 percent of GDP by the end of the projection horizon. **Gross debt** is projected to continue its downward trend, reaching 31.6 percent of GDP in 2024, as a result of the decline in the ratio of public sector deposits to GDP.

vi. The Board of Directors of BCRP decided to raise the BCRP **benchmark rate** by 25 basis points to 7.75 percent in January 2023. Subsequently, it decided to maintain this rate between February and June. The BCRP has stated that this decision does not necessarily imply the end of the hiking cycle and that it remains attentive to new information on the evolution of inflation and its determinants.

**vii.** **Credit to the private sector** recorded an expansion of 2.7 percent per year in April 2023 (4.6 percent in 2022). This result was supported by the increase in credit to individuals, especially consumer credit. Taking these results into account, the growth rate of credit to the private sector is projected to be 4.0 and 5.0 percent in 2023 and 2024, respectively.

viii. The year-over-year **inflation** rate has continued to decline in recent months, falling from 8.45 percent at the end of 2022 to 7.89 percent in May 2023. The decline was due to the correction in energy prices, a slower pace of increase in the item of meals consumed away from home, and a reduction in non-food and energy inflation (from 5.59 to 5.11 percent in the same period). Trend inflation indicators remained on a downward trend, although they are still above the target range.

The inflation rate is projected to reach 3.3 percent by the end of 2023. This upward revision from the March Report (3.0 percent) takes into account the effect of adverse weather events and avian influenza on food prices. Inflation is expected to decline over the forecasts horizon and close at 2.4 percent in 2024. The return to the target range assumes a reversal of the impact of transitory factors on prices (exchange rate, international fuel and grain prices), a context in which inflation expectations are expected to return to the target range and economic activity is expected to be around its potential level.

ix. The **balance of risks to the inflation projection** has shifted further to the upside compared with the previous report. Risks to the projection mainly include the following contingencies: (i) lower demand in the event that business and consumer confidence does not recover due to the persistence of political instability; (ii) a slowdown in global growth, which would imply lower demand for exports; (iii) an intensification of geopolitical tensions, which could exacerbate and prolong the current energy and food crisis; (iv) the possibility of climatic events, such as a strong global El Niño, with a strong negative impact on the economy; and (v) upward pressure on the exchange rate, capital outflows and increased financial market volatility due to episodes of heightened political uncertainty, disruptions to growth or a tightening of international financial conditions.

## SUMMARY OF INFLATION REPORT FORECAST

| | 2022 | 2023* | | 2024* | |
|---|---|---|---|---|---|
| | | IR Mar.23 | IR Jun.23 | IR Mar.23 | IR Jun.23 |
| **Real % change** | | | | | |
| 1. Gross Domestic Product | 2.7 | 2.6 | 2.2 | 3.0 | 3.0 |
| 2. Domestic demand | 2.3 | 2.1 | 1.5 | 2.9 | 2.9 |
| *a. Private consumption* | 3.6 | 2.8 | 2.6 | 3.0 | 3.0 |
| *b. Public consumption* | -3.4 | 2.0 | 2.0 | 3.0 | 3.0 |
| *c. Fixed private investment* | -0.4 | -0.5 | -2.5 | 1.8 | 1.8 |
| *d. Public investment* | 7.7 | 1.0 | 1.5 | 4.0 | 4.0 |
| 3. Exports (good and services) | 6.1 | 3.9 | 3.4 | 3.5 | 3.3 |
| 4. Imports (good and services) | 4.4 | 1.9 | 0.8 | 2.9 | 2.9 |
| 5. Global economic growth | 3.4 | 2.4 | 2.5 | 2.9 | 2.8 |
| **Memo:** | | | | | |
| Output gap 1/ (%) | 0.0 | -0.5 ; 0.5 | -0.7 ; 0.0 | -0.5 ; 0.5 | -0.5 ; 0.5 |
| **% change** | | | | | |
| 6. Inflation | 8.5 | 3.0 | 3.3 | 2.4 | 2.4 |
| 7. Expected inflation 2/ | 6.3 | 4.5 | 4.9 | 3.3 | 3.3 |
| 8. Expected depreciation 2/ | -5.1 | 0.4 | 0.4 | 0.9 | 0.9 |
| 9. Terms of trade | -10.5 | 3.9 | 3.7 | 0.9 | 2.5 |
| *a. Export prices* | 1.8 | -0.7 | -3.1 | 1.2 | 1.9 |
| *b. Import prices* | 13.7 | -4.4 | -6.6 | 0.3 | -0.6 |
| **Nominal % change** | | | | | |
| 10. Currency in circulation | -3.8 | -1.0 | -3.5 | 0.0 | -1.0 |
| 11. Credit to the private sector | 4.6 | 4.5 | 4.0 | 6.0 | 5.0 |
| **% GDP** | | | | | |
| 12. Gross fixed investment | 25.3 | 24.2 | 23.8 | 24.0 | 23.4 |
| 13. Current account of the balance of payments | -4.0 | -1.4 | -1.9 | -0.8 | -1.3 |
| 14. Trade balance | 4.2 | 5.1 | 5.2 | 5.0 | 5.3 |
| 15. Long-term external financing of the private sector 3/ | 6.0 | 1.7 | 2.1 | 0.9 | 1.5 |
| 16. Current revenue of the general government | 22.1 | 20.9 | 20.7 | 20.8 | 20.7 |
| 17. Non-financial expenditure of the general government | 22.0 | 20.9 | 21.0 | 20.9 | 21.0 |
| 18. Overall balance of the non-financial public sector | -1.7 | -1.6 | -1.9 | -1.5 | -1.8 |
| 19. Balance of total public debt | 33.8 | 32.8 | 32.1 | 32.1 | 31.6 |
| 20. Balance of net public debt | 21.0 | 21.4 | 20.9 | 21.2 | 21.4 |

IR: Inflation Report
* Forecast.
1/ Differential between GDP and trend GDP (in % of trend GDP).
2/ 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 2022, and the average of expectations throughout year in case of inflation has been considered.
3/ Includes net direct investment, foreign assets investment from residents (AFP), foreign net portfolio investment, and private sector's long term disbursement. Positive sign indicates net inflow of foreign capital.

# I. External sector

1. Global economic activity has expanded in recent months, supported by improvements in the services sector and strength in the labor market. In line with this performance, the global growth estimate for 2023 has been revised slightly upward, from 2.4 to 2.5 percent. However, a slowdown is expected in the coming quarters, reflecting, among other factors, tighter financial conditions, the lagged impact of monetary policy on aggregate demand, and weaker labor market dynamics.

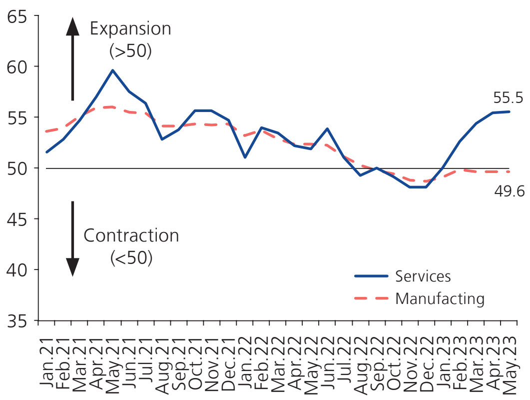
## Recent developments in global economic activity

2. After a better-than-expected performance in the first months of the year, **global economic activity** is expected to lose momentum starting in the second half of the year.

Between January and May, growth in the major economies was stronger than expected. This higher growth is explained by the positive evolution of the services sector, which continued to expand at the global level, offsetting the performance of manufacturing activity, which was affected, among other things, by the reduced dynamism of world trade. In all major economies, the services sector is above the 50 threshold, indicating that activity is expanding. This contrasts with the performance of the manufacturing sector.

**Graph 1**

**GLOBAL PMI: WORLD ECONOMIC ACTIVITY INDEX FOR THE MANUFACTURING AND SERVICES SECTORS**
(Diffusion index)




**GLOBAL ACTIVITY INDEX**
(JP Morgan)

**I. Services**

| | Dec.21 | Dec.22 | Jan.23 | Feb.23 | Mar.23 | Apr.23 | May.23 |
|---|---|---|---|---|---|---|---|
| Global | 54.7 | 48.1 | 50.0 | 52.6 | 54.4 | 55.4 | 55.5 |
| USA Markit | 57.6 | 44.7 | 46.8 | 50.6 | 52.6 | 53.6 | 55.1 |
| China Caixin | 53.1 | 48.0 | 52.9 | 55.0 | 57.8 | 56.4 | 57.1 |
| Eurozone | 53.1 | 49.8 | 50.8 | 52.7 | 55.0 | 56.2 | 55.9 |
| United Kingdom | 53.6 | 49.9 | 48.7 | 53.5 | 52.9 | 55.9 | 55.1 |
| Japan | 52.1 | 50.3 | 52.3 | 54.0 | 55.0 | 55.4 | 56.3 |

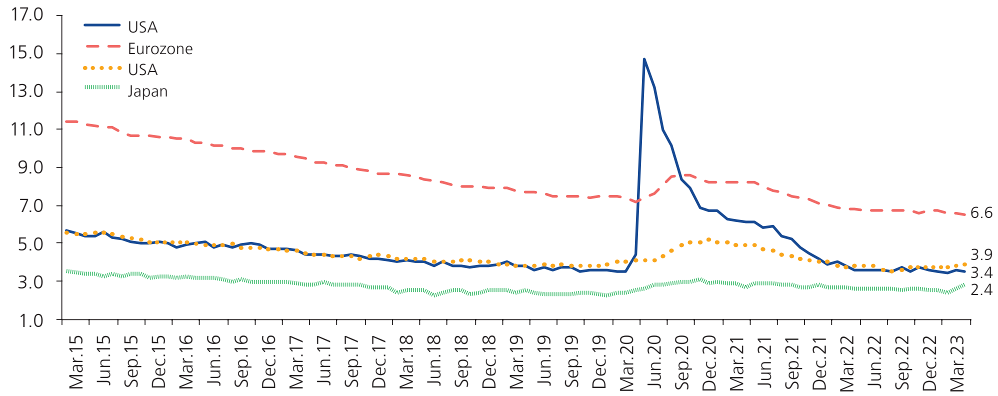
**II. Manufacturing**

| | Dec.21 | Dec.22 | Jan.23 | Feb.23 | Mar.23 | Apr.23 | May.23 |
|---|---|---|---|---|---|---|---|
| Global | 54.3 | 48.7 | 49.1 | 49.9 | 49.6 | 49.6 | 49.6 |
| USA Markit | 57.7 | 46.2 | 46.9 | 47.3 | 49.2 | 50.2 | 48.4 |
| China Caixin | 50.9 | 49.0 | 49.2 | 51.6 | 50.0 | 49.5 | 50.9 |
| Eurozone | 58.0 | 47.8 | 48.8 | 48.5 | 47.3 | 45.8 | 44.8 |
| United Kingdom | 57.9 | 45.3 | 47.0 | 49.3 | 47.9 | 47.8 | 47.1 |
| Japan | 54.3 | 48.9 | 48.9 | 47.7 | 49.2 | 49.5 | 50.6 |

Source: JP Morgan.

The dynamism of the services sector reflects that private consumption is supported by the evolution of the labor market. In the main economies, unemployment rates remained close to their historical lows and job creation, although slower than in 2022, was higher than expected. This development compensated for the less favorable performance of other components of aggregate demand, such as investment (in particular residential investment) and net exports.

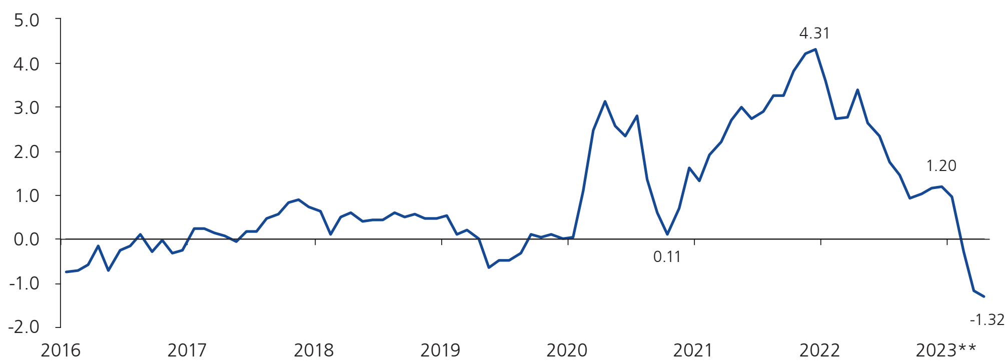
Graph 2
**UNEMPLOYMENT RATE: 2015-2023**
(%)




Source: OECD.

On the supply side, several developed economies –notably the Eurozone and the UK– experienced fewer energy supply restrictions than expected due to less cold weather and an increased supply of liquefied natural gas. Supply chain conditions were also favorable, with restrictions reduced so far this year and even below historical averages, in part due to lower transportation costs.

Graph 3
**GSCPI GLOBAL SUPPLY CHAIN PRESSURES INDEX***
(Standard deviation)




* The GSCPI is constructed from transportation costs (Baltic Dry Index, the Harpex index and BLS air freight cost indices) and PMI components for the United States, China, Eurozone, Japan, USA, South Korea and Taiwan. Source: New York Fed.**
** As of April 2023.
Source: New York Federal Reserve

In the case of **China,** the recovery was a consequence of the reopening of the economy after the mobility restrictions imposed in the fourth quarter of 2002 in the face of the

COVID-19 cases. As in the developed economies, the services sector was the most dynamic, whereas the manufacturing sector, the main consumer of raw materials, remained stagnant in the first months of the year.

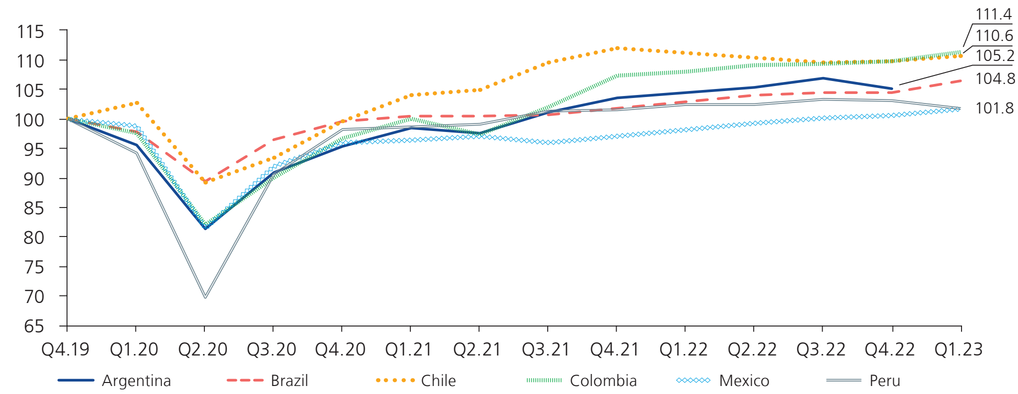
Table 1
**GROWTH OF THE MAIN ECONOMIES**
(Annualized % change respect to the seasonally adjusted GDP of the previous quarter)

| | Q1.22 | Q2.22 | Q3.22 | Q4.22 | Q1.23 |
|---|---|---|---|---|---|
| USA | -1.6 | -0.6 | 3.2 | 2.6 | 1.3 |
| Germany | 4.2 | -0.5 | 1.9 | -2.1 | -1.3 |
| United Kingdom | 2.0 | 0.2 | -0.4 | 0.5 | 0.5 |
| Japan | -1.9 | 4.7 | -1.0 | -0.1 | 1.6 |
| China | 3.2 | -8.9 | 16.5 | 2.4 | 9.1 |

Source: Reuters and OECD.

In the case of **Latin American economies**, activity lost momentum in a less favorable international environment, reflected in lower commodity prices and lower capital inflows. The former is explained by the weak growth of manufacturing at the global level, while capital inflows have been affected by global financial conditions. On the other hand, the tightening of monetary policy, the impact of inflation on consumption and various idiosyncratic shocks that have affected consumer and investor confidence stand out among the domestic factors.

Graph 4
**LATIN AMERICA: QUATERLY GDP***
(Index 100 = Q4.19)

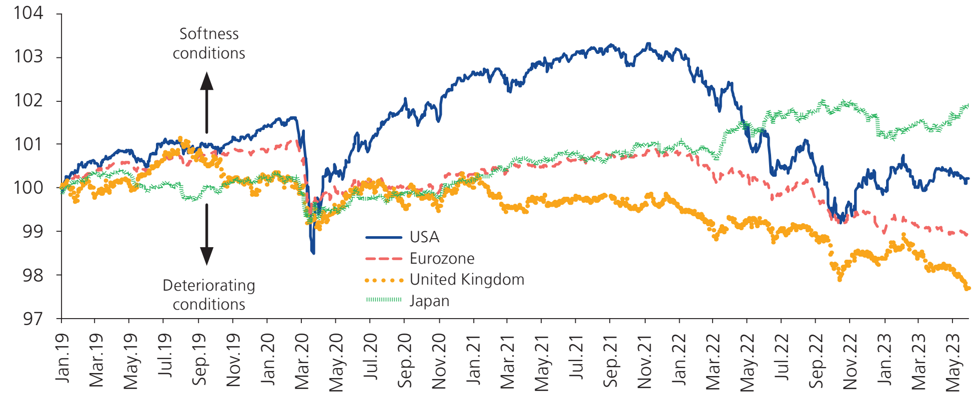



* Seasonally adjusted series.
Source: Statistical institutes and central banks.

3. Despite the recent performance of the global economy, several factors appear to be **limiting growth** in the coming quarters.

First, the adjustment in financial conditions resulting from the restrictive monetary policies of central banks was exacerbated in recent months by the regional banking crisis that began with the bankruptcy of Silicon Valley Bank, continued with Signature Bank, and culminated with the acquisition of First Republic Bank by JP Morgan. Europe also experienced a temporary period of turbulence with the failure of Credit Suisse, an institution that was eventually acquired by UBS.

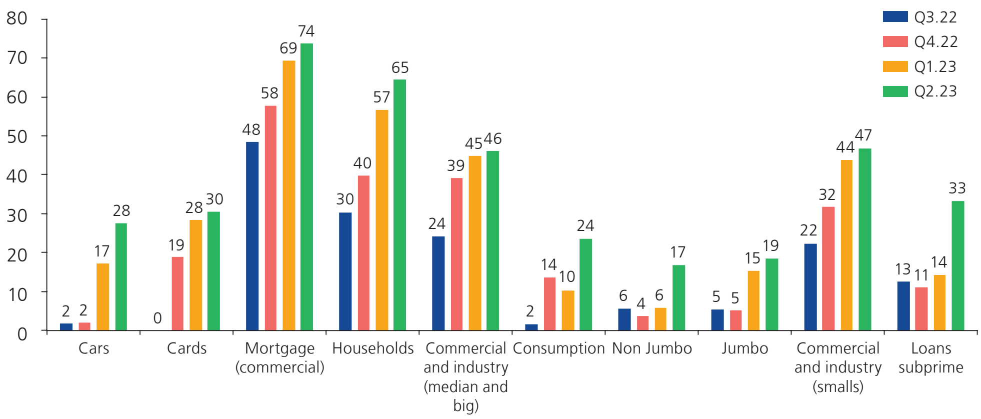
Graph 5
**FINANCIAL CONDITION INDICES**
(January 1, 2019 =100)




Source: Goldman Sachs.

This has led to increased volatility in financial markets and tighter credit conditions, a trend that is likely to continue in the coming months given the lagged effect of the monetary policy adjustment. In the case of the United States, data at the end of April show a tightening of credit conditions in all segments. The adjustment in the housing sector stands out, where 30-year mortgage rates are close to their highest levels in two decades and where the level of activity has contracted significantly.

Graph 6
**UNITED STATES: PERCENTAGE (NET) OF BANKS THAT HAVE ADJUSTED THEIR CREDIT CONDITIONS (%)**



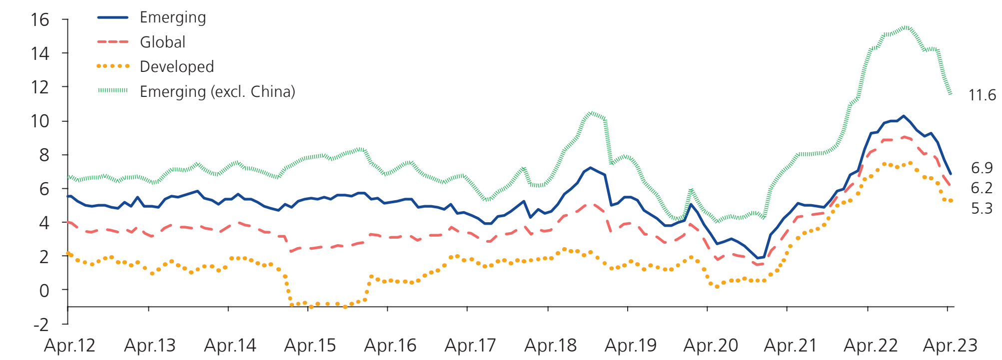

Source: FED

Second, the slow convergence of inflation to its target has affected consumption, particularly in those economies where wages have grown less than prices. This development is also influenced by lower private savings surpluses, which have boosted domestic demand growth, especially between 2021 and 2022.

## Recent inflation trends

**4.** **Inflation** continued its downward trend of recent months, although in most cases the inflation rate remains above the target range. In April, headline inflation, as estimated from a sample of major developed and emerging economies, declined for the seventh consecutive month. This downward trend has been relatively homogeneous across the major regions.

Graph 7
**INFLATION: GLOBAL, DEVELOPED COUNTRIES, AND EMERGING ECONOMIES**
(12 months % chg.)



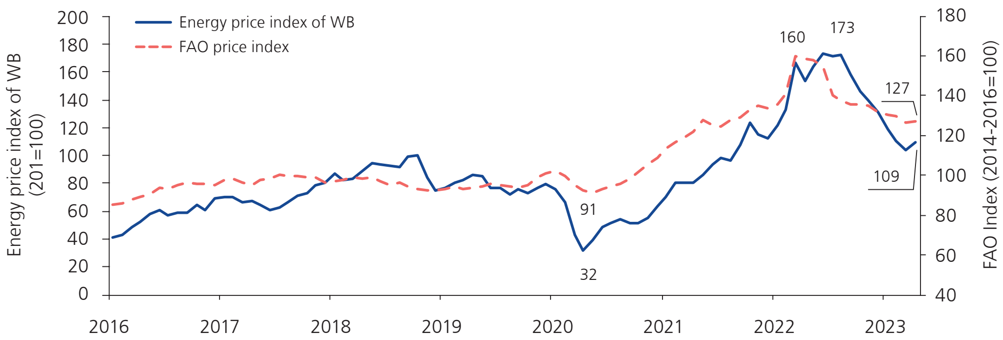

**Inflation (12 months % chg)**

| | Dec.20 | Dec.21 | Mar.22 | Sep.22 | Dec.22 | Mar.23 | Apr.23 |
|---|---|---|---|---|---|---|---|
| Global | 1.5% | 5.7% | 7.6% | 9.1% | 8.0% | 6.7% | 6.2% |
| Developed | 0.6% | 5.2% | 6.6% | 7.4% | 6.7% | 5.3% | 5.3% |
| Emerging | 1.9% | 6.0% | 8.3% | 10.3% | 9.0% | 7.7% | 6.9% |
| Developed (excl. USA) | -0.1% | 3.8% | 5.1% | 6.9% | 6.9% | 5.6% | 5.6% |
| Emerging (excl. China) | 4.2% | 9.4% | 13.1% | 15.6% | 14.0% | 12.6% | 11.6% |

Source: Trading Economics, Statistical institutes and central banks.

The decline in **headline inflation** is partly explained by the non-core component related to lower energy and food prices. In the month of April, energy prices fell by 29 percent on an annual basis, due to the decline in both oil and gas prices. For its part, food accumulated a reduction of 20 percent.

Graph 8
**ENERGY PRICE INDEX OF WORLD BANK AND FAO PRICE INDEX**

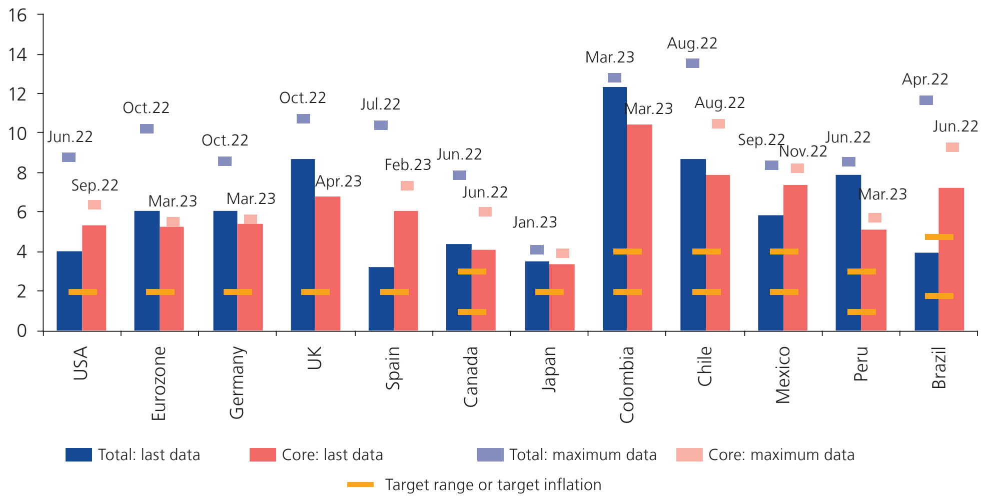



Source: World Bank and FAO.

On the other hand, **core inflation** has shown greater downward resistance. In many cases, demand pressures in the services sector have limited the decline in this variable.

The decline in headline inflation from the peaks recorded in the last two years has been greater than that observed in the core component.

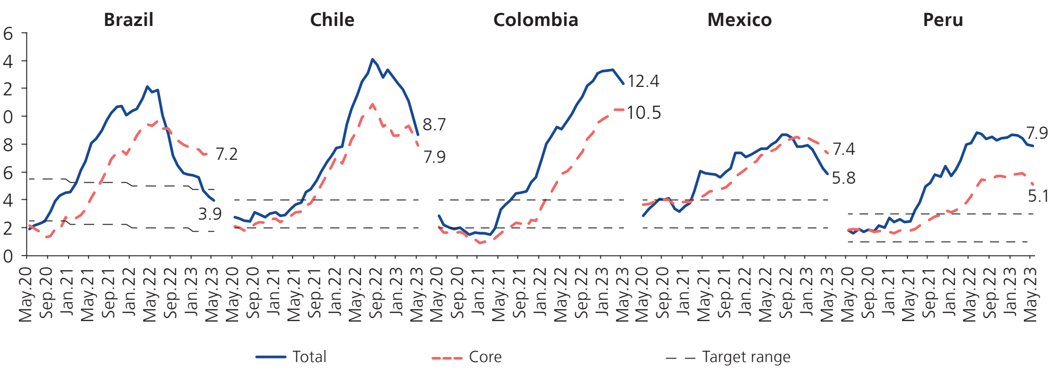
Graph 9
**INFLATION AND CORE INFLATION: YEAR ON YEAR**
(%)




Source: Trading Economics and BCRP (Peru).

A similar trend can be seen in the **economies of the region**. In the case of Brazil and Mexico, which have taken specific measures to reduce energy prices, core inflation is even higher than headline inflation.

Graph 10
**INFLATION IN LATIN AMERICA 2020-2023**
(In %)




Source: Central banks and national statistical institutes of each country.

## Monetary and fiscal policy responses

5. In recent months, the central banks of the major developed economies have continued to **tighten monetary policy**, although at a slower pace than in previous months.

As expected, the central banks of the major **developed economies** continued to raise interest rates. In May, the Fed raised rates by 25 basis points for the third time this year, bringing the rate to a range of 5.0 percent to 5.25 percent. In June, it held rates steady, but left open the possibility of further hikes in the remainder of 2023.

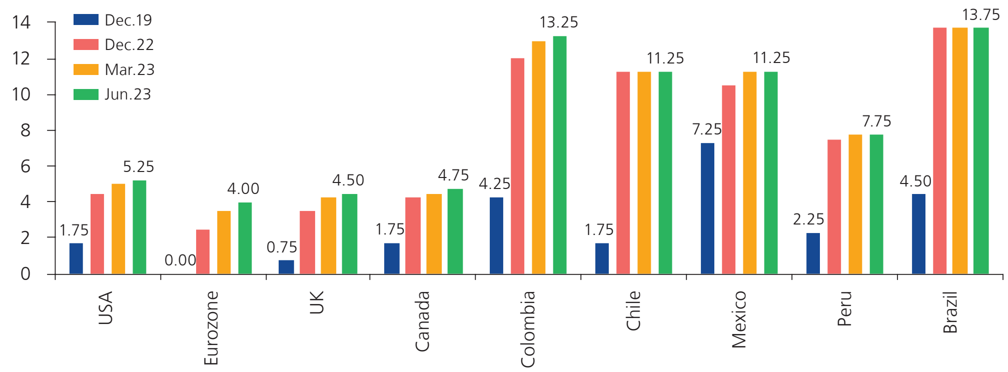
Table 2
**FED PROJECTIONS***

| | 2023 | | 2024 | | 2025 | | Long-term | |
|---|---|---|---|---|---|---|---|---|
| | Mar.23 | Jun.23 | Mar.23 | Jun.23 | Mar.23 | Jun.23 | Mar.23 | Jun.23 |
| Growth | 0.4 | 1.0 | 1.2 | 1.1 | 1.9 | 1.8 | 1.8 | 1.8 |
| Unemployment rate | 4.5 | 4.1 | 4.6 | 4.5 | 4.6 | 4.5 | 4.0 | 4.0 |
| Inflation (PCE) | 3.3 | 3.2 | 2.5 | 2.5 | 2.1 | 2.1 | 2.0 | 2.0 |
| Core Inflation (Core PCE) | 3.6 | 3.9 | 2.6 | 2.6 | 2.1 | 2.2 | - | - |
| Note: Core PCE excludes food and energy. | | | | | | | | |
| Interest rate (%) | 5.1 | 5.6 | 4.3 | 4.6 | 3.1 | 3.4 | 2.5 | 2.5 |
| Interest rate range (%) | 4.9-5-9 | 5.1-6.1 | 3.4-5.6 | 3.6-5.9 | 2.4-5.6 | 2.4-5.6 | 2.3-3.6 | 2.4-3.6 |

* Includes 19 data from the individual projections of the members of the Fed at the end of the period. Forecats are estimated for the fourth quarter of each year with respect to the same quarter of the previous year.

The European Central Bank and the Bank of England also continued their hiking cycle. In the case of the former, there were two hikes of 25 bps (in May and June). In the case of the latter, the hike was made at the May meeting and a similar hike is expected at the next meeting in June. The exception was the Bank of Japan, which kept the interest rate at -0.1 percent and reaffirmed its expansionary monetary policy stance.

Graph 11
**MONETARY POLICY INTEREST RATE**
(%)

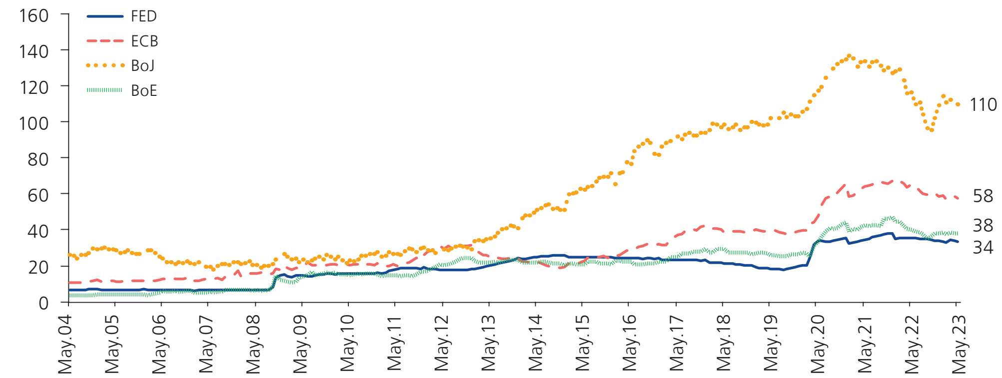



* In the case of the United States, the data correspond to the upper band of the range of the reference rate of the Fed.
Source: Central banks, statistical institutions and others.

In the **emerging economies**, most central banks kept their rates on hold in April and May. The exceptions were South Africa (which raised its rate by 50 bps) and Malaysia (which raised it by 25 bps). In Latin America, only Colombia raised its rate by 25 bps in May, bringing the year-to-date increase to 125 bps.

On the other hand, central banks continued to reduce their assets by reducing their holdings of securities (Treasury bonds and mortgage-backed securities). In March, this reduction in purchases was temporarily offset by the provision of liquidity during the regional banking crisis in the United States.

Graph 12
**CENTRAL BANKS: TOTAL ASSETS**
(Percentage GDP)




Source: Central Banks and IMF.

6. In the area of **fiscal policy**, the negotiations on raising the national debt ceiling in the United States are noteworthy. The inability of Congress to agree on a US$ 1.5 trillion increase in the national debt ceiling, which currently stands at US$ 31.4 trillion, led to fears of a possible default on Treasury obligations in June. This had an impact not only on financial markets, especially on the short-term tranches, but also on consumer and investor confidence. An agreement had been reached by the time this report was finalized.

## Global economic outlook

7. In line with the data to date, the **global growth forecast** for 2023 ihas been revised upwards (from 2.4 to 2.5 percent). As noted above, this revision mainly reflects the dynamism of the first months of the year in the services sector and the strength of the labor market. At the block level, the upward revision occurs in most developed economies; in the case of emerging economies, China's higher growth and Russia's lower contraction stand out.

   On the other hand, the growth projection for 2024 has been revised down slightly, in line with expectations of a somewhat sharper slowdown towards the end of the fourth quarter of 2023 that would extend into the first quarters of the following year.

   As noted above, for most economies, this slowdown reflects, among other factors, the impact of the monetary tightening that has been under way since 2022, tighter financial and credit conditions, and lower consumption growth in the face of persistently high inflation and lower expected labor market dynamism.

   Lower spending associated with reduced savings surpluses generated during the pandemic and the impact of geopolitical tensions on consumer and investor confidence (notably the ongoing war in Ukraine and U.S.-China trade tensions) also play a role.

Table 3
**GLOBAL GROWTH**
(Annual percentage changes)

| | PPP* | 2022 | 2023 | | 2024 | |
|---|---|---|---|---|---|---|
| | | | IR Mar | IR Jun. | IR Mar. | IR Jun. |
| **Developed economies** | **41.7** | **2.7** | **0.7** | **0.8** | **1.4** | **1.2** |
| **Of wich** | | | | | | |
| 1. USA | 15.6 | 2.1 | 0.8 | 1.0 | 1.2 | 1.0 |
| 2. Eurozone | 12.0 | 3.5 | 0.4 | 0.5 | 1.3 | 1.1 |
| 3. Japan | 3.8 | 1.1 | 1.2 | 1.0 | 1.1 | 1.1 |
| 4. United Kingdom | 2.3 | 4.0 | -0.8 | -0.2 | 0.7 | 0.7 |
| 5. Canada | 1.4 | 3.4 | 1.0 | 1.0 | 1.6 | 1.3 |
| **Dveloping economies** | **58.3** | **4.0** | **3.7** | **3.7** | **4.1** | **4.0** |
| **Of wich** | | | | | | |
| 1. China | 18.5 | 3.0 | 5.2 | 5.4 | 5.0 | 5.0 |
| 2. India | 7.3 | 6.8 | 6.0 | 6.0 | 6.0 | 6.0 |
| 3. Russia | 2.9 | -2.2 | -2.9 | -2.0 | 1.6 | 1.3 |
| 4. Latin America and the Caribbean | 7.3 | 3.9 | 1.2 | 1.1 | 2.0 | 1.9 |
| Argentina | 0.7 | 5.2 | 0.0 | -0.5 | 1.8 | 1.8 |
| Brazil | 2.3 | 2.9 | 0.9 | 0.9 | 1.8 | 1.7 |
| Chile | 0.4 | 2.4 | -1.0 | -0.8 | 2.0 | 2.0 |
| Colombia | 0.6 | 7.5 | 0.5 | 0.5 | 1.5 | 1.7 |
| Mexico | 1.8 | 3.1 | 1.1 | 1.3 | 1.9 | 1.6 |
| Peru | 0.3 | 2.7 | 2.6 | 2.2 | 3.0 | 3.0 |
| **World Economy** | **100.0** | **3.4** | **2.4** | **2.5** | **2.9** | **2.8** |

* Base 2022.
Source: IMF and Consensus Forecast.

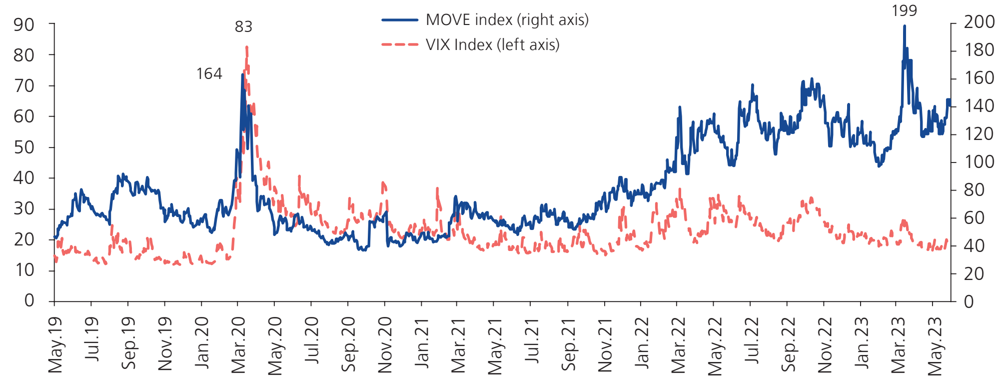
8. As in previous reports, the main risks to this scenario are on the downside. These include a sharper adjustment in global financial conditions, associated with a potential deterioration in bank balance sheets (mainly in the United States). Similarly, a slower convergence of inflation to target in advanced economies would lead to a tightening of monetary policy. Other risk factors are related to an intensification of geopolitical tensions and an escalation of trade tensions, particularly between the United States and China.

## International financial markets

9. Since the last Report, new events have affected the **financial markets**. In the month of April, the failure of First Republic Bank renewed fears about the regional banking situation and led to a further tightening of credit and financial conditions.

   In addition, the uncertainty surrounding the increase in the US government debt ceiling led to fears of a default by the US Treasury. This particularly affected the short tranches of the government bond markets. Thus, as in previous months, the greatest volatility was recorded in the fixed income markets: the MOVE index, despite the correction observed in March, remained well above its historical averages and close to the levels observed at the beginning of the COVID-19 pandemic.

**Graph 13**
**VOLATILITY INDICES: U.S. STOCK MARKETS (VIX) AND SOVEREIGN YIELDS (MOVE)**



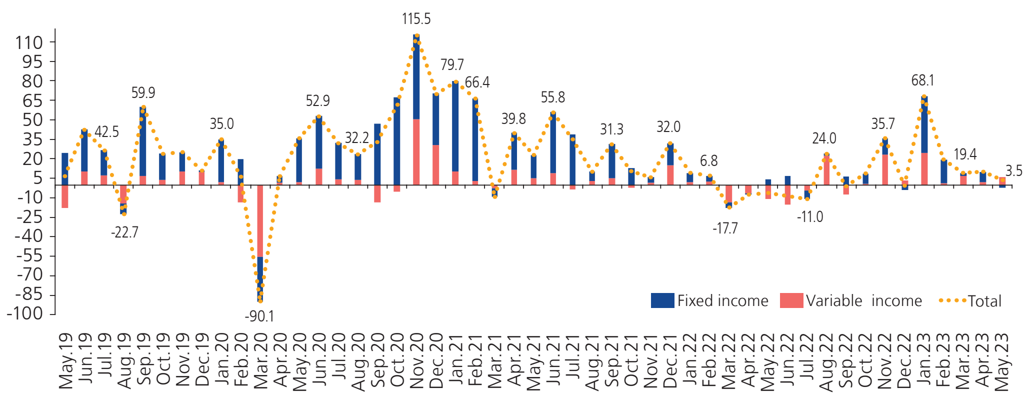

Source: Reuters.

Finally, geopolitical factors have persisted and even worsened in recent months. The war between Russia and Ukraine has intensified, increasing the likelihood of a protracted conflict. On the other hand, tensions between the United States and China have continued, both in terms of international politics (where tensions over Taiwan remain) and trade relations (particularly with regard to the technology war).

These negative factors were offset by mostly positive corporate results in the first quarter and the resilience of U.S. systemic banks to the regional banking crisis mentioned above. Similarly, activity indicators in recent months, particularly in the services sector and the labor market, have reflected a slower-than-expected slowdown in the U.S. economy. These factors have had a particular impact on equity markets, where the VIX index has declined and volatility has fallen.

Against this backdrop, the dollar appreciated against the major currencies, U.S. equity markets rose and U.S. government bond yields increased (in contrast to other developed economies). In turn, capital flows to emerging markets continued the downward trend observed since February.

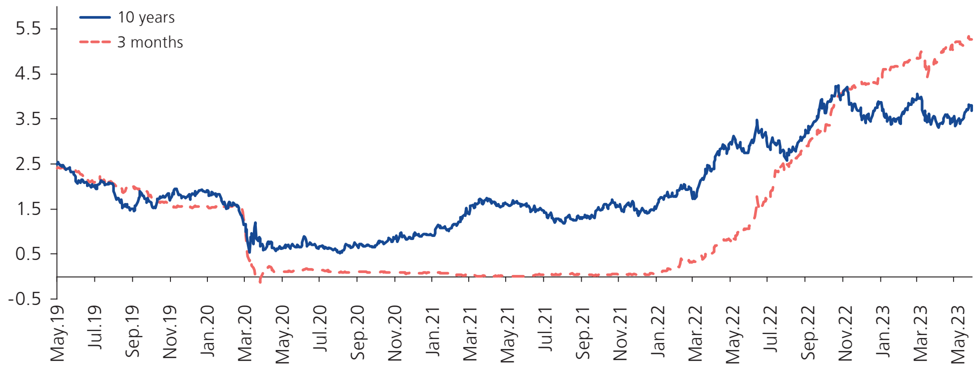
**Graph 14**
**NON-RESIDENT CAPITAL FLOWS TO EMERGING MARKETS**
(Billion US$)




* As of May 23.
Source: IIF.

10. In the **fixed income markets**, US sovereign yields rose on renewed expectations of Fed tightening monetary policy, positive economic data and uncertainty over the debt ceiling. It should be noted that the short end of the yield curve rose the most due to near-term default fears and the relatively smaller impact of Fed policy on the long end of the curve. This was reflected in the yield curve, where the spread between three-month and 10-year yields remained positive, widening from 128 to 175 basis points.

Graph 15
**U.S. SOVEREIGN YIELDS**
(%)




Source: Reuters.

Yields in Europe were mixed. On the one hand, the spread of negative activity indicators (especially in the manufacturing sector) pushed yields lower. On the other hand, expectations of further rate tightening by the ECB and the BoE pushed yields higher.

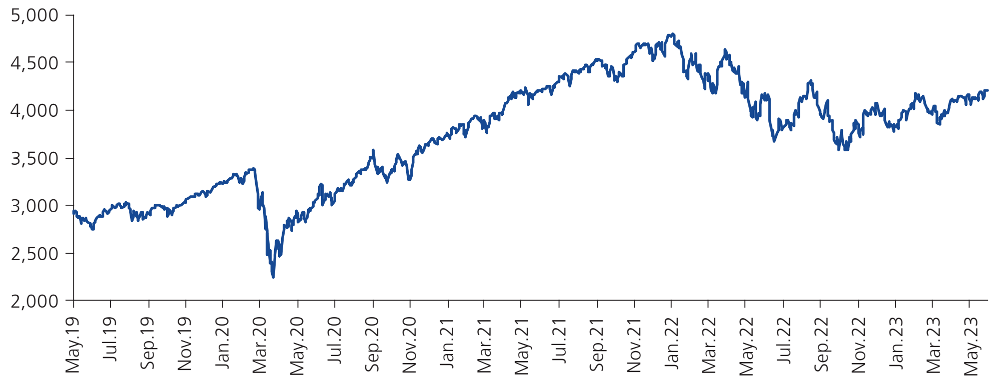
Table 4
**10-YEAR SOVEREIGN BOND YIELDS***
(%)

| | Dec.22 (a) | Mar.23 (b) | May.23 (c) | Difference (pbs) (c) - (b) | Difference (pbs) (c) - (a) |
|---|---|---|---|---|---|
| USA | 3.88 | 3.47 | 3.65 | 18 | -23 |
| Germany | 2.57 | 2.29 | 2.28 | -1 | -29 |
| France | 3.11 | 2.79 | 2.85 | 6 | -26 |
| Italy | 4.70 | 4.09 | 4.08 | -1 | -62 |
| Spain | 3.65 | 3.30 | 3.33 | 3 | -32 |
| Greece | 4.57 | 4.19 | 3.75 | -44 | -82 |
| United Kingdom | 3.66 | 3.49 | 4.18 | 69 | 51 |
| Japan | 0.41 | 0.33 | 0.43 | 10 | 2 |
| Brazil | 12.69 | 12.82 | 11.57 | -125 | -112 |
| Colombia | 13.01 | 11.76 | 11.17 | -58 | -184 |
| Chile | 5.26 | 5.20 | 5.63 | 43 | 36 |
| Mexico | 9.02 | 8.84 | 8.80 | -4 | -23 |
| **Peru** | **7.97** | **7.56** | **7.22** | **-33** | **-75** |
| South Africa | 10.79 | 11.04 | 12.43 | 138 | 164 |
| India | 7.33 | 7.31 | 6.99 | -32 | -34 |
| Turkey | 9.60 | 10.23 | 8.89 | -134 | -71 |
| Russia | 9.28 | 9.64 | 9.50 | -14 | 22 |
| China | 2.84 | 2.86 | 2.71 | -15 | -13 |
| South Korea | 3.74 | 3.36 | 3.52 | 16 | -22 |
| Indonesia | 6.92 | 6.77 | 6.36 | -41 | -56 |
| Thailand | 2.64 | 2.43 | 2.49 | 6 | -15 |
| Malaysia | 4.04 | 3.90 | 3.71 | -19 | -33 |
| Philippines | 6.67 | 6.07 | 5.77 | -31 | -91 |

* As of May 31, 2023.
Source: Reuters.

11. On the **equity markets**, the US stock market rose, driven by corporate results that offset the uncertainty caused by the negative factors mentioned above. At the sector level, companies in the communications, technology and luxury consumer goods sectors posted the strongest gains, while the energy and mining sectors were under the most downward pressure, also as a result of lower commodity prices.

Graph 16
**US STOCK EXCHANGE (S&P 500)**
(Index)




Source: Reuters.

Table 5
**WORLD STOCK EXCHANGES***
(Indices)

| | | Dec.22 (a) | Mar.23 (b) | May.23 (c) | % chg. | |
|---|---|---|---|---|---|---|
| | | | | | (c) / (b) | (c) / (a) |
| VIX** | S&P 500 | 21.67 | 18.70 | 17.94 | -0.8 | -3.7 |
| USA | Dow Jones | 33,147 | 33,274 | 32,908 | -1.1 | -0.7 |
| USA | S&P 500 | 3,840 | 4,109 | 4,180 | 1.7 | 8.9 |
| USA | Nasdaq | 10,466 | 12,222 | 12,935 | 5.8 | 23.6 |
| Germany | DAX | 13,924 | 15,629 | 15,664 | 0.2 | 12.5 |
| France | CAC 40 | 6,474 | 7,322 | 7,099 | -3.1 | 9.7 |
| Italy | FTSE MIB | 23,707 | 27,114 | 26,051 | -3.9 | 9.9 |
| Spain | IBEX 35 | 8,229 | 9,233 | 9,050 | -2.0 | 10.0 |
| Greece | ASE | 930 | 1,055 | 1,219 | 15.6 | 31.1 |
| United Kingdom | FTSE 100 | 7,452 | 7,632 | 7,446 | -2.4 | -0.1 |
| Japan | Nikkei 225 | 26,095 | 28,041 | 30,888 | 10.2 | 18.4 |
| Brazil | Ibovespa | 109,735 | 101,882 | 108,335 | 6.3 | -1.3 |
| Colombia | COLCAP | 1,286 | 1,158 | 1,099 | -5.1 | -14.5 |
| Chile | IPSA | 5,262 | 5,325 | 5,472 | 2.8 | 4.0 |
| Mexico | IPC | 48,464 | 53,904 | 52,736 | -2.2 | 8.8 |
| Argentina | Merval | 202,085 | 245,716 | 342,078 | 39.2 | 69.3 |
| **Peru** | **Ind. Gral.** | **21,330** | **21,898** | **21,179** | **-3.3** | **-0.7** |
| South Africa | JSE | 73,049 | 76,100 | 75,067 | -1.4 | 2.8 |
| India | Nifty 50 | 18,105 | 17,360 | 18,534 | 6.8 | 2.4 |
| Turkey | XU100 | 5,509 | 4,813 | 4,887 | 1.5 | -11.3 |
| Russia | RTS | 971 | 997 | 1,055 | 5.9 | 8.7 |
| China | Shangai C. | 3,089 | 3,273 | 3,205 | -2.1 | 3.7 |
| South Korea | KOSPI | 2,236 | 2,477 | 2,577 | 4.0 | 15.2 |
| Indonesia | JCI | 6,851 | 6,805 | 6,633 | -2.5 | -3.2 |
| Thailand | Sep | 1,669 | 1,609 | 1,534 | -4.7 | -8.1 |
| Malaysia | KLCI | 1,495 | 1,423 | 1,387 | -2.5 | -7.2 |
| Philippines | Psei | 6,566 | 6,500 | 6,477 | -0.3 | -1.4 |

* As of May 31, 2023.
**Data and variations are expressed in points.
Source: Reuters.

In contrast, several European markets declined due to lower economic momentum and expectations of interest rate adjustments. The region's equity markets fell as a result of the less favorable international environment, reflected in the decline in commodity prices and lower capital inflows.

12. In **foreign exchange markets**, the dollar strengthened against the euro and the yen on expectations that the Fed may raise its rates again in July due to high inflation levels and a persistently tight labor market. However, the noise surrounding the fiscal negotiations dampened this trend.

Graph 17
**DXY DOLLAR INDEX**


Memo: An increase (fall) in the index means an appreciation (depreciation) of the dollar.
Source: Reuters.

It is worth noting that the decoupling between the Fed and the BoJ explains why the Yen has continued to weaken against other currencies.

Table 6
**EXCHANGE RATES***
(In U.M. per dollar, except euro and pound sterling)

| | | Dec.22 (a) | Mar.23 (b) | May.23 (c) | % chg. ** | |
|---|---|---|---|---|---|---|
| | | | | | (c) / (b) | (c) / (a) |
| Dollar index DXY** | US Dollar Index | 103.52 | 102.51 | 104.33 | 1.8 | 0.8 |
| Euro | Euro | 1.070 | 1.084 | 1.069 | -1.3 | -0.1 |
| United Kingdom | Pound | 1.210 | 1.233 | 1.245 | 0.9 | 2.9 |
| Japan | Yen | 131.11 | 132.79 | 139.03 | 4.7 | 6.0 |
| Brazil | Real | 5.286 | 5.063 | 5.055 | -0.2 | -4.4 |
| Colombia | Peso | 4,847 | 4,652 | 4,448 | -4.4 | -8.2 |
| Chile | Peso | 848 | 794 | 808 | 1.7 | -4.7 |
| Mexico | Peso | 19.47 | 18.01 | 17.68 | -1.8 | -9.2 |
| Argentina | Peso | 176.74 | 208.98 | 239.47 | 14.6 | 35.5 |
| **Peru** | **Sol** | **3.807** | **3.764** | **3.671** | **-2.5** | **-3.6** |
| South Africa | Rand | 17.00 | 17.78 | 19.72 | 10.9 | 16.0 |
| India | Rupee | 82.72 | 82.16 | 82.66 | 0.6 | -0.1 |
| Turkey | Lira | 18.69 | 19.16 | 20.82 | 8.7 | 11.4 |
| Russia | Ruble | 72.50 | 78.00 | 81.55 | 4.6 | 12.5 |
| China | Yuan (onshore) | 6.897 | 6.868 | 7.111 | 3.5 | 3.1 |
| South Korea | Won | 1,261 | 1,306 | 1,320 | 1.0 | 4.7 |
| Indonesia | Rupee | 15,565 | 14,990 | 14,985 | 0.0 | -3.7 |
| Thailand | Bath | 34.61 | 34.16 | 34.62 | 1.3 | 0.0 |
| Malaysia | Ringgit | 4.400 | 4.410 | 4.613 | 4.6 | 4.8 |
| Philippines | Peso | 55.67 | 54.27 | 56.35 | 3.8 | 1.2 |

* As of May 31, 2023.
** A rise (fall) in the index means an appreciation (depreciation) of the dollar, except for the euro and the pound sterling.
*** A rise (fall) in the index means an appreciation (depreciation) of the dollar against the currencies basket consisting of the euro, yen, pound sterling, Canadian dollar, the Swedish krona, and the Swiss franc).
Source: Reuters.

## Commodity prices

13. The prices of most **industrial metals** declined in recent months, reflecting weakening global manufacturing activity and weaker-than-expected growth in China's real estate sector. The strengthening of the dollar was also influenced by expectations that the Fed will continue its cycle of interest rate hikes. In line with this, the forecasts for basic metals have been revised down from those considered in the March report.

The price of **gold**, on the other hand, rose steadily on increased safe-haven demand in the face of instability in the US and European banking sectors and ongoing geopolitical risks.

Graph 18
**LME AND CRB COMMODITY INDICES**


Source: Reuters.

## Copper

14. The average price of **copper** decreased 7 percent in the last two months, from US$ 4.01 per pound in March to US$ 3.74 per pound in May 2023. With this, the quotation reverses the increase of the first months and accumulates a decrease of 1 percent compared to the price in December 2022.

Table 7
**SUPPLY AND DEMAND FOR REFINED COPPER [1/]**
(Thousands of metric tons of copper)

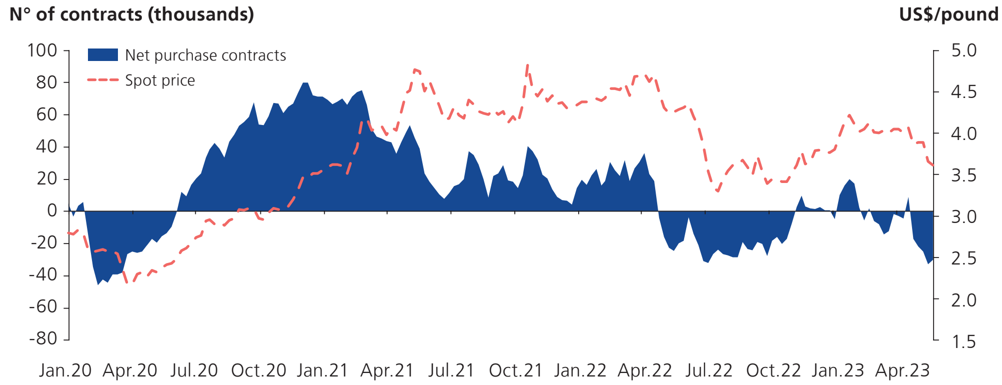
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | % chg. 2024/2023 |
|---|---|---|---|---|---|---|---|
| Global Mine Production | 20,672 | 20,743 | 21,279 | 21,937 | 22,578 | 23,153 | 2.5% |
| Global Refined Production (Primary and Secondary) | 24,144 | 24,643 | 24,938 | 25,641 | 26,317 | 27,480 | 4.4% |
| Global Refining Utilization | 24,321 | 24,945 | 25,204 | 26,069 | 26,431 | 27,183 | 2.8% |
| Refining Balance 2/ | -177 | -302 | -266 | -428 | -114 | 298 | -- |

1/ ICSG reports for May 2023 and ICSG copper market forecasts for April 2023.
2/ The refined products balance is calculated as the subtraction between the global production of refined products (supply) and their utilization (demand).
Source: ICSG

This fall in the average price of copper is explained by the deterioration in the outlook for Chinese demand. It is worth noting that after the lifting of the restrictions due to the COVID-19 cases, the growth of the economy has been largely supported by the service sector. On the supply side, mine and smelter expansion projects are expected to start production later this year and in 2024, ensuring a well supplied market in the short term.

These developments were also reflected in a decline in non-commercial demand. The number of non-commercial net purchase contracts for copper was again in negative territory, reflecting the negative sentiment among non-commercial investors about the prospects for a recovery in Chinese copper demand in these two months.

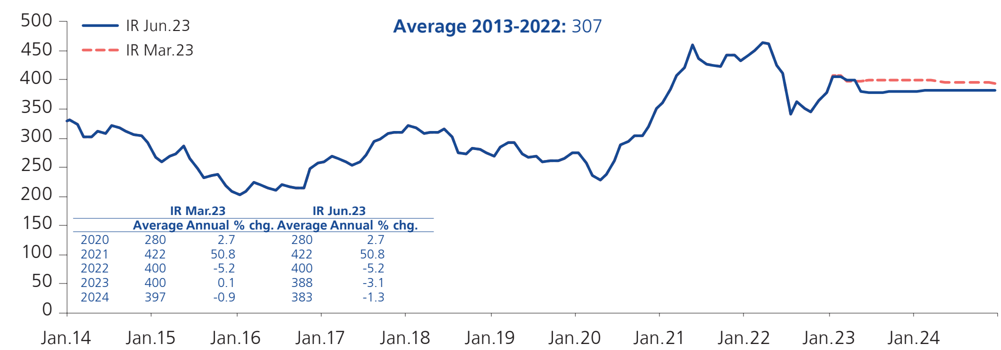
Graph 19
**COPPER: NON-COMMERCIAL CONTRACTS**




Memo: Commission is a weekly report that reflects the difference between the total volume of long (or buy) and short (or sell) copper positions in the market opened by non-commercial traders (or short (or sell) positions in the market opened by non-commercial (speculative) traders. The report only includes the U.S. futures markets futures markets in the United States (Chicago and New York Stock Exchanges).
Source: Comex.

In this context, the copper price forecasts have been revised downwards compared to the estimate in the March Report. The main factors of uncertainty are related to the evolution of the monetary policies of the main economies, the behavior of the Chinese real estate market and the implementation of decarbonization programs at the global level, which would encourage more copper-intensive industries, although limited by the increase in copper refining capacity in China planned for this year and the expansion of world mining capacity.

Graph 20
**COPPER: JANUARY 2014 - DECEMBER 2024**
(ctv. US$/pound)




| | IR Mar.23 | | IR Jun.23 | |
|---|---|---|---|---|
| | Average | Annual % chg. | Average | Annual % chg. |
| 2020 | 280 | 2.7 | 280 | 2.7 |
| 2021 | 422 | 50.8 | 422 | 50.8 |
| 2022 | 400 | -5.2 | 400 | -5.2 |
| 2023 | 400 | 0.1 | 388 | -3.1 |
| 2024 | 397 | -0.9 | 383 | -1.3 |

Source: Reuters and BCRP.

## Zinc

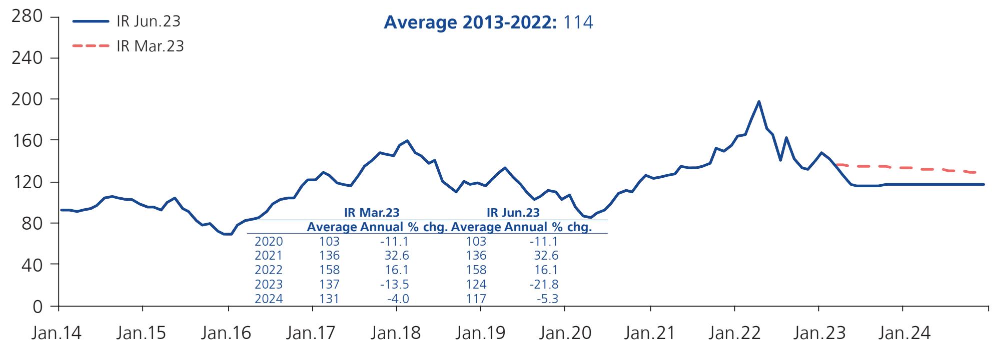
15. The average international price of **zinc** fell to US$ 1.13 the pound in May 2023, a price level 16 percent lower than that recorded in March 2023. Thus, the zinc price accumulated a decline of 20 percent compared to December 2022.

The average price of zinc declined on growing expectations of a global supply surplus in 2023-2024. As in the case of copper, the pace of demand recovery in China was below estimates. In particular, weakness in China's real estate sector has affected galvanized steel production. In addition, demand for galvanized steel is affected by emission reduction restrictions and capacity reductions in the steel industry.

Supply is recovering rapidly. The production of refined products in Europe is expected to recover due to the fall in energy prices, which would add to the expected increase in production in China. These factors have been reinforced by the improvement in inventories on the metal exchanges and the appreciation of the dollar.

In line with these developments, the price of zinc is expected to correct downwards over the forecast horizon from the level observed in the March Inflation Report. In the medium term, the normalization of smelter production and increased mine supply could exert downward pressure on the price.

Graph 21
**ZINC: JANUARY 2014 - DECEMBER 2024**
(ctv. US$/pound)




| | IR Mar.23 | | IR Jun.23 | |
|---|---|---|---|---|
| | Average | Annual % chg. | Average | Annual % chg. |
| 2020 | 103 | -11.1 | 103 | -11.1 |
| 2021 | 136 | 32.6 | 136 | 32.6 |
| 2022 | 158 | 16.1 | 158 | 16.1 |
| 2023 | 137 | -13.5 | 124 | -21.8 |
| 2024 | 131 | -4.0 | 117 | -5.3 |

Source: Reuters and BCRP.

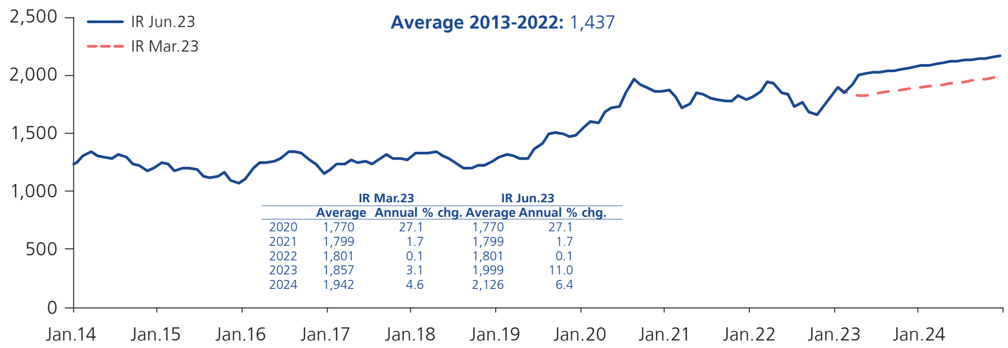
## Gold

16. The average **gold** price was US$ 1,991 the troy ounce in May 2023, a level 4 percent higher than in March 2023. As a result, the gold price accumulated an 11 percent increase compared to December 2022.

The price of gold rose on solid safe-haven demand in a context of high risk aversion due to fears about the U.S. banking system, debt ceiling negotiations and ongoing global geopolitical tensions. Demand from emerging market central banks also contributed to higher gold prices, as their gold holdings increased, albeit at a slower pace than in 2012. The recent strengthening of the dollar limited the rise in prices.

In line with the data available at the time of writing this report, the gold price forecast has been revised upwards with respect to the March Inflation Report. This revision reflects expectations of less tightening by the Fed and the slower than expected decline in global inflation rates.

Graph 22
**GOLD: JANUARY 2014 - DECEMBER 2024**
(US$/tr. ou.)




| | IR Mar.23 | | IR Jun.23 | |
|---|---|---|---|---|
| | Average | Annual % chg. | Average | Annual % chg. |
| 2020 | 1,770 | 27.1 | 1,770 | 27.1 |
| 2021 | 1,799 | 1.7 | 1,799 | 1.7 |
| 2022 | 1,801 | 0.1 | 1,801 | 0.1 |
| 2023 | 1,857 | 3.1 | 1,999 | 11.0 |
| 2024 | 1,942 | 4.6 | 2,126 | 6.4 |

Source: Reuters and BCRP.

## Gas

17. The average **Henry Hub natural gas** price decreased by 7 percent compared to March 2023. Thus, the gas price accumulated a decrease of 61 percent with respect to December 2022.

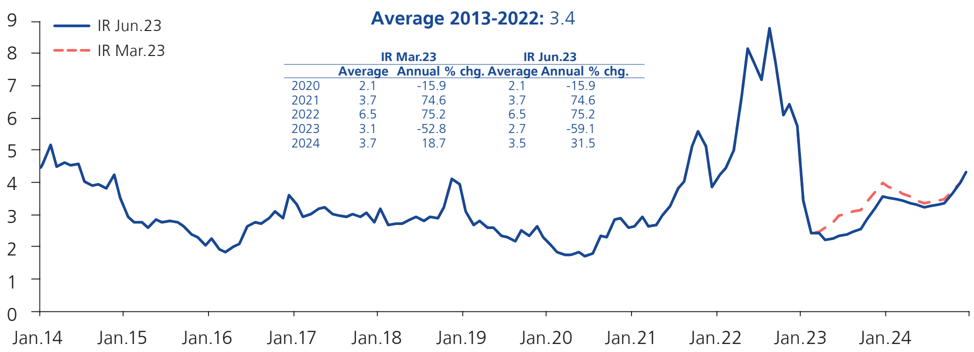
For its part, the price corresponding to the European market (UK BNP) fell 34 percent in May 2023 compared to the level of March 2023. As a result, the gas price has accumulated a 75 percent decrease compared to December 2022. It should be noted that prices in the European market remain above the Henry Hub natural gas quotation.

The decline in the Henry Hub natural gas price is explained by lower demand for heating due to warmer than expected weather and high levels of gas production in the United States, some of which was destined for the European market through liquefied natural gas (LNG) exports. This higher production and lower demand was reflected in a rapid buildup of inventories in the United States, which were above the average levels of the last five years.

The European price decline was due to lower demand for heating and power generation by utilities, which benefited from warmer-than-expected weather, and lower industrial demand. In addition, high LNG supplies from the United States and Qatar kept inventories high in Europe.

The projection of the average Henry Hub natural gas price for the forecast horizon has been revised downward, in line with a less tight global market than projected in the March Report. Nevertheless, natural gas prices will remain higher than at the start of the energy crisis, particularly in Europe, where substitutes for Russian gas are more expensive.

Graph 23
**NATURAL GAS HENRY HUB: JANUARY 2014 - DECEMBER 2024**
(US$/MBTU)




| | IR Mar.23 | | IR Jun.23 | |
|---|---|---|---|---|
| | Average | Annual % chg. | Average | Annual % chg. |
| 2020 | 2.1 | -15.9 | 2.1 | -15.9 |
| 2021 | 3.7 | 74.6 | 3.7 | 74.6 |
| 2022 | 6.5 | 75.2 | 6.5 | 75.2 |
| 2023 | 3.1 | -52.8 | 2.7 | -59.1 |
| 2024 | 3.7 | 18.7 | 3.5 | 31.5 |

Source: Reuters and BCRP.

## Oil

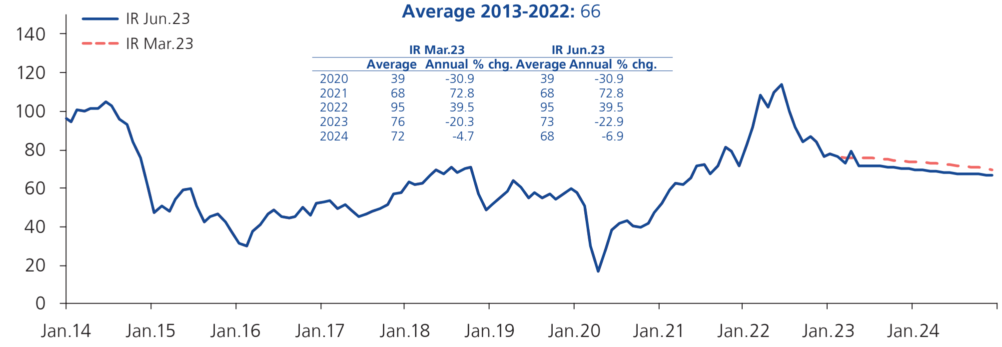
18. The average **WTI oil** price decreased by 2 percent in the last two months, from a monthly average of US$ 73 the barrel in March 2023 to US$ 72 the barrel. This brings the cumulative decline in the oil price to 7 percent compared with December 2022.

Oil prices declined due to lower demand prospects in response to increased recession risks associated with tight monetary policies in the United States and Europe, persistent global inflation, and fears of a financial crisis. On the supply side, U.S. production has increased to record levels, driven by shale. This is compounded by the release of US strategic reserves, increased production from Russia and Iran (despite sanctions) and only partial compliance with OPEC's announced production cuts.

However, a number of factors limited the decline in prices. On the demand side, China's consumption, supported by the service sector, stood out. On the supply side, OPEC unexpectedly cut its production target by around 1.16 million barrels per day and Russia announced a production cut of 500 thousand barrels. In June, Saudi Arabia announced a unilateral cut of 1.0 million barrels per day to take effect in July.

The average oil price projected for the forecast horizon has been revised down from that foreseen in the March report. However, prices would remain above the average of the last ten years due to low inventory levels, the need for the United States to replenish its strategic reserves, and the limited spare production capacity of the OPEC+ countries, which are even experiencing problems in meeting production quotas.

Graph 24
**WTI OIL: JANUARY 2014 - DECEMBER 2024**
(US$/bl)



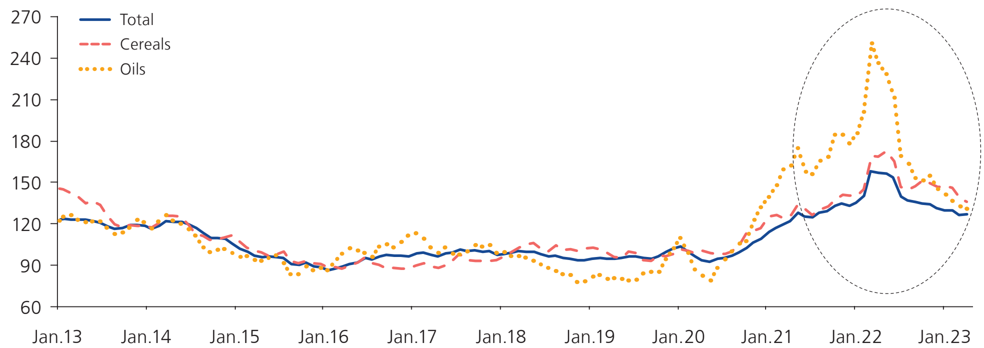

| | IR Mar.23 | | IR Jun.23 | |
|---|---|---|---|---|
| | Average | Annual % chg. | Average | Annual % chg. |
| 2020 | 39 | -30.9 | 39 | -30.9 |
| 2021 | 68 | 72.8 | 68 | 72.8 |
| 2022 | 95 | 39.5 | 95 | 39.5 |
| 2023 | 76 | -20.3 | 73 | -22.9 |
| 2024 | 72 | -4.7 | 68 | -6.9 |

Source: Reuters and BCRP.

## Food

**19.** **Food** prices have fallen slightly since the last report. According to the FAO index, which includes cereals, sugar, oil, meat and dairy products, food prices fell by 3.5 percent in the first four months of the year, although they remain above their historical averages. This correction was mainly due to the fall in prices of vegetable oils and cereals.

Graph 25
**FAO FOOD PRICE INDEX***
(Base 2014 - 2016 = 100)




* The real price index is the nominal price index deflated by the World Bank's manufacturing unit value index.
Source: FAO.

In general, the decline in the prices of most food products is explained by fewer disruptions in the global supply chain, agreements on grain trade across the Black Sea, and high production levels in most countries. Similarly, lower fertilizer costs are being recorded, although they are still at levels not seen since 2014.

In this context, prices of most food commodities are not expected to show an upward trend over the forecast horizon, mainly due to supply factors. However, the main upward risk to prices, especially for cereals, is the occurrence of the El Niño event.

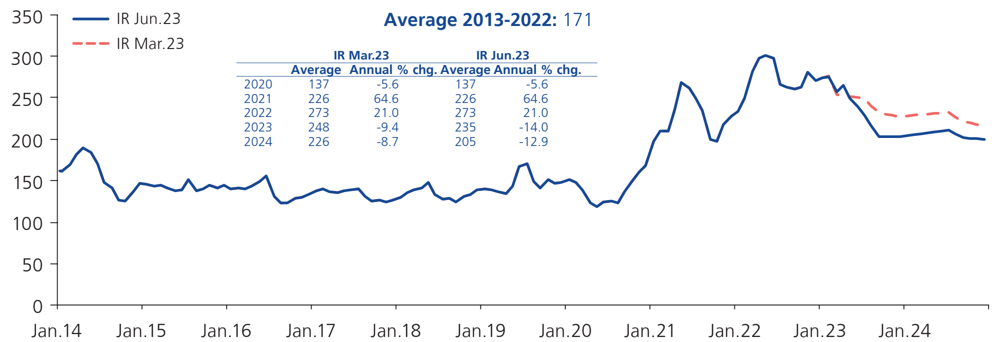
Graph 26
**GREEN MARKETS NORTH AMERICA FERTILIZER PRICE INDEX**
(Index, Jan 07, 2002=100))


Source: Reuters.

(a) The price of **maize** fell by 3 percent in the last two months, reaching an average monthly quotation of US$ 250 MT in May 2023. Thus, the maize price accumulated a decline of 8 percent compared to December 2022.

The price of maize fell on expectations for the start of the Brazilian harvest and the USDA's forecasts for record crops in that country for the 2023/24 season. The renewal of the agreement allowing exports from Ukraine through Black Sea ports, reduced Chinese demand for U.S. corn, and high U.S. ethanol stocks also contributed to the downward pressure. However, the decline in prices is limited by low global maize inventories.

Graph 27
**MAIZE: JANUARY 2014 - DECEMBER 2024**
(US$/ton)




| | IR Mar.23 | | IR Jun.23 | |
|---|---|---|---|---|
| | Average | Annual % chg. | Average | Annual % chg. |
| 2020 | 137 | -5.6 | 137 | -5.6 |
| 2021 | 226 | 64.6 | 226 | 64.6 |
| 2022 | 273 | 21.0 | 273 | 21.0 |
| 2023 | 248 | -9.4 | 235 | -14.0 |
| 2024 | 226 | -8.7 | 205 | -12.9 |

Source: Reuters and BCRP.

In this context, the forecasts are revised downward in the projection horizon due to the prospects of a better production in the United States for the 2023/2024 season (given expectations of favorable weather) and the seasonal arrival of the South American crop, which will keep the world market well supplied in the coming months.

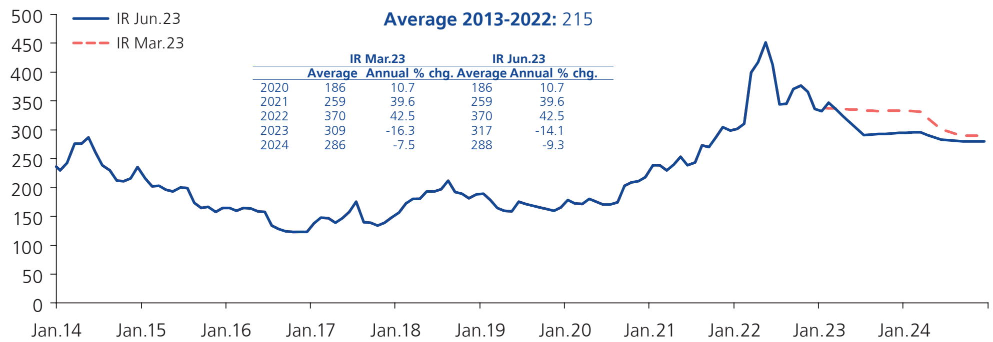
The main risks to this forecast are the future of the grain export corridor through the Black Sea and the impact of the probable El Niño event at the end of this year. Regarding the former, it should be noted that maize accounts for almost half of the exports transported through the Black Sea.

(b) Since the last report, **wheat** prices increased by 2 percent, reaching a level of US$ 328 per MT in May 2023. Compared with December 2022, the wheat price accumulated a 2 percent decline.

Wheat prices increased due to a deterioration in the outlook for wheat supply in the United States, coupled with fears of a lower quality winter wheat crop as a result of the drought that has been affecting the main producing states. In addition, inventories in the major exporting countries remain relatively tight, at eleven-year lows. A temporary factor explaining the price increase was the expectation of possible export restrictions from Russia.

Over the forecast horizon, wheat prices are revised slightly higher from the March Inflation Report, after the USDA estimated a lower-than-expected production increase for the upcoming 2023/24 marketing year. Risks are skewed to the upside as the global wheat market remains tight and, like maize, vulnerable to potential disruptions in trade flows from the Black Sea region.

Graph 28
**WHEAT: JANUARY 2014 - DECEMBER 2024**
(US$/ton)




| | IR Mar.23 | | IR Jun.23 | |
|---|---|---|---|---|
| | Average | Annual % chg. | Average | Annual % chg. |
| 2020 | 186 | 10.7 | 186 | 10.7 |
| 2021 | 259 | 39.6 | 259 | 39.6 |
| 2022 | 370 | 42.5 | 370 | 42.5 |
| 2023 | 309 | -16.3 | 317 | -14.1 |
| 2024 | 286 | -7.5 | 288 | -9.3 |

Source: Reuters and BCRP.

(c) The **soybean oil** price averaged US$ 1,168 per MT in May 2023, 11 percent lower than the March 2023 price of US$ 1,311 per MT. Compared to December 2022, the soybean oil price thus accumulated a 23 percent decreasse.

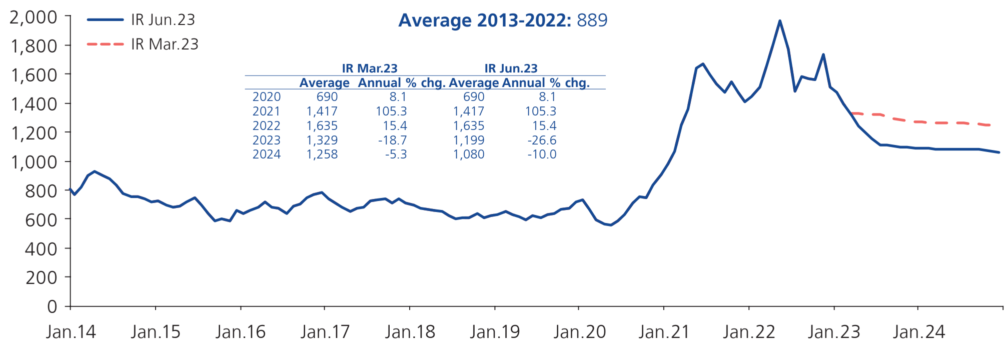
The average soybean oil price declined due to better soybean production prospects for the 2023/24 season, a cycle that would see record harvests in Brazil and the United States. In addition to this, there would be a recovery in Argentina's production after the impact of the drought in the current season. The price decline is also explained by the prospect of regulatory changes in the United States, where the U.S. Environmental Protection Agency would require less use of biodiesel based on soybean oil. Other downward factors included an increased supply of substitute oils, particularly sunflower oil exports from Ukraine.

In light of these recent developments, prices are projected to be lower than in the previous report. The main uncertainties in this forecast are the evolution of oil prices and likely regulatory changes in the United States. Despite lower prices, strong underlying demand and limited inventories in major exporters are expected to keep prices above pre-pandemic levels.

Graph 29

**SOYBEAN OIL: JANUARY 2014 - DECEMBER 2024**

(US$/ton)




| | IR Mar.23 | | IR Jun.23 | |
|---|---|---|---|---|
| | Average | Annual % chg. | Average | Annual % chg. |
| 2020 | 690 | 8.1 | 690 | 8.1 |
| 2021 | 1,417 | 105.3 | 1,417 | 105.3 |
| 2022 | 1,635 | 15.4 | 1,635 | 15.4 |
| 2023 | 1,329 | -18.7 | 1,199 | -26.6 |
| 2024 | 1,258 | -5.3 | 1,080 | -10.0 |

Source: Reuters and BCRP.

# II. Balance of payments

## Balance of external accounts

20. As expected, the current account deficit of the balance of payments has shown a significant reduction as of the first quarter of 2023: in year-on-year terms, it decreased by US$ 2,671 million to represent 1.7 percent of output, while in annualized terms, it decreased to 2.9 percent of GDP, from 4.0 percent at the end of 2022, remaining at sustainable levels. The common factors in this evolution are the decline in the primary income deficit, especially in the profits of companies with FDI in the country, and the lower deficit in services, following the correction in international freight prices.

Table 8
**BALANCE OF PAYMENTS**
(Million US$)

| | 2022 | 2023* | | | 2024* | |
|---|---|---|---|---|---|---|
| | | Q1.23 | IR Mar.23 | IR Jun.23 | IR Mar.23 | IR Jun.23 |
| **I. CURRENT ACCOUNT BALANCE** | **-9,908** | **-1,027** | **-3,898** | **-5,274** | **-2,343** | **-3,760** |
| *% GDP* | *-4.0* | *-1.7* | *-1.4* | *-1.9* | *-0.8* | *-1.3* |
| **1. Trade Balance** | **10,333** | **3,655** | **13,844** | **14,260** | **14,233** | **15,659** |
| a. Exports | 66,235 | 15,489 | 68,179 | 66,131 | 70,327 | 68,824 |
| *Of wich:* | | | | | | |
| *i) Traditional* | *47,760* | *10,782* | *48,600* | *46,929* | *49,289* | *48,297* |
| *ii) Non-Traditional* | *18,221* | *4,643* | *19,351* | *18,993* | *20,820* | *20,329* |
| b. Imports | 55,902 | 11,835 | 54,334 | 51,872 | 56,094 | 53,165 |
| **2. Services** | **-8,642** | **-1,870** | **-6,847** | **-6,626** | **-5,388** | **-5,403** |
| **3. Primary income (factor income)** | **-17,373** | **-4,294** | **-16,515** | **-18,980** | **-16,700** | **-20,035** |
| **4. Secondary income (transfers)** | **5,773** | **1,483** | **5,620** | **6,072** | **5,513** | **6,018** |
| Of which: Remittances | 3,708 | 942 | 3,873 | 3,894 | 3,989 | 4,028 |
| **II. FINANCIAL ACCOUNT 1/** | **-9,246** | **-1,861** | **-6,699** | **-6,614** | **-4,843** | **-7,260** |
| **1. Sector Private** | **-10,203** | **-2,710** | **-4,512** | **-5,828** | **-2,524** | **-4,460** |
| *a. Long-term* | *-14,587* | *-2,964* | *-4,512* | *-5,828* | *-2,524* | *-4,460* |
| *b. Short-term* | *4,385* | *254* | *0* | *0* | *0* | *0* |
| **2. Sector Public 2/** | **957** | **849** | **-2,187** | **-786** | **-2,319** | **-2,800** |
| **III. NET ERRORS AND OMISSIONS** | **-4,427** | **-745** | **0** | **0** | **0** | **0** |
| **IV. BALANCE OF PAYMENTS** | **-5,089** | **89** | **2,801** | **1,339** | **2,500** | **3,500** |
| IV= (I+III) - II = (1-2) | | | | | | |
| 1. Change in NIR balance | -6,612 | 851 | 2,801 | 2,101 | 2,500 | 3,500 |
| 2. Valuation effect | -1,523 | 762 | 0 | 762 | 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.
Source: BCRP.

The current account deficit is expected to continue to decline in 2023 and 2024, taking into account a scenario of recovery in the terms of trade, normalization of international trade, progress in primary production and global demand. However, the correction of the current account deficit would be more gradual than projected in the March Report, as the current forecast assumes a higher level of profits of non-mining companies with FDI in the country, based on what was observed in the first quarter.

21. In line with the evolution of the current account, the **financial account** shows a smaller increase in the net debtor position in the first quarter of 2023. The gradual adjustment of the external financing requirement will reflect in a reduction of the net financial account inflows over the projection horizon. Nevertheless, the projected increase in the net debtor position for both years is revised up compared with the March Report, due to (i) a larger increase in FDI liabilities from higher profits, (ii) an increase in portfolio investment in the country in 2023, and (iii) higher external disbursements by the public and private sectors.

**Terms of trade and trade balance**

22. The terms of trade showed a year-on-year decline in the first quarter of 2023, as the fall in export prices –mainly the export prices for natural gas, crude oil and oil derivatives, zinc and copper– outweighed the fall in import prices –mainly the import prices for industrial inputs such as plastics, iron and steel, and organic chemicals, as well as crude oil. This development is associated with a deterioration in the outlook for global demand, fears of a slowdown in China and more aggressive monetary policies by the major central banks.

The terms of trade are projected to increase by 3.7 percent in 2023, as the foreseen decline in the price of imports will outweigh the decline in the price of exports. The larger decline in the price of imports is related to the projected correction in the price of oil, which in turn is the result of lower expected demand associated with restrictive monetary policies in the United States and Europe, the persistence of global inflation and fears of a financial crisis, as well as to a greater supply of fuels, given that historically high levels of production would be reached in various countries. On the other hand, a rise in export prices and a fall in import prices are projected for 2024. These effects would lead to a 2.5 percent increase in the terms of trade.

Compared with the March report, export prices for 2023 have been revised downward, mainly in the case of some industrial metals (copper and zinc) and natural gas. The revision is explained by lower-than-expected growth in China's real estate sector, a negative outlook for the recovery of China's copper demand from non-commercial investors, high zinc and gas production levels, warmer-than-expected weather in Europe, and a less tight global market. Meanwhile, export prices for 2024 have been revised up from 1.2 percent to 1.9 percent, mainly due to the higher prices of gold, natural gas, and coffee.

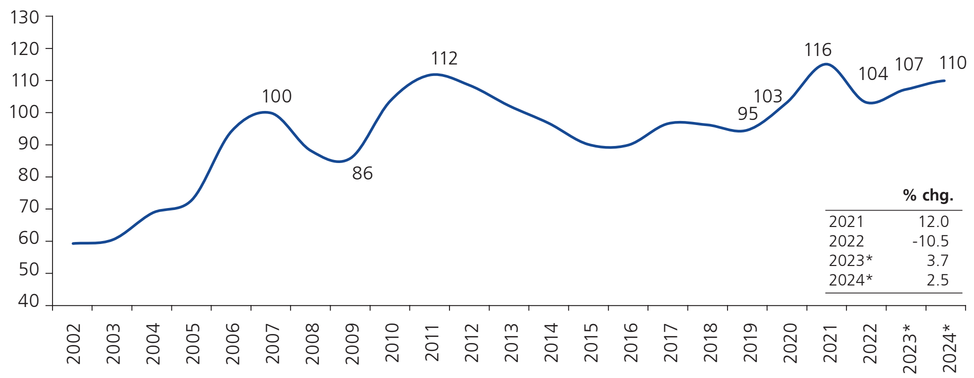
With respect to import prices in 2023, this report assumes a larger decline due to downward revisions in the prices of oil and oil derivatives, food products such as soybean oil and maize, and industrial inputs. This is associated with a lower demand outlook, increased oil production in the United States, Russia, and Iran, fewer disruptions in global supply chains, Black Sea grain trade agreements, and a better outlook for soybean production. For 2024, the current baseline scenario assumes a reduction in import prices, which would be explained by lower prices for food (maize and soybeans) and oil and its derivatives.

Table 9
**TERMS OF TRADE: 2022 - 2024**

| | 2022 | 2023* | | | 2024* | |
|---|---|---|---|---|---|---|
| | | Q1 | IR Mar.23 | IR Jun.23 | IR Mar.23 | IR Jun.23 |
| **Terms of Trade** | | | | | | |
| *Annual average % chg.* | **-10.5** | **-4.9** | **3.9** | **3.7** | **0.9** | **2.5** |
| **Price of exports** | | | | | | |
| *Annual average % chg.* | **1.8** | **-6.1** | **-0.7** | **-3.1** | **1.2** | **1.9** |
| *Copper (US$ cents per pound)* | *400* | *404* | *400* | *388* | *397* | *383* |
| *Zinc (US$ cents per pound)* | *158* | *142* | *137* | *124* | *131* | *117* |
| *Lead (US$ cents per pound)* | *98* | *97* | *95* | *96* | *81* | *96* |
| *Gold (US$ per troy ounce)* | *1,801* | *1,888* | *1,857* | *1,999* | *1,942* | *2,126* |
| **Price of imports** | | | | | | |
| *Annual average % chg.* | **13.7** | **-1.3** | **-4.4** | **-6.6** | **0.3** | **-0.6** |
| *Oil (US$ per barrel)* | *95* | *76* | *76* | *73* | *72* | *68* |
| *Wheat (US$ per ton)* | *370* | *333* | *309* | *317* | *286* | *288* |
| *Maize (US$ per ton)* | *273* | *270* | *248* | *235* | *226* | *205* |

* Forecast.
Source: BCRP.

Graph 30
**TERMS OF TRADE, 2002-2024**
(Index 100 = 2007)

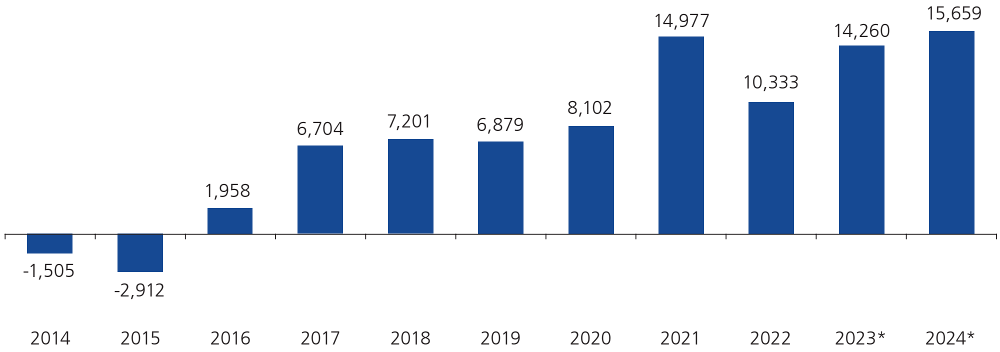



* Forecast.
Source: BCRP.

23. The **goods trade** surplus reached US$ 3,655 million during the first quarter of 2023, US$ 237 million less than the amount recorded in the same period of 2022 (US$ 3,892 million). The year-on-year decrease was due to a larger decline in exports than in imports. This development occurred in a context of declining terms of trade and a lower volume of exported goods.

The trade balance is projected to reach a surplus of US$ 14.3 billion in 2023, US$ 415 million higher than expected in the March Report, and the projection for 2024 has been revised upwards from US$ 14.2 billion to US$ 15.7 billion. The change in the forecasts is in line with the correction in import prices in 2023 and 2024 and with lower volumes of imported inputs.

Graph 31
**BALANCE OF TRADE IN GOODS, 2014-2024**
(Million US$)




* Forecast.
Source: BCRP.

**24.** **Exports** amounted to US$ 15,489 million in the first quarter of 2023, US$ 1,374 million (-8.2 percent) lower than in the same period of 2022. The decrease mainly reflects the decline in the average price of exports –copper, zinc, natural gas, and oil and oil derivatives– and, to a lesser extent, the decline in the volume of exports – fishmeal, coffee, gold, zinc, and natural gas.

Exports are projected to decline by 0.2 percent in 2023, mainly due to a decline in the price of copper and zinc. In 2024, they would recover and grow by 4.1 percent, driven by an increase in exports of copper and natural gas, as well as by higher prices for gold, natural gas, and non-traditional products.

Compared to the previous report, the lower value of exports in 2023 is based on a revision on the downside of their average price –mainly the prices of traditional products– and a lower expected production of traditional products such as fishmeal and gold, basically.

**25.** **Imports** amounted to US$ 11,835 million in the first quarter of the year, which represents a decrease of US$ 1,137 million (-8.8 percent) compared to the same period of the previous year. This development is the result of the decline in import volumes, mainly of capital goods and industrial inputs. The decline in import prices, especially for inputs, also contributed to this decline, but to a lesser extent,

In 2023, imports are projected to decline by 7.2 percent as a result of lower oil prices and lower volumes of industrial inputs and capital goods. On the other hand, in 2024 the value of imports is projected to increase by 2.5 percent, reflecting the recovery in domestic demand.

Compared with the March Report, a larger decline in imports is expected in 2023, driven mainly by a lower projected value of inputs, mainly fuels and industrial inputs, due to lower prices. Lower import volumes would contribute to the decline to a lesser extent, in line with the lower expected growth in domestic demand. In turn, the downward revision for 2024 is explained by a downward revision in import prices, mainly for products such as maize, soybeans, oil and industrial inputs.

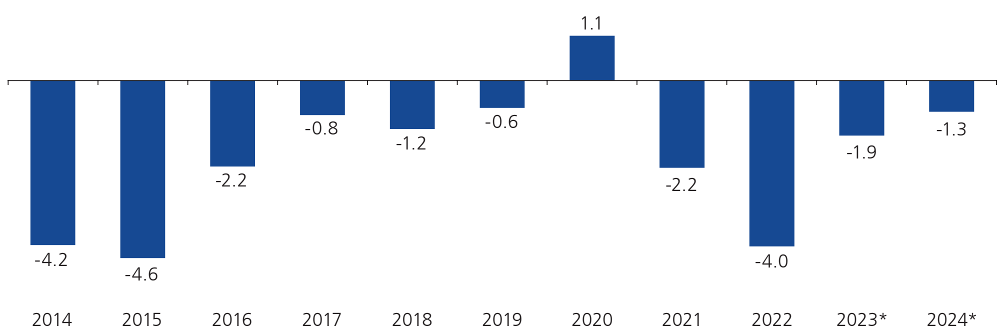
**Current account**

26. The cumulative **current account balance** in the last 4 quarters went from a deficit of 4.0 percent of GDP in 2022 to a deficit of 2.9 percent in the first quarter of 2023. This development reflects: (i) the decline in profits of private companies with FDI due to the correction in export prices, (ii) higher interest income due to the increase in international interest rates, and (iii) the decline in the services deficit, explained by the decline in maritime transport prices.

The current account deficit is projected to narrow between 2022 and 2023 as a result of a higher trade surplus, reflecting lower import prices and more moderate domestic demand and income growth. In addition, a lower services deficit is expected, given the global correction in international freight rates and the gradual recovery of inbound tourism. The outlook for 2024 implies a recovery in primary production, global demand and export prices, which would translate into a higher level of exports. Similarly, the services account will record a lower deficit due to the normalization of international trade and inbound tourism. The gradual narrowing of the current account deficit over the projection horizon corresponds to the recovery of private savings and lower gross domestic investment.

However, a slower correction of the current account deficit over the projection horizon is assumed in this report as a result of a higher level of profits of companies with FDI.

Graph 32
**CURRENT ACCOUNT: 2014-2024**
(% GDP)




* Forecast.
Source: BCRP.

27. The variation in the current account deficit can be broken down into two main factors: those related to domestic absorption (higher nominal demand for goods and services from abroad) and those related to the return paid on factors of production (capital) and Peru's liabilities abroad (debt instruments).

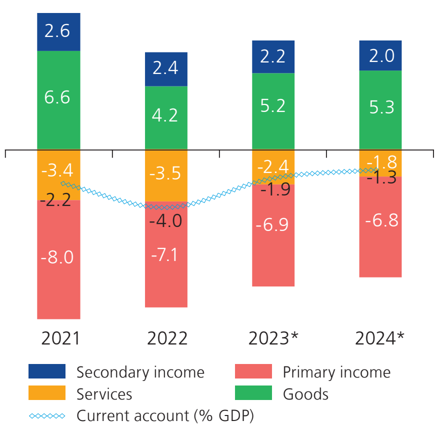
The reduction in the deficit in 2023 and 2024 will be driven to a greater extent by the price effect of domestic absorption, due to the favorable impact of the recovery in the terms of trade (0.6 p.p. and 0.5 p.p., respectively). The decline in freight rates following the normalization of the global supply chain would have a positive impact in 2023 (0.8 percentage point). Finally, an increase in the net volume of goods and services (a total of 0.8 p.p.) would contribute to reducing the deficit in 2023 –with the reduction in the volume of imported goods standing out– as well as the increase in interest received on assets held abroad by Peru in the face of higher interest rates.

The deficit reduction in 2023 will be offset by a higher rate of return that Peru will have to pay on its foreign debt due to higher profits and by interest payments on medium- and long-term debt.

Table 10

**DETERMINANTS BEHIND THE INCREASE IN THE CURRENT ACCOUNT DEFICIT, 2022-2024**

**CURRENT ACCOUNT**
(% GDP)




* Forecast.

**INTERANNUAL CHANGE ON CURRENT ACCOUNT RESULT**
(p.p. GDP)

| | 2022/ 2021 | 2023*/ 2022 | 2024*/ 2023 |
|---|---|---|---|
| **A. Domestic absorption** | **-2.5** | **2.1** | **0.7** |
| **1. Price Effect** | **-2.8** | **1.3** | **0.7** |
| 1.1 Terms of Trade | -2.3 | 0.6 | 0.5 |
| 1.2 Freight | -0.5 | 0.8 | 0.1 |
| **2. Volume effect** | **0.3** | **0.8** | **0.0** |
| 2.1 Goods | -0.1 | 0.4 | -0.4 |
| 2.2 Services** | 0.4 | 0.4 | 0.4 |
| **B. Yield paid to external liabilities** | **0.4** | **-0.9** | **0.2** |
| **1. Foreign Direct Investment** | **0.5** | **-0.6** | **0.0** |
| **2. Medium- and long-term debt** | **-0.1** | **-0.3** | **0.1** |
| **C. Rest*** ** | **0.2** | **1.0** | **-0.2** |
| **TOTAL (A + B + C)** | **-1.8** | **2.1** | **0.6** |

* Forecast
** Includes changes in the volume of transportation and the volume and price of services that are not transportation.
*** Includes changes of current transfers and yield payed for external assets.
Source: BCRP.

28. A synchronized reduction in the current account deficit of several countries in the region can be observed in the first quarter of 2023, In Chile, the decline is due to the higher positive balance of trade in goods as a result of the increase in its terms of trade. In Brazil, it is explained by the increase in the surplus of goods and services, while in Colombia, the reduction in the deficits of the balance of goods and services and of primary income explains the result of the current account.

Table 11
**LATIN AMERICA: CURRENT ACCOUNT OF THE BALANCE OF PAYMENTS**
(Annualized, in % GDP)

| | 2019 | 2020 | 2021 | 2022 | Q1.23 | 2023* |
|---|---|---|---|---|---|---|
| Brazil | -3.6 | -1.9 | -2.8 | -3.0 | -2.7 | -1.6 |
| Chile | -5.2 | -1.7 | -6.6 | -9.0 | -6.9 | -4.0 |
| Colombia | -4.6 | -3.4 | -5.6 | -6.2 | -5.7 | -4.1 |
| Mexico | -0.3 | 2.5 | -0.7 | -1.3 | -1.3 | -1.4 |
| Peru | -0.6 | 1.1 | -2.2 | -4.0 | -2.9 | -1.9 |

* Forecast.
Source: Central banks of each country.

## Financial account

29. The **financial account** in the first quarter of 2023 recorded a net capital inflow of US$ 1,861 million, equivalent to 3.1 percent of GDP. The inflow for the period consisted of an increase in long-term financing of the private sector, mainly from FDI liabilities associated with the reinvestment of profits and disbursements of long-term loans. These inflows were offset by sales of sovereign bonds by non-residents and purchases of net short-term external assets, particularly by banks and the non-financial sector.

Net capital inflows will gradually decline over the forecast horizon as a result of lower current account financing needs. This will be reflected in a smaller increase in FDI liabilities in 2023, the resumption of asset purchases abroad by AFPs and mutual funds, and a greater preference among companies for equity financing.

Compared with the previous Report, the flow of financing to the public sector in 2023 has been revised downward due to higher amortization payments and a slower recovery in purchases of government bonds by non-residents. On the other hand, financing flows to the private sector are expected to be higher than in the previous report, due to the higher reinvestment of profits –in line with higher expected profits– and disbursements made since the first quarter. In 2024, financing is also expected to be higher than in March, mainly due to reinvestment of profits.

**30.** **Long-term external financing of the private sector's** external financing amounted to US$ 2,964 million during the first quarter of 2023, a sum US$ 2,103 million lower than in the same period of the previous year. The result is explained by lower flows of FDI liabilities and net long-term loans. On the asset side, there was an increase in FDI, which was mitigated by the decline in portfolio investment abroad.

The flow of private financing would be lower in 2023 than in 2022, to a greater extent due to the resumption of portfolio investment abroad by AFPs and mutual funds and the lower increase in FDI liabilities. On the other hand, corporations are expected to finance their investment needs from their own resources (through reinvestment of profits), which would reduce the preference for net long-term borrowing from third parties. These factors would continue to slightly reduce net long-term capital inflows in 2024.

Table 12
**FINANCIAL ACCOUNT OF THE PRIVATE SECTOR 1/**
(Million US$)

| | 2022 | 2023* | | | 2024* | |
|---|---|---|---|---|---|---|
| | | Q1.23 | IR Mar.23 | IR Jun.23 | IR Mar.23 | IR Jun.23 |
| **SECTOR PRIVATE (A + B)** | **-10,203** | **-2,710** | **-4,512** | **-5,828** | **-2,524** | **-4,460** |
| *% GDP* | *-4.2* | *-4.5* | *-1.7* | *-2.1* | *-0.9* | *-1.5* |
| **A. Long-term (1-2)** | **-14,587** | **-2,964** | **-4,512** | **-5,828** | **-2,524** | **-4,460** |
| **1. ASSETS** | **-2,906** | **567** | **2,925** | **3,577** | **3,458** | **5,126** |
| Direct investment | -448 | 672 | 1,227 | 1,250 | 565 | 1,525 |
| Portfolio investment 2/ | -2,458 | -105 | 1,698 | 2,326 | 2,892 | 3,601 |
| **2. LIABILITIES 3/** | **11,682** | **3,531** | **7,437** | **9,404** | **5,981** | **9,586** |
| Direct investment | 10,848 | 2,487 | 8,885 | 9,778 | 9,130 | 11,523 |
| Portfolio investment 4/ | -760 | 301 | 200 | 556 | 0 | 0 |
| Long-term loans | 1,594 | 744 | -1,648 | -930 | -3,148 | -1,936 |
| **B. CORTO PLAZO** | **4,385** | **254** | **0** | **0** | **0** | **0** |

1/ Expressed in terms of assets net from 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 CAVALI. Includes bonds and similar.
* Forecast.
Source: BCRP.

Compared with the previous report, the 2023 private sector long-term financial account includes higher FDI liabilities (due to higher profits) and higher net long-term loans and portfolio investment, in line with data observed in the first quarter. A higher increase in the net debt position is also projected for 2024, due to higher expected FDI liabilities and disbursements. These factors would be offset to some extent by a faster recovery in portfolio investment abroad.

31. In the first three months of 2002, **external financing of the general government** was negative by US$ 849 million. Sales of sovereign bonds by non-residents (US$ 614 million) and portfolio repayments (US$ 173 million) and loan repayments (US$ 92 million) mainly explain the flow for the period. Compared to the same period in 2022, external financing was more negative due to higher sales of sovereign bonds acquired by non-residents and higher purchases of global bonds acquired by residents.

Financing flows to the public sector are projected to recover in 2023 and 2024 as a result of the resumption of non-residents' purchases of government bonds in a context of lower global uncertainty and higher disbursements of long-term loans.

Compared with the previous Report, the 2023 public financial account incorporates higher amortization payments and lower non-residents' purchases of sovereign bonds observed so far this year, which would be partially offset by higher long-term loan disbursements. The 2024 projection incorporates a higher pace of non-residents' purchases of sovereign bonds than expected in the March Report.

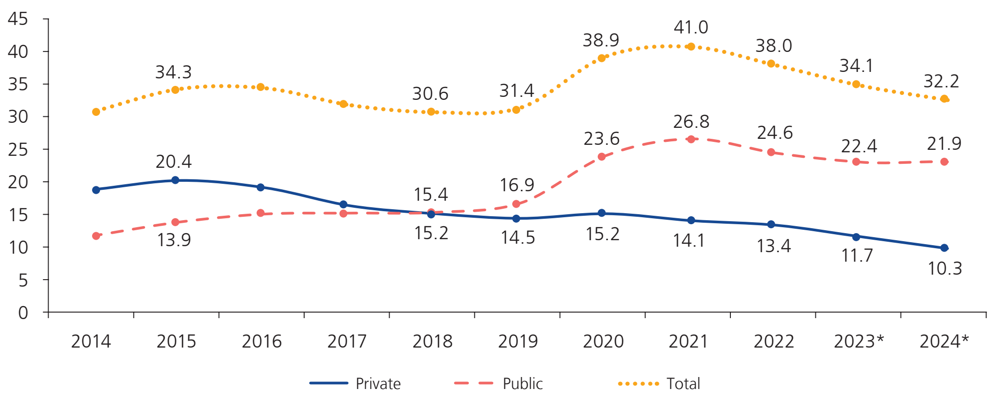
Table 13
**FINANCIAL ACCOUNT OF THE PUBLIC SECTOR 1/**
(Million US$)

| | 2022 | 2023* | | | 2024* | |
|---|---|---|---|---|---|---|
| | | Q1.23 | IR Mar.23 | IR Jun.23 | IR Mar.23 | IR Jun.23 |
| **I. ASSETS** | **-145** | **46** | **221** | **154** | **140** | **140** |
| **II. LIABILITIES (1 + 2 + 3) 2/** | **-1,102** | **-803** | **2,408** | **940** | **2,459** | **2,940** |
| **1. Portfolio investment** | **-1,880** | **-878** | **1,014** | **-897** | **1,450** | **1,909** |
| Issuance | 600 | 0 | 0 | 0 | 0 | 0 |
| Amortizations | -658 | -173 | -173 | -1,801 | -389 | -404 |
| Other operations (a - b) 3/ | -1,822 | -705 | 1,187 | 904 | 1,839 | 2,313 |
| a. Sovereign bonds purchased by non-residents | -1,888 | -614 | 1,192 | 1,008 | 1,839 | 2,313 |
| b. Global bonds purchased by residents | -66 | 91 | 4 | 104 | 0 | 0 |
| **2. Loans** | **779** | **75** | **1,394** | **1,837** | **1,009** | **1,031** |
| Disbursements | 1,838 | 167 | 2,475 | 2,931 | 2,031 | 2,081 |
| Amortizations | -1,060 | -92 | -1,081 | -1,094 | -1,021 | -1,050 |
| **3. BCRP: other operations 4/** | **0** | **0** | **0** | **0** | **0** | **0** |
| **III. TOTAL (I - II)** | **957** | **849** | **-2,187** | **-786** | **-2,319** | **-2,800** |

1/ Medium and long-term debt. An inflow of capital has a negative sign. An increase (a fall) in an external asset has a positive (negative) sign.
2/ 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.
Source: BCRP.

32. Private sector medium- and long-term external debt is projected to decline from 13.4 percent of GDP in 2022 to 10.3 percent of GDP at the end of the projection horizon, the lowest level in the last 10 years. Public external debt, on the other hand, would decline somewhat less, from 24.6 to 21.9 percent over the same period.

Graph 33
**BALANCE OF MEDIUM- AND LONG-TERM EXTERNAL DEBT**
(% GDP)




* Forecast.
Source: BCRP.

## Net International Reserves

33. As of June 15, international reserves had increased by US$ 2,596 million compared to the end of last year, reaching US$ 74,779 million. This result is largely due to the

increase in commercial bank deposits (US$ 2,777 million) and public sector deposits (US$ 1,762 million), offset by foreign exchange operations with the public sector (US$ 3,202 million).

Although the ratio of international reserves to GDP falls slightly below its pre-pandemic level over the forecast horizon, international reserves can cover more than five times the balance of short-term external liabilities and between three and four times the sum of these liabilities plus the current account deficit. In addition, as of May 27, 2022, Peru has a successor arrangement to the IMF's Flexible Credit Line (FCL), with contingent access to up to about US$ 5.3 billion. The arrangement is aimed at strengthening the economy's resilience in the face of global uncertainties stemming from recession fears, the Russia-Ukraine conflict, and tighter international financial conditions that have affected economic activity and global inflation.

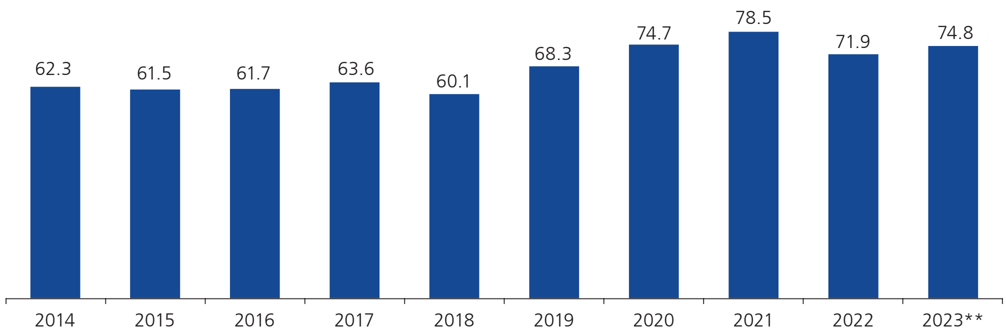
Graph 34

**NET INTERNATIONAL RESERVES, 2014 - 2024**

(Billion US$)

| | 2019 | 2020 | 2021 | 2022* | 2023* | 2024* |
|---|---|---|---|---|---|---|
| International Reserves as a percentage of: | | | | | | |
| a. GDP | 29.4 | 36.3 | 34.8 | 29.4 | 26.8 | 26.3 |
| b. Short-term external debt [1/] | 498 | 538 | 578 | 454 | 525 | 550 |
| c. Short-term external debt plus current account deficit | 455 | 642 | 421 | 279 | 382 | 434 |

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




** As of June 15, 2023.
Source: BCRP.

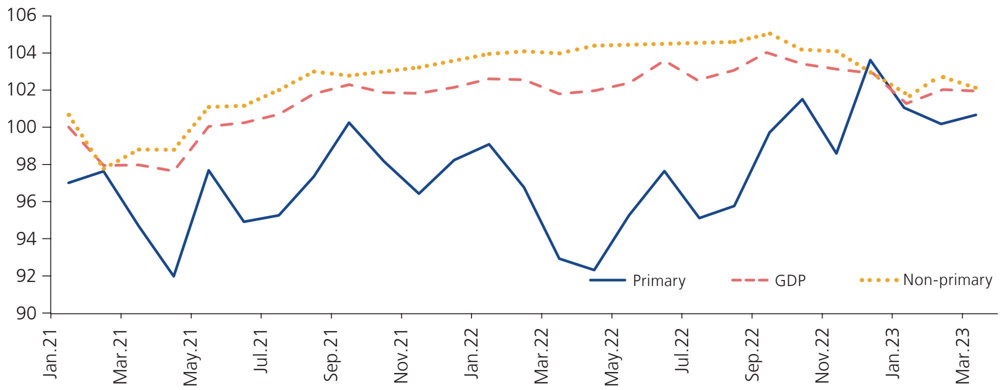
# III. Economic activity

## Sectoral GDP

34. Economic activity in the first quarter of 2023 contracted by 0.4 percent year-on-year, mainly due to the impact of road blockades and activity disruptions resulting from social conflicts and excessive rainfall, including the impact of Cyclone Yaku in March. Activities in the non-primary sector, particularly construction, manufacturing, and services, were most affected. The contraction in the construction sector was reflected in a decline in private and public investment.

    The seasonally adjusted monthly indicator of economic activity rebounded in February after falling in January, but fell slightly in March. Thus, the activity index has not yet reached the level of December last year due to the stagnation in the primary sector (weather events and social conflicts), construction (low investment) and trade (decline in private spending).

Graph 35
**SEASONALLY ADJUSTED ECONOMIC ACTIVITY INDICES**
(Base 100 = 4Q-2019)




Source: BCRP.

35. The economy is expected to grow by 2.2 percent in 2023, a lower rate than last year (2.7 percent). This forecast takes into account the slowdown in non-primary activities,

resulting from lower momentum in private consumption and public investment, as well as the contraction in private investment. The slowdown in public investment is explained by the usual impact on spending of subnational authorities' first year in office, while the contraction in private investment stems from an environment in which business expectations are gradually recovering from socio-political instability. On the other hand, activity in the primary sector is expected to improve in 2022 as a result of the commissioning of Quellaveco and fewer days of mining downtime. In 2024, GDP is expected to grow by 3.0 percent, as the increase in domestic demand will allow the non-primary sectors to recover at a rate of 3.1 percent.

The current projections imply a downward revision of 0.4 percentage points in 2023 growth compared to the March report (from 2.6 to 2.2 percent). Factors explaining this include the maintenance of the ban on anchovy fishing in the north-central zone in May and June and the unfavorable data for the first quarter in the agricultural, manufacturing and construction sectors, due to the impact of social conflicts, the lower dynamism of domestic demand and adverse weather effects. The accumulation of inventories was also observed in several companies, mainly in the manufacturing sector, linked to the slowdown in private spending.

Table 14
**GDP BY ECONOMIC SECTORS**
(Real % change)

| | 2022 | 2023* | | | 2024* | |
|---|---|---|---|---|---|---|
| | | Q1 | IR Mar.23 | IR Jun.23 | IR Mar.23 | IR Jun.23 |
| **Primary GDP** | **0.8** | **4.7** | **5.1** | **4.0** | **3.0** | **2.9** |
| Agriculture and livestock | 4.4 | -0.2 | 2.2 | 0.4 | 2.7 | 2.7 |
| Fishing | -13.7 | 22.4 | 5.0 | -15.0 | 3.5 | 10.5 |
| Metallic mining | -0.1 | 3.2 | 7.0 | 8.3 | 3.1 | 2.4 |
| Hydrocarbons | 4.0 | -1.1 | 4.7 | 4.7 | 4.9 | 4.9 |
| Manufacture | -2.6 | 20.8 | 5.3 | 0.0 | 2.0 | 3.3 |
| **Non-Primary GDP** | **3.2** | **-1.7** | **1.9** | **1.7** | **3.1** | **3.1** |
| Manufacture | 2.1 | -6.6 | 1.0 | 0.0 | 3.0 | 3.0 |
| Electricity and water | 3.9 | 4.6 | 4.6 | 4.3 | 3.9 | 3.9 |
| Construction | 3.0 | -11.5 | 1.0 | 0.0 | 3.2 | 3.2 |
| Commerce | 3.3 | 2.2 | 2.2 | 2.5 | 3.5 | 3.5 |
| Services | 3.4 | -0.7 | 2.1 | 1.9 | 2.9 | 2.9 |
| **GDP** | **2.7** | **-0.4** | **2.6** | **2.2** | **3.0** | **3.0** |

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

36. The factors that have led to the downward revision of GDP in 2023 will have a greater impact on expected growth in the first half of the year. The baseline scenario in this report assumes the occurrence of a weak global La Niña event between the end of 2023 and the first quarter of 2024.

a) Output in the **agricultural sector** contracted by 0.2 percent in the first quarter of the year due to low production in the highlands (potatoes, maize, peas, beans, and barley, among other products). This result was partially offset by higher production of export fruits (grapes, blueberries, avocados and mangos) and agribusiness crops (hard yellow maize and cotton), with favorable prices at planting time.

Regarding the availability of water, it is worth noting that the level of water storage level has recovered since March due to the anomalies in rainfall caused by the warming of the sea surface temperature and Cyclone Yaku. Thus, as of June 2, 2023, water storage in the main reservoirs[1] was over 80 percent of their total useful volume, with the levels at the Poechos, Tinajones and Gallito Ciego reservoirs standing out at 100 percent.

Production forecasts for 2023 have been revised downward from 2.2 percent to 0.4 percent due to the impact of climatic anomalies on farming production in the highlands (water deficit until January 2023 and frosts) and on the coast (anomalies in environmental temperature and rainfall). In addition, poultry production would recover more slowly from avian influenza. The projection of 2.7 percent for 2024 is maintained under a scenario of a weak to moderate coastal El Niño in the summer of 2024 and the recovery of the poultry sector starting in the second half of 2023.

b) The **fishing sector** recorded a growth rate of 22.4 percent in the first quarter of 2023. This was mainly due to the higher quota in the second anchoveta season in the North Central Zone 2022, which led to a 211.4 percent growth in fishing for industrial consumption in the first quarter of the year.

In addition, the positive sea temperature anomalies resulted in greater availability of resources such as squid (239.1 percent), mackerel (55.8 percent), bonito (30.7 percent) and jack mackerel (18.8 percent). As a result, catches of fish for direct human consumption increased by 3.4 percent in the first three months of the year. However, this result was mainly offset by the lower catch of scallops (-58.6 percent) due to abnormal swell in the Bay of Sechura and positive anomalies in sea temperature in March, which caused the mortality of specimens.

Forecasts for the sector for 2023 have been revised from a growth rate of 5.0 percent to a contraction of 15.0 percent in this report, due to the continuation of the ban on anchoveta fishing in the North Central Zone in May and June, and the lower quota set for squid. For 2024, the growth forecasts have been revised to 10.5 percent.

c) In the first quarter of 2023, the **metal mining** sector grew by 3.2 percent due to higher copper extraction (10.3 percent) as a result of the commissioning of

1 Poechos, Tinajones, Gallito Ciego, San Lorenzo, Sistema Chili and Condoroma.

Quellaveco in the third quarter of 2022. The company produced 59 thousand FMT of copper in the first 3 months of the year. Southern aalso recorded higher production than in the previous year as the company had to suspend operations at Cuajone in March 2022 due to problems with the communities. Iron production also increased due to higher processing at Shougang.

On the other hand, lower production was recorded for: (i) tin (-68.7 percent), due to problems with the communities at the San Rafael unit; (ii) zinc (-12.5 percent) due to lower production at Antamina and El Brocal. Likewise, lower production of silver (-9.5 percent), lead (-5.1 percent) and molybdenum (-9.2 percent) was recorded due to lower grades from mining operations.

The forecast for the sector for 2023 is revised from 7.0 percent to 8.3 percent due to the earlier than expected start of molybdenum production in the sector by Quellaveco. The forecasts also assume an environment of socio-political stability that does not affect the production plans of the mining companies. In 2024, the sector is expected to grow by 2.4 percent.

d) Activity in the **hydrocarbon sector** in the first three months of 2023 decreased by 1.1 percent compared to the same period of the previous year, due to lower extraction of oil and natural gas liquids. Oil production decreased by 6.2 percent due to lower production from lot Z-2B and the coastal lots (X, VI- VII, among others). On the other hand, production from Lot 95 (East) increased due to more wells being drilled, whereas production of natural gas liquids decreased due to lower production from Lot 56.

In April and May 2023, oil production was affected by the presence of abnormal swells that hindered transportation. Lot 192 and Lot 8, for their part, continue to be out of production after being shut down in 2020. Lot 67 has also stopped operations since October 2022 due to social conflicts.

The growth forecast for 2023 is maintained at 4.7 percent due to the recovery of natural gas and natural gas liquids production. In 2024, the sector would grow by 4.9 percent. This would be associated with a normalization of oil production in jungle areas.

e) Activity in the **primary manufacturing** subsector grew 20.8 percent in the first quarter of 2023, mainly due to higher production of canned and frozen fish and fishmeal and fish oil, as well as higher refining of non-ferrous metals and hydrocarbons.

Projections for the subsector in 2023 have been revised down from 5.3 percent growth to zero growth, reflecting lower fishing activity. An increase of 3.3 percent is expected in 2024.

f) **Ouput in non-primary manufacturing** contracted by 6.6 percent in the first quarter of 2023, affected by social conflicts, the decline in private investment, and the slowdown in consumption. The branches that recorded lower output were those manufacturing inputs such as plastics and paper and cardboard packaging; mass consumer goods such as other paper and cardboard products, miscellaneous food products, and oils and fats; and investment oriented goods, such as cement and metal products.

Even though non-primary manufacturing is projected to show zero growth in 2023, the subsector's output would remain above pre-pandemic levels. Year-on-year growth of 3.0 percent is expected in 2024.

g) The **construction** sector decreased its activity by 11.5 percent in the first quarter of 2023, affected by social conflicts and rains during the first quarter of the year.

Construction activity is estimated to record zero growth in 2023, despite the expected recovery in do-it-yourself construction in the second half of the year. Growth of 3.2 percent is expected in 2024, driven by a recovery in public and private investment.

h) In the first quarter of 2023, the **trade** sector grew 2.2 percent, driven by higher wholesale trade (2.2 percent), retail trade (2.6 percent), and sales of motor vehicles and motorcycles (0.8 percent). High trade in these areas was favored by the lifting of restrictions on visitor capacity.

In 2023, the sector's activity is expected to grow by 2.5 percent, while in 2024 it is expected to grow by 3.5 percent.

i) Growth in the **services** sector contracted by 0.7 percent during the first three months of the year. The activity of the sector was affected by the decline in telecommunications services due to the lower number of fixed and cell phone calls, as well as by the slowdown in internet consumption due to the return of face-to-face activities. Similarly, the finance and insurance sector, which had already been slowing down, fell by 6.6 percent.

On the other hand, transport and storage (0.2 percent) and hotels and restaurants (5.0 percent) slowed down. This was due to the social conflicts recorded in the first months of the year and the rains recorded in the north of the country.

The sector is expected to grow by 1.9 percent in 2023. This projection takes into account the impact of social conflicts and rainfall in the first months of the year on economic activity. In 2024, the sector is expected to grow by 2.9 percent.

**Expenditure-side GDP**

37. On the expenditure side, the contraction in domestic demand in the first quarter of 2023 is explained by the decline in private investment and lower growth in private

consumption. This occurred in a context of social conflicts, absence of new large mining projects, decline in public investment by subnational governments, and gradual withdrawal of pandemic and reactivation-related public spending.

The expected deceleration of economic activity in 2023 is related to the low growth rates expected for private consumption and public investment, as well as to the decline in private investment in the context of the slow recovery of business confidence, the absence of mining mega-projects and the low momentum of self-construction. In 2024, the recovery in private spending is expected to contribute to economic growth of 3.0 percent in a scenario of "greater agent confidence".

The downward revision of growth with respect to the March report is due to lower expectations for private consumption in light of first-quarter data and a more gradual recovery of business confidence, as well as lower export volumes of traditional goods. The growth forecast for 2024 remains unchanged (3.0 percent), with domestic demand as the main driver of growth in a scenario of socio-political and macroeconomic stability.

Table 15
**DOMESTIC DEMAND AND GDP**
(Real % change)

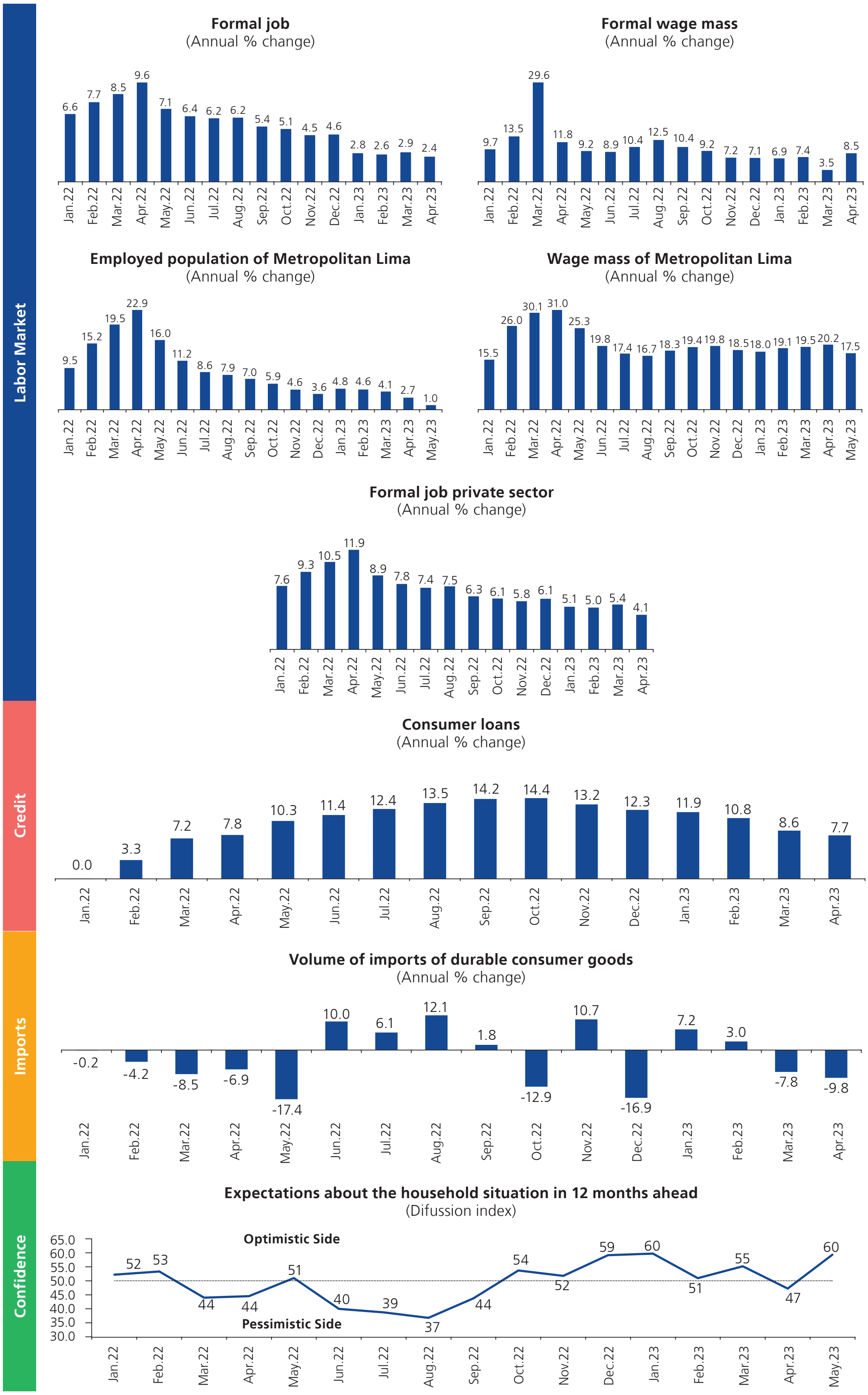
| | 2022 | 2023* | | | 2024* | |
|---|---|---|---|---|---|---|
| | | Q1 | IR Mar.23 | IR Jun.23 | IR Mar.23 | IR Jun.23 |
| **Domestic demand** | **2.3** | **-1.4** | **2.1** | **1.5** | **2.9** | **2.9** |
| Private consumption | 3.6 | 0.7 | 2.8 | 2.6 | 3.0 | 3.0 |
| Public consumption | -3.4 | -6.0 | 2.0 | 2.0 | 3.0 | 3.0 |
| Private investment | -0.4 | -12.0 | -0.5 | -2.5 | 1.8 | 1.8 |
| Public investment | 7.7 | -1.0 | 1.0 | 1.5 | 4.0 | 4.0 |
| Change on inventories (contribution) | 0.1 | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Exports** | **6.1** | **-1.1** | **3.9** | **3.4** | **3.5** | **3.3** |
| **Imports** | **4.4** | **-5.0** | **1.9** | **0.8** | **2.9** | **2.9** |
| **Gross Domestic Product** | **2.7** | **-0.4** | **2.6** | **2.2** | **3.0** | **3.0** |

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

38. The indicators related to **private consumption** have, for the most part, been showing a slowdown in the last few months: In the labor market, the number of formal sector jobs at the national level and the wage bill continued to grow in relation to 2022, although at a slower pace. In the Lima Metropolitan Area, a lower growth of the employed population was observed in May, but the wage bill maintains high growth rates, according to INEI's Permanent Employment Survey.

Consumer credit also showed less dynamism, especially in the use of credit cards. The volume of imports of durable consumer goods contracted in March and April. For its part, consumer confidence, as measured by agents' expectations of their future family's economic situation, recovered in May on the back of improved purchasing power –due to higher salaries and a slight moderation in inflation– although it remains below pre-pandemic levels.

Graph 36
**INDICATORS RELATED TO THE PRIVATE CONSUMPTION**

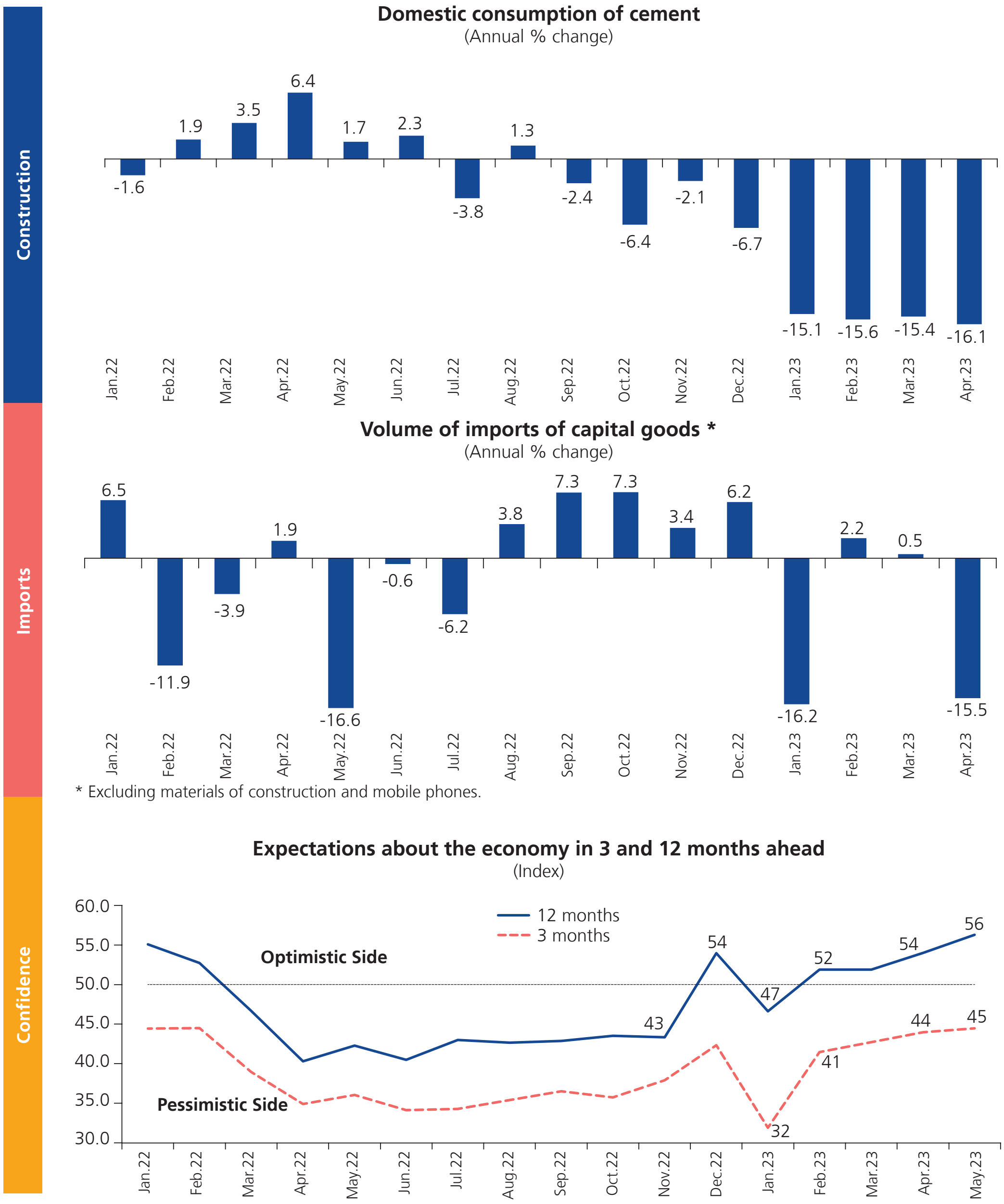



Source: BCRP, INEI, SUNAT, and APOYO.

39. Current leading indicators related to **private investment** continue to show an unfavorable evolution. Domestic cement consumption contracted in the first four months of the year due to the lower dynamism of private works and self-construction projects, the blockage of highways and the slow progress of public investment. The volume of imports of capital goods, excluding construction materials and mobile phones, recorded a weak growth rate in March and contracted in April. The 3-month and 12-month economic expectations fell sharply in January and recovered in the following months, but the 3-month economic expectations are still in the pessimistic range.

Graph 37

**INDICATORS RELATED TO PRIVATE INVESTMENT**




Source: BCRP, SUNAT, and cement companies.

40. The May Survey of **Macroeconomic Expectations** shows that agents forecast growth of between 1.9 and 2.3 percent for the current year and a range of 2.5 to 3.0 percent for 2024.

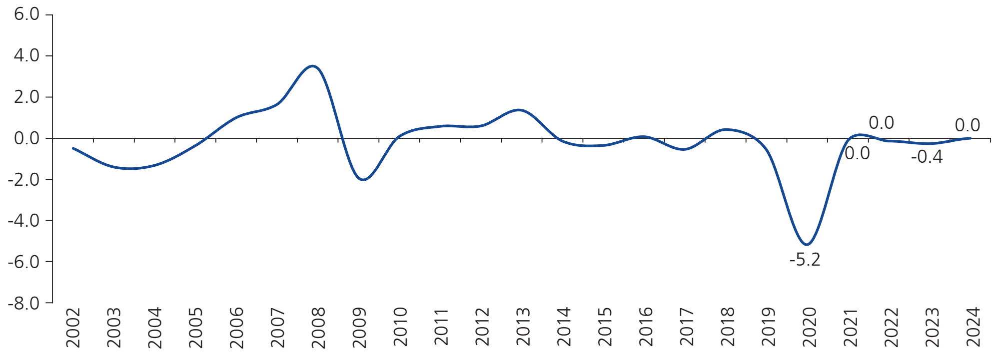
Table 16
**MACROECONOMIC EXPECTATIONS SURVEY: GDP GROWTH**
(% change)

| | IR Dec.22 | IR Mar.23 | IR Jun.23* |
|---|---|---|---|
| **Financial entities** | | | |
| 2023 | 2.3 | 2.2 | 1.9 |
| 2024 | 2.7 | 2.7 | 2.5 |
| **Economic analysts** | | | |
| 2023 | 2.3 | 2.0 | 1.9 |
| 2024 | 2.5 | 2.6 | 2.7 |
| **Non-financial firms** | | | |
| 2023 | 3.0 | 2.6 | 2.3 |
| 2024 | 3.0 | 3.0 | 3.0 |

* Survey conducted on May 31.
Source: BCRP.

41. The **output gap**, calculated as the difference between GDP and potential GDP, is estimated at -0.4 percent in 2023. This gap measures inflationary demand pressures on the level of activity, as potential GDP characterizes the short- and medium-term productive capacity of the economy over the business cycle.

Graph 38
**OUTPUT GAP**
(% of potential GDP)




Source: BCRP.

42. **Private consumption** grew 0.7 percent in the first quarter of 2023 due to the progress in the labor market; however, low consumer confidence due to political uncertainty and the effect of inflation on spending dampened this momentum.

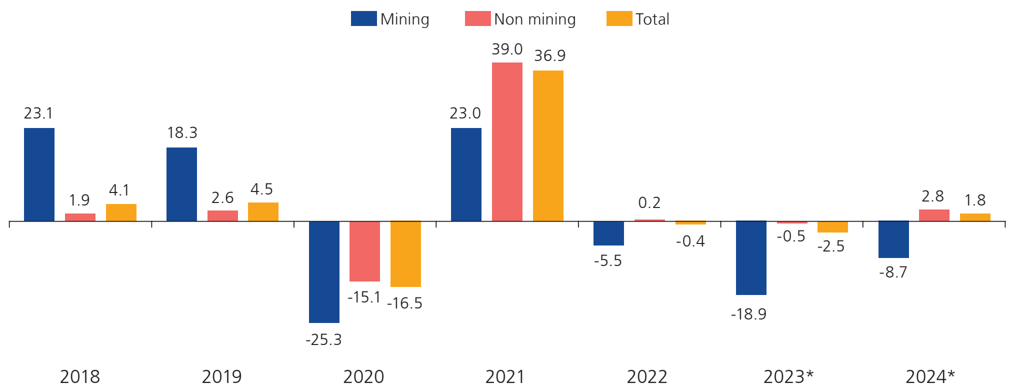
Private consumption is likely to lose some of its dynamism in 2023, once the sources of savings that were available in the course of 2022 have been exhausted. However, consumption is expected to recover from the third quarter of 2023 onwards, once the effects of the social protests have dissipated. Compared to the forecast in the previous report, the projection for private consumption has been reduced from 2.8 to 2.6 percent due to the lower level of real income. The growth forecast of 3.0 percent for 2024 is maintained.

**43.** **Private investment** contracted by 12.0 percent in the first quarter of 2023, a result explained by shutdowns and lower business confidence as a result of social conflicts, as well as by the absence of new mining megaprojects.

Private investment is expected to decline by 2.5 percent in 2023, in a scenario of slowly recovering business confidence, which would negatively affect decisions on new investment projects. In 2024, investment is expected to recover (1.8 percent), mainly due to planned spending in non-mining sectors once socio-political tensions have subsided.

Compared to the March Report, the investment growth forecast for 2023 has been lowered from -0.5 to -2.5 percent, reflecting a slower-than-expected recovery in business confidence and lower execution of mining investments so far this year. The growth forecast for 2024 remains unchanged at 1.8 percent.

Graph 39
**PRIVATE INVESTMENT**
(Real % change)




* Forecast.
Source: BCRP.

a) Investments in the **mining sector** in 2022 totaled US$ 5,364 million, which mainly include the investments of Anglo American Quellaveco (US$ 1,067 million), Antamina (US$ 459 million) and Yanacocha (US$ 422 million). The projection for the 2023-2024 period considers the completion of the construction of the

Quellaveco projects (US$ 5.5 billion of total investment) in 2023. In addition, the San Gabriel construction phase (US$ 0.4 billion) is expected to start in 2023, while the construction phase of the Reposición Antamina project (US$ 2 billion) is expected to start in 2024.

b) In the **non-mining sectors**, progress continues on the expansion of Jorge Chavez International Airport. The second runway and the new control tower will start operations this year. In addition, the construction of the new passenger terminal is in its initial stage, with a delivery date of 2025.

Regarding the modernization of the Callao North Pier, the concessionaire reached an agreement with the government in November 2022 to expand the cargo handling capacity and improve the design of the following phases, which is expected to increase the investment amount from US$ 895 million to US$ 1,208 million. On the other hand, DP World notes that the project to increase the operational capacity of the Bicentennial Pier will commence construction in September 2021, with cumulative progress of 60 percent as of May 2023. The company estimates that the work will be completed in the second quarter of 2024.

Table 17

**MAIN ANNOUNCEMENTS OF PRIVATE INVESTMENT PROJECTS: 2023-2024**

| SECTOR | INVESTOR | PROJECTS |
|---|---|---|
| **MINING** | Yanacocha | Sulfur plant |
| | Antamina | Replacement of Antamina |
| | Chinalco | Expansion of Toromocho Mine |
| | Buenaventura | San Gabriel |
| **HYDROCARBONS** | Cálidda Gas Natural del Peru | Wide-Scale Use of Natural Gas |
| | Promigas Peru | Distribution of Natural Gas |
| **ELECTRICTY** | Huallaga Hydro | Hydropower plant Huallaga I |
| | ISA Peru | 500 kV Mantaro - Carapongo |
| | Luz del Sur | Hydropower plant Santa Teresa II |
| | Hydro Global Peru | Hydropower plant San Gaban III |
| **INDUSTRY** | Siderperu | Plant capacity expansion |
| | Unacem | Environmental Sustainability Program |
| | Arca Continental Lindley | Environmental Sustainability Program |
| **INFRASTRUCTURE OF TRANSPORT** | Consorcio Nuevo Metro de Lima | Line 2 of the Metro network of Lima and Callao |
| | Cosco Shipping Ports Chancay | Chancay I Port Terminal |
| | Lima Airport Partners | Expansion of International Airport (Jorge Chavez) |
| | Shougang Hierro Peru | Marcona Port Terminal |
| | APM Terminals | Modernization of Muelle Norte |
| | DP World Callao | Expansion of Muelle Sur |

Source: Information on companies, newspaper and specialized media.

c) For 2023-2024, **Proinversion** reports a US$ 9.1 billion portfolio of investment projects to be awarded as of February 2023.

Table 18
**MAIN PROJECTS TO BE IMPLEMENTED THROUGH CONCESSION ARRANGEMENTS IN 2023-2024+**
(Million US$)

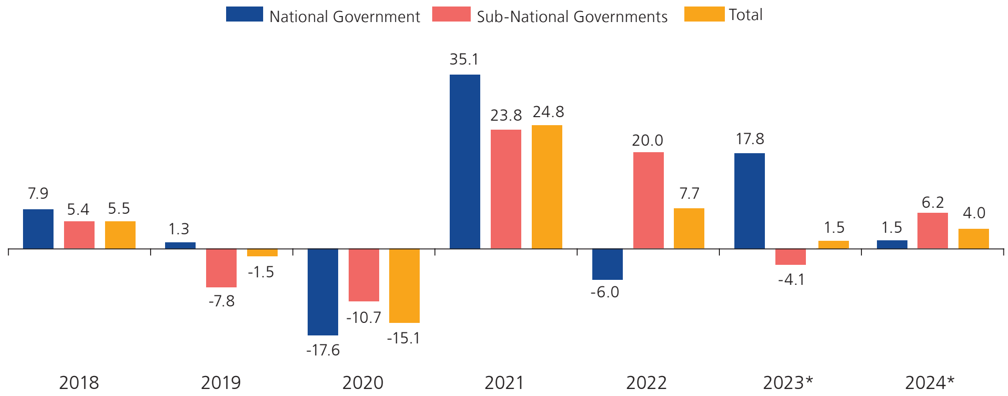
| | Estimated investment |
|---|---|
| **To be called** | **9,100** |
| Peripheral Ring Road | 2,380 |
| Longitudinal of the Sierra road project, Section 4 | 929 |
| Ancon Industrial Park | 762 |
| 500 kV Transmission Line Huanuco –Tocache - Celendín - Trujillo and 500 kV Transmission Line Celendín - Piura link | 611 |
| Headworks and Conduction for the Drinking Water Supply in Lima | 480 |
| New San Juan de Marcona Port Terminal | 410 |
| Essalud Piura and Ancash | 323 |
| Broadband AWS-3 and 2.3 GHz | 267 |
| Huancayo - Huancavelica Railway | 263 |
| Improvement of Tourist Services in the Choquequirao Archeological Park, Cusco-Apurimac Regions | 260 |
| Schools in risk: Metropolitan Lima | 255 |
| National Hospital Hipólito Unanue | 250 |
| 500 kV Transmission Line and Piura Nueva - Frontera Substation | 217 |
| Treatment system for wastewater Huancayo | 172 |
| 220 kV Transmission Line Bealunde Terry - Tarapoto Norte | 164 |
| Schools in Risk: Ate-San Juan de Lurigancho | 140 |
| 220 kV Transmission Line Piura Nueva - Colán | 139 |
| 220 kV Transmission Line Ica - Poroma and 220 kV Transmission Line Caclic - Jaen Norte | 132 |
| IPC- Wastewater Treatment for effluent dumping or reuse - Trujillo | 129 |
| Central Military Hospital | 115 |
| Schools at Risk: Comas - San Martín de Porres | 91 |
| IPC -Wastewater Treatment System for Puerto Maldonado | 88 |
| IPC -Wastewater Treatment for effluent dumping or reuse, Chincha province, Ica, Peru | 73 |
| Schools at Risk: Villa María del Triunfo | 68 |
| High Performance Schools: COAR Centro | 59 |
| Improvement and enlargement of the sewage and wastewater treatment system in Cajamarca | 58 |
| IPC -Wastewater Treatment for effluent dumping or reuse, Cusco | 46 |
| Improvement schools in Cusco | 44 |
| Transmission Line Nueva Carhuaquero and Tumbes Substation | 38 |
| Ilo desalination plant | 37 |
| IPC -Wastewater Treatment for effluent dumping or reuse, Cañete | 34 |
| IPC -Wastewater Treatment for effluent dumping or reuse, Tarapoto | 26 |
| Solid waste Treatment in Minsa | 24 |
| Other | 16 |

Source: Proinversión

**44. Public investment** declined by 1.0 percent year-on-year in the first quarter of 2023 due to lower disbursements by subnational governments, an effect exacerbated by the shutdown of some regions due to social conflicts. The national government increased its capital spending, mainly driven by *Reconstrucciòn con Cambios* projects.

In 2023, public investment is projected to grow by 1.5 percent, higher than forecast in March (1.0 percent). This forecast continues to assume that national government investment growth will be higher than the decline in subnational government investment that is typically observed in the year following local and regional elections. The current baseline scenario incorporates the positive impact of the second part of the *Con Punche Peru* program and the higher investment progress observed so far this year. On the other hand, public investment projections for 2024 remain unchanged at 4.0 percent.

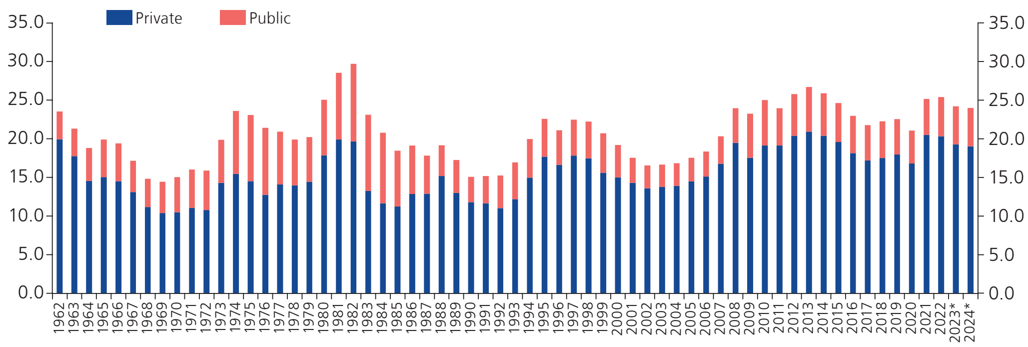
Graph 40
**PUBLIC INVESTMENT**
(Real % change)




Memo: Public investment is made up of investment by the National Government, Subnational Governments and investment by public companies.
* Forecast.
Source: BCRP.

**45.** **Gross fixed investment**, as a percentage of GDP, is expected to decline from 25.3 to 23.8 percent between 2022 and 2023 due to lower private investment. A further contraction of this indicator is expected in 2024, representing 23.4 percent of output in that year. For investment to recover, it is necessary to maintain economic and financial stability, consolidate an adequate business environment, and implement reforms to support the economy's productivity.

Graph 41
**GROSS FIXED INVESTMENT: PRIVATE AND PUBLIC, 1962-2024**
(% of real GDP)

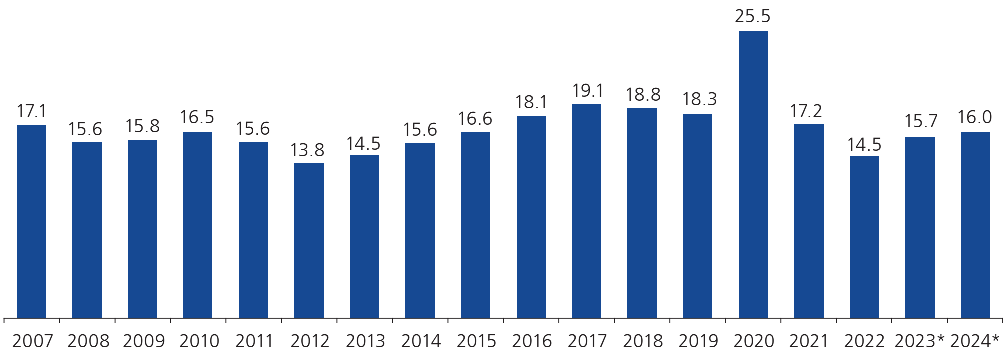



* Forecast.
Source: BCRP.

**46.** **Domestic savings** are projected to rise from 17.9 percent of GDP in 2022 to 18.8 percent in 2023 due to the increase in private savings by 1.2 percentage points of GDP resulting from higher interest rates in the economy. In addition, taking into account the decline in gross domestic investment, external financing requirements would fall from 4.0 to 1.9 percent of GDP this year.

The downward revision in the private savings forecast for 2023 is due to lower income growth relative to consumption growth. This implies lower domestic savings, which will lead to an increase in external financing needs compared to the previous report.

Graph 42
**PRIVATE INVESTMENT: 2007-2024**
(% GDP)




* Forecast.
Source: BCRP.

Table 19
**SAVING-INVESTMENT GAP**
(Accumulated last 4 quarters % of nominal GDP)

| | 2022 | 2023* | | | 2024* | |
|---|---|---|---|---|---|---|
| | | Q1 | IR Mar.23 | IR Jun.23 | IR Mar.23 | IR Jun.23 |
| 1. Domestic Gross Investment 1/ | 22.0 | 21.6 | 21.2 | 20.7 | 21.1 | 20.5 |
| 2. Domestic Saving | 17.9 | 18.7 | 19.8 | 18.8 | 20.3 | 19.3 |
| External Gap (=2-1) | -4.0 | -2.9 | -1.4 | -1.9 | -0.8 | -1.3 |
| 1.1 Private Domestic Gross Investment 1/ | 16.9 | 16.6 | 16.3 | 15.7 | 16.2 | 15.5 |
| 1.2 Private Saving | 14.5 | 15.8 | 16.5 | 15.7 | 16.9 | 16.0 |
| Private Gap (=1.2-1.1) | -2.3 | -0.8 | 0.2 | 0.0 | 0.7 | 0.5 |
| 2.1 Public investment | 5.1 | 5.0 | 4.9 | 5.0 | 5.0 | 5.0 |
| 2.2 Public Saving | 3.4 | 3.0 | 3.3 | 3.1 | 3.4 | 3.2 |
| Public Gap (=2.2-2.1) | -1.7 | -2.1 | -1.6 | -1.9 | -1.5 | -1.8 |

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

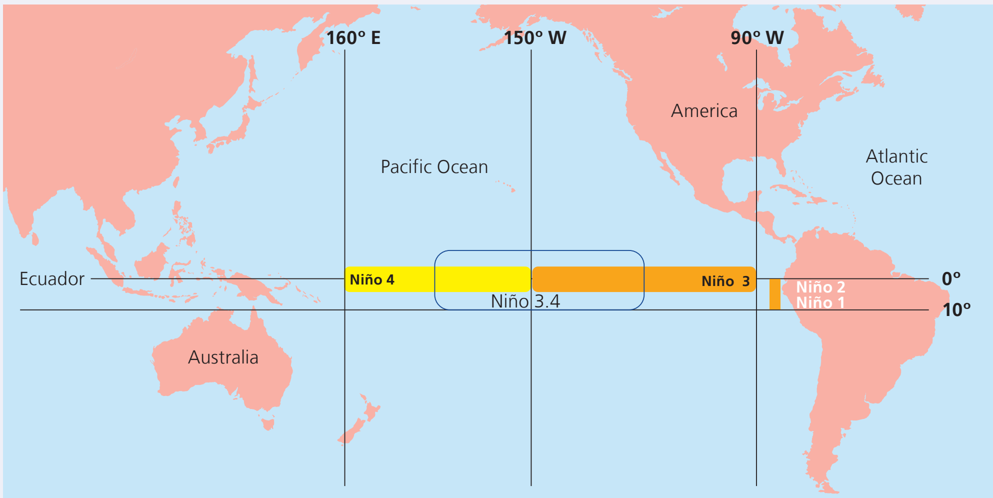
## Box 1
## EL NIÑO EVENT AND ITS IMPACT ON THE PERUVIAN ECONOMY

There are differences between what is known in Peru as the *Fenómeno El Niño* (ENF) and what is known worldwide as El Niño event. The terms "Coastal El Niño" and "Global El Niño" have emerged to reflect this difference. Although both are ocean-atmospheric events that cause a warming of the sea surface temperature, they differ in the distribution of climatic anomalies in the equatorial Pacific, so they do not have the same consequences for all countries.

*El Niño Costero*, or Eastern Pacific El Niño, affects the northern coast of Peru and is characterized by rains and floods in this region. Technically, it is a warming of the sea surface temperature in the Niño 1+2 region located off the northern coast of the country. It is an event characterized by a weakening of the trade winds in the equatorial Pacific, which causes an influx of warm water from the western Pacific, known as warm Kelvin waves[2], which displaces the cold water current that characterizes the Peruvian Sea and increases the sea surface temperature (SENAMHI 2014[3]).

On the other hand, the global El Niño, also known as the El Niño-Southern Oscillation (ENSO), implies a warming of the sea surface temperature in the Niño 3.4 region, in the central Pacific Ocean. This event may not have an impact on the rainfall recorded in Peru, as happened in 2015-2016, when a global El Niño occurred that did not bring extraordinary flooding to the Peruvian coast. This event is the one that has received more attention from the scientific community because its effects are at the global level.

**REGIONS EL NIÑO**




Source: MINAM.

Occasionally, the two events may coincide, as was the case in 1982-1983 and 1997-1998, when both El Niño Costero and the global El Niño converged. These events brought heavy rains and

2 Warm Kelvin waves are subsurface water masses that form in the equatorial Pacific and travel from west to east along the equator at an average speed of 2.5 m/s. (Mosquera 2014).

3 Senamhi (2014). El Fenómeno El Niño en el Perú.

flooding to the northern coast of the country. In fact, both events were extraordinary not only in their intensity, but also in their warming patterns and physical mechanisms (Takahashi, 2017[4]).

### Probabilities of occurrence of El Niño 2023-2024

We are currently experiencing a Coastal El Niño, which, according to the latest communiqué[5] issued by the Multisectoral Commission in charge of the National Study of Fenómeno El Niño (ENFEN), is most likely going to last until summer. Therefore, both the coastal El Niño and the global El Niño are likely to coincide in the summer of 2024.[6]

**PROBABILITIES OF OCCURRENCE OF EL NIÑO EVENT**

| Date | State | Coastal El Niño conditions | FEN probabilities in summer 2024 |
|---|---|---|---|
| January 13 | Inactive | Neutral until autumn.<br>Warming in March is not ruled out. | - |
| February 16 | Inactive | Weak between February and April 2023.<br>A Coastal El Niño is not configured. | - |
| March 1 | Coastal El Niño Surveillance | Weak until mid fall.<br>Arrival of Ondas Kelvin Calidas (OKC) between March and May. | - |
| March 16 | Coastal El Niño Alert | Weak between March and July. | - |
| March 30 | Coastal El Niño Alert | Weak at least until July.<br>El Niño conditions developing. | - |
| April 13 | Coastal El Niño Alert | Moderate until winter.<br>Strong magnitude is not ruled out in April. | - |
| April 28 | Coastal El Niño Alert | Moderate until winter.<br>Strong magnitude is not ruled out in May. | Most likely magnitude: Weak<br>3.4: 65%<br>1+2: 67% |
| May 11 | Coastal El Niño Alert | Strong to moderate until early spring.<br>Maximum sea temperature anomalies in autumn. | Most likely magnitude: Weak<br>3.4: 68%<br>1+2: 66% |
| May 31 | Coastal El Niño Alert | Strong to moderate for fall.<br>Moderate for winter and spring.<br>Conjunction of the Coastal and Global El Niño in the summer of 2024 could bring moderate to heavy rains on the coast and northern highlands. | Most likely magnitude: Weak<br>3.4: 82%<br>1+2: 77%<br><br>Compared to the previous statement, the chances of the event reaching a moderate magnitude in both areas are increasing. |

Source: ENFEN.

### Potential impacts on the economy

From an economic point of view, this type of weather event affects the production of goods and services, which reduces Gross Domestic Product (GDP). In addition, it destroys the capital stock of the economy, which affects the level of potential GDP only once.

The impact depends both on the particular characteristics of each El Niño event[7] and on the conditions facing each sector and the economy in general at the time, which can have a compounding effect.

4 K. Takahashi (2017). El Niño: Global vs Costero. Boletín Técnico - Vol.4 N° 4. Abril del 2017. Instituto Geofísico del Perú.
5 ENFEN (2023). COMUNICADO OFICIAL ENFEN N°08-2023.
6 In addition to ENFEN, the NOAA (National Oceanic and Atmospheric Administration) estimates probabilities of El Niño occurrence in the Central Pacific. On the one hand, NOAA uses the average of monthly ONI (Oceanic Niño Index) forecasts independently generated by its scientists as the midpoint of a historical distribution, while ENFEN uses collegial expert judgment.
7 It is important to note that each El Niño event is unique, as there is no reference pattern for forecasting. ENFEN (2015). Pronóstico probabilístico de la magnitud de El Niño Costero en el verano 2015-2016. NOTA TÉCNICA ENFEN N° 02-2015.

For example, in 1997-1998, in addition to the El Niño event, the country faced the onslaught of the Asian and Russian crises.

In general terms, it is possible to identify the positive and negative impacts on each sector of the economy under the assumption of a warm temperature event that brings more rainfall to the coast:

**EFFECTS OF EL NIÑO AT THE SECTORAL LEVEL**

| | |
|---|---|
| **Agriculture** | - It affects the flowering of fruit trees (such as lemon and mango) due to high temperatures.<br>- Increased presence of pests due to high temperatures.<br>- Loss of crop areas due to the overflow of rivers and the presence of landslides.<br>- Crop tropicalization (the foliage develops to the detriment of the fruit).<br>- Less poultry production (meat and eggs) due to dehydration.<br>- If there are droughts in the Andes, sowings in that region decrease.<br>+ There could be more rice production, if there are no extreme rains.<br>+ Regeneration of dry forests on the north coast. |
| **Fishing** | - Less availability of anchovy due to vertical deepening of the species, displacement to the south and less food (phytoplankton). Likewise, alterations in their reproductive cycle.<br>+ Abundance of other species such as squid, horse mackerel and mackerel. |
| **Primary manufacturing** | - Lower production of fishmeal and fish oil, associated with lower fishing activity. |
| **Mining** | - Loss of connectivity due to the closure of roads and railways, which prevents the transport of supplies and final production.<br>- Problems to carry out the mineral extraction process due to rain and fog. |
| **Non-primary manufacturing** | - Closure of roads slows down production, by preventing the transfer of inputs.<br>- Damage to factories and stoppages.<br>- Lower demand for products, except those whose demand benefits from heat (soaps, deodorants, water, soft drinks, etc.). |
| **Construction** | The net effect in the year could even be zero, since self-construction is reduced in the rainy months and public investment, but then there is a rebound effect in the reconstruction. |
| **Transportation and commerce** | - Limitation of cargo and interprovincial transportation due to damage to roads, which makes trade difficult. |

Source: BCRP and SENAHMI.

### Recorded El Niño impacts

Each El Niño event is different, as evidenced by the impacts that different El Niño events have had on agriculture and fisheries, such as: (i) the 1997-1998 global and coastal El Niño; (ii) the 2015-2016 global El Niño; and (iii) the current coastal El Niño (2023).

*Agriculture and livestock sector*

In **1997 and 1998,** the agricultural sector grew by 4.4 percent and 0.1 percent, respectively. Growth in 1997 resulted from increased agricultural production for both the domestic market (potatoes, rice, lemons, and tomatoes) and foreign markets (grapes, olives, and mangoes), and increased production in the agro-industrial sector (sugar cane) and the livestock sector (poultry and eggs). In 1998, affected by the thermal and rainfall anomalies characteristuc of the El Niño event, activity in the sector slowed down due to a decrease in the production of the same products coming from the coastal region. The impact was reflected in lower yields of fruit trees (lemons and olives) due to reduced flowering, as well as lower production of sugar cane due to tropicalization, of tomatoes due to a greater presence of pests, and of potatoes on the coast due to high temperatures that affected the crop. Rice production also decreased compared to the previous year when there were better conditions (water, temperature and support for the complementary campaign).

During the global El Niño of **2015-2016**, the sector grew by 3.5 and 2.7 percent, respectively. The lower activity in 2016 was related to the water deficit, which reduced production in the Andes (potatoes and starchy maize) and the northern coast (rice and lemons). This feature contrasts with the rainfall anomalies that characterize a coastal El Niño event. On the other hand, there were no high thermal or prolonged weather anomalies, so fruit trees such as mangos and olives had good harvests.

In **March 2023,** the Peruvian coast was affected by a sudden and intense coastal El Niño and by the unusual presence of cyclone Yaku. Both events offset the impact of drought on agriculture, which had left a balance of 0.2 percent lower sector activity (lower production of potatoes, maize, peas and beans, among others). However, the rainfall was so intense that it affected farming activities (interruption of the harvest, postponement of sowing, and damage to cultivated areas). The impact of these rains will be observed until the first half of the year, a period that will also be marked by low poultry activity due to the recovery from the avian flu that occurred at the end of last year.

The occurrence of a global El Niño in the fourth quarter of 2023 would have an impact next year, which would be offset by lower fertilizer prices, a recovery in the poultry sector (due to the avian flu vaccination campaign), and favorable farm-gate prices for products for the domestic market (tubers and vegetables), which had a lower supply this year.

*Fisheries*

In **1997-1998**, the fishing sector contracted by 0.3 percent and 9.7 percent, respectively. A relevant feature of the event in this period is that it was the longest and one of the most intense recorded (Peña, 2019[8]), which was reflected in an abrupt decrease in the biomass of fishery resources by the beginning of 1998. The event became noticeable in the Niño 1+2 zone from the second quarter of 1997.

Nevertheless, anchoveta landings were not severely affected in 1997 (previous years were characterized by negative sea surface temperature anomalies). However, the greatest intensity of the event coincided with the main reproductive period of the resource (August-September) and presented a strong magnitude during the second period of maximum reproductive activity (February-March). As a result, the estimated biomass for 1998 was significantly reduced.

In **2015**, output in the sector grew by 15.9 percent, while in **2016**, it declined by 10.1 percent. The 2015 result was particularly influenced by a base effect, given El Niño Costero and the absence of the second anchoveta fishing season in the North Central Zone the previous year. In that year, landings amounted to 3.8 million MT, higher than the 2.3 million MT recorded in 2014. In 2016, the first season was delayed due to the reduced biomass and it started in the last week of June, with a quota of 1.8 million MT (of which only half was caught). By the second half of the year, the stock showed a rapid recovery with the normalization of sea temperatures, and was estimated at 7.3 million MT. Thus, landings of 2.9 million MT were recorded in 2016.

In **March 2023**, as a result of the presence of a sudden and intense Coastal Niño, the anchoveta stock in the North Central Zone began to retreat to the coast, deepening and moving south. In addition, until April, the population structure consisted mainly of juveniles and a reduced biomass, which led to the maintenance of a fishing ban in May and June. Therefore, even if the first fishing

8 Peña (2019). Eventos El Niño y su impacto en la pesquería de anchoveta en el Perú.

season were to be authorized in the near future, the shorter time available for the exploitation of the resource would imply a lower growth of the sector. Finally, it should also be noted that a global El Niño in the fourth quarter of 2023 –which could last until the summer of 2024– would generate less reproductive activity of the resource, reducing the biomass for the next year.

**Final considerations**

As can be seen, the final impact of an El Niño event in 2024 will depend mainly on: (i) the particular conditions faced by each sector at that time; and (ii) the confluence or not of a coastal and global El Niño in the summer of 2024 and the rainfall or droughts that this will trigger in the different regions of the country.

In any case, we will be able to better predict these events and their magnitudes after the fall, when the barrier to predictability is overcome, as forecasts become more reliable from June onwards.

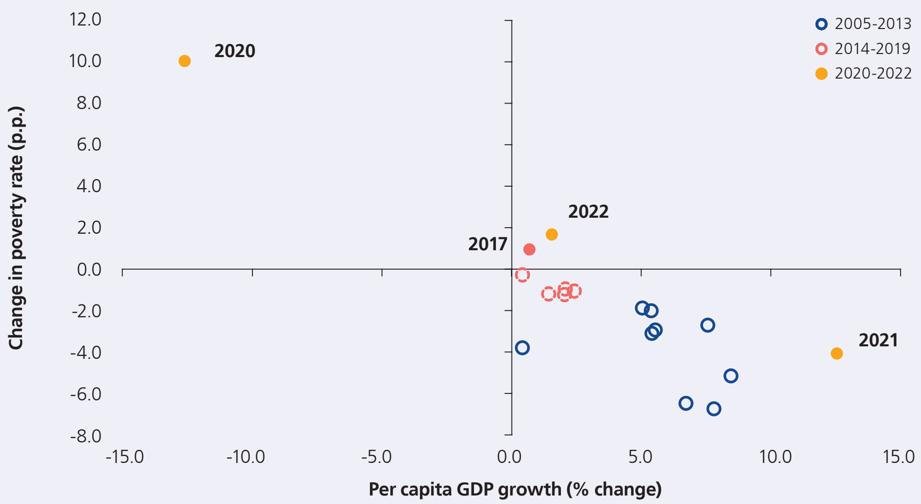
## Box 2
## GROWTH, PRICES AND MONETARY POVERTY IN PERU: 2004-2022

Economic growth is one of the most important drivers of poverty reduction, as it increases the average income of vulnerable families, increases the fiscal space for social policies, and closes gaps in access to basic goods and services[9]. On the other hand, inflation makes the basic food basket more expensive and reduces the real purchasing power of households, which would tend to increase the monetary poverty rate. This box examines the relationship between growth, prices and monetary poverty for the period 2004-2022.

**Poverty trends**

In Peru, the poverty rate fell from 58.7 percent in 2004 to 27.5 percent in 2022. However, three distinct periods can be distinguished. Between 2004 and 2013, GDP per capita grew at an average annual rate of 5.8 percent, and the poverty rate fell by an average of 3.9 percentage points per year. In contrast, between 2013 and 2019, GDP per capita grew at an average annual rate of 1.5 percent, and the poverty rate fell by an average of only 0.6 percentage points per year. With the pandemic, poverty increased again and in 2020 recorded the highest increase in the last two decades (9.9 percentage points), coinciding with a 12.3 percent decline in GDP per capita. The economic recovery in 2021 and 2022 led to a partial reversal of this phenomenon, although the poverty rate in 2022 is still 7.3 percentage points higher than in 2019 and close to the 2011 level.

**PER CAPITA GDP GROWTH AND CHANGE IN ANNUAL MONETARY POVERTY RATE**
(In % and % points, respectively)




Memo: Each point means the annual change in Per capita GDP and poverty rate. Since data on monetary poverty are only available from 2004, the annual changes shown are calculated from 2005 onwards.
Source: INEI and BCRP.

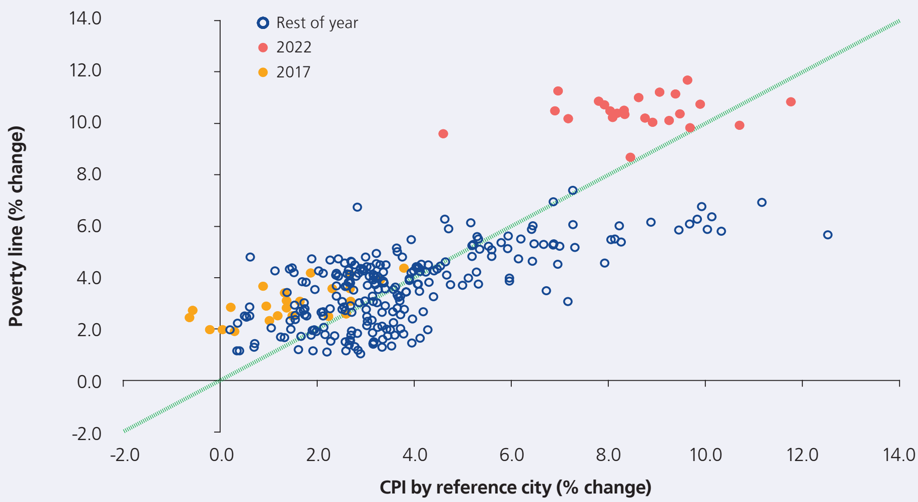
In general, the poverty rate decreases in years when GDP per capita increases. However, in 2017 and 2022, although there was an increase in GDP per capita, the poverty rate increased. Both

9 For a detailed review of the links between growth and poverty, see: Cerra, V.; Lama, R.; and Loayza, N. "Links Between Growth, Inequality, and Poverty" In Cerra, V. et al (2021) "How to achieve inclusive growth", Oxford University Press.

years coincide in that they were periods when there was a large increase in food prices (internal supply shock due to the coastal El Niño event in 2017 and global inflation shock in 2022). Inflation increases the cost of living and leads to an increase in the expenditure level below which a family is considered poor, i.e. the monetary poverty line. This poverty line measures the cost of purchasing a very basic consumption basket (with a food component, whose value is updated according to the prices faced by a reference population[10], and a non-food component, whose value is updated according to the CPI of the country's departments).

In particular, in 2022, the monetary poverty lines by department showed the highest annual increase since records have been kept, and this increase was even higher than the inflation rate recorded in the same year[11] (the average poverty line rose by 9.7 percent, compared to a national inflation rate of 8.6 percent).

**POVERTY LINES AND CPI BY DEPARTMENT, 2011-2022**
(In % points)




Source: INEI.

It should be noted that lower-income households are the most affected by changes in food prices, as a larger share of their expenditure is on food. In 2022, a household in the lowest expenditure quintile spent half the value of its consumption on food, while households in the highest quintile spent only a third.

### Decomposition of the poverty rate into growth, distribution and prices

This section presents an estimate for decomposing the change in the poverty rate into the contributions of economic growth and price increases, using a variant of the method of Kolenikov

10 The reference population is the population considered to be close to poverty prior to the poverty estimation. In 2022, this was the population between 10 and 40 percent of the expenditure distribution.

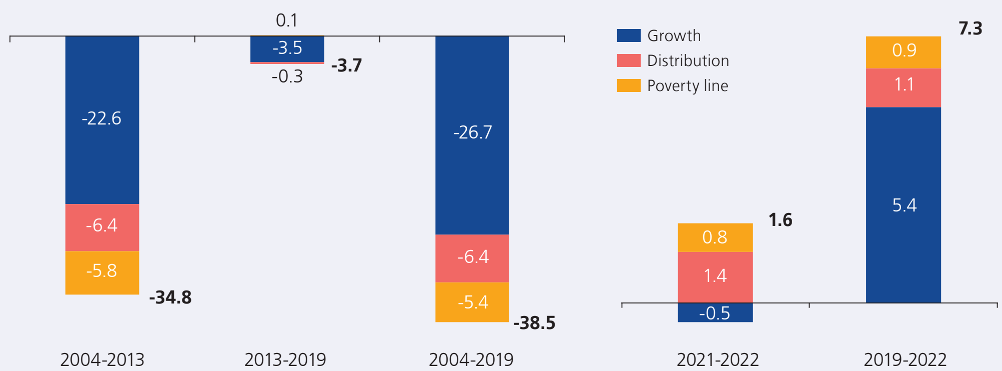
11 For example, in 2022, inflation for food and non-alcoholic beverages in Metropolitan Lima was 15.2 percent, higher than overall inflation (8.5 percent). Goods such as potatoes and sugar, which together account for 11 percent of the food basket used to measure the poverty line, saw their prices increase by 94 percent and 33 percent, respectively.

and Shorrocks (2003)[12]. The method expresses the cumulative distribution function of per capita expenditure in terms of average expenditure, a measure of the distribution of expenditure across families, and the value of the poverty line. It should be noted that this is an analytical exercise that does not isolate the effect of specific policies on the poverty rate.

The difference in this methodology is that both per capita expenditure and the poverty line are expressed in real (deflated) terms. Thus, an increase in the poverty line will only contribute to a higher poverty rate if it is higher than the expenditure deflator. In other words, there will be more poor people if the basic consumption basket (associated with the poverty line) rises faster than the overall prices of the economy.

The results show that the economic growth component (change in average per capita expenditure) is the main factor explaining poverty reduction between 2004 and 2019, with a contribution of 26.7 percentage points (69 percent of the change in the poverty rate in these years). However, the impact of growth on poverty reduction diminishes when comparing 2004-2013 with subsequent years. Between 2004 and 2019, the distributional component also contributed to poverty reduction, albeit to a lesser extent, suggesting that the distribution of expenditure became more equitable as average expenditure increased.

**DECOMPOSITION OF THE CHANGE IN THE POVERTY RATE: GROWTH, DISTRIBUTION AND INFLATION**
(In % points)




Source: INEI.

Since the average real household expenditure in 2022 is still below the 2019 level (9.2 percent on average), the effect of growth is to increase the poverty rate in the period 2019-2022. In addition to this effect, the distributional component also contributes to the increase in poverty. This is related to the fact that between 2021 and 2022, the lower deciles experienced a decrease in their per capita expenditure (-2.9 percent in the bottom decile of expenditure), while the upper deciles experienced an increase (2.2 percent in the top decile). However, there is also an increase due to the effect of the higher cost of the basic consumption basket, which rose faster than the overall price level in most of Peru's departments between 2021 and 2022.

12 Kolenikov, S. and Shorrocks, A. (2003) A decomposition analysis of regional poverty in Russia. WIDER discussion paper.

## Analysis of the impact of income growth on poverty

As inflationary pressures ease, the gradual return of inflation to the target range will reduce the impact of the cost of living component on the incidence of monetary poverty. Subsequently, economic growth is expected to become more important in relative terms. In particular, to the extent that increased economic activity leads to more sources of labor and non-labor income, poverty could be reduced more rapidly.

The Azevedo et al. (2012) method[13] allows us to relate poverty to different sources of income, also taking into account the income earners in each family. It does this by using counterfactual distributions to calculate what the monetary poverty rate would have been if only one source of income had varied while the rest remained constant. This requires linking per capita expenditure to income sources through  with income sources through the following accounting structure:

$$g = b * y = b * [\frac{n_A}{n}(\frac{n_E}{n_A}\bar{y}_e^L + \bar{y}_A^{NL})]$$

Where $b$ is the average ratio of real per capita expenditure to real per capita income, and $y$ is the real per capita income. For its part, per capita income is equivalent to the non-labor income received by the adults in the household plus the labor income received by the employed adults in the household. In this sense, $\bar{y}_A^{NL}$ is the average real non-labor income of the adults, $\bar{y}_e^L$ is the average real labor income of the employed adults, $(n_E/n_A)$ is the ratio of employed adults to non-employed adults, and $(n_A/n)$ is the ratio of adults over total household members. For the purposes of this analysis, average non-labor income $(\bar{y}_A^{NL})$ is disaggregated into the sum of public transfers and other non-labor income.

The results show that labor income and other non-labor income (incomes, rents, extraordinary income), as well as the percentage of working adults in the household, played an important role in reducing monetary poverty between 2004 and 2019 (77 percent of the poverty reduction), which can be linked to economic growth, in line with the evidence presented earlier. Similarly, the higher proportion of adults with income in the household contributed to the reduction in the poverty rate (19 percent of the poverty reduction), suggesting that there was some exploitation of the demographic dividend among the poorest households.

### DECOMPOSITION OF THE CHANGE IN THE POVERTY RATE BY INCOME SOURCE

(In % points)

| | Pre-pandemic | | | Pandemic | | | |
|---|---|---|---|---|---|---|---|
| | 2004-2013 | 2013-2019 | 2004-2019 | 2019-2020 | 2020-2021 | 2021-2022 | 2019-2022 |
| Average expense/income ratio ($b$) | 0.0 | 1.5 | **1.5** | -2.7 | 4.4 | 0.2 | **1.8** |
| Adult ratio ($n_A/n$) | -6.7 | -0.8 | **-7.5** | 1.0 | -0.4 | 0.0 | **0.9** |
| Ratio of employed adults ($n_E/n_A$) | -4.0 | 0.5 | **-3.3** | 5.6 | -3.4 | -0.4 | **1.9** |
| Employment income ($\bar{y}_e^L$) | -16.8 | -2.5 | **-19.1** | 9.0 | -5.2 | -1.5 | **1.6** |
| Non-employment income ($\bar{y}_A^{NL}$) | | | | | | | |
| - Public transfers | -2.7 | 0.0 | **-2.7** | -2.2 | 0.4 | 1.7 | **0.0** |
| - Other non-work income | -4.5 | -2.4 | **-7.4** | -0.8 | 0.0 | 1.7 | **1.1** |
| **Total change** | **-34.8** | **-3.7** | **-38.5** | **9.9** | **-4.3** | **1.6** | **7.3** |

Memo: All incomes and expenditures are in real terms. The sum of the contributions by sub-periods does not necessarily coincide with the change in contribution for the whole period because a different ratio of average expenditure to income is used in the analysis.

13 Azevedo, J. P.; Sanfelice, V.; and Nguyen, M. C. (2012) "Shapley Decomposition by Components of a Welfare Aggregate," MPRA Paper 85584, University Library of Munich, Germany.

However, between 2019 and 2022, labor income had an impact on increasing poverty. In 2022, the bottom income quintile (20 percent of people with the lowest total per capita income) in Peru still had a real per capita labor income about 8.4 percent below pre-pandemic levels, while the penultimate quintile had a lag of 11.2 percent.

Public cash transfers (which include social programs as well as government pandemic bonuses) managed to keep a group of vulnerable households out of poverty between 2019 and 2020: without them, the poverty rate would have been 2.2 percentage points higher between those years. However, once the transfers because of the COVID-19 public health emergency stopped, the effect disappeared, so the contribution between 2019 and 2022 was zero.[14] In the future, transfers could play a temporary supportive role for the vulnerable population, but they should be targeted and limited to maximize their efficiency[15] and take into account their impact on fiscal sustainability.

In general, in order to accelerate poverty reduction, even below pre-pandemic levels, it is necessary to maintain macroeconomic stability conducive to increased investment and job creation, especially quality jobs that raise the incomes of the most vulnerable households.

14 Between 2020 and 2022, there was a 2.1 percentage point rise in poverty due to the withdrawal of government bonds.

15 For example, in the case of the 2022 Bono Alimentario, only 57 percent of the people living in a household that received the benefit belonged to the two lowest quintiles of per capita income according to ENAHO. Something similar happened with the Bono Yanapay in 2021, where the percentage drops to 46 percent. This implies that there were additional resources that could have been targeted to the most vulnerable population.

**Box 3**
**BUSINESS CONFIDENCE**
**AND ECONOMIC ACTIVITY**

Economic agents' optimistic or pessimistic attitudes about the economy are an important determinant of the business cycle. This is because these attitudes influence their decisions regarding the intensity of capital use, labor demand and production. In the same way, the confidence of these agents also influences their propensity to invest or make new business plans (Angeletos and Lian, 2022 ).[16]

In Peru, the BCRP measures these changes in attitudes through the Survey of Macroeconomic Expectations. This survey includes a module of questions on business confidence. Based on this information, several confidence indicators are constructed that reflect the subjective perception of business people about the economy, their sector and their company, in a 3- and 12-month horizon, and whose historical series are reported since April 2002 (see BCRP 2011).[17]

The dynamic properties and predictive power of such business confidence or sentiment indices have been studied in the academic and applied literature. Such indicators have been found to provide early signals of turning points in economic activity (Bachnmann and Sims, 2011, Dees 2018; Angeletos et al. 2018)[18]. In Peru, Box 1 of the December 2016 Inflation Report (hereafter BCRP 2016) documents that business confidence shocks make an important contribution to explaining the business cycle behavior of investment and its fluctuations over time[19]. Sanchez and Vassallo (2023) also show consistent estimates of the importance of business confidence in explaining investment fluctuations.[20]

16 Angeletos, George-Marios and Chen Lian, 2022. Confidence and the Propagation of Demand Shocks. Review of Economic Studies 89, 1085-1119.

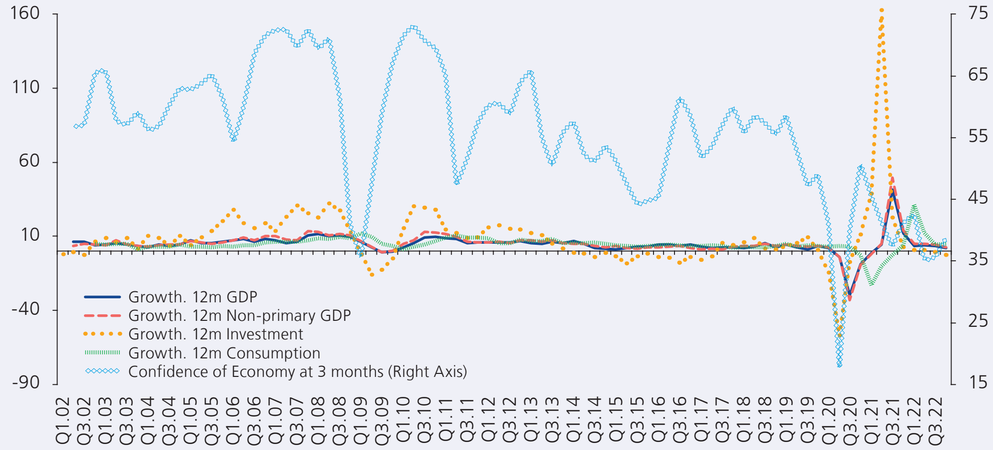
17 The diffusion indices calculated by the BCRP are based on the OECD methodology (Business Tendency Surveys: A Handbook) and are calculated as the percentage of those who expect a better situation (M) minus the percentage of those who expect a worse situation (P) plus 1 and this result is multiplied by 50. Thus, the index is centered on 50, which implies a neutral position; if the percentage of favorable responses is higher than the percentage of unfavorable ones, the index will be above 50, indicating a positive situation; and finally, when the percentage of unfavorable responses is higher, the index is below 50, which implies a negative situation. See: BCRP, 2011. Metodología de la Encuesta de Expectativas Macroeconómicas del BCRP. Notas de Estudios del BCRP No. 35 - July 12, 2011.

18 Bachnmann, R and Sims, E (2011). News shocks and business cycles. Journal of Monetary Economics 58(3), pp 273-289.
Dees, Stéphane 2017. The role of confidence shocks in business cycles and their global dimension. International Economics 151 48-65.
Angeletos, George-Marios, Fabrice Collard, and Harris Dellas, 2018. Quantifying Confidence. Econometrica, Econometric Society, vol. 86(5).

19 A business confidence shock is a change in the confidence index that is independent of the effect on other macro variables included in the estimate. BCRP 2016 reports that 18 percent of the variability in investment is explained by business confidence shocks. See: BCRP, 2016. Inflation Report December 2016. Box: Business Confidence and Private Investment In Peru.

20 Sanchez and Vassallo (2023) document that for the period 2003 -2019, on average, 65 percent of variability in investment is explained by shocks to business expectations. Sanchez, W. and R. Vassallo, 2023. "Business expectations and private investment in Peru: a non-linear analysis for the period 2003-2019."

**CONSUMPTION, INVESTMENT, GDP, NON-PRIMARY GDP, AND 3-MONTH ECONOMIC CONFIDENCE INDEX**




Source: BCRP.

This box updates and extends the empirical results presented in BCRP 2016 and examines the relationship between the business confidence indicator and the macroeconomic variables of consumption, investment, nonprimary GDP and total GDP. As shown in the graph above and the table below, there is empirical evidence of a positive correlation between the 3-month business confidence indicator and the year-on-year growth rate of gross domestic product, consumption and investment. These correlations are even stronger when the COVID-19 pandemic period (2020-2022) is excluded.

**CORRELATIONS WITH THE CONFIDENCE INDEX (3-MONTH ECONOMY)**

| | Period 2002Q2-2022Q4 | Pre-pandemic period: 2002Q2-2019Q4 |
|---|---|---|
| Growth. 12m GDP | 0.38 | 0.59 |
| Growth. 12m Non-primary GDP | 0.38 | 0.68 |
| Growth. 12m Investment | 0.25 | 0.61 |
| Growth. 12m Consumption | 0.39 | 0.54 |

Note: Quarterly information for the period 2002Q2-2022Q4. 12m. growth refers to year-over-year percentage change.

Changes in business confidence can generally be attributed to a variety of domestic and international factors. For example, changes in the ease of doing business in the domestic economy, predictable changes in economic policy, changes in international uncertainty, expected news about the state of the economy, or independent (or idiosyncratic) changes in business sentiment.

To identify the latter effects and to assess the impact of changes in business confidence on activity variables, a structural vector autoregression (SVAR) is estimated. This SVAR includes an exogenous block associated with international variables that do not depend on the Peruvian economy (such as the terms of trade) and an endogenous block composed of Peruvian economic variables (domestic) relevant to this exercise[21]. The estimation was carried out

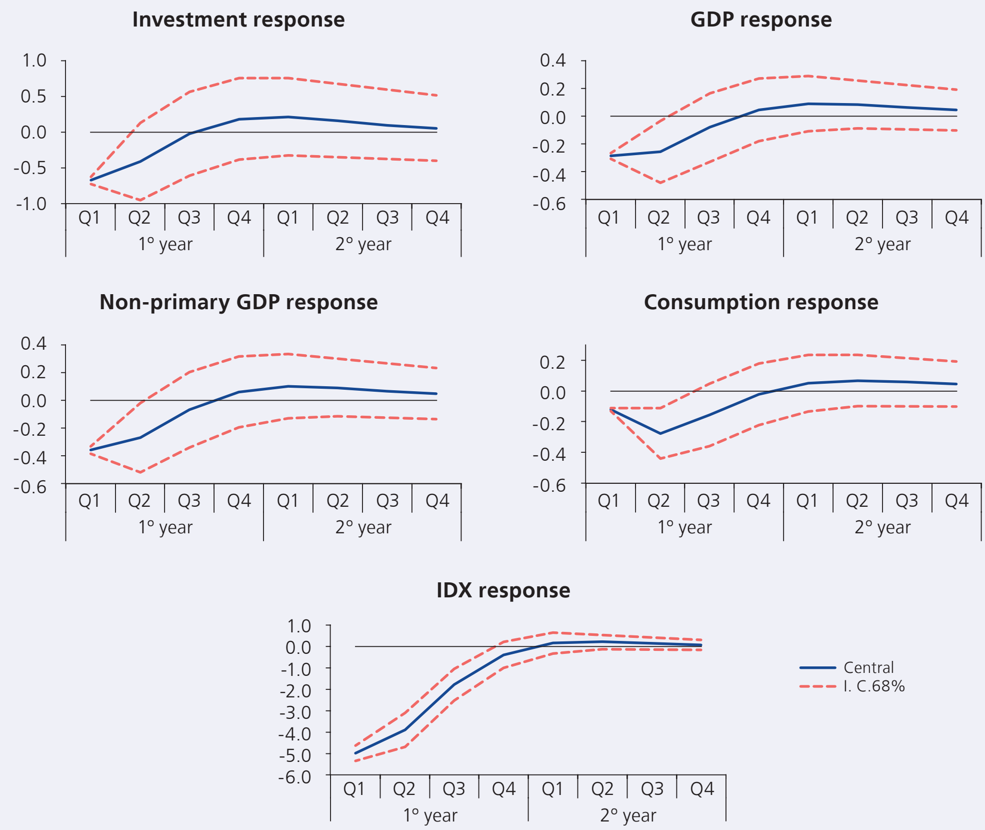
21 These are private investment, GDP, nonprimary GDP, consumption, 1-year GDP growth expectations of non-financial corporations, and the 3-month business confidence index for the economy.

with quarterly information between the second quarter of 2002 and the fourth quarter of 2019.

The following graph shows the simulation of the effects of 5 percentage point drop in the business confidence index for the economy in three months, a drop that is independent of the dynamics of the rest of variables in the system (not anticipated). It is observed that after this contraction, the confidence index recovers in about 4 quarters.

For their part, the responses of GDP year-on-year growth, nonprimary GDP growth, consumption and investment are estimated to be transitory, although with a duration of up to 2 years. Likewise, the impact of this shock on all these variables of the model occurs in the same quarter in which the shock occurs. It should be noted that private investment is the most affected variable, given its more volatile nature, while private consumption reacts in the same direction, but with a smaller magnitude. A reduction of 5 percentage points in the business confidence index (3-month economy) in the first quarter reduces consumption by 0.12 percent, GDP by 0.29 percent, nonprimary GDP by 0.36 percent, and investment by 0.68 percent (deviations from their trends). The maximum impact on consumption occurs in the second quarter when it is reduced by 0.28 percent. These responses are statistically significant for the first 2 quarters.

**SVAR: UNEXPECTED 5 PERCENTAGE POINT DROP IN BUSINESS CONFIDENCE INDEX FOR THE 3-MONTH ECONOMY**




Where IDX is the 3-month business confidence index for the economy.

**IMPACT OF UNEXPECTED REDUCTION OF 5 PERCENTAGE POINTS IN THE BUSINESS CONFIDENCE INDEX FOR THE 3-MONTH ECONOMY**
(%)

| | Impact after ... | | | | Maximum Impact | |
|---|---|---|---|---|---|---|
| **Variable** | **1 Quarter** | **2 Quarter** | **1 Year** | **2 Years** | **Magnitude** | **Quarter** |
| GDP | -0.29 | -0.26 | 0.05 | 0.05 | -0.29 | 1 |
| Non-primary GDP | -0.36 | -0.27 | 0.06 | 0.05 | -0.36 | 1 |
| Investment | -0.68 | -0.41 | 0.19 | 0.06 | -0.68 | 1 |
| Consumption | -0.12 | -0.28 | -0.02 | 0.05 | -0.28 | 2 |

**Note:** Sample 2002Q3-2019Q4. Recursive SVAR model with 1 time lag including terms of trade, investment, GDP, non-primary GDP, consumption, GDP growth expectations 1 year ahead, 3-month economic confidence indicator. The terms of trade are modeled as an exogenous block in the system. The identification scheme restricts the long-run response of system variables to business confidence shocks to zero. The red bands represent a 68 percent confidence level (equivalent to +/- one standard deviation in a normal distribution). The shock to the business confidence index occurs in the first quarter.

The presented estimates of exogenous changes in business confidence are important at the macroeconomic level. This is because economic policy decisions generally take into account the structural and conjunctural events facing the business sector. Clearly, a good real-time picture of the prevailing demand conditions in the economy is fundamental to assessing the degree of inflationary pressure. For this reason, business surveys are a relevant source of information for the BCRP's analysis and monetary policy formulation.

In light of the results presented above, there is statistical evidence indicating that fluctuations in business confidence are relevant in explaining the evolution of economic activity. In fact, the current context of greater uncertainty at the domestic level with respect to the past decade has a significant impact on GDP growth, over and above other economic policy measures, such as monetary policy, whose objective is to stabilize inflation and thus create a favorable environment for sustainable medium-term growth. Thus, restoring business confidence will be fundamental to achieving such growth.

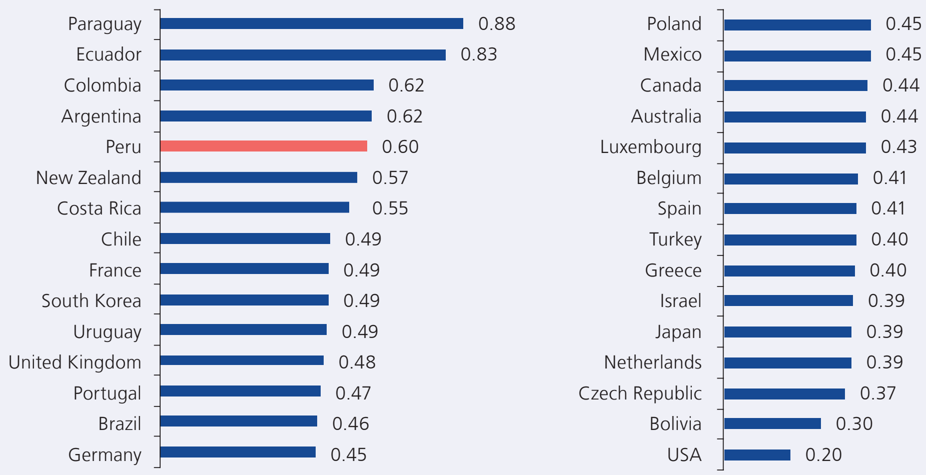
## Box 4
## EMPLOYMENT AROUND THE MINIMUM WAGE: MAIN CHARACTERISTICS OF FORMAL AND INFORMAL JOBS IN PERU

The minimum wage, or minimum living wage (MLW), is intended to guarantee a minimum income for workers. However, if it is set at a very high level, it could reduce employment and the competitiveness of enterprises, as well as increase labor informality and the general price level. Adjustments to the MLW impact mostly on workers who receive remuneration close to the minimum wage level, so it is important to know this group of workers.

**The relative level of the minimum wage**

A level of the MLW close to the average income means that low-productivity enterprises or activities would be less viable. Therefore, fewer workers are likely to be formally employed. This, in turn, would lead to greater informality of work, fewer social benefits and fewer employment opportunities for less skilled and less productive workers, so an adequate minimum wage, which would mitigate the distortions it could create in the labor market, would be sufficiently distant from the average income. In Peru, the MLW of S/ 1,025, effective from May 1, 2022, represented 60 percent of the average income in 2022. This percentage is higher than that observed in Chile, Mexico and other countries of the Organization for Economic Cooperation and Development (OECD)[22] and is the highest value recorded in the last 10 years (the ratio has fluctuated between 50 and 60 percent between 2013 and 2022).

**MINIMUM WAGE AS A PERCENTAGE OF MEDIAN INCOME ***



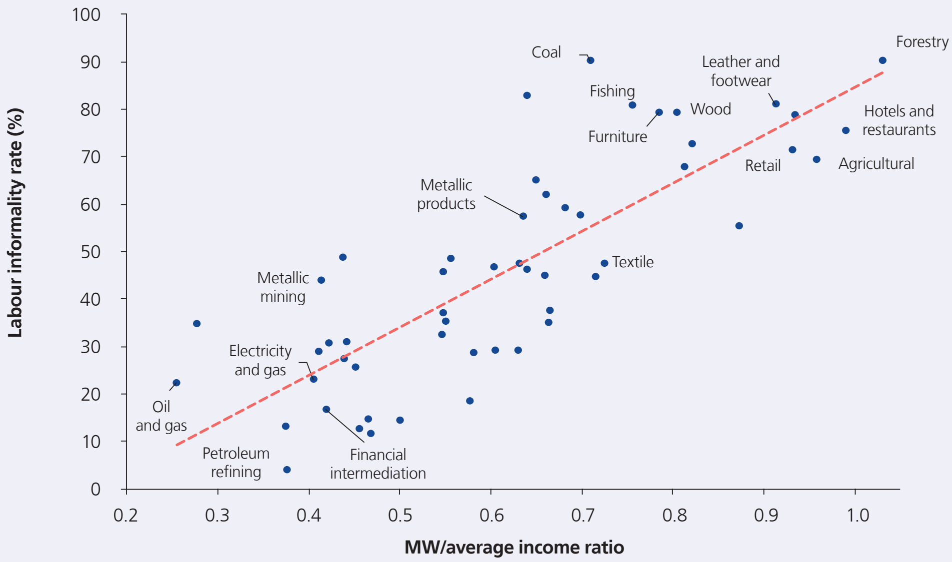

* Information as of 2021, except for Peru (2022) and Uruguay (2020). For OECD countries, the median income corresponds to a full-time worker, while for the rest of the countries in the region it corresponds to dependent workers. For the rest of the countries in the region, the average income corresponds to a full-time worker, while for the rest of the countries in the region it corresponds to dependent workers. In Peru, the average income comes from the main job of a dependent worker working 40 hours or more per week.
Source: OECD, ILO, INEI (ENAHO).

In the country, data show that labor informality is higher in those sectors where the minimum wage is relatively higher than the average income of the sector. According to the National Household Survey (ENAHO), those sectors where the MLW represents a higher proportion of the average

22 If we look at the median income of a 40-hour worker, Peru's MLW ratio is 79 percent. It is among the highest in the OECD, below only Costa Rica and Colombia.

income are associated with a higher rate of labor informality, as can be seen in the retail trade or hotel and restaurant sectors, for example.

**RELATIONSHIP BETWEEN LABOUR INFORMALITY AND MINIMUM WAGE /AVERAGE INCOME RATIO**




Memo: Income is derived from the main job of a dependent worker who logs 40 or more hours of work per week. The informality rate for each of the 53 sectors shown in the graph is calculated on the basis of dependent workers working 40 hours or more per week. The graph excludes outliers for both the labour informality rate and the RMV/average income ratio (5 sectors in total). Outliers are defined as those below the 1st percentile or above the 99th percentile for each of these variables. The sectors with outlier informality rates, according to the 2-digit International Standard Industrial Classification (ISIC, revision 3), were: mining of uranium and thorium metals; manufacture of office, accounting and computing machinery; and recycling. The sector with an outlier MW/average income ratio was offshore organisations and bodies. The sector with outliers for both the informality rate and the RMV/average income ratio was activities of private households as employers of domestic staff.
Source: ENAHO 2019-2022.

In a context of higher informality rates[23] than the historical average[24], adjusting the MLW should take into account its possible undesired effects on the labor market if it is not accompanied by similar increases in productivity. Moreover, Castellares, Ghurra, and Toma (2022) estimate that a 10 percent increase in the MLW would increase inflation by 0.73 percentage points after one year.[25]

**Characteristics of workers with earnings around the MLW**

Adjustments to the minimum wage should take into account the characteristics of formal and informal workers with labor income around the minimum wage, as this group of workers would be most affected by increases in the MLW. Based on information from ENAHO, we compare below various characteristics of formal and informal dependent workers who work more than 40 hours per week and earn 0.9 and 1.2 times the minimum wage in 2022 (between S/ 922.5 and S/ 1,230). This

23 This box uses the INEI's definition of informal employment, which includes: (i) employers and self-employed workers whose productive unit belongs to the informal sector; (ii) employees without social security coverage provided by their employer; (iii) unpaid family workers, regardless of the formal or informal nature of the productive unit in which they work.

24 In 2022, the informality rate was 75.7 percent, lower than the 76.8 percent recorded in 2021, but higher than the 10-year average (73.7 percent).

25 Castellares, R., Ghurra, O., and Toma, H. (2022). Efectos del salario mínimo en los precios y en el poder de compra de los hogares. Documento de Trabajo 004-2022. Banco Central de Reserva del Perú.

group, comprising 1.5 million people, represents 26 percent of all dependent employees working 40 hours or more (5.8 million people).[26]

Demographically, the **age** distribution shows some heterogeneity. For example, almost a third (31 percent) of informal workers with wages close to the MLW are under 25 years old, compared to 17 percent in the case of formal workers. On the other hand, the proportion of workers aged over 45 with a wage close to the MLW is higher among formal workers (28 percent), as opposed to 17 percent among informal workers[27]. In terms of **education**, about 60 percent of both formal and informal workers with earnings around the MLW have completed secondary school. However, in the case of formal workers, 24 percent have higher education, compared to 15 percent of informal workers. On the other hand, 20 percent of informal workers have only completed primary school, compared to 13 percent of formal workers. These results suggest that education may play an important role in determining the formality of employment[28]. Thus, workers with higher levels of education may be more likely to obtain formal employment because they have more skills and competencies acquired through higher education compared to their informal counterparts, which increases their productivity and makes them more attractive to formal employers.

The average **number of hours worked per week** is similar for both groups, at 51 hours for formal workers and 53 hours for informal workers. However, differences are observed in the segment of workers who work 49 hours or more per week (45 percent for informal workers and 28 percent for formal workers). Moreover, although the **average hourly wage** is similar (S/ 21 for formal workers compared to S/ 20 for informal workers), as would be expected given the convergence of the reference groups around the minimum wage, it is observed that for both formal and informal workers, the hourly wage is lower for those who work more than 49 hours per week compared to those who work between 40 and 48 hours.

In the segment studied, formal workers tend to stay in their main **job for more years** (5 years) than informal workers (2 years), which suggests that the formal sector offers greater job stability than the informal sector. This stability is related to job security. For example, formal workers tend to have employment contracts (75 percent of informal workers do not have a contract). Formal workers enjoy labor rights and social protection, which creates incentives for them to stay in their jobs.

It is worth noting that the results show that the majority of formal workers (61 percent) work in large enterprises, while the majority of informal workers (68 percent) work in **MSEs**. This is consistent with what was mentioned earlier, as smaller firms tend to be those with less capacity to comply with labor and social security regulations. Therefore, since informal employment with wages close to the MLW is mainly concentrated in MSEs, an increase in the minimum wage would have an impact on their costs.

There are even greater disparities between formal and informal workers in terms of **access to social security**. For example, while all formal workers are covered by some type of health insurance,

26 The economically active population is 17.8 million people, of which 8.4 million are dependent workers. Workers earning around the minimum wage represent 9 percent of the employed EAP.

27 The average income of workers over 45 years of age who are paid around the MLW is S/1,052 for formal workers and S/1,037 for informal workers.

28 Perry, G.; Maloney, W.; Arias, O.; Fajnzylber, P.; Mason, A.; Saavedra-Chanduvi, J. (2007). Informality: Exit and Exclusion. World Bank Latin American and Caribbean Studies.

which is consistent with the definition of informality used (96 percent of them are covered by EsSalud and 4 percent by Seguro Integral de Salud - SIS or other insurance programs), 30 percent of informal workers are not covered by any type of insurance, although 60 percent are covered by SIS and 4 percent by EsSalud[29]. On the other hand, 97 percent of formal workers are affiliated to the pension system, compared to only 24 percent of their informal counterparts. This difference is even more pronounced when we look at the frequency of contributions, since only 10 percent of informal workers are affiliated to the pension system and have made a contribution in the last 12 months. All this reflects one of the main disadvantages of informality: the lack of access to social protection.

### CHARACTERIZATION OF WORKERS EARNING CLOSE TO THE MINIMUM WAGE

| | Formals | Informals |
|---|---|---|
| **1. Average age** | **37** | **33** |
| Less than 25 | 17% | 31% |
| From 25 to 44 years | 55% | 52% |
| More than 45 | 28% | 17% |
| **2. Men (%)** | **56%** | **60%** |
| **3. Educational level completed** | | |
| Primary | 13% | 20% |
| Secondary | 60% | 59% |
| Superior | 24% | 15% |
| **4. Average monthly income (S/)** | **1 052** | **1 036** |
| 25th percentile | 988 | 958 |
| 50th percentile | 1 030 | 1 030 |
| 75th percentile | 1 108 | 1 090 |
| 90th percentile | 1 200 | 1 200 |
| **5. Weekly hours worked** | **51** | **53** |
| 40 to 49 hours | 72% | 55% |
| 50 to 59 hours | 28% | 45% |
| **6. Income per hour (S/)** | **21** | **20** |
| 40 to 49 hours | 23 | 23 |
| 50 to 59 hours | 17 | 17 |
| **7. Average time in main occupation (years)** | **5** | **2** |
| **8. Company size** | | |
| MYPE | 15% | 68% |
| Median | 24% | 14% |
| Big | 61% | 17% |
| **9. Type of contract** | | |
| Undefined | 19% | 0% |
| Fixed term | 73% | 14% |
| Without contract | 3% | 75% |
| Other 1/ | 5% | 10% |
| **10. Affiliation to any health insurance** | | |
| ESSALUD | 96% | 4% |
| Seguro Integral de Salud (SIS) or others | 4% | 66% |
| Not affiliated | 0% | 30% |
| **11. Affiliation to the pension system (AFP / ONP)** | **97%** | **24%** |
| Contributed in the last 12 months | 92% | 10% |
| Did not contribute in the last 12 months | 4% | 14% |
| **12. Financial inclusion (% of workers with access to:)** | | |
| Savings account or salary account | 95% | 52% |
| CTS | 15% | 1% |

1/ Mainly includes probationary workers, youth work training agreements or pre-professional internships, service contracts, and the CAS regime. The statistics presented only include dependent workers (formal and informal) who earned between 0.9 and 1.2 times the minimum wage and worked 40 hours or more per week in 2022. In total, this number of workers amounted to 1.5 million, of which 958 thousand (63.1 per cent) were informal. Firm size was approximated by the number of workers (2 to 10 workers for MSEs, 11 to 50 workers for medium-sized firms and 51 to more workers for large firms).
Source: ENAHO.

Finally, the results show that **financial inclusion** is higher among formal workers. For example, 95 percent of them have a savings or payroll account, compared to 52 percent of informal workers. This

29 The percentage of informal workers enrolled in EsSalud could be related to affiliation with a previous employer or to the status of a family member enrolled in EsSalud as a beneficiary.

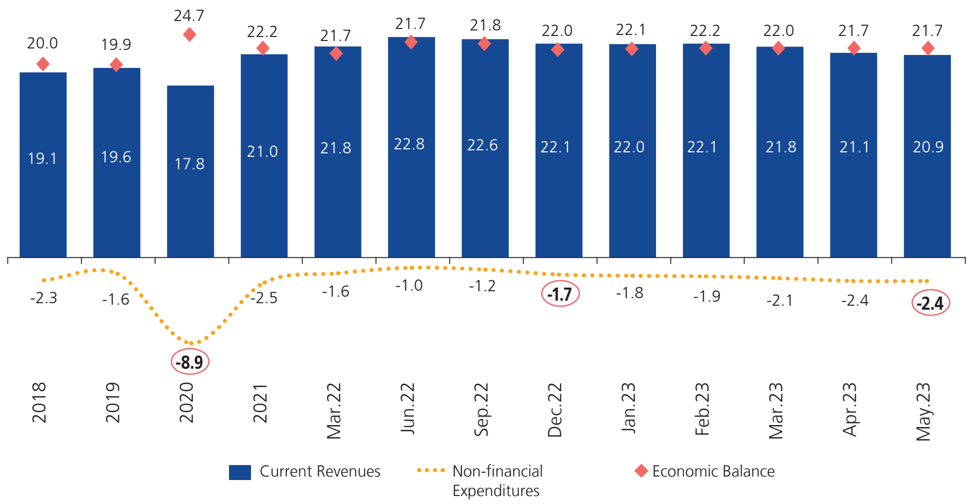
could limit informal workers' access to other financial services, such as credit, which could help them improve their living conditions and smooth their consumption patterns to avoid falling into poverty. Finally, lack of access to financial services can make informal workers more vulnerable to economic shocks and less able to plan and prepare for the future.

In Peru, 21 percent of dependent workers who work 40 or more hours per week are paid below the minimum wage (6 percent of formal workers and 35 percent of informal workers).

# IV. Public finances

47. Between December 2022 and May 2023, the cumulative budget deficit over the last twelve months increased from 1.7 to 2.4 percent of GDP. This increase was mainly due to lower general government current revenues, especially tax revenues. To a lesser extent, lower general government capital revenues and higher interest payments on external debt contributed to this increase as well.

Graph 43
**ECONOMIC BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2018-2023**
(Accumulated last 12 months - % GDP)




Memo: The economic balance is calculated as current revenues - non-financial expenditure + others (capital income and primary result of state-owned companies) – payment of debt service.
Source: MEF, SUNAT and BCRP.

The decline in current income as a percentage of output was mainly due to lower tax revenues of the national government and, to a lesser extent, to the contraction of non-tax revenues. The decline in tax revenues is explained by the lower dynamism of domestic demand, the correction of export mineral prices and tax relief measures. In terms of components, lower income tax collections were recorded, mainly due to regularization, as well as the value added tax (VAT) applied to imports. On the other hand, non-tax revenues were lower due to a lower collection of *canon*, oil and gas royalties, and mining royalties.

Non-financial expenditures declined as a percentage of GDP, mainly due to the withdrawal of COVID-19 and economic reactivation expenditures. This development was offset by higher expenditures in: (i) compensation, due to the increase in compensation of personnel in the Education sector, in addition to the effect of the salary increases provided for the different work regimes in the public sector; (ii) other capital expenditures, mainly due to the transfer to the Energy Social Inclusion Fund (ESIF) for the massification of the use of natural gas and the transfers for the granting of housing bonds through the Mivivienda Fund; and (iii) gross capital formation of the national government. With regard to gross fixed capital formation, the greatest expansion occurred mainly in the functions of Public Order and Security, Education, Transportation and Sanitation.

48. The **fiscal deficit** is projected to increase from 1.7 to 1.9 percent of GDP between 2022 and 2023, 0.5 percentage points below the fiscal rule of 2.4 percent (Law No. 31541). The increase is supported by the impact of the correction in commodity prices on current income, the lower projected economic growth, and the loss of momentum in private spending. These factors are expected to translate into a lower growth in corporate income tax collections and a decrease in the VAT applied to imports. Moreover, as a result of the higher advance payment coefficients applied in 2022, lower income tax regularization payments are expected in 2023, in line with the evolution observed in the current year.

However, a reduction in the ratio of non-financial expenditure to GDP is expected, which would partially offset the upward trend in the budget deficit.

In 2024, in terms of output, the deficit is projected to narrow slightly to 1.8 percent of GDP, 0.2 percentage point below the fiscal rule of 2.0 percent of GDP (Law No. 31541). While both non-financial expenditures and current revenues are expected to remain unchanged as a percentage of GDP compared to the previous year, a recovery in general government capital revenues and an improvement in the primary result of state-owned enterprises are also projected.

Table 20
**NON-FINANCIAL PUBLIC SECTOR**
(% GDP)

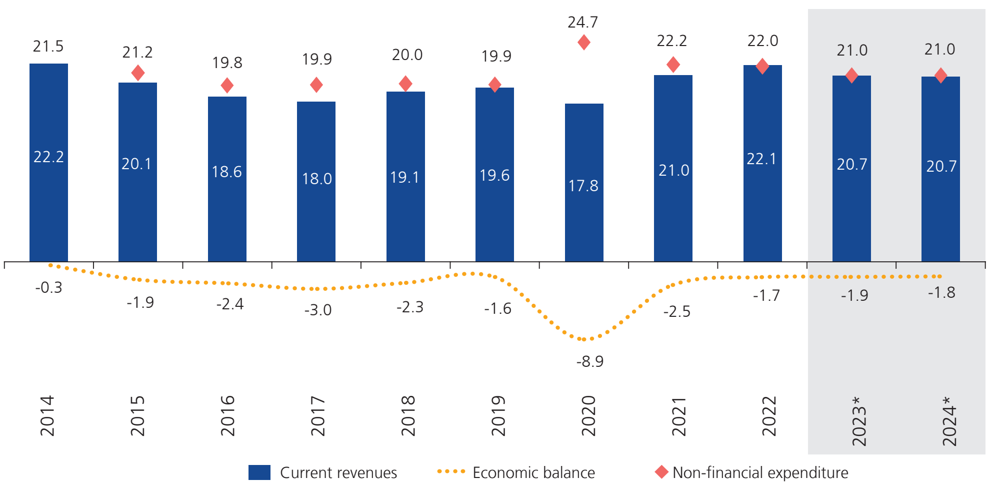
| | 2022 | 2023* | | | 2024* | |
|---|---|---|---|---|---|---|
| | | May [1/] | IR Mar.23 | IR Jun.23 | IR Mar.23 | IR Jun.23 |
| **1. General government current revenues** | **22.1** | **20.9** | **20.9** | **20.7** | **20.8** | **20.7** |
| *Real % change* | *4.7%* | *-9.0%* | *-1.8%* | *-3.1%* | *3.2%* | *3.6%* |
| **2. General government non-financial expenditure** | **22.0** | **21.7** | **20.9** | **21.0** | **20.9** | **21.0** |
| *Real % change* | *-1.5%* | *-1.6%* | *-0.5%* | *-1.0%* | *3.6%* | *3.8%* |
| *Of which:* | | | | | | |
| Current expenditure | 15.9 | 15.6 | 15.6 | 15.6 | 15.6 | 15.6 |
| *Real % change* | *-7.7%* | *-8.4%* | *2.3%* | *1.5%* | *3.4%* | *3.9%* |
| Gross capital formation | 4.7 | 4.6 | 4.6 | 4.6 | 4.7 | 4.7 |
| *Real % change* | *9.9%* | *11.6%* | *3.2%* | *3.3%* | *4.9%* | *4.9%* |
| **3. Others [2/]** | **-0.2** | **0.0** | **0.1** | **0.0** | **0.2** | **0.2** |
| **4. Primary balance (1-2+3)** | **-0.1** | **-0.7** | **0.0** | **-0.3** | **0.0** | **-0.2** |
| **5. Interests** | **1.6** | **1.6** | **1.6** | **1.6** | **1.6** | **1.6** |
| **6. Overall Balance** | **-1.7** | **-2.4** | **-1.6** | **-1.9** | **-1.5** | **-1.8** |

1 / Ratios on % of GDP and real % changes represent accumulated in the last 12 months as of May.
2 / Includes capital income of the general government and primary balance from state-owned companies.
* Forecast
IR: Inflation Report.

Compared with the March Report, the budget deficit projection has been raised from 1.6 to 1.9 percent of output in 2023. This revision takes into account the negative impact on revenues of the downward revision of the average price of export minerals (especially copper and zinc) and hydrocarbons (natural gas and oil and derivatives) and the reduction of the GDP growth estimate. In addition, the forecasts for the primary result of state-owned enterprises and capital revenues have been revised downward.

For 2024, the projection of the budget deficit is revised upwards from 1.5 to 1.8 percent of GDP compared to the previous report, mainly due to a lower base of current government revenues in 2023. This trend would be reinforced by the upward revision of expenditure as a percentage of output due to a lower projected level of nominal GDP.

Graph 44
**ECONOMIC BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2014 - 2024**
(% GDP)




Memo: The economic balance is calculated as current revenues - non-financial expenditure + others (capital income and primary result of state-owned companies) – payment of debt service.
* Forecast.
Source: BCRP.

## Current income

**49.** **Current revenues** would fall by 3.1 percent in real terms in 2023 and would represent 20.7 percent of GDP, 1.4 percentage points lower than at the end of 2022.

This decline in revenues is due, first, to the fall in commodity prices, which will affect the collection of income taxes and non-tax revenues related to the mining and hydrocarbon sectors. Second, the lower economic growth will translate into a lower real expansion of corporate income tax, while the loss of momentum in private spending will affect the IGV applied to imports through lower purchases of capital goods and industrial inputs. Finally, a decline in the regularization of personal income tax is expected, in line with what was observed in the January-May period, where a real decline of 42.3 percent year-on-year was recorded.

The downward revision of the 2023 projections –from 20.9 to 20.7 percent of GDP– takes into account the lower growth recorded up to May compared to the projection in the March Report. In addition, this downward revision reflects the downward revision of mineral export and hydrocarbon prices, lower economic growth, and the impact of lower projected imports on VAT collection.

In 2024, current revenues are projected to increase by 3.6 percent in real terms relative to the previous year and to remain stable as a percentage of output. This is mainly explained by higher domestic VAT collections, in line with the recovery in economic activity and private spending.

Table 21
**CURRENT REVENUES OF THE GENERAL GOVERNMENT**
(% GDP)

| | 2022 | 2023* | | | 2024* | |
|---|---|---|---|---|---|---|
| | | May 1/ | IR Mar.23 | IR Jun.23 | IR Mar.23 | IR Jun.23 |
| **TAX REVENUES** | **17.2** | **16.2** | **16.2** | **16.2** | **16.2** | **16.2** |
| Income tax | 7.5 | 6.7 | 6.5 | 6.6 | 6.2 | 6.3 |
| Value Added Tax (VAT) | 9.4 | 9.0 | 9.2 | 8.8 | 9.3 | 9.0 |
| Excise tax | 1.0 | 0.9 | 1.0 | 1.0 | 1.1 | 1.1 |
| Import duties | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Other tax revenues | 1.9 | 1.8 | 1.7 | 1.8 | 1.7 | 1.8 |
| Tax returns | -2.7 | -2.5 | -2.4 | -2.3 | -2.3 | -2.1 |
| **NON-TAX REVENUES** | **4.9** | **4.8** | **4.7** | **4.6** | **4.6** | **4.5** |
| Contributions to social security | 2.0 | 2.0 | 1.9 | 1.9 | 2.0 | 2.0 |
| Own resources and transfers | 1.4 | 0.8 | 1.3 | 1.3 | 1.4 | 1.3 |
| Royalties and likely | 1.0 | 0.8 | 0.9 | 0.8 | 0.8 | 0.7 |
| Rest | 0.5 | 1.2 | 0.5 | 0.6 | 0.5 | 0.5 |
| **TOTAL** | **22.1** | **20.9** | **20.9** | **20.7** | **20.8** | **20.7** |

1 / Represents accumulated in the last 12 months as of May.
* Forecast
IR: Inflation Report.

## Non-financial expenditure

**50.** **Non-financial expenditures** would record a real decrease of 1.0 percent in 2023, and would represent 21.0 percent as a percentage of GDP, 1.0 percentage point less than in 2022. This decrease mainly reflects a reduction in COVID-19 spending, lower spending by the Fuel Price Stabilization Fund and the statistical effect of the capital contribution to Petroperú in 2022. This decrease would be partially offset by the recovery of non-pandemic and reactivation spending (Arranca Perú), as well as by spending on the *Con Punche Perú* program.

In 2024, spending is expected to grow by 3.8 percent in real terms, reaching 21.0 percent of GDP on the expenditure side, a similar figure to that projected for 2023. This growth includes an increase in current spending and gross capital formation of the general government, after the learning period of the subnational authorities.

Expenditure projections for 2023 remain unchanged in nominal terms, although their composition changes compared with the previous report. On the one hand, an increase in spending on wages and salaries and on investments is expected, which would be offset by a decrease in spending on goods and services and on transfers. For output, the forecast is revised upward from 20.9 to 21.0 percent.

Meanwhile, for 2024, real expenditure growth is revised upwards from 3.6 to 3.8 percent, raising the projection from 20.9 to 21.0 percent of GDP. In this sense, spending is projected to remain above the pre-pandemic level (19.9 percent of GDP in 2019).

Table 22
**NON-FINANCIAL EXPENDITURE OF THE GENERAL GOVERNMENT**
(% GDP)

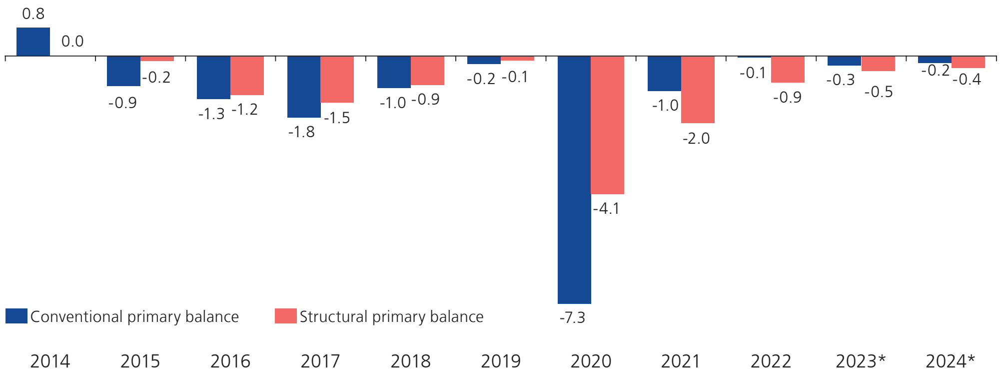
| | 2022 | 2023* | | | 2024* | |
|---|---|---|---|---|---|---|
| | | May [1/] | IR Mar.23 | IR Jun.23 | IR Mar.23 | IR Jun.23 |
| **Current expenditure** | **15.9** | **15.6** | **15.6** | **15.6** | **15.6** | **15.6** |
| National Government | 10.6 | 10.3 | 10.5 | 10.4 | 10.5 | 10.7 |
| Regional Governments | 3.6 | 3.6 | 3.4 | 3.5 | 3.3 | 3.2 |
| Local Governments | 1.8 | 1.7 | 1.7 | 1.7 | 1.8 | 1.7 |
| **Capital expenditure** | **6.1** | **6.0** | **5.3** | **5.4** | **5.4** | **5.4** |
| **Gross capital formation** | **4.7** | **4.6** | **4.6** | **4.6** | **4.7** | **4.7** |
| National Government | 1.5 | 1.6 | 1.7 | 1.7 | 1.7 | 1.7 |
| Regional Governments | 1.0 | 1.0 | 0.9 | 1.0 | 0.9 | 1.0 |
| Local Governments | 2.2 | 2.1 | 2.0 | 1.9 | 2.0 | 2.0 |
| **Other** | **1.4** | **1.4** | **0.7** | **0.7** | **0.7** | **0.7** |
| **TOTAL** | **22.0** | **21.7** | **20.9** | **21.0** | **20.9** | **21.0** |
| National Government | 13.5 | 13.3 | 12.9 | 12.9 | 12.9 | 13.1 |
| Regional Governments | 4.6 | 4.6 | 4.4 | 4.5 | 4.2 | 4.2 |
| Local Governments | 4.0 | 3.8 | 3.7 | 3.7 | 3.9 | 3.8 |

1 / Represents accumulated in the last 12 months as of May.
* Forecast
IR: Inflation Report.

## Fiscal Stance

51. The **structural primary balance** excludes the impact on government revenue and expenditure of discretionary fiscal policy decisions as well as cyclical and transitory components affecting the economy. The structural primary deficit is estimated at 0.5 and 0.4 percent of potential GDP in 2023 and 2024, respectively, both higher than the 0.1 percent estimated for 2019. The evolution of the structural primary deficit reflects a gradual reduction in the expansionary fiscal stance, in line with a gradually closing output gap.

Graph 45
CONVENTIONAL AND STRUCTURAL PRIMARY BALANCE OF THE NON-FINANCIAL PUBLIC SECTOR: 2014-2024
(% GDP and Trend GDP)




* Forecast.
Memo: For 2020, the structural primary balance is calculated using trend GDP.
Source: BCRP.

## Financing and debt

52. Compared with the March Report, the projection of **financing requirements** in 2023 has been revised upwards. This adjustment is mainly due to the higher estimate of public debt repayments as a result of the debt management operation (DMO) and, to a lesser extent, to the expected evolution of the nominal budget deficit. Regarding the sources of financing, an increase is estimated in the issuance of government bonds (in line with the government's recent placements) as well as a greater use of public deposits.

Table 23
FINANCIAL REQUIREMENT AND FINANCING OF THE NON-FINANCIAL PUBLIC SECTOR
(Million soles)

| | 2022 | 2023* | | | 2024* | |
|---|---|---|---|---|---|---|
| | | Jan-May | IR Mar.23 | IR Jun.23 | IR Mar.23 | IR Jun.23 |
| **I. USES** | **20,639** | **-6,629** | **22,660** | **45,075** | **29,942** | **29,882** |
| 1. Amortization | 4,680 | 1,931 | 6,024 | 25,342 | 12,918 | 10,359 |
| a. External | 3,893 | 1,397 | 4,009 | 9,972 | 3,834 | 3,737 |
| b. Domestic | 788 | 534 | 2,015 | 15,370 | 9,083 | 6,622 |
| *Of which: recognition bond* | *553* | *225* | *549* | *533* | *550* | *550* |
| 2. Economic balance 1/ | 15,959 | -8,561 | 16,636 | 19,732 | 17,025 | 19,522 |
| **II. SOURCES** | **20,639** | **-6,629** | **22,660** | **45,075** | **29,942** | **29,882** |
| 1. Disbursements and others | 14,974 | 13,211 | 24,201 | 40,557 | 26,349 | 26,033 |
| a. External credits | 7,066 | 4,637 | 9,146 | 10,682 | 7,849 | 7,533 |
| b. Global and Sovereign bonds | 7,908 | 8,574 | 15,055 | 29,875 | 18,500 | 18,500 |
| 2. Variation in deposits and others 2/ | 5,665 | -19,840 | -1,541 | 4,518 | 3,593 | 3,848 |
| Note: | | | | | | |
| Percentage of GDP | | | | | | |
| Gross public debt balance | 33.8 | 33.0 | 32.8 | 32.1 | 32.1 | 31.6 |
| Net public debt balance | 21.0 | 19.3 | 21.4 | 20.9 | 21.2 | 21.4 |
| Balance of public deposits | 12.8 | 13.7 | 11.5 | 11.2 | 10.8 | 10.2 |

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

As for the financing needs for 2024, they have been revised slightly downwards, on the one hand because of lower amortization payments expected (due to the exchange and/or repurchase of sovereign and global bonds in May 2023), which would be partly offset by the upward revision of the nominal budget deficit.

Financing requirements for 2023 are expected to be higher than in 2022 due to the projected increase in the amortization of domestic and external debt, as well as in the fiscal deficit. This financing would be covered through higher sovereign bond issuance, consistent with the pace of placements observed during the year and, to a lesser extent, through external borrowing. In 2024, financing requirements are expected to be lower than projected for 2023.

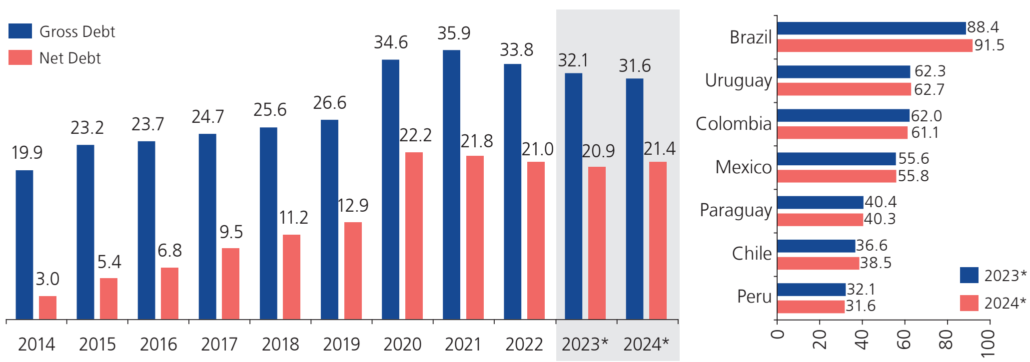
53. The **gross debt** of the non-financial public sector would decline from 33.8 to 32.1 percent of GDP between 2022 and 2023, to reach 31.6 percent at the end of the projection horizon. The gross debt projections for 2023 and 2024 would be lower than the maximum of 38.0 percent of GDP established by the macro-fiscal debt rule in Law No. 31541. The current projections imply that Peru's gross debt is positioned as one of the lowest in the region.

On the other hand, **debt net** of non-financial public sector deposits would decline from 21.0 to 20.9 percent of GDP between 2022 and 2023, and would stand at 21.4 percent of GDP at the end of the projection horizon.

**Graph 46**

**NON-FINANCIAL PUBLIC SECTOR DEBT: 2014- 2024**
(% GDP)

**GROSS DEBT IN LATAM. 2023-2024**
(% GDP)



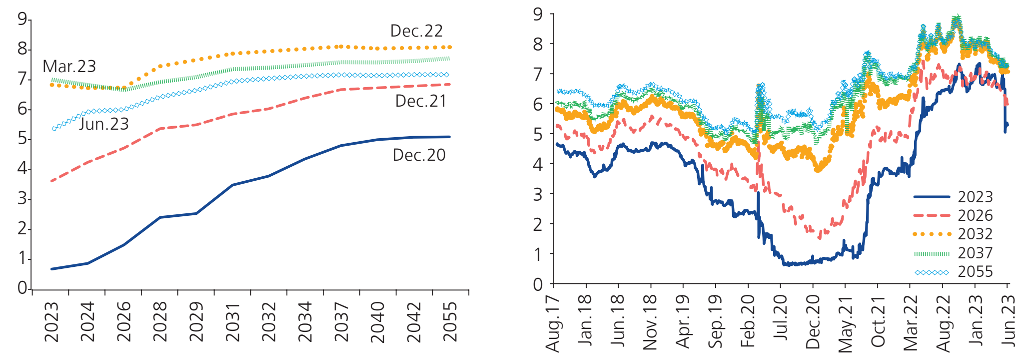

* Forecast.
Source: BCRP and WEO (April 2023).

54. The yield curve of fixed-rate Treasury Bonds (BTPs) denominated in soles declined by an average of 59 basis points between March and June.

**Graph 47**

**YIELD CURVE**
(In %)

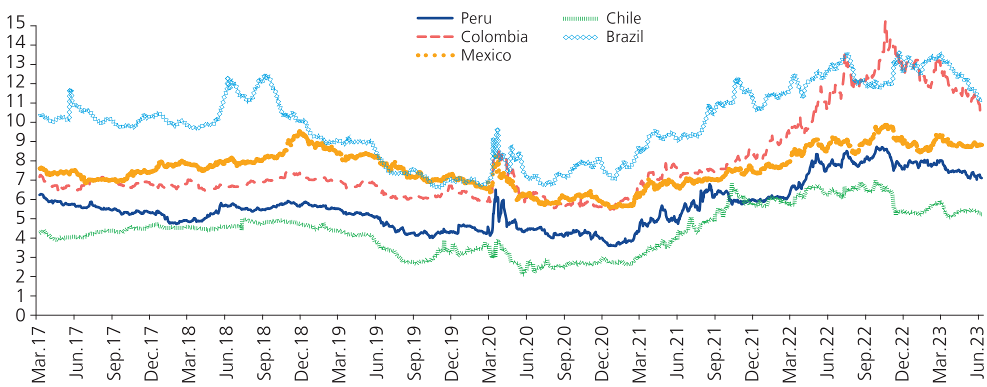
**YIELD BY MATURITY**
(%)




* As of June 12.
Source: MEF.

Over the period, 10-year government bond yields in local currency declined in most countries in the region. In particular, the yield of Brazilian and Colombian bonds declined by 160 and 120 basis points, respectively. In contrast, Mexican and Chilean bonds rose by 2 and 6 basis points, respectively. The yield of the Peruvian bond declined from 7.51 percent in March to 7.13 percent in June.

**Graph 48**
**10 YEAR SOVEREIGN BOND YIELDS IN LOCAL CURRENCY**
(%)




* As of June 12.
Source: MEF and Reuters.

So far in the second quarter, the yields of global bonds in dollars have risen at the short and long ends of the yield curve, while moderate increases have been observed in the middle of the curve. In particular, the 10-year Peruvian bond has risen slightly from

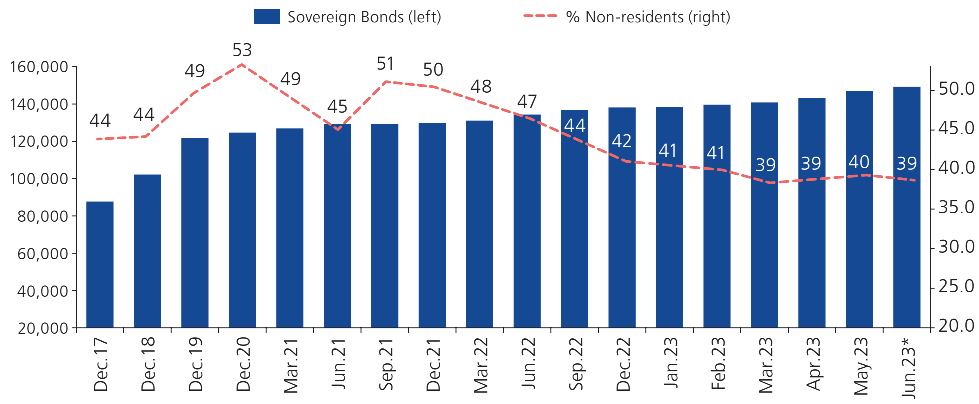
5.32 to 5.33 percent, while the yield on the comparable U.S. bond has risen from 3.47 to 3.74 percent. In the region, bonds from Chile, Colombia and Mexico showed higher yields during the quarter.

The balance of government bonds as of June 14 was S/148.9 billion, S/8.4 billion higher than the balance as of March 31. In the second quarter, non-resident investors and AFPs are the main demanders of bonds, while banks stand out on the supply side. Although non-resident investors increased their holdings of government bonds by S/ 3.8 billion between March and June, their share remained stable at 39 percent.

Graph 49

**SOVEREIGN BOND BALANCE AND PARTICIPATION OF NON-RESIDENT INVESTORS**

(Amounts in millions of soles and participation in %)




* As of June 14.
Note: As of February 2021, excludes inflation-linked bonds, Global Depositary Notes (GDN) and Euroclear transactions of non-residents. As of March 2021, nominal sovereign bonds and VAC are included and GDN are excluded.
Source: BCRP, CAVALI, MEF, and SBS.

55. On May 31, 2023, the Ministry of Economy and Finance (MEF) announced the completion of a DMO that included:

(i) The issuance of a new sustainable government bond maturing in 2033 (the first bonds of its kind issued in soles) for S/ 9,185 million with a coupon of 7.30 percent, a yield of 7.35 percent and a credit rating of BBB. The spread of the BTP 2033 over the Peruvian Global Bond and the US Treasury Bond was 199 and 371 basis points, respectively. Demand for these bonds was about twice the amount offered, and the main buyers were non-resident investors, who acquired almost 55 percent of the total amount placed.

(ii) The exchange of the 2023, 2024, 2026 and 2028 sovereign bonds for the new sovereign bond maturing in 2033 and/or for repurchase with cash payment[30]. The offer started on May 31 and ended on June 6. A total of S/ 14,012 million of sovereign bonds were accepted (S/ 7,099 million for the exchange of the newly

30 Rating assigned by Fitch.

issued BTP 2033 and S/ 6,913 million for the repurchase of the bonds for cash), representing approximately 38 percent of the sovereign bond stock as of May 31.

Table 24
**RESULTS OF THE EXCHANGE OPERATION OR REPURCHASE FOR CASH OF SOVEREIGN BONDS**
(Million soles)

| Bond | Coupon Rate (%) | Balance May 31 (Mill. S/) | Repurchase price* | | Exchange | | | Repurchase in cash | | | Accepted nominal amount | % Offer Accepted regarding the Balance as of May 31 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | BTP | GDN | BTP | GDN | Total | BTP | GDN | Total | | Exchange | Repurchase | Total |
| BTP 12SEP2023 | 5.20 | 1,309 | 1,000.0 | 999.0 | 804 | 0 | 804 | 120 | 1 | 121 | 926 | 61 | 9 | 71 |
| BTP 12AGO2024 | 5.70 | 6,741 | 998.8 | 997.8 | 2,382 | 1 | 2,382 | 119 | 2 | 120 | 2,503 | 35 | 2 | 37 |
| BTP 12AGO2026 | 8.20 | 12,517 | 1,061.3 | 1 060.25 | 937 | 360 | 1,296 | 338 | 3,840 | 4,178 | 5,475 | 10 | 33 | 44 |
| BTP 12AGO2028 | 6.35 | 16,625 | 992.5 | 991.5 | 1,927 | 688 | 2,616 | 436 | 2,057 | 2,493 | 5,109 | 16 | 15 | 31 |
| **Total** | | **37,192** | | | **6,050** | **1,049** | **7,099** | **1,014** | **5,900** | **6,913** | **14,012** | **19** | **19** | **38** |

* For each S/ 1,000 nominal value.

(iii) The repurchase for cash of the 2025, 2026, 2027, 2030 and 2031 global bonds. The total amount repurchased was US$ 1,628 million, or approximately 20 percent of the global bond portfolio as of May 31.

Table 25
**RESULTS OF GLOBAL NOTES CASH REPURCHASE TRANSACTION**
(Million US$)

| Bond | Coupon Rate (%) | Balance as of May 31 | Repurchase Price* | Cash Repurchase | % Offer accepted regarding the Balance as of May 31 |
|---|---|---|---|---|---|
| Global 21JUL2025 | 7.350 | 1,542 | 1,055.0 | 653 | 42 |
| Global 23JAN2026 | 2.392 | 1,000 | 943.8 | 386 | 39 |
| Global 25AGO2027 | 4.125 | 1,013 | 985.0 | 262 | 26 |
| Global 20JUN2030 | 2.844 | 750 | 877.8 | 56 | 7 |
| Global 23JAN2031 | 2.783 | 3,750 | 856.5 | 272 | 7 |
| **Total** | | **8,055** | | **1,628** | **20** |

* For each US$ 1,000 of face value.

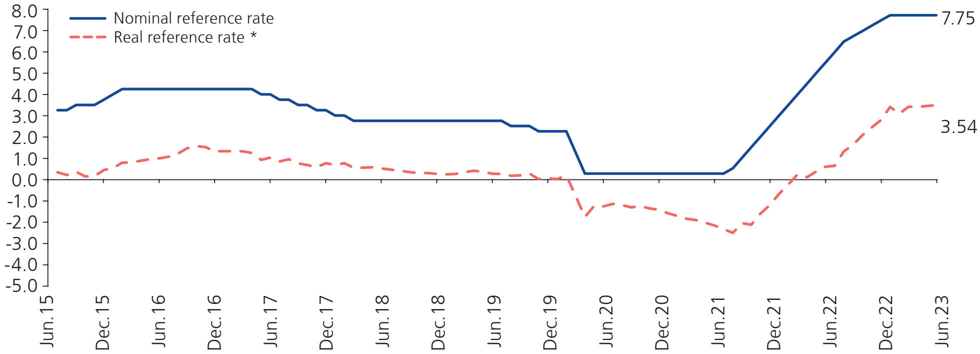
(iv) Therefore, taking into account the amounts of the bonds issued for repurchase (S/ 9,185 million) and for exchange (S/ 7,173 million), it is estimated that bonds for a total amount of S/ 16,358 million was issued for the DMO.

# V. Monetary policy and financial conditions

## Monetary policy actions

56. In January 2023 the Board of Directors of BCRP agreed to raise the benchmark rate by 25 basis points to 7.75 percent. Subsequently, between February and June, the Board of Directors decided to keep this rate unchanged, emphasizing that this decision does not necessarily imply the end of the rate-hike cycle. Future adjustments of the policy rate will depend on new information on inflation and its determinants.

Graph 50
**REFERENCE INTEREST RATE**
(In %)




* With expectation on inflation.
Source: BCRP.

As a result, the real benchmark rate stands at 3.54 percent in June 2023 (above the estimated neutral real rate of 1.50 percent), after having reached an all-time low of -2.53 percent in August 2021.

57. Monetary policy decisions between April and June 2023 took into account the following indicators:

- Remaining above the BCRP's inflation target range (between 1 and 3 percent), the twelve-month inflation rate in May 2023 was 7.89 percent.

- The 12-month non-food and energy inflation rate in May 2023 (5.11 percent) was also above the upper limit of the target range.

- The significant increase in international energy and food prices observed since the second half of 2001, exacerbated by international conflicts, has led to a sharp rise in global inflation rates to levels not seen for many years and well above the inflation targets of central banks in both advanced economies and the region. In the case of Peru, temporary effects on inflation have been recorded due to restrictions in the supply of some food products.

- Year-on-year inflation is expected to continue its downward trend in the coming months, remaining close to the target range at the end of the year, as the impact of international food and energy prices fades, supply shocks in the agriculture sector reverse, and inflation expectations for the rest of the year decline.

- Between March and May 2023, twelve-month inflation expectations declined from 4.30 to 4.21 percent, still above the upper limit of the inflation target range.

- Leading economic indicators and expectations rebounded in May compared with the previous month, although most remain in the pessimistic range.

- The outlook for global economic growth points to moderation, although global risks remain from the effects of restrictive monetary policies in advanced economies and international conflicts.

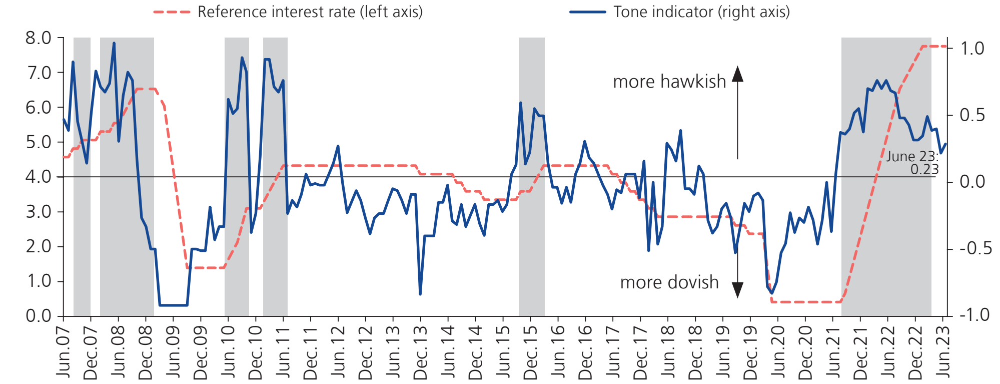
58. The decision on the policy rate takes into account inflation forecasts and inflation determinants such as the evolution of the output gap, changes in international prices, the exchange rate and other supply factors that may affect the formation of economic agents' expectations[31].

    Since 2021, the BCRP has made the necessary adjustments to its monetary policy stance to ensure that inflation expectations return to the target range within a reasonable timeframe, in a context of higher inflation at the global level, particularly due to higher international food and energy prices. In the absence of a timely response, the central bank would have had to adopt a more restrictive monetary policy stance in order to regain credibility regarding inflation control. In such a scenario, the increases in the policy rate needed to control inflation would have been larger and, consequently, the potential impact on economic activity would have been greater.

59. Regarding the tone and communication signals of monetary policy, the tone indicator used by the BCRP shows a hawkish stance since July 2021, one month before the August 2021 rate hike. However, the value of the indicator has declined in recent months, especially since the pause in February 2023.

31 Inflation expectations refer to the rate at which economic agents expect the price level in an economy to rise. The lower and more stable these expectations are, the better firms and households can make price and wage decisions.

Graph 51
**REFERENCE INTEREST RATE AND MONETARY POLICY TONE INDICATOR***
(% and index value)

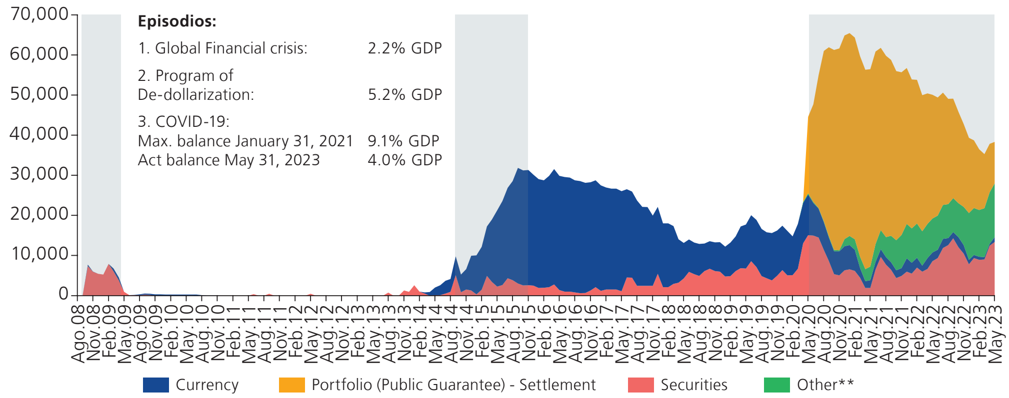



* For the monetary policy tone indicator, the positive values of the index mean a tone in favor of a contractionary position (hawkish), while negative values imply communication with an expansive position (dovish). Shaded areas correspond to periods of rising interest rates.
Source: BCRP.

### *Monetary Operations*

60. The BCRP's operations were aimed at ensuring an adequate level of liquidity in the interbank market. To this end, between March 1 and May 31, 2023, the BCRP injected liquidity through the net maturity of BCRP CDVs (S/ 14,769 million), the net maturity of time deposits and overnight deposits (S/ 5,469 million), the net placement of securities repos (S/ 4,450 million) and the net placement of currency repos (S/ 415 million). These operations were partially offset by the net placement of BCRP CDs (S/ 13,942 million), the redemption of government-guaranteed loan portfolio repos (S/ 4,764 million), the net maturity of auctions of Public Treasury time deposits (S/ 134 million), the placement of BCRP CDRs (S/ 60 million), the maturity of loan portfolio repos (S/ 19 million), and the sale of foreign currency in the interbank spot market for US$ 1 million (S/ 4 million).

Graph 52
**BALANCE OF MONETARY INJECTION OPERATIONS OF BCRP**
(In mill. S/)




* As of May 31.
** 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.

The balance of injection operations as of May 31, 2023 was S/ 38,263 million, while the balance of CD BCRP, CDV BCRP and BCRP CDRs as of the same date was S/ 28,932 million. For its part, the balances of the auctions of Public Treasury fund and settlements of BTP purchases were S/ 6,662 million and S/ 7,087 million, resectively, on the same date.

In terms of GDP, the balance of liquidity injection operations is equivalent to 4.0 percent of GDP, of which S/ 10,311 million corresponds to government-backed repos of the credit portfolio.

61. Between March and May 2023, the BCRP purchased Public Treasury Bonds (BTP) with maturities up to 2040 on the secondary market. These operations are part of the set of instruments available to the BCRP to regulate the liquidity of the financial system. Thus, so far in 2023, the BCRP has purchased BTPs with maturities between 2028 and 2040 for a total value of S/ 1,774 million. This value, added to the purchases made between 2020 and 2022, implies a balance of BTP purchases by the BCRP of S/ 7,087 million at acquisition value as of May 31, 2023.

    It should be noted that Article 61 of its Organic Law establishes that the BCRP is authorized to purchase securities issued by the Public Treasury on the secondary market, provided that the annual increase in the holdings of such securities, valued at their acquisition price, does not exceed 5 percent of the balance of the monetary base at the end of the previous year.

62. The share of the repo balance in the BCRP's net assets in May was similar to that in February, but the share of public sector deposits in the BCRP's net liabilities increased, while the shares of the BCRP's sterilization instruments and currency in circulation decreased. On the one hand, the balance of repo operations remained at 9.8 percent of the BCRP's net assets between February and May 2023. On the other hand, the share of public sector deposits in the BCRP's net liabilities increased from 25.9 percent in February 2023 to 30.5 percent in May 2023. Finally, BCRP sterilization instruments (BCRP CD, BCRP CDV, BCRP CDRs, and time and overnight deposits) decreased their share of BCRP net liabilities from 11.9 percent in February 2023 to 9.8 percent in May 2023; currency in circulation also decreased its share from 24.4 percent to 22.9 percent between the end of February and May 2023.2023.

    The result of these operations can be seen in the change in the size and composition of the Central Bank's balance sheet. Thus, in May 2023, BCRP assets amount to S/ 318 841 million, equivalent to 33.4 percent of GDP, lower than that observed in 2020 in the context of the Covid-19 pandemic (46.6 percent) and that observed in 2015 during the de-dollarization program (39.2 percent of GDP)[32].

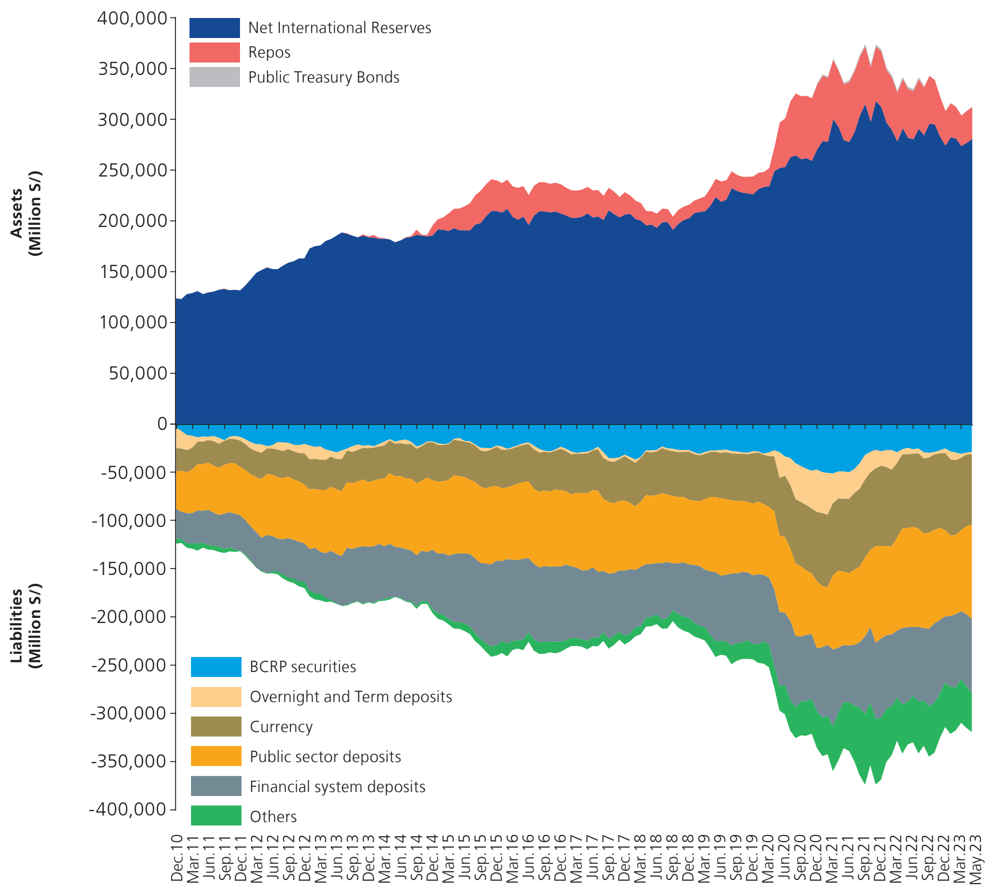
32 Includes Net International Reserves, Repos and Treasury Bonds.

Table 26
## SIMPLIFIED BALANCE SHEET OF THE BCRP
(As % of Net Assets)

| | Dec.21 | Dec.22 | Feb.23 | May.23 |
|---|---|---|---|---|
| **I. Net assets** | **100%** | **100%** | **100%** | **100%** |
| **Net International Reserves** | **84.6%** | **87.5%** | **88.5%** | **88.0%** |
| | (US$78,495 mills.) | (US$71,883 mills.) | (US$73,884 mills.) | (US$76,244 mills.) |
| **Repos** | 14.8% | 10.8% | 9.8% | 9.8% |
| **Sovereign bonds** | 0.6% | 1.7% | 1.7% | 2.2% |
| **II. Net liabilities** | **100%** | **100%** | **100%** | **100%** |
| **1. Total public sector deposits** | **26.0%** | **28.4%** | **25.9%** | **30.5%** |
| In domestic currency | 23.9% | 24.8% | 22.5% | 24.9% |
| In foreign currency | 2.1% | 3.6% | 3.4% | 5.7% |
| **2. Total financial system deposits** | **22.2%** | **21.9%** | **23.9%** | **24.1%** |
| In domestic currency | 3.9% | 4.3% | 4.1% | 4.0% |
| In foreign currency | 18.4% | 17.6% | 19.8% | 20.2% |
| **3. BCRP instruments** | **11.8%** | **9.6%** | **11.9%** | **9.8%** |
| CD BCRP | 3.9% | 4.0% | 4.0% | 8.3% |
| CDR BCRP | 0.4% | 0.0% | 0.0% | 0.0% |
| CDV BCRP | 3.4% | 4.2% | 5.4% | 0.7% |
| Term deposits | 3.2% | 1.1% | 1.9% | 0.2% |
| Overnight deposits | 0.9% | 0.4% | 0.6% | 0.6% |
| **4. Currency** | **22.6%** | **25.5%** | **24.4%** | **22.9%** |
| **5. Others*** | **17.4%** | **14.5%** | **14.0%** | **12.6%** |

* Includes assets and other accounts.
Source: BCRP.

Graph 53
## EVOLUTION OF THE BCRP BALANCE SHEET: 2010 - 2023




Source: BCRP.

## Financial markets

63. Credit market interest rates moderated the increase recorded in the first quarter of 2023, in a period in which the BCRP benchmark rate remained at 7.75 percent. Expectations of a gradual withdrawal of monetary stimulus and the BCRP's liquidity injection operations to banks helped to keep the average overnight interbank lending rate at its benchmark level during the quarter.

Table 27
**INTEREST RATE IN DOMESTIC CURRENCY 1/**
(%)

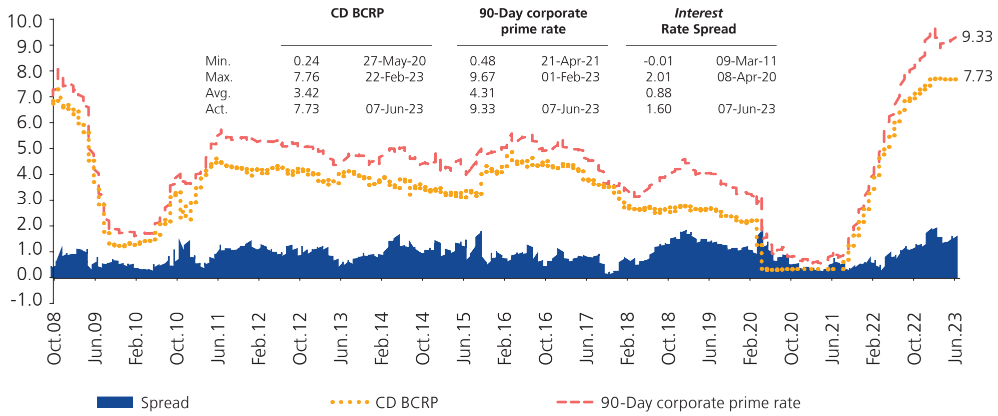
| | | Dec.19 | Dec.20 | Dec.21 | Jun.22 | Sep.22 | Dec.22 | Mar.23 | Jun.23 | Average Hist.2/ |
|---|---|---|---|---|---|---|---|---|---|---|
| Passive | 90-day corporate prime | 2.8 | 0.2 | 2.6 | 6.1 | 7.4 | 8.1 | 8.1 | 8.2 | 3.6 |
| | TIPMN | 2.3 | 1.0 | 1.1 | 2.2 | 2.7 | 3.0 | 3.5 | 3.8 | 2.3 |
| | FTIPMN | 1.5 | 0.1 | 1.0 | 2.9 | 3.5 | 3.7 | 3.9 | 3.8 | 2.2 |
| | Deposits up to 30-day | 2.3 | 0.0 | 1.9 | 5.1 | 6.5 | 7.4 | 7.5 | 7.8 | 3.3 |
| | Individuals | 1.6 | 0.2 | 0.7 | 1.0 | 3.3 | 3.7 | 3.3 | 3.3 | 2.3 |
| | Business | 2.3 | 0.0 | 1.9 | 5.1 | 6.5 | 7.4 | 7.5 | 7.8 | 3.3 |
| | On 31 to 90-day term deposits | 2.7 | 0.2 | 2.2 | 5.5 | 6.8 | 7.5 | 7.9 | 7.8 | 3.5 |
| | Individuals | 1.8 | 0.5 | 0.8 | 2.2 | 3.5 | 3.7 | 4.1 | 5.0 | 1.9 |
| | Business | 2.8 | 0.2 | 2.2 | 5.7 | 7.0 | 7.8 | 8.1 | 8.0 | 3.6 |
| | On 91 to 180-day term deposits | 3.0 | 0.4 | 2.4 | 6.2 | 6.9 | 7.6 | 7.5 | 8.2 | 3.7 |
| | Individuals | 2.3 | 0.5 | 0.9 | 4.1 | 4.6 | 4.8 | 5.5 | 7.1 | 2.6 |
| | Business | 3.1 | 0.3 | 2.6 | 6.4 | 7.4 | 8.5 | 8.4 | 8.8 | 3.9 |
| | On 181 to 360-day term deposits | 3.3 | 0.7 | 2.9 | 6.1 | 7.3 | 7.6 | 7.9 | 7.9 | 4.0 |
| | Individuals | 3.3 | 1.3 | 2.9 | 5.4 | 6.6 | 6.9 | 7.3 | 7.3 | 3.8 |
| | Business | 3.3 | 0.4 | 2.9 | 6.4 | 7.6 | 7.8 | 8.2 | 8.1 | 4.1 |
| | CTS | 2.2 | 1.9 | 2.3 | 2.2 | 3.5 | 2.6 | 3.5 | 2.4 | 3.1 |
| Active | 90-day corporate prime | 3.3 | 0.7 | 3.1 | 6.7 | 8.1 | 9.2 | 9.1 | 9.3 | 4.4 |
| | TAMN | 14.4 | 12.1 | 11.2 | 12.7 | 13.5 | 14.5 | 14.9 | 15.5 | 15.7 |
| | FTAMN | 18.2 | 17.6 | 20.9 | 24.7 | 27.5 | 28.3 | 28.9 | 29.0 | 20.8 |
| | Corporates | 3.8 | 2.5 | 3.2 | 6.8 | 8.2 | 8.9 | 9.3 | 9.0 | 5.2 |
| | Large companies | 6.0 | 4.6 | 5.7 | 8.3 | 9.4 | 10.6 | 11.0 | 10.8 | 6.8 |
| | Medium-sized enterprises | 9.3 | 6.1 | 8.8 | 11.9 | 13.4 | 14.1 | 14.8 | 14.6 | 10.1 |
| | Small business | 18.0 | 17.2 | 19.3 | 20.4 | 21.6 | 22.5 | 23.4 | 23.5 | 20.2 |
| | Micro business | 31.3 | 30.1 | 32.3 | 35.2 | 35.3 | 36.3 | 38.9 | 39.1 | 32.7 |
| | Micro business 3/ | 44.5 | 22.6 | 38.8 | 39.2 | 39.3 | 39.3 | 42.2 | 41.9 | 40.0 |
| | Consumer | 40.9 | 39.5 | 41.8 | 44.6 | 47.4 | 49.6 | 50.1 | 52.3 | 42.1 |
| | Consumer 3/ | 43.1 | 41.5 | 40.4 | 43.5 | 45.8 | 47.7 | 50.2 | 49.5 | 43.8 |
| | Mortgage | 7.0 | 6.4 | 6.9 | 8.1 | 9.5 | 9.9 | 10.0 | 9.7 | 8.4 |

1/Rates in annual terms of banks' transactions in the last 30 days.
2/ Average since September 2010. In the case of consumer credit, it is the average since October 2019.
3/ Corresponds to the average of the financial system.
As of June 12.
Source: BCRP and SBS.

Lending and deposit prime interest rates, which are highly representative of banks' financial conditions, and which quickly absorb changes in the benchmark rate, increased in the second quarter of 2023. On average, the overnight and 12-month lending and deposit rates increased by 17 and 9 basis points, respectively. The spreads of the 3-month, 6-month and 12-month lending rates over the benchmark rate are above pre-pandemic levels.

The spread between the prime corporate lending rate and the 3-month CD BCRP in June (1.60 percent) has declined from one of the highest levels reached in recent years (1.93 percent in February 2023). In this context, the central bank continues to carry out operations aimed at ensuring the proper functioning of the market through the issuance of longer-dated BCRP CDs and repo placements.

Graph 54
**INTEREST RATE IN S/: 90-DAY CORPORATE PRIME AND REFERENCE RATE**
(%)



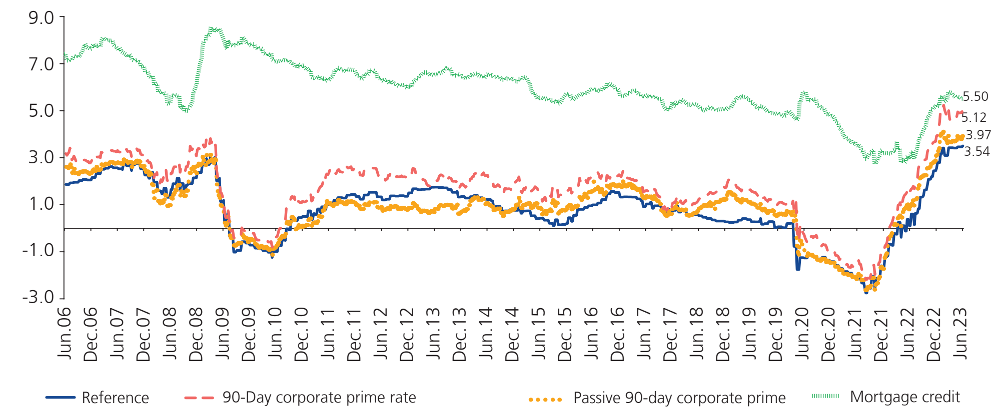

As of 7 of July.
Source: BCRP and SBS.

Interest rates for the loan segments with the highest credit risk also increased between March and June 2023. The consumer segment of banks showed the largest increase during the quarter, with its interest rate rising from 50.1 percent in March to 52.3 percent in June. Over the same period, the mortgage sector's rate fell from 10.0 percent to 9.7 percent, in line with the downward trend observed in the 10-year Treasury yield.

Similarly, bank deposit rates, especially those paid to individuals, have increased in the second quarter of 2023. The decline in the balance of deposits in the financial system would be encouraging competition among entities to attract funds. As a result, interest rates on deposits to individuals have increased by an average of 62 basis points, with an increase of 160 basis points for maturities between 91 and 180 days. Interest rates on time deposits for businesses showed a mixed behavior, accumulating an increase of 13 basis points between March and June 2023, while on the other hand, the average C.T.S. deposit rate at banks decreased from 3.5 percent to 2.4 percent between March and June.

64. Real interest rates in domestic currency also recorded higher levels in the second quarter of 2023, with the exception of the average mortgage rate. Between March and June 2023, the reference rate increased by 8 basis points in real terms, while the 90-day prime lending and deposit rates increased by 32 and 21 basis points, respectively. The real rate on mortgage loans decreased by 22 basis points, influenced by the decrease in the 10-year and 30-year BTPs yields (38 and 55 basis points, respectively).

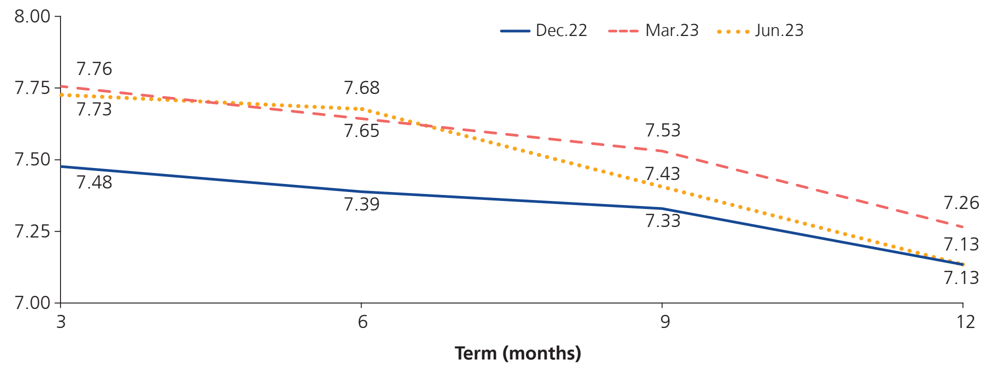
Graph 55
**EX-ANTE REAL INTEREST RATES IN SOLES**
(In %)




As of June 7, 2023. Nominal interest rates are deflated using inflation expectations.
Source: BCRP and SBS.

65. The yield curve for certificates of deposit (CD-BCRP) remains inverted in the second quarter of 2023, reflecting the market's expectation of the future evolution of the benchmark rate. Thus, between March and June 2023, interest rates have fallen by 3, 10 and 13 basis points for 3-month, 9-month and 12-month maturities respectively, while the 6 month rate has risen by 3 basis points.

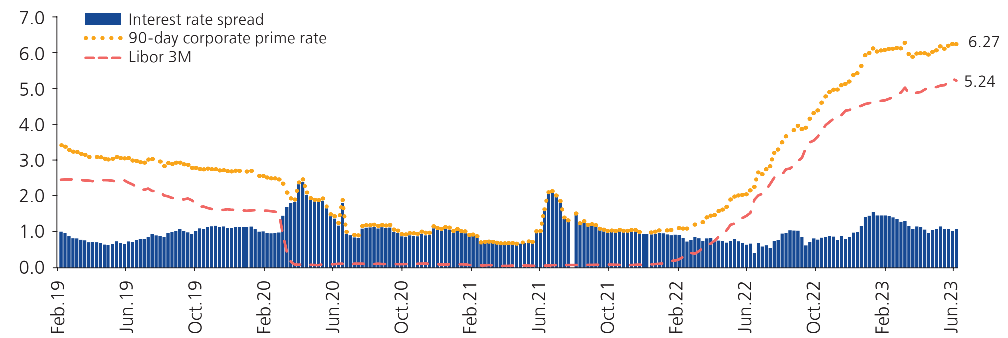
Graph 56
**YIELD CURVE OF CD-BCRP SECURITIES** 1/
(Percentage)




1/ Yield rate of the primary and secondary market of BCRP CDs.
As of June 12.
Source: BCRP.

66. In the dollar money market, interest rates continue to reflect the tight monetary conditions in international financial markets. For example, the average overnight interbank interest rate rose by the same amount as the Federal Reserve's policy rate (federal funds rate), from 5.00 percent in March to 5.25 percent in June. Prime lending and deposit rates for maturities between overnight and six months increased by an average of 20 and 18 basis points, respectively. The spread between the prime lending rate and the three-month SOFR declined from 111 basis points in March to 103 basis points in June 2023.

Graph 57
**INTEREST RATE IN DOLLARS: CORPORATE PRIME ACTIVE AND 3-MONTH TERM-SOFR**
(In %)




As of June 7
Source: Chicago Mercantile Exchange and BCRP

Bank interest rates on dollar deposits also rose in the second quarter, but to a lesser extent than in the first quarter and to a lesser extent than lending rates. On average, rates on dollar deposits held by individuals rose by 38 basis points, while those on deposits held by corporations with maturities of less than 180 days rose by 19 basis points.

Table 28
**INTEREST RATE IN FOREIGN CURRENCY 1/**
(%)

| | | Dec.19 | Dec.20 | Dec.21 | Jun.22 | Sep.22 | Dec.22 | Mar.23 | Jun.23 | Average Hist. 2/ |
|---|---|---|---|---|---|---|---|---|---|---|
| Passive | 90-day corporate prime | 1.6 | 0.2 | 0.3 | 1.7 | 3.5 | 4.7 | 4.9 | 5.1 | 1.1 |
| | TIPMEX | 0.8 | 0.3 | 0.2 | 0.4 | 0.8 | 1.2 | 1.6 | 1.7 | 0.6 |
| | FTIPMEX | 1.2 | 0.1 | 0.1 | 0.5 | 1.5 | 2.3 | 3.0 | 3.1 | 0.7 |
| | Deposits up to 30-day | 1.4 | 0.1 | 0.1 | 0.8 | 2.2 | 3.6 | 4.3 | 4.6 | 0.9 |
| | Individuals | 1.3 | 0.0 | 0.1 | 0.5 | 1.1 | 1.1 | 1.7 | 2.2 | 0.6 |
| | Business | 1.4 | 0.1 | 0.1 | 0.8 | 2.2 | 3.6 | 4.3 | 4.6 | 0.9 |
| | On 31 to 90-day term deposits | 1.5 | 0.3 | 0.2 | 0.8 | 2.4 | 3.3 | 4.5 | 4.7 | 1.1 |
| | Individuals | 1.0 | 0.2 | 0.2 | 0.4 | 0.9 | 1.7 | 2.8 | 2.8 | 0.7 |
| | Business | 1.6 | 0.3 | 0.2 | 0.8 | 2.6 | 3.4 | 4.7 | 4.9 | 1.2 |
| | On 91 to 180-day term deposits | 1.3 | 0.3 | 0.5 | 1.2 | 2.4 | 3.4 | 3.7 | 4.1 | 1.1 |
| | Individuals | 1.0 | 0.2 | 0.3 | 0.9 | 1.6 | 2.1 | 2.9 | 3.8 | 0.8 |
| | Business | 1.6 | 0.3 | 0.6 | 1.4 | 3.1 | 4.6 | 4.8 | 4.9 | 1.3 |
| | On 181 to 360-day term deposits | 1.4 | 0.3 | 0.6 | 1.7 | 2.7 | 3.8 | 4.2 | 4.1 | 1.2 |
| | Individuals | 1.2 | 0.3 | 0.4 | 1.4 | 2.1 | 3.2 | 4.0 | 3.9 | 1.1 |
| | Business | 1.8 | 0.3 | 0.7 | 1.8 | 3.5 | 4.9 | 5.0 | 4.7 | 1.4 |
| | CTS | 1.3 | 1.0 | 0.9 | 1.0 | 1.3 | 1.1 | 1.1 | 0.9 | 1.5 |
| Active | 90-day corporate prime | 2.7 | 1.0 | 1.0 | 2.6 | 4.3 | 6.0 | 6.0 | 6.3 | 2.2 |
| | TAMEX | 7.6 | 6.1 | 6.7 | 6.9 | 8.3 | 9.3 | 10.2 | 10.4 | 7.7 |
| | FTAMEX | 7.1 | 6.3 | 7.6 | 8.1 | 10.8 | 10.9 | 12.5 | 12.9 | 7.8 |
| | Corporates | 3.2 | 2.0 | 2.1 | 2.8 | 4.8 | 6.1 | 7.1 | 7.0 | 3.2 |
| | Large companies | 5.5 | 4.5 | 5.7 | 8.3 | 9.4 | 7.8 | 8.5 | 8.5 | 6.7 |
| | Medium-sized enterprises | 6.6 | 5.9 | 5.9 | 6.5 | 8.1 | 8.8 | 10.1 | 10.2 | 7.8 |
| | Small business | 8.8 | 5.3 | 10.3 | 13.3 | 12.7 | 12.2 | 13.5 | 12.9 | 11.6 |
| | Micro business 3/ | 7.7 | 4.8 | 17.1 | 14.3 | 10.6 | 9.4 | 12.5 | 12.6 | 13.1 |
| | Consumer 3/ | 35.3 | 33.5 | 33.9 | 34.6 | 33.7 | 37.1 | 40.7 | 41.6 | 35.5 |
| | Mortgage | 5.6 | 5.4 | 5.0 | 6.9 | 7.3 | 8.3 | 8.0 | 8.2 | 6.9 |

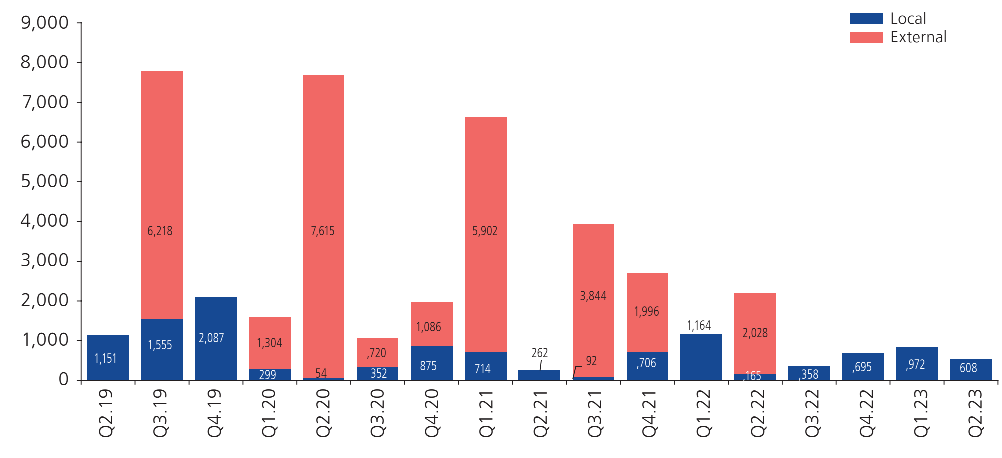
1/ Rates in annual terms of banks' transactions in the last 30 days.
2/ Average since September 2010. In the case of consumer credit, it is the average since October 2019.
3/ Corresponds to the average of the financial system.
As of June 12.
Source: BCRP and SBS.

## Fixed income market

67. In the second quarter of 2023, Peruvian companies only sought financing in the local capital market, which has been the case since the third quarter of 2022. The lower level of private sector bond placements, both in the local and foreign markets, is explained by: i) the increase in the cost of debt for issuers due to the more restrictive monetary conditions at the global level; ii) the prospects of recession at the global level, which still persist and affect the demand in auctions of risky securities; iii) the increase in yields of US government bonds, which makes them more attractive than domestic ones; iv) the low business confidence; and v) the lower long-term financing in the local capital market, generated by pension fund withdrawals.

Securities placed in the local market through public offerings so far in the second quarter of 2023 amount to S/ 608 million, which is a lower figure than that recorded in the first quarter of 2023 (S/ 972 million) and lower than the quarterly average between 2019 and 2022 (S/ 740 million). In the international market, Peruvian companies did not issue new bonds for the fourth consecutive quarter, which contrasts with non-resident companies that continue to issue securities in soles. In the second quarter of 2023, as of June 1, they placed bonds for a total of S/ 47 million, below the total sold in the second quarter of 2023 (S/ 532 million) and the quarterly average between the years 2019 and 2022 (S/ 543 million).

Graph 58
**PRIVATE SECTOR BOND PLACEMENTS**
(in millions S/)




As of June 1
Source: Reuters and SMV.

68. The value of the portfolios managed by institutional investors has continued to recover slightly in the second quarter of 2023, in a negative environment for local and international financial assets.

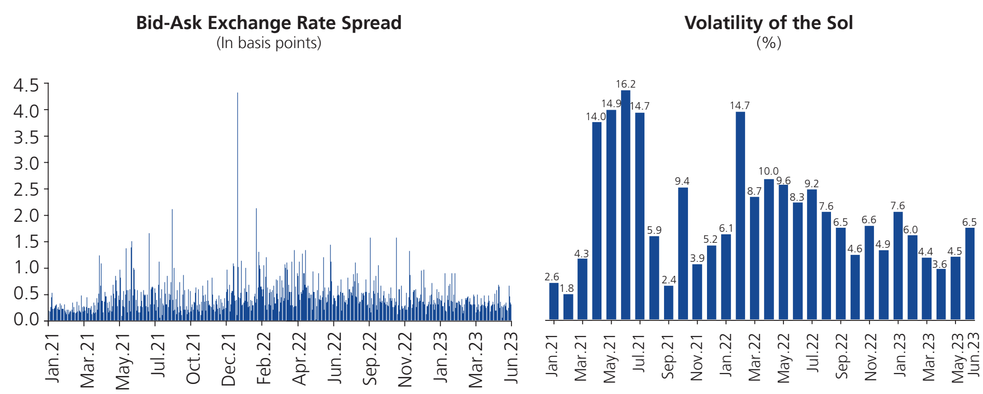
In the case of the AFPs, the investment portfolio increased from S/ 105.9 billion to S/ 110.1 billion between December 30, 2022 and May 31, 2023. This is a slight recovery after the significant withdrawals of contributors' funds following the enactment of Law No. 31478 ("Law authorizing the extraordinary withdrawal of private pension funds in the context of the COVID-19 pandemic in 2022"). It is estimated that the extraordinary withdrawals between 2020 and 2022 amounted to S/ 88.0 billion (9.4 percent of GDP). During this period, the BCRP conducted repo operations with AFPs for up to 3 months for S/ 17,208 million (to mitigate the impact on the financial markets of a significant liquidation in a short period of time). These repos have already expired and have no current balances.

In mutual funds, assets under management increased slightly, from S/ 28.3 billion in December 2022 to S/ 28.7 billion in May 2023. The number of participants has decreased from 341.2 to 340.9 thousand in the same period. In the case of insurance companies, the portfolio increased from S/ 58.0 billion to S/ 58.9 billion between December 2022 and February 2023.

## Foreign Exchange Market

69. The performance of the **Peruvian sol** (PEN) was influenced by the high uncertainty in the international financial markets due to: (i) fears of a global recession; (ii) banking tensions in the United States; (iii) uncertainty about the path of monetary policy rates; (iv) uncertainty about the debt ceiling in the United States; and (v) the risk of lower economic growth in China. So far in the second quarter of 2023, the PEN has appreciated by 3.0 percent. In April 2023, the Peruvian sol appreciated by 1.4 percent against the dollar, which is explained by i) the supply of dollars from the non-financial sector, and ii) the better risk perception of the Peruvian economy, given its solid macroeconomic fundamentals compared to its regional peers, and despite the political uncertainty. These factors contributed to the sol standing out as the currency with the best monthly performance in the region after Brazil. In May 2023, it appreciated by 1.1 percent against the dollar, while the dollar appreciated by 2.6 percent globally. In June, at the end of the 12th, the sol appreciated by 0.6 percent and reached its lowest level (S/ 3.650 per dollar) since April 2022.

Graph 59
**SPREAD AND VOLATILITY OF THE EXCHANGE RATE**




Monthly annualized daily standard deviation.
As of June 12
Source: Reuters and BCRP.

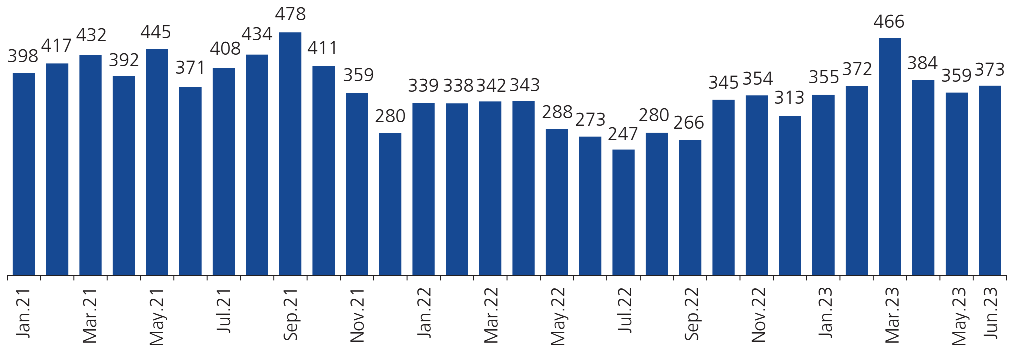
The average volatility of the PEN decreased in the second quarter, especially in April, compared to the first quarter. This lower volatility was also reflected in the bid-ask spreads, which fluctuated between 0.05 and 0.65 basis points between March and June, lower than the range in the first quarter (0.13 and 0.87 basis points).

Average daily trading in the interbank spot foreign exchange market so far in the second quarter (US$ 372 million) is lower than in the first quarter (US$ 398 million), reflecting lower demand for dollars from non-financial clients in the spot market.

Graph 60

**AVERAGE AMOUNT TRADED IN INTERBANK SPOT MARKET**

(Million US$)



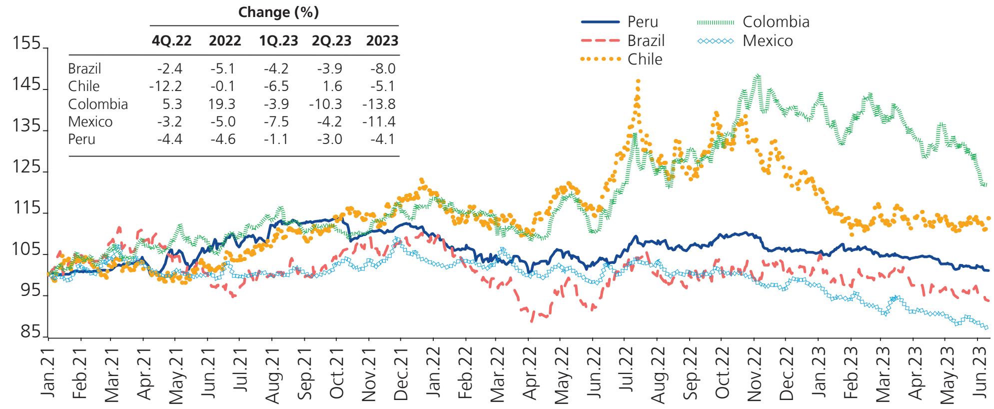

As of June 12.
Source: BCRP

In the region, the sol had the lowest volatility in the second quarter (4.5 percent), below the regional average (10.5 percent). The stability of the PEN is related to the solid macroeconomic fundamentals of the Peruvian economy, as well as to the moderation of depreciation expectations of economic agents.

Graph 61

**EXCHANGE RATE INDEX [1/]**

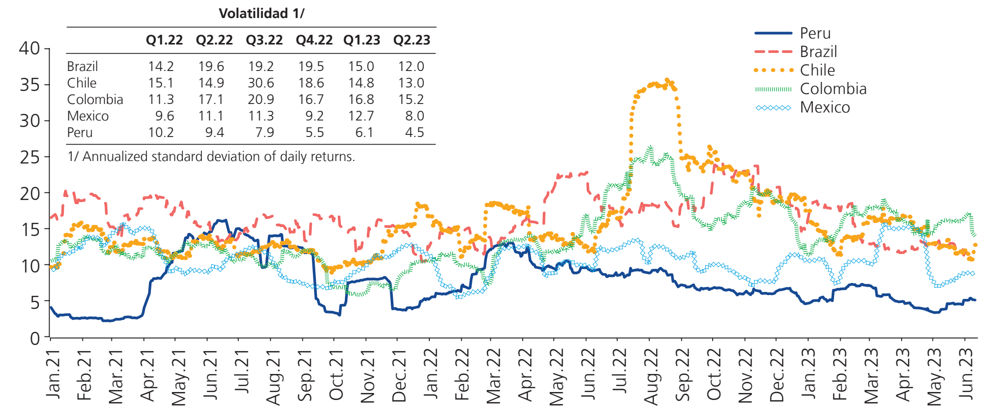
(Dec 31, 2020=100)




| | Change (%) | | | | |
|---|---|---|---|---|---|
| | **4Q.22** | **2022** | **1Q.23** | **2Q.23** | **2023** |
| Brazil | -2.4 | -5.1 | -4.2 | -3.9 | -8.0 |
| Chile | -12.2 | -0.1 | -6.5 | 1.6 | -5.1 |
| Colombia | 5.3 | 19.3 | -3.9 | -10.3 | -13.8 |
| Mexico | -3.2 | -5.0 | -7.5 | -4.2 | -11.4 |
| Peru | -4.4 | -4.6 | -1.1 | -3.0 | -4.1 |

[1/] An increase in the index indicates currency depreciation.
As of June 12.
Source: BCRP and Reuters.

Graph 62
## EXCHANGE RATE VOLATILITY*

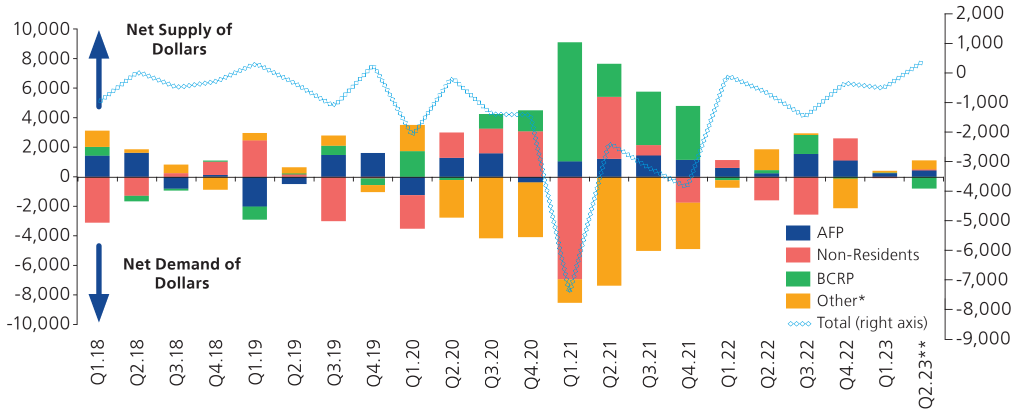



| | Q1.22 | Q2.22 | Q3.22 | Q4.22 | Q1.23 | Q2.23 |
|---|---|---|---|---|---|---|
| Brazil | 14.2 | 19.6 | 19.2 | 19.5 | 15.0 | 12.0 |
| Chile | 15.1 | 14.9 | 30.6 | 18.6 | 14.8 | 13.0 |
| Colombia | 11.3 | 17.1 | 20.9 | 16.7 | 16.8 | 15.2 |
| Mexico | 9.6 | 11.1 | 11.3 | 9.2 | 12.7 | 8.0 |
| Peru | 10.2 | 9.4 | 7.9 | 5.5 | 6.1 | 4.5 |

*Standard deviation of the annualized daily return over the last 30 days.
As of June 12.
Source: Reuters.

70. Foreign exchange flows from market participants in the second quarter of 2023, as of June 12, are a net supply of dollars (US$ 833 million), which represents a change from the net demand of dollars observed in the first quarter (US$ 171 million). In the spot market, there is a net supply of dollars (US$1,362 million), mainly from mining companies and private clients, related to foreign exchange sales for income tax payments and profit settlements. In the derivatives market, there is a net demand (US$529 million) from non-resident investors and the corporate sector.

Graph 63
## FOREIGN EXCHANGE FLOWS: SPOT AND DERIVATIVES
(Million US$)




| | 2021 | Q1.22 | Q2.22 | Q3.22 | Q4.22 | 2022 | Q1.23 | Q2.23** | 2023** |
|---|---|---|---|---|---|---|---|---|---|
| *Spot* | -6,891 | -1,482 | 2,017 | 2,816 | -2,071 | 1,281 | 104 | 1,362 | 1,467 |
| Derivatives | -10,287 | 1,787 | -2,338 | -4,064 | 2,085 | -2,528 | -275 | -529 | -805 |
| **Total** | **-17,178** | **305** | **-321** | **-1,248** | **14** | **-1,247** | **-171** | **833** | **662** |
| Change in Global Exchange Position of Banks | -328 | -77 | 107 | -25 | 108 | 113 | 138 | -33 | 105 |
| BCRP intervention | 17,506 | -229 | 213 | 1,273 | -123 | 1,134 | 33 | -801 | -768 |

* Other includes companies in the corporate sector, mining and retail sectors.
** As of June 12.
Source: BCRP.

Non-resident investors changed their net dollar positions between the first and second quarters. In the spot market, they supplied dollars in the second quarter (US$ 350 million), mainly in the month of May (US$ 505 million), a change from the net dollar demand observed in the first quarter (US$ 271 million). In the derivatives market, there was a net demand in the second quarter (US$ 279 million), compared with a net supply of forwards in the first quarter (US$ 170 million). Moreover, between March 31 and June 9, foreign investors purchased treasury bonds (BTPs) for a net total of S/ 3,911 million, a notable change from net sales recorded in the first quarter (S/ 2,302 million).

AFPs supplied about US$ 426 million in the second quarter of 2023, a higher amount than the net supply in the first quarter (US$ 239 million), while in the spot market they supplied a net total of US$ 60 million and in the derivatives market, almost US$ 366 million. Net purchases of external securities by AFPs during the period amounted to US$ 477 million, less than in the first quarter (US$ 540 million).

In the non-financial sector, entities showed a net supply of US$ 611 million between March and June 2023: (i) companies in the corporate sector registered a net demand of US$ 1,950 million, mainly in the spot market (US$ 1,618 million), lower than the total recorded in the first quarter (US$ 2,898 million), which is reflected in a reduction in dollarization by economic agents due to precautionary reasons; (ii) companies in the mining sector recorded a net supply of US$ 1,952 million in the spot market, below the net supply in the first quarter (US$ 2,973 million), associated with the sale of dollars due to the regularization of income taxes; (iii) the retail sector recorded a net supply of US$ 610 million in the spot market, above the net supply in the first quarter (US$ 522 million).

The banks' overall position increased from a negative US$ 27 million in March to a positive US$ 6 million in June 2023. The balance of net bank sales of non-delivery forwards (NDF) to non-resident investors increased by US$ 403 million between the first and second quarter of 2023, reflecting the increased supply of dollars from non-resident investors seen in foreign exchange market flows.

Between March and June 2023, the BCRP intervened in the foreign exchange market through auctions of FX swaps-sales at fixed and variable rates and through the placement of Adjustable Certificates of Deposit (CDR-BCRP), in order to reduce the volatility of the PEN's price against the dollar, in a context of high uncertainty in the global foreign exchange market. Thus, FX Swaps-sale for S/ 14,422 million were placed with maturities of 3, 6, 9 and 12 months at fixed and variable rates and a total of S/ 18,035 million matured at fixed rates.

The cumulative balance of FX swap sales as of June 12 is US$ 9,016 billion (12 percent of NIRs), which represents an average residual term of 283 days in June 2023, higher than in December 2019 (62 days) and December 2020 (107 days), but lower than the average residual term in December 2021 (293 days). The increase in the average maturity is related to the demand for hedging over a longer horizon.

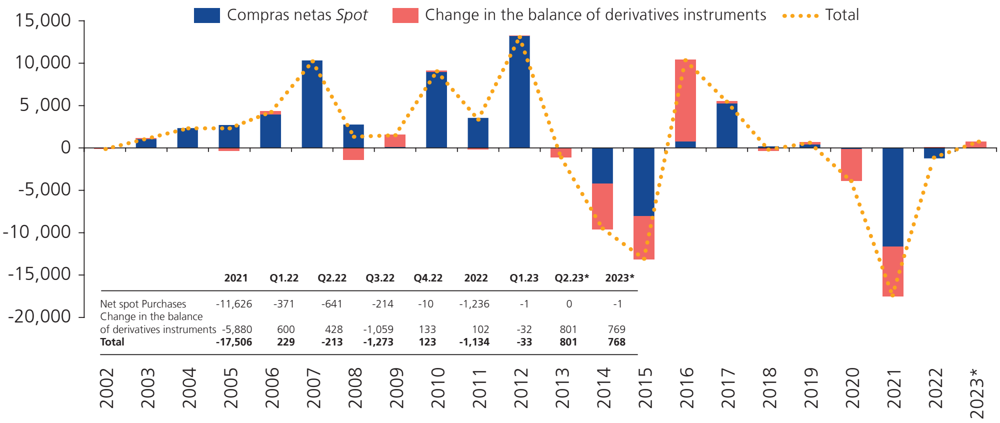
As of June 12, in the second quarter, the BCRP was a net buyer of USD 801 million in the foreign exchange market through the net maturity of FX swaps (USD 817 million) and the net placement of BCRP CDRs (USD 16 million). Average monthly interventions in the FX market during the most volatile period –from January to November 2021– amounted to US$ 1,568 million, higher than during the global financial crisis

(US$ 1,296 million), the period from February 2013 to April 2016 (US$ 614 million), and the period from December 2021 to June 2023 (US$ 33 million).

Graph 64

**INTERVENTIONS IN THE FOREIGN EXCHANGE MARKET OF THE BCRP**

(Million US$)




| | 2021 | Q1.22 | Q2.22 | Q3.22 | Q4.22 | 2022 | Q1.23 | Q2.23* | 2023* |
|---|---|---|---|---|---|---|---|---|---|
| Net spot Purchases | -11,626 | -371 | -641 | -214 | -10 | -1,236 | -1 | 0 | -1 |
| Change in the balance of derivatives instruments | -5,880 | 600 | 428 | -1,059 | 133 | 102 | -32 | 801 | 769 |
| **Total** | **-17,506** | **229** | **-213** | **-1,273** | **123** | **-1,134** | **-33** | **801** | **768** |

As of June 12
Source: BCRP.

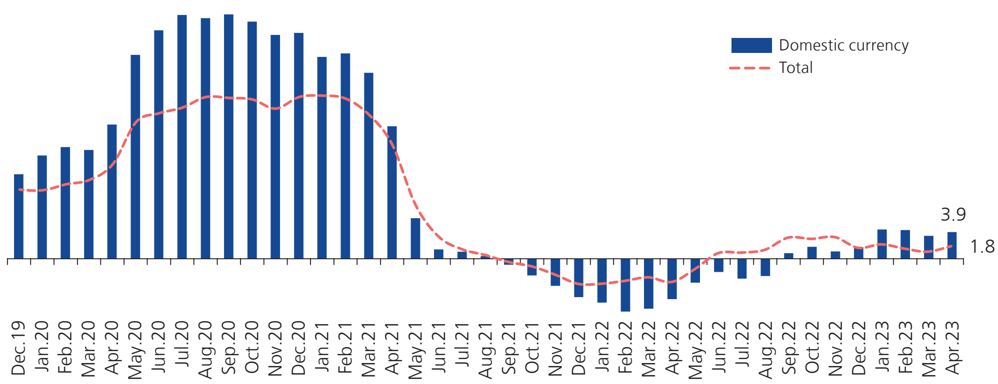
## Liquidity

71. The year-on-year growth rate of private sector deposits is positive and has remained stable at around 1.6 percent since June 2022. In April, the annual growth rate of these deposits was 1.8 percent. In terms of currency, deposits in soles grew by 3.9 percent year-on-year, while deposits in dollars declined by 1.7 percent in the 12 months to April.

Graph 65

**PRIVATE SECTOR DEPOSITS BY CURRENCY**

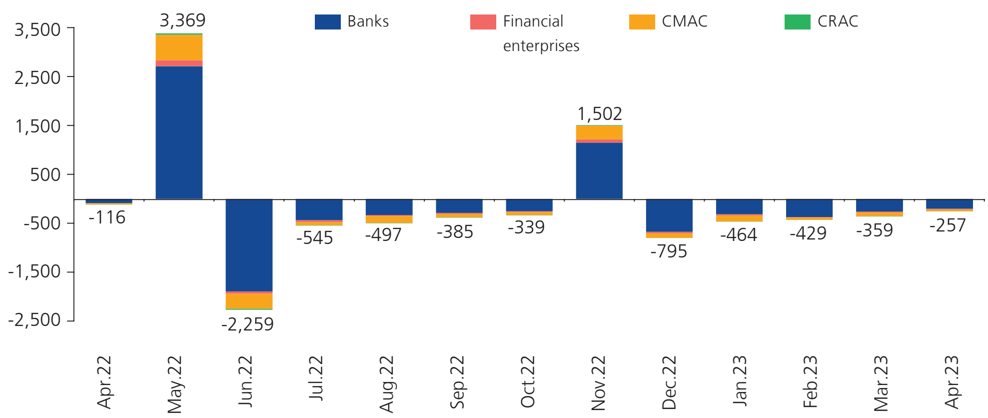
(Annual % change)




Source: BCRP.

In 2021 and 2022, laws were passed that allowed the withdrawal of the C.T.S., which largely explains the decline in private sector deposits in those years. In May 2021, a law was passed that allowed the withdrawal of 100 percent of the C.T.S.. As a result of this law, which was in effect until December 2021, an estimated total withdrawal of S/ 12,539 million was recorded. Moreover, a similar law was enacted in May 2022 (in force since June) allowing withdrawals until December 2023. In this context, it should be noted that the largest decrease in C.T.S. deposits since the enactment of the measure was observed in banks (S/ 3,864 million) and in municipal savings banks (S/ 727 million). In the month of May, prior to the implementation of this measure, the balance of C.T.S. deposits reached S/ 14,391 million, while in April 2023, the balance remained at S/ 9,565 million.

Graph 66
**MONTHLY FLOWS OF C.T.S. DEPOSITS**
(Million S/)




Source: BCRP.

The dollarization ratio of private sector deposits increased from 35.6 percent in December 2022 to 36.3 percent in April 2023. This is explained by the increase in the dollarization of corporate deposits (from 39.7 percent to 40.8 percent) and individual deposits (from 32.5 percent to 32.9 percent).

In 2022, domestic currency deposits grew by 1.7 percent, while credit to the private sector in domestic currency grew 2.5 percent. By 2023, the gap between loans and deposits is expected to narrow (7.8 percent for deposits and 3.9 percent for domestic currency loans to the private sector). In 2024, the gap would continue to narrow (10.7 and 5.6 percent, respectively).

Table 29
**MONETARY AND CREDIT ACCOUNTS OF THE DEPOSITORY CORPORATIONS (END-OF-PERIOD)**
(Annual % change)

| | Dec.19 | Dec.20 | Dec.21 | Mar.22 | Jun.22 | Sep.22 | Dec.22 | Apr.23 | Dec.23* | Dec.24* |
|---|---|---|---|---|---|---|---|---|---|---|
| Currency in circulation (End-of-period) | 4.7 | 37.3 | 16.0 | 3.7 | -1.0 | -3.3 | -3.8 | -3.5 | -3.5 | -1.0 |
| Deposits in domestic currency | 12.3 | 33.0 | -5.6 | -7.3 | -1.9 | 0.8 | 1.7 | 3.9 | 7.8 | 10.7 |
| Total deposits 1/ | 10.1 | 23.6 | -3.7 | -2.8 | 0.8 | 3.0 | 1.5 | 1.8 | 5.2 | 7.3 |
| Broad money in domestic currenc | 10.6 | 32.2 | -0.9 | -4.4 | -1.3 | 0.1 | 0.6 | 2.4 | 4.9 | 7.9 |
| Total broad money 1/ | 9.6 | 25.1 | -0.4 | -1.0 | 1.0 | 2.3 | 1.0 | 1.2 | 3.5 | 5.7 |
| Credit to the private sector in domestic currency | 10.1 | 19.4 | 5.5 | 7.6 | 6.7 | 4.2 | 2.5 | 0.6 | 3.9 | 5.6 |
| Total credit to the private sector 1/ | 6.9 | 10.7 | 4.0 | 6.9 | 5.9 | 6.1 | 4.6 | 2.7 | 4.0 | 5.0 |
| Total credit to the private sector (without Reactiva Peru Program)1/ | 6.9 | -5.5 | 8.8 | 13.5 | 12.9 | 13.1 | 11.3 | 8.9 | 7.4 | 6.5 |

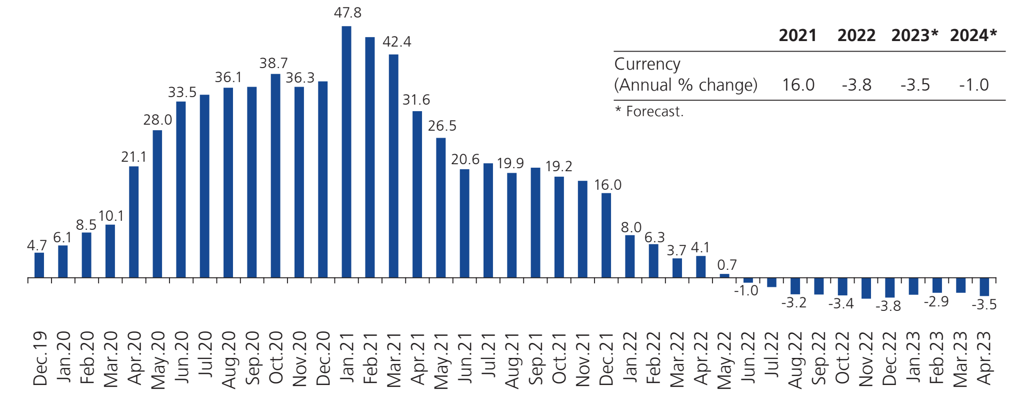
1/ The December 2022 constant exchange rate is maintained.
* Forecast.
Source: BCRP.

72. Currency in circulation declined by 3.8 percent year-on-year in December 2022 and by 3.5 percent in April 2023. Currency in circulation is expected to continue to moderate in the following months, after growing at historically high rates during the health emergency[33], as the factors that favored currency growth in previous years fade. In addition, currency in circulation would decrease, so that its pre-pandemic trend relative to GDP would recover in the medium term, given the expected growth in nominal GDP and the recent innovations in electronic means of payment. In particular, variation rates of -3.5 percent are expected for 2023 and -1.0 percent for 2024.

**Graph 67**

**CURRENCY IN CIRCULATION**

(Percentage change 12 months)




| | 2021 | 2022 | 2023* | 2024* |
|---|---|---|---|---|
| Currency (Annual % change) | 16.0 | -3.8 | -3.5 | -1.0 |

* Forecast.

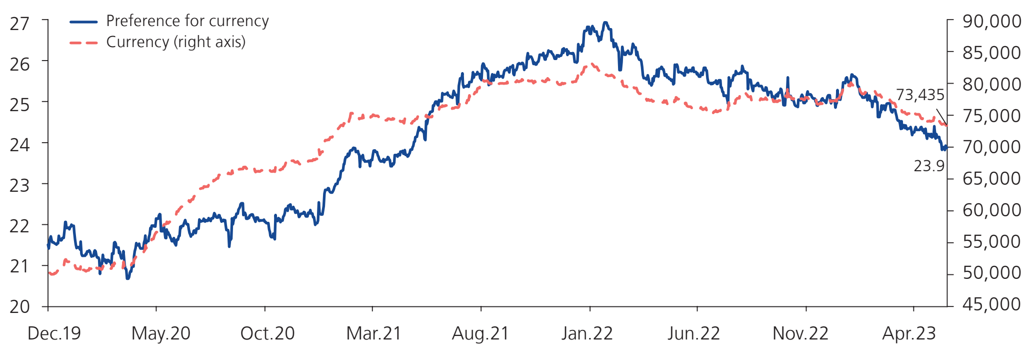
* Forecast.
Source: BCRP.

73. The preference for currency in circulation has continued to decline during 2022 and early 2023, after rising steadily between April 2020 and December 2021, reaching 23.9 percent in May 2023.

**Graph 68**

**CURRENCY IN CIRCULATION AND PREFERENCE FOR CURRENCY IN CIRCULATION**

(In millions of Sol and in percentages)




Source: BCRP.

33 Precautionary cash savings would have been mainly driven by transfers to families through the bonds granted by the government.

## Credit to the private sector

**74.** **Credit to the private sector** grew at an annual rate of 2.7 percent in April 2023 (4.6 percent in 2022). Excluding loans from the Reactiva Perú program, the annual growth rate of credit was 8.9 percent in April 2023 (11.3 percent in 2022).

75. Credit growth was mainly driven by loans to individuals. It grew by 12.1 percent in April 2023 (15.9 percent in 2022), this slowdown in credit to individuals being mainly explained by the lower increase in consumer credit (16.3 percent in April 2023). On the other hand, mortgage credit also shows a deceleration in the last month recording a growth rate of 6.1 percent year-on-year in April 2023.

76. Credit to companies shows a decrease related to the amortization of loans from the Reactiva Peru program. In April 2023, credit to companies decreased by 2.6 percent, while excluding Reactiva Peru loans it increased by 6.8 percent. The segment with the largest decrease was that of medium, small and micro enterprises (-4.1 percent), while the corporate and large enterprise segment showed a smaller decrease of 1.2 percent.

Table 30

**CREDIT TO THE PRIVATE SECTOR 1/**

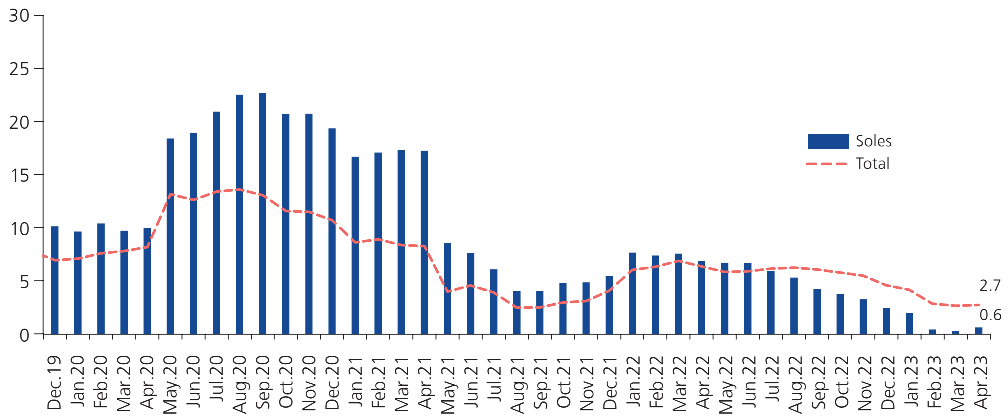
(Annual growth rates)

| | Dec.19 | Dec.20 | Dec.21 | Mar.22 | Jun.22 | Sep.22 | Dec.22 | Mar.23 | Apr.23 |
|---|---|---|---|---|---|---|---|---|---|
| **Businesses** | **4.2** | **19.7** | **3.6** | **4.6** | **1.1** | **0.4** | **-1.4** | **-3.1** | **-2.6** |
| Corporate and large companies | 4.3 | 6.4 | 8.0 | 10.6 | 4.2 | 4.0 | 1.2 | -2.2 | -1.2 |
| Medium-sized enterprises, Small business and Micro business | 4.2 | 35.6 | -0.5 | -1.0 | -2.1 | -3.3 | -4.0 | -4.2 | -4.1 |
| **Individuals** | **11.4** | **-3.2** | **4.8** | **11.2** | **15.4** | **17.3** | **15.9** | **13.1** | **12.1** |
| Consumer | 13.3 | -7.2 | 3.1 | 14.5 | 21.2 | 24.0 | 21.8 | 17.7 | 16.3 |
| Car loans | 12.0 | -2.2 | 7.3 | 13.4 | 12.3 | 17.6 | 15.9 | 18.7 | 19.3 |
| Rest | 13.4 | -7.3 | 3.0 | 14.5 | 21.5 | 24.2 | 22.0 | 17.7 | 16.2 |
| Mortgage | 8.6 | 2.9 | 7.1 | 7.0 | 8.1 | 8.8 | 8.0 | 6.7 | 6.1 |
| **TOTAL** | **6.9** | **10.7** | **4.0** | **6.9** | **5.9** | **6.1** | **4.6** | **2.6** | **2.7** |
| **Memo:** | | | | | | | | | |
| **Businesses without Reactiva** | **4.2** | **-7.0** | **11.5** | **15.0** | **11.3** | **10.4** | **8.4** | **6.2** | **6.8** |
| **Total without Reactiva Peru** | **6.9** | **-5.5** | **8.8** | **13.5** | **12.9** | **13.1** | **11.3** | **8.9** | **8.9** |

1/ The constant exchange rate as of December 2022 is maintained.
Source: BCRP.

77. Since early 2022, sol-denominated credit has slowed and dollar-denominated credit has increased, mainly in the corporate sector. By April 2023, sol-denominated credit grew by 0.6 percent, while dollar-denominated credit grew by 9.9 percent over the same period.

Graph 69
**TOTAL CREDIT AND CREDIT TO THE PRIVATE SECTOR IN DOMESTIC CURRENCY**
(Annual growth rates)




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

| | Dec.19 | Dec.20 | Mar.21 | Jun.21 | Sep.21 | Dec.21 | Mar.22 | Jun.22 | Sep.22 | Dec.22 | Apr.23 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Domestic currency | 10.1 | 19.4 | 17.3 | 7.6 | 4.1 | 5.5 | 7.6 | 6.7 | 4.2 | 2.5 | 0.6 |
| Foreign currency | -0.3 | -11.0 | -14.0 | -4.3 | -2.8 | -0.8 | 4.6 | 3.2 | 12.5 | 12.1 | 9.9 |
| Total | ,6.9 | 10.7 | 8.4 | 4.5 | 2.5 | 4.0 | 6.9 | 5.9 | 6.1 | 4.6 | 2.7 |

1/ The constant exchange rate as of December 2022 is maintained.
Source: BCRP.

78. For its part, the Superintendency of Banks, Insurance Companies and AFPs (SBS) extended some prudential measures related to the rescheduling of loans. In particular, on March 15, 2023, with Oficio Multiple No. 12174-2023-SBS, the SBS authorized the entities of the financial system to reschedule the loans of retail debtors affected by the weather phenomena, in accordance with the regulations issued in January 2023 (Oficio Multiple No. 3583-2023-SBS) and in December 2022 (Oficio Multiple No. 54961-2022-SBS), which benefited retail debtors affected by the breach of peace or internal order that led to the declaration of a state of national emergency.

## Dollarization of credit and liquidity

79. The **dollarization ratio** of credit to the private sector, measured at constant exchange rates, was 23.9 percent in April 2023, higher than the level observed in December 2022 (23.4 percent). The dollarization of credit to the corporate sector increased from 33.6 to 35.0 percent between December 2022 and April 2023. On the other hand, the dollarization ratio of credit to individuals decreased slightly, from 6.9 to 6.7 percent over the same period, while in the segment of mortgage loans it decreased from 8.9 percent in December 2022 to 8.6 percent in April 2023 and in the segment of consumer loans it decreased from 5.5 percent to 5.4 percent in the same period.

Table 31
**CREDIT DOLLARIZATION RATIO 1/**
(%)

| | Dec.19 | Dec.20 | Dec.21 | Mar.22 | Jun.22 | Sep.22 | Dec.22 | Apr.23 |
|---|---|---|---|---|---|---|---|---|
| **Business** | **40.3** | **30.1** | **29.4** | **30.2** | **32.0** | **32.9** | **33.6** | **35.0** |
| Corporate and large companie | 53.7 | 45.8 | 44.5 | 45.7 | 49.0 | 50.5 | 51.5 | 53.6 |
| Medium-sized enterprises | 41.9 | 24.4 | 22.7 | 23.0 | 23.9 | 24.8 | 26.1 | 27.8 |
| Small business and Micro business | 6.4 | 4.5 | 3.1 | 2.9 | 2.7 | 2.7 | 2.7 | 2.6 |
| **Individuals** | **10.1** | **9.0** | **7.5** | **7.5** | **7.3** | **7.2** | **6.9** | **6.7** |
| Consumer | 6.8 | 6.1 | 5.5 | 5.9 | 5.8 | 5.8 | 5.5 | 5.4 |
| Car loans | 16.6 | 18.8 | 14.4 | 12.7 | 12.0 | 11.3 | 11.0 | 10.5 |
| Credit cards | 8.0 | 6.5 | 12.9 | 12.3 | 12.3 | 12.7 | 11.6 | 12.0 |
| Rest | 5.7 | 5.4 | 3.7 | 4.3 | 4.2 | 4.1 | 3.9 | 3.7 |
| Mortgage | 15.0 | 13.1 | 10.2 | 9.7 | 9.3 | 9.1 | 8.9 | 8.6 |
| **TOTAL** | **28.5** | **22.9** | **21.8** | **22.1** | **22.9** | **23.4** | **23.4** | **23.9** |

1/ The constant exchange rate as of December 2022 is maintained.
Source: BCRP.

## Non-performing loans (NPL)

80. The **non-performing loans ratio** in April 2023 was 4.06 percent, slightly higher than in December 2022 (3.97 percent). This result is explained by higher non-performing loans to companies, mainly due to the increase in non-performing loans granted to medium-sized companies and micro and small enterprises. Non-performing loans to individuals also increased over the same period, particularly in the case of credit cards.

Table 32
**NON-PERFORMING LOANS DELINQUENCY RATE**
(%)

| | Dec.19 | Dec.20 | Dec.21 | Mar.22 | Jun.22 | Sep.22 | Dec.22 | Apr.23 |
|---|---|---|---|---|---|---|---|---|
| **Business** | **3.71** | **3.73** | **4.60** | **4.80** | **4.81** | **5.04** | **5.09** | **5.23** |
| Corporate and large companies | 0.62 | 1.04 | 1.08 | 1.28 | 1.45 | 1.46 | 1.39 | 1.45 |
| Medium-sized enterprises | 8.24 | 6.27 | 9.49 | 9.99 | 10.16 | 11.29 | 11.65 | 12.13 |
| Small business and Micro business | 6.29 | 6.06 | 6.54 | 6.63 | 6.37 | 6.47 | 6.37 | 6.61 |
| **Individuals** | **2.85** | **4.91** | **2.57** | **2.45** | **2.53** | **2.54** | **2.54** | **2.61** |
| Consumer | 2.81 | 5.92 | 2.23 | 2.14 | 2.31 | 2.47 | 2.51 | 2.65 |
| Credit cards | 5.33 | 12.70 | 6.28 | 6.18 | 6.43 | 6.71 | 6.58 | 7.24 |
| Car loans | 3.75 | 5.85 | 3.72 | 3.74 | 3.54 | 3.46 | 3.37 | 3.13 |
| Rest | 1.46 | 3.07 | 1.35 | 1.28 | 1.39 | 1.52 | 1.57 | 1.59 |
| Mortgage | 2.91 | 3.51 | 3.01 | 2.87 | 2.84 | 2.64 | 2.57 | 2.55 |
| **Average 1/** | **3.24** | **4.00** | **3.76** | **3.82** | **3.84** | **3.98** | **3.97** | **4.06** |

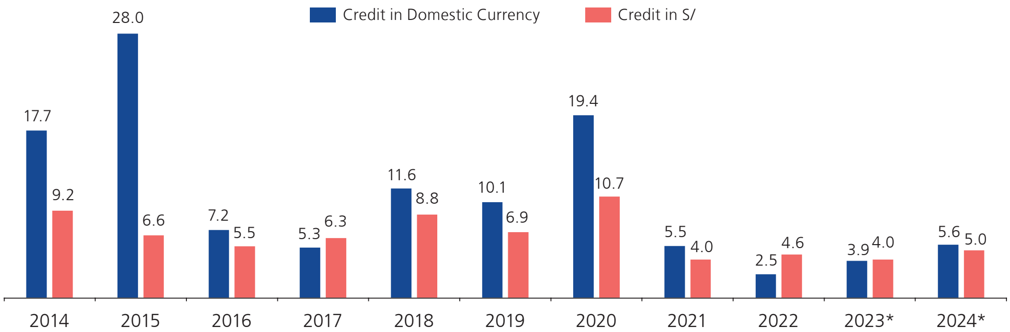
1/ The non-performing loans ratio is the percentage of direct loans that are past due or in judicial collection. This indicator also includes loans to companies, individuals, sovereign loans, loans to multilateral organizations, and loans to public sector companies and organizations.
Source: BCRP.

## Projected credit to the private sector

81. In 2023 and 2024, credit to the private sector is expected to grow at a slower pace than nominal GDP, after showing a significant increase in the credit-to-GDP ratio in

2020, which would stabilize at pre-pandemic levels after 2024. Thus, the credit-to-GDP ratio is projected to reach 41.9 percent of GDP in 2023 (after declining from 53.1 percent in 2020, 45.4 percent in 2021, and 44.3 percent in 2022). This forecast also assumes a recovery in economic activity (with a nominal GDP growth rate of 33.1 percent in 2019 and a rate of 10.1 percent in 2022).

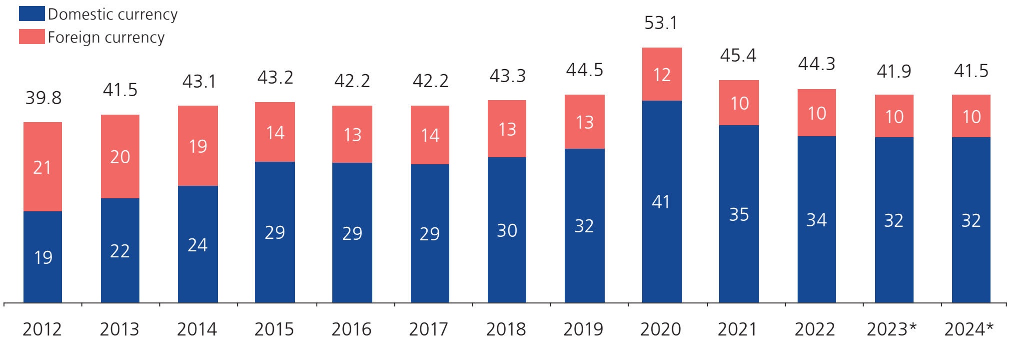
Graph 70
**CREDIT TO THE PRIVATE SECTOR**
(% change)




* Forecast.
Source: BCRP.

On the other hand, credit in domestic currency is expected to increase. Thus, the projected growth of credit to the private sector in domestic currency would be 3.9 percent in 2023 and 5.6 percent in 2024, taking into account the disappearance of the statistical effect of the strong increase in 2020 and the beginning of the amortization of the loans granted under the Reactiva Peru program. Thus, total credit would grow by 4.0 percent in 2023 (7.4 percent without Reactiva) and by 5.0 percent in 2024 (6.5 percent without Reactiva). This would stabilize the credit dollarization ratio at 23.1 percent by the end of 2024.

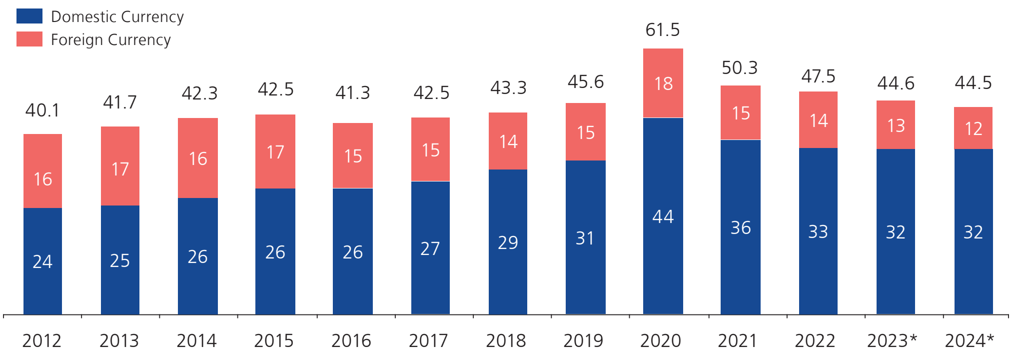
Graph 71
**CREDIT / GDP RATIO**
(%)




Note: Calculated at constant exchange rate (December 2022).
* Forecast
Source: BCRP

On the other hand, the growth rates of liquidity and currency in circulation would be lower than those of nominal GDP in 2023 and 2024. The ratio of liquidity to GDP would decline from 47.5 percent in 2022 to 44.6 percent in 2023 and 44.5 percent in 2024. Meanwhile, the ratio of currency in circulation to GDP would decline from 8.5 percent in 2022 to 7.5 percent in 2023 and to 7.0 percent in 2024.

Graph 72
**LIQUIDITY / GDP RATIO**
(%)




Note: Calculated at constant exchange rate (December 2022).
* Forecast.
Source: BCRP.

## Box 5
## CREDIT SUPPLY AND DEMAND SHOCKS IN PERU[34]

The dynamics of private sector credit growth can be explained by various macroeconomic and financial shocks, which in turn can be driven by market forces, supply and demand, as well as monetary policy actions and external factors. The objective of this box is to explain the recent dynamics of private sector credit growth by identifying credit supply and demand shocks by currency and together with other traditional macroeconomic shocks (monetary policy, aggregate demand and supply, etc.).

In the particular case of Peru, there are two credit markets operating simultaneously (financial intermediation system in soles and in dollars), which makes it even more difficult to capture the aforementioned market forces through data. Consequently, identifying these traditional shocks in the literature is more difficult. Nonetheless, it is worth noting that the dollarization rate has declined significantly over the period of analysis (2002-2023), from 83.3 percent in December 2001 to 23.9 percent in March 2023. As a result, the financial system is now less vulnerable to external shocks, which is reflected in the appreciation of the exchange rate.

To capture the above shocks, a Bayesian structural vector autoregressive (BVAR) model is estimated for the period 2002-2023, where structural shocks are identified by imposing zero and sign restrictions,[35] in line with recent empirical literature,[36] for both advanced and emerging economies.[37] This methodology allows us to isolate opposing market forces, such as supply and demand. The sign restrictions that allow for the separation of demand and supply effects are as follows: (i) a credit supply shock increases the level of credit and decreases the spread between lending and deposit rates, (ii) a credit demand shock increases the level of credit and increases the spread between lending and deposit rates per currency. These restrictions apply simultaneously to credit in both currencies (soles and dollars).

The data used for Peru correspond to: (i) inflation, (ii) GDP growth, (iii) credit growth in dollars, (iv) credit growth in soles, (v) lending and deposit rate spread in soles, (vi) lending and deposit rate

34 This box is based on the paper of the same title by Fernando Perez. It was presented at the BCRP's Economic Research Seminar in May 2023.

35 Canova, F. and De Nicoló, G. (2002). Monetary disturbances matter for business fluctuations in the G-7. Journal of Monetary Economics, 49, 1131-1159.

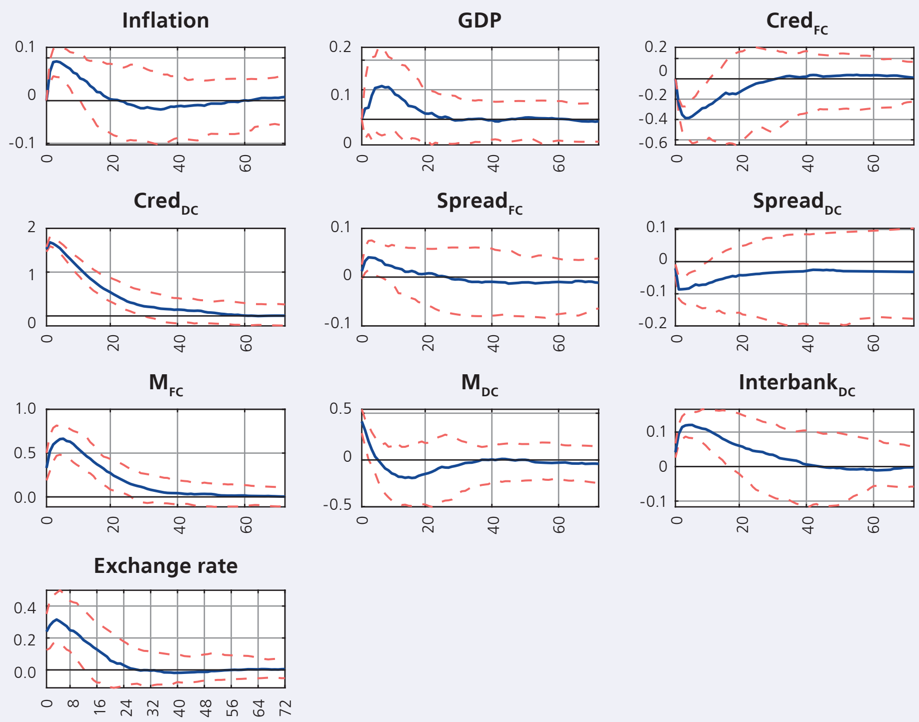
36 See Rubio-Ramírez, J. F., Waggoner, D. F. and Zha, T. (2010). Structural vector autoregressions: Theory of identification and algorithms for inference. Review of Economic Studies, 77, 665-696.

37 See Balke, N. S., Zeng, Z. and Zhang, R. (2021). Identifying credit demand, financial intermediation, and supply of funds shocks: A structural var approach. The North American Journal of Economics and Finance, 56, 101375; Buyukbasaran, T., Karasoy-Can, G. and Kucuk, H. (2022). Macroeconomic effcts of bank lending in an emerging economy: Evidence from turkey. Economic Modelling, 115, 105946.

spread in dollars, (vii) liquidity growth in dollars, (viii) liquidity growth in soles, (ix) interbank interest rate in soles, and (x) exchange rate variation (S/ per US$). All variables, except interest rates and spreads, were expressed as year-on-year percentage changes.

Among the main results we find that macroeconomic supply, demand and exchange rate shocks, together with the monetary policy shock, produce the usual effects, in line with previous empirical evidence. On the one hand, the credit supply shock in domestic currency expands credit and liquidity in soles, reduces the spread between lending and deposit rates (financial margin), causes a decline in foreign currency credit and an expansion of economic activity, which is subsequently reflected in an increase in inflation and the central bank's response by raising its interest rate.

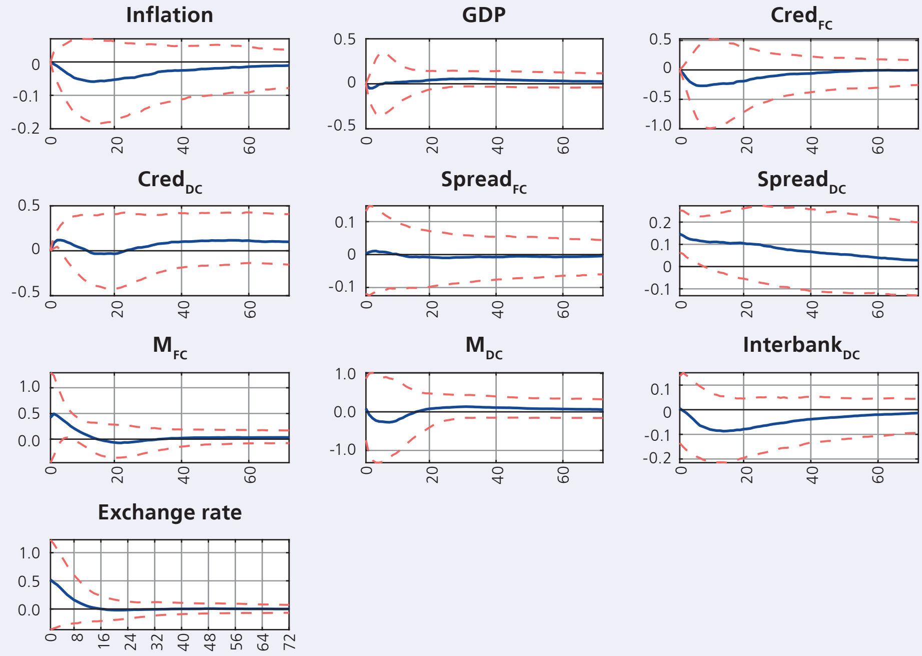
**DYNAMIC EFFECTS OF A CREDIT SUPPLY SHOCK IN SOLES***




* Median value and interval of the 68th percentile most probable.

In turn, a shock to the demand for credit in domestic currency leads to an increase in the spread between lending and deposit rates and a subsequent increase in economic activity.

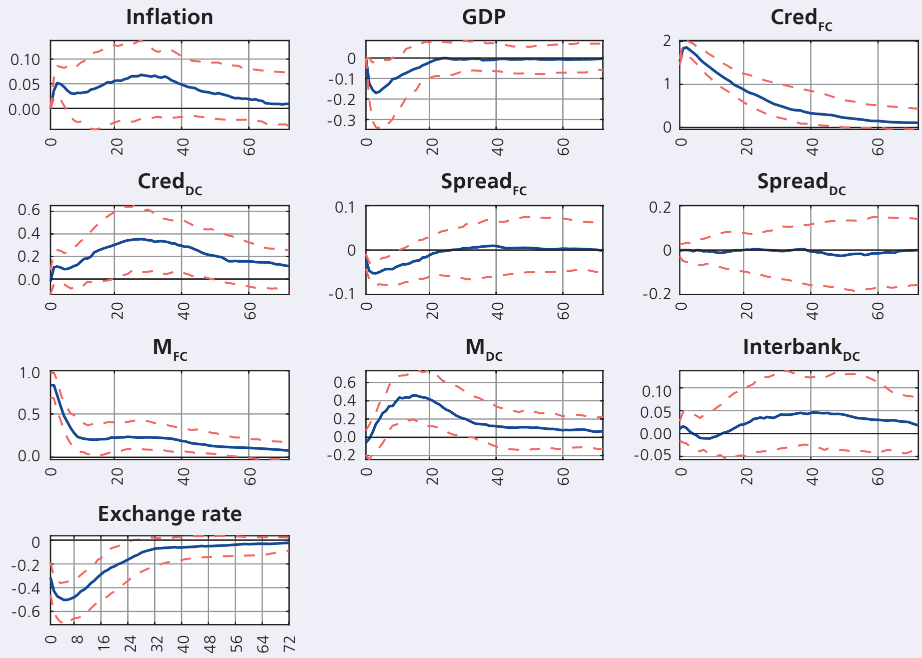
**DYNAMIC EFFECTS OF A CREDIT DEMAND SHOCK IN SOLES***




* Median value and interval of the 68th percentile most probable.

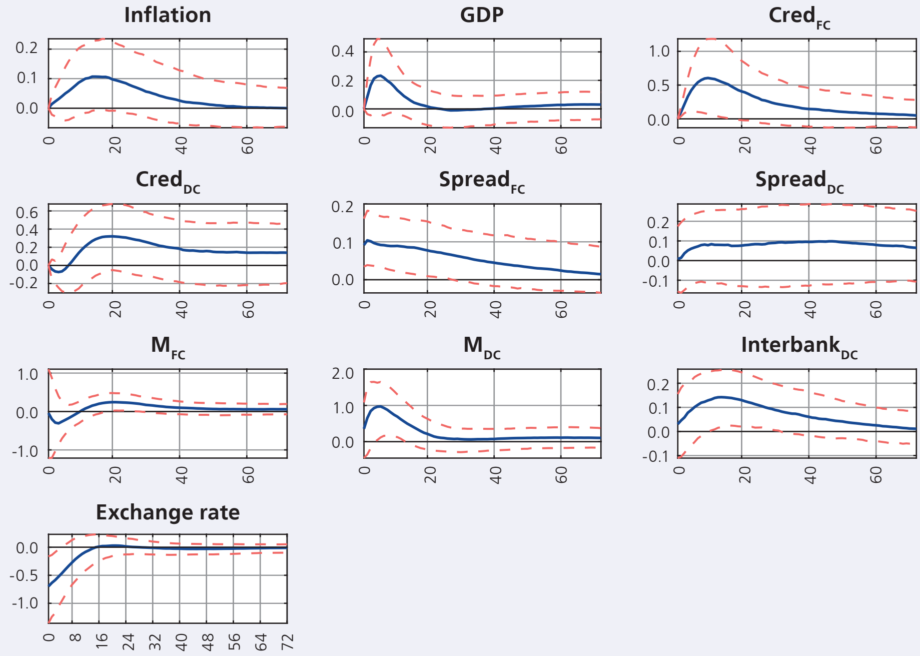
On the other hand, a credit supply shock in foreign currency expands credit and liquidity in that currency, reduces the *spread* between lending and deposit rates, and its effect on economic activity is negative, given the increase in dollarization and the balance sheet effect. Finally, a credit demand shock in foreign currency also causes an increase in the spread between lending and deposit rates and an expansion of economic activity.

**DYNAMIC EFFECTS OF A CREDIT SUPPLY SHOCK IN DOLLARS***




* Median value and interval of the 68th percentile most probable.

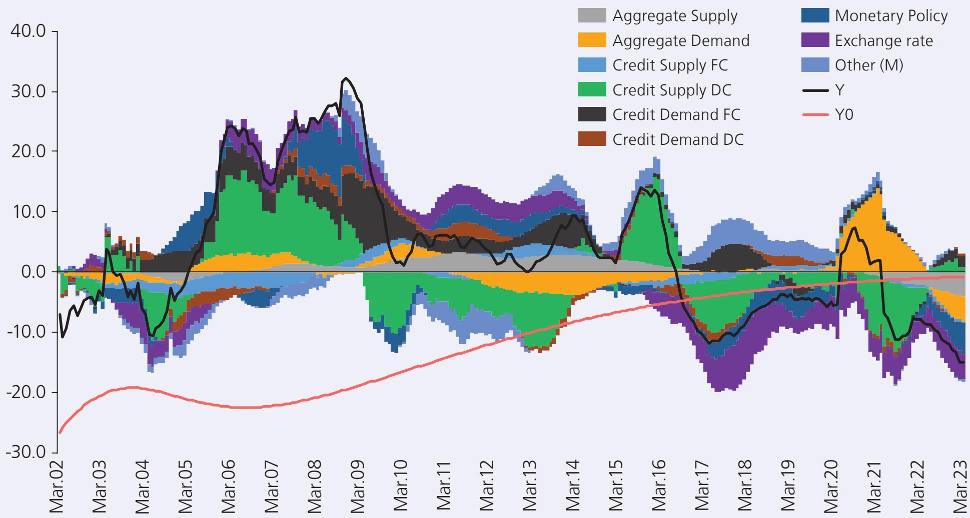
### DYNAMIC EFFECTS OF A CREDIT DEMAND SHOCK IN DOLLARS*




* Median value and interval of the 68th percentile most probable.

The historical decomposition of year-on-year credit growth in both currencies shows the contribution of the above-mentioned credit demand and supply shocks. In particular, the historical decomposition shows that the recent slowdown in aggregate credit in domestic currency is explained by negative exchange rate shocks, aggregate demand and supply shocks, and also by monetary policy actions associated with interest rate hikes (a phenomenon observed at the global level).

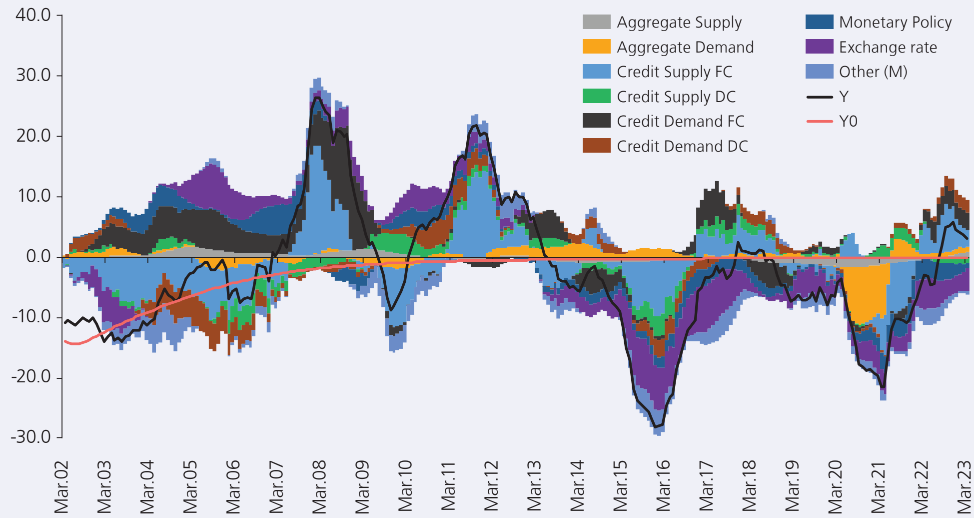
### HISTORICAL BREAKDOWN OF CREDIT IN LOCAL CURRENCY




* The sample average of the variable under study was subtracted for presentation purposes.

For its part, the historical decomposition also shows that the recent slowdown in aggregate foreign currency credit is explained by negative credit supply shocks in both currencies, as well as by exchange rate shocks.

**HISTORICAL BREAKDOWN OF FOREIGN CURRENCY LENDING***




* The sample average of the variable under study was subtracted for presentation purposes.

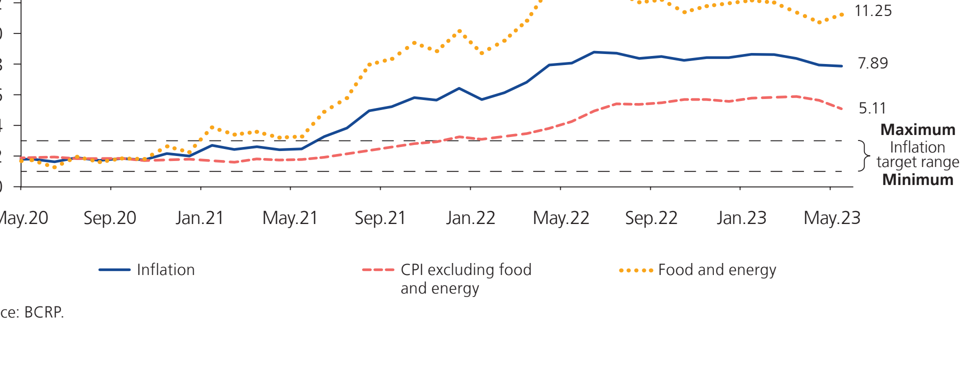
In conclusion, the evolution of credit to the private sector, especially in domestic currency, depends on several factors, both macroeconomic and financial. In this sense, the slowdown in credit to the sector observed in recent months responds mainly to domestic aggregate demand and supply factors and, to a lesser extent, to monetary policy measures and external factors such as exchange rate fluctuations. In turn, the growth of credit to the private sector in foreign currency also depends on external factors such as the exchange rate and the evolution of international interest rates, mainly in dollars. In short, the slowdown in credit is explained by various macroeconomic factors, beyond the increase in the policy rate at the global level, due to both domestic and external effects.

# VI. Inflation and balance of inflation risks

## Recent inflation trends

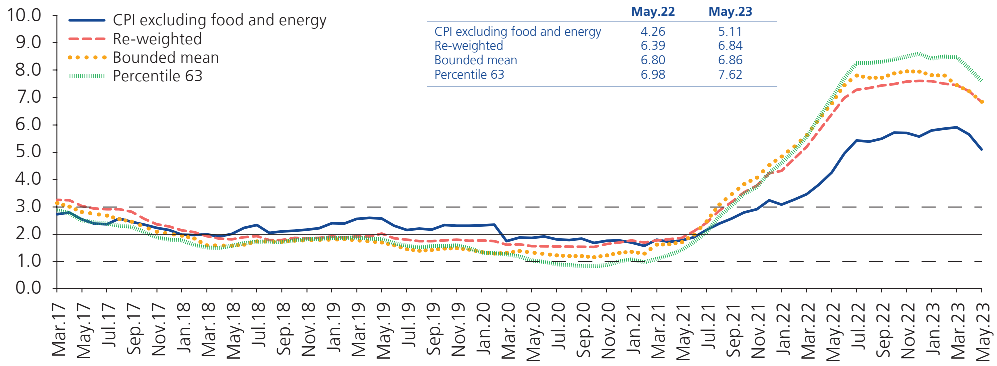
82. Year-on-year **inflation** fell from 8.65 percent in February to 7.89 percent in May 2023. The items that contributed most to the variation in inflation over the last twelve months to May were meals away from home, local transportation, chicken meat, eggs, and personal care products. Inflation excluding food and energy fell from 5.87 to 5.11 percent over the same period, above the target range. The various trend inflation indicators were also above the target range, although they have been showing a declining trend so far this year.

**Graph 73**
**INFLATION**
(Last 12-month % change)




Source: BCRP.

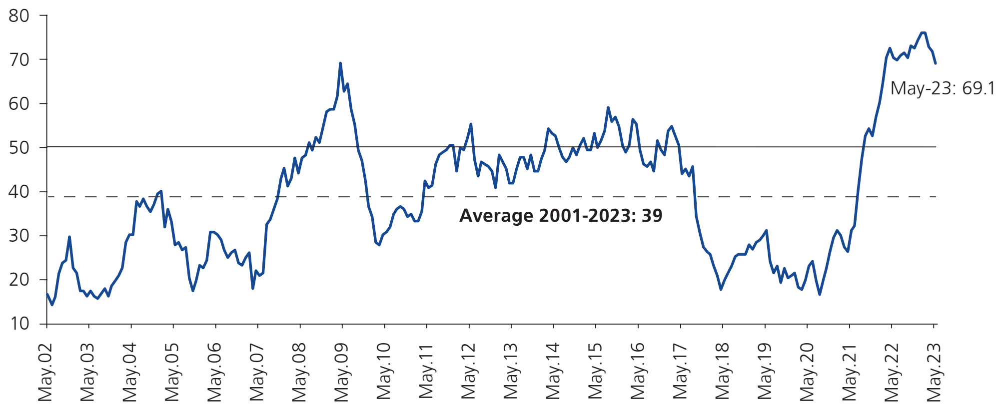
Graph 74
**MEASUREMENTS OF THE INFLATIONARY TREND**
(Last 12 months % change)




**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 over 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. Percentile 63:** Corresponds to the percentage changes of the item placed in the 63th percentile.
Source: BCRP

83. Out of a total of 186 items in the Consumer Price Index (CPI), 69 percent had a year-on-year change of more than 3 percent in May. This indicator peaked at 76 percent in February and declined in March and April. It has not been below 70 since February 2022 (64.5 percent).

Graph 75
**PERCENTAGE OF CPI ITEMS WITH YEAR-ON-YEAR PRICE CHANGE HIGHER THAN 3%**




| | May.22 | Jun.22 | Jul.22 | Aug.22 | Sep.22 | Oct.22 | Nov.22 | Dec.22 | Jan.23 | Feb.23 | Mar.23 | Apr.23 | May.23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Index | 70 | 70 | 71 | 72 | 70 | 73 | 73 | 74 | 76 | 76 | 73 | 72 | 69 |
| Number of items: | | | | | | | | | | | | | |
| Items with variation higher than 3% | 131 | 130 | 132 | 133 | 131 | 136 | 135 | 140 | 143 | 143 | 137 | 135 | 130 |
| Items with variation lower than 3% | 55 | 56 | 54 | 53 | 55 | 50 | 51 | 48 | 45 | 45 | 51 | 53 | 58 |

Source: BCRP.

84. The items most closely linked to the exchange rate, international prices and contracts linked to the Wholesale Price Index (WPI) contributed 0.60 percentage points to cumulative inflation between January and May (2.67 percent). For reference, in 2022 these same items contributed 2.1 percentage points to annual inflation (8.46 percent).

Table 33

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

| | Weight 2009 | % chg. 12 m. Dec.21 | Weighted contribution | Weight Dec.21 | % chg. 12 m. Dec.22 | Weighted contribution | Cumulated % chg. Jan-May.23 | Weighted contribution |
|---|---|---|---|---|---|---|---|---|
| **CPI** | **100.00** | **6.43** | **6.43** | **100.00** | **8.46** | **8.46** | **2.67** | **2.67** |
| **Items linked to the exchange rate** | **14.06** | **4.25** | **0.54** | **14.58** | **5.19** | **0.76** | **0.48** | **0.07** |
| **Items linked to international prices and exchange rate** | **9.83** | **28.52** | **2.51** | **7.99** | **11.40** | **0.91** | **8.69** | **0.71** |
| Linked to food commodities | 7.03 | 21.32 | 1.35 | 5.84 | 15.21 | 0.89 | 13.23 | 0.82 |
| Linked to Fuels | 2.79 | 47.20 | 1.15 | 2.15 | 1.05 | 0.02 | -5.39 | -0.11 |
| **Items related to WPI** | **1.64** | **11.57** | **0.22** | **1.37** | **7.90** | **0.11** | **1.32** | **0.02** |
| **Items related to the exchange rate, WPI and international prices** | **2.95** | **9.50** | **0.35** | **2.62** | **11.46** | **0.30** | **-7.19** | **-0.19** |
| **Total items related to the exchange rate, WPI and prices** | **28.47** | **13.31** | **3.63** | **26.56** | **7.82** | **2.08** | **2.29** | **0.60** |
| **Rest** | **71.54** | **3.86** | **2.81** | **73.44** | **8.69** | **6.38** | **2.81** | **2.07** |

Source: BCRP.

85. Regarding the evolution of inflation in 2023, between the months of January and May, the general price level increased by 2.67 percent. This result is mainly explained by the increase in the prices of the food and beverages group (5.2 percent), which contributed 1.87 percentage points to inflation during the period. This result reflects increases in the prices of meals away from home, chicken meat, other fresh fruits, leaves or stems, and root or bulb vegetables, which together contributed 1.85 percentage points to inflation. In contrast, a decrease was observed in fuel and electricity prices (-6.4 percent), which contributed -0.30 percentage points to inflation.

Table 34

**INFLATION**

(Year-on-year percentage changes)

| | Peso | Dec.20 | Dec.21 | Dec.22 | 2023 May.23-Dec.22* | 2023 May.23/May.22 |
|---|---|---|---|---|---|---|
| **CPI** | **100.0** | **1.97** | **6.43** | **8.46** | **2.67** | **7.89** |
| **1. CPI excluding food and energy** | **55.3** | **1.76** | **3.24** | **5.59** | **1.48** | **5.11** |
| a. Goods | 17.4 | 1.5 | 2.6 | 5.3 | 1.5 | 4.6 |
| b. Services | 37.9 | 1.9 | 3.6 | 5.7 | 1.5 | 5.4 |
| Education | 8.6 | 2.0 | 1.6 | 3.9 | 5.8 | 6.8 |
| Health | 1.5 | 1.2 | 2.8 | 7.3 | 1.8 | 7.3 |
| Local transportation | 9.1 | 2.5 | 3.7 | 12.3 | -0.6 | 8.9 |
| Others | 18.7 | 1.6 | 1.7 | 3.2 | 0.6 | 2.7 |
| **2. Food and energy** | **44.7** | **2.22** | **10.18** | **12.02** | **4.05** | **11.25** |
| **a. Food and beverages** | **40.0** | **2.2** | **8.0** | **12.6** | **5.2** | **13.1** |
| Meals inside the home | 24.5 | 2.9 | 9.8 | 14.5 | 6.4 | 15.7 |
| Meals outside the home | 15.5 | 1.0 | 4.5 | 9.7 | 3.3 | 8.9 |
| **b. Fuel and electricity** | **4.8** | **2.1** | **24.4** | **6.8** | **-6.4** | **-4.1** |
| Fuel | 2.1 | -4.2 | 47.2 | 1.0 | -5.4 | -10.6 |
| Electricity | 2.6 | 6.7 | 9.5 | 11.5 | -7.2 | 1.5 |

* Cumulative percentage change.
Source: BCRP.

86. At a disaggregated level, the items with the largest positive contribution to inflation in the January-May period were meals away from home, chicken meat, education, eggs and other fresh fruit. Among the items with the highest negative contribution were potatoes, electricity rates, fuel for vehicles, avocados and citrus fruits.

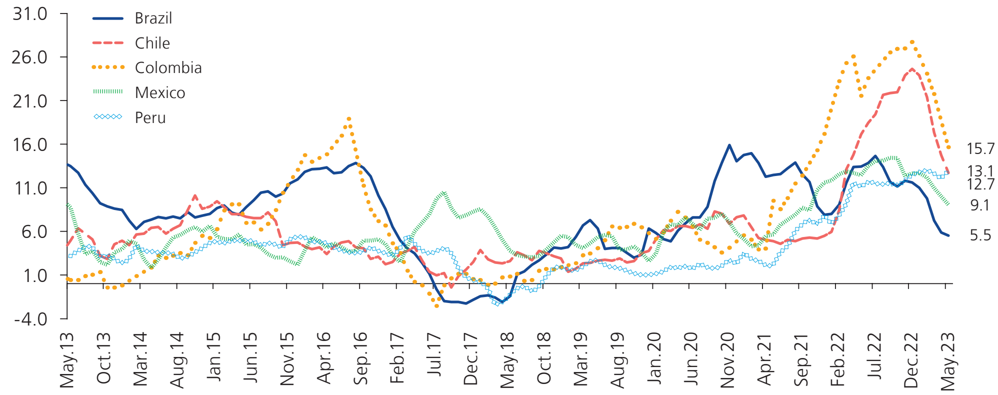
Table 35
**ITEM WITH THE HIGHEST WEIGHTED CONTRIBUTION TO INFLATION: JANUARY - MAY 2023**

| Positive | Weight | % chg. | Contr. | Negative | Weight | % chg. | Contr. |
|---|---|---|---|---|---|---|---|
| Meals outside the home | 15.5 | 3.3 | 0.52 | Potatoes | 0.7 | -33.2 | -0.42 |
| Chicken meat | 2.7 | 20.6 | 0.51 | Electricity | 2.6 | -7.2 | -0.19 |
| Eggs | 0.7 | 28.4 | 0.27 | Vehicle fuels | 1.1 | -7.0 | -0.08 |
| Other fresh fruits | 0.6 | 42.4 | 0.27 | Avocado | 0.2 | -27.2 | -0.07 |
| Primary education | 1.6 | 10.4 | 0.15 | Citrus | 0.6 | -8.0 | -0.06 |
| Leaves or stems | 0.2 | 86.1 | 0.14 | International air transport | 0.5 | -7.8 | -0.04 |
| Root or bulb vegetables | 0.5 | 26.7 | 0.14 | National ground transportation | 0.3 | -16.2 | -0.04 |
| Secondary education | 1.3 | 10.7 | 0.13 | Fresh fish maritime | 0.7 | -6.2 | -0.04 |
| Higher education | 4.3 | 2.8 | 0.11 | Domestic gas | 0.8 | -3.6 | -0.03 |
| Tomato | 0.2 | 66.4 | 0.11 | Fresh legumes | 0.2 | -11.4 | -0.03 |
| **Total** | | | **2.35** | **Total** | | | **-1.00** |

Source: BCRP.

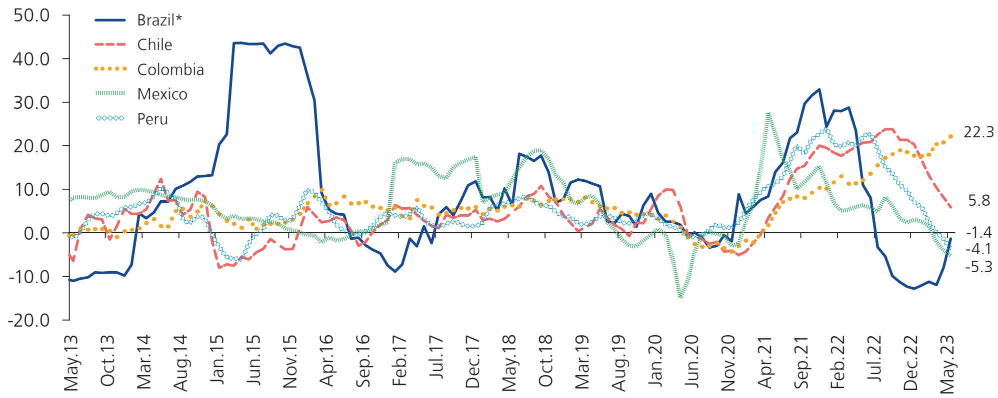
87. In contrast to other countries in the region, Peru's inflation rate is declining at a slower pace, due to a more persistent increase in food prices. The evolution of energy prices is similar to that of the other countries.

Graph 76
**FOOD PRICES* IN LATIN AMERICA**
(Percentage change last twelve months)




Note: The indices for Brazil and Peru include the subgroup of meals away from home.
Source: Central banks of each country.

Graph 77
**ENERGY PRICES IN LATIN AMERICA**
(Percentage change last twelve months)




* Corresponds to the energy subgroup within the household.
Source: Central banks of each country.

### Food

Meals away from home prices of increased 3.3 percent, reflecting higher food input prices and increased restaurant activity following the normalization of on-site activity. It is worth noting that the year-on-year increase in the price of away-from-home meals through May (8.9 percent) did not fully reflect the increase in the price of food within the home over the same period (15.7 percent).

The price of chicken recorded successive increases between February and April, due to a decrease in supply. The placement of baby chickens at the national level, corresponding to the supply of those months, was 6 percent lower than in the same period of 2022. Supply to Lima was affected by outbreaks of avian influenza, as well as the impact of weather disruptions –rains and flooding in March and April– and road blockades that prevented the timely arrival of inputs. In addition, production costs increased due to the lower availability and higher price of soybean meal, the poultry feed. The above factors also had a negative impact on egg prices; avian influenza and the rising temperatures increased mortality and reduced laying hen performance.

Subsequently, the price of chicken decreased in May, due to the higher volume traded in the wholesale distribution centers in Metropolitan Lima (8.2 percent with respect to the April average), although without recovering the level of the previous year (-16.8 percent with respect to May 2022). The recovery in supply was influenced by the application of vaccines to poultry since March and the importation of fertile eggs. As for eggs, the production cycle from the importation of fertile eggs is longer than that of chickens (20 weeks), so supply is expected to recover gradually.

Other fresh fruits recorded price increases in February and March. The supply of crops such as strawberries, which come from the Canta, Huara and Huaral valleys, decreased due to the rains that devastated crops in March. Mangoes were another product affected by climatic disruptions; flooding of plantations in Piura due to rains and overflowing rivers hampered harvesting.

Prices of leafy and stalk vegetables, such as celery (stalk vegetables) and lettuce (leafy vegetables) also increased due to reduced supplies as a result of landslides and floods in March and April that destroyed crops in the valleys of Lima.

The price of onions (bulb vegetable), which come mainly from Arequipa, increased due to higher marketing costs in the current crop year, which have been high since the interruption of roads in March. The reduction in plantings due to higher production costs and the end of the large season, whose yields declined due to climatic variability and lower fertilizer application, also played a role.

Tomato prices rose in April and May, in a scenario of lower plantings in Lima, the main source of this product. The increase also responded to the lower supply of the best quality product due to lower fertilizer application, the rains and flooding in March, and the erratic temperatures that affected crop production between April and May.

Potato prices recorded successive declines throughout the period, accumulating a negative variation of -33.2 percent. The rains in February and March led to an acceleration of the harvest in the central highlands, especially in Junín. Although plantings in this region decreased in the current season, lower temperature anomalies from April contributed to increased harvests. Ayacucho and Arequipa also reported increased supplies.

Citrus prices fell in April and May, mainly due to the fall in the price of lemons (-17.9 percent) as a result of the recovery of supplies from the north of the country: this crop was affected in March by the climatic changes associated with the *Niño Costero* (high temperatures, heavy rains and flooding).

**Services**

The price of primary education increased by 10.4 percent due to the increase in school tuition corresponding to the start of the school year and the increase in monthly fees due to the return of daily face-to-face classes. In 2022, face-to-face classes were held only on some days of the week and were supplemented by virtual classes. Similarly, the prices of secondary and higher education increased by 10.7 and 2.8 percent, respectively.

**Energy**

Electricity rates decreased by 7.2 percent, influenced by the adjustment made in February, which included the reduction of the Renewable Energy Premium (REP) as a result of a higher spot price. The decrease also reflected the quarterly adjustment of the generation price and the surcharge on the main transmission component. The lower surcharge for the Electricity Social Compensation Fund (FOSE) also played a role.

Subsequently, rates were reduced in April due to the impact of the lower exchange rate on transmission and distribution prices. In the month of May a new reduction was recorded, which was influenced not only by the impact of the lower exchange rate, but also by the application of compensation mechanisms resulting from the differences between the generation price set ex ante by OSINERGMIN and the realized prices of the tendered contracts.

Vehicle fuel prices decreased by 7.0 percent, reflecting lower gasohol prices, in line with lower international oil prices (-6.3 percent).

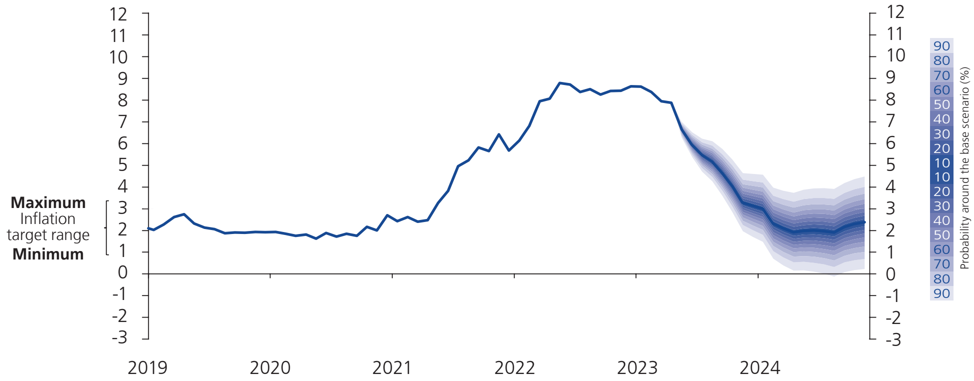
**Forecasts**

88. The BCRP adopts monetary policy measures in response to inflation forecasts and inflation determinants, taking into account all available macroeconomic and financial information. The determinants of inflation include: inflation expectations, imported inflation (which includes the effect of the exchange rate), and inflationary pressures on both demand and supply.

The inflation rate is expected to reach a level of 3.3 percent by the end of 2023, which implies an upward revision from the 3.0 percent expected in the March Report. The revision is due to the impact of adverse weather events and avian flu on food prices such as chicken, eggs, fresh fruits, vegetables, and away-from-home meals. Inflation will decline over the forecasts horizon, returning to the target range in the early months of 2024 and ending the year at 2.4 percent.

The current forecasts assume that the impact of transitory factors on inflation (exchange rate, international fuel and grain prices) will reverse, in a context in which economic activity is close to its potential level, financial conditions remain restrictive and inflation expectations show a downward trend towards the target range.

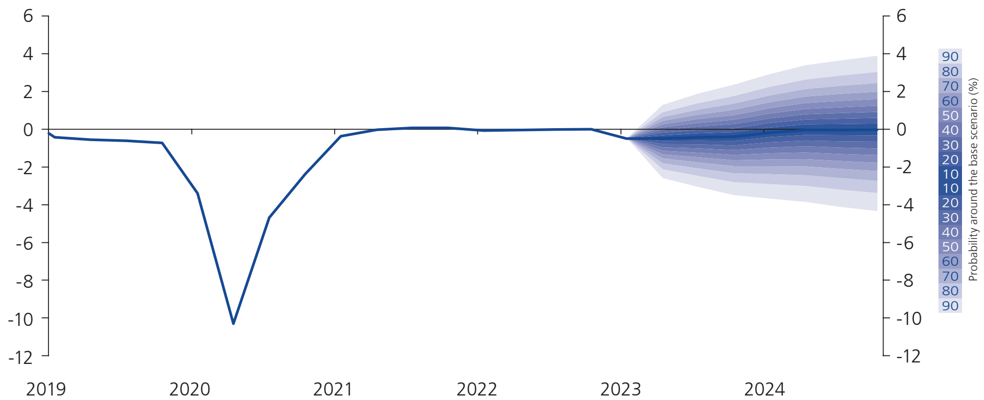
Graph 78
**INFLATION FORECAST: 2023-2024**
(Percentage change last twelve months)




Note: This Fanchart presents the distribution of possible inflation projection values over the projection horizon. Its central line is the mode of the distribution and shows the baseline scenario projection presented in this Inflation Report. Each pair of Fanchart bands (each shade) accumulates a 10% probability and indicates the possible values for the evolution of inflation over the projection horizon associated with this confidence level.
Source: BCRP.

89. Business confidence is expected to gradually recover from the low levels recorded at the end of last year and in the first half of this year by the end of the forecast horizon, while our export prices are expected to remain above pre-pandemic levels. As a result, the output gap is expected to be close to zero over the forecast horizon.

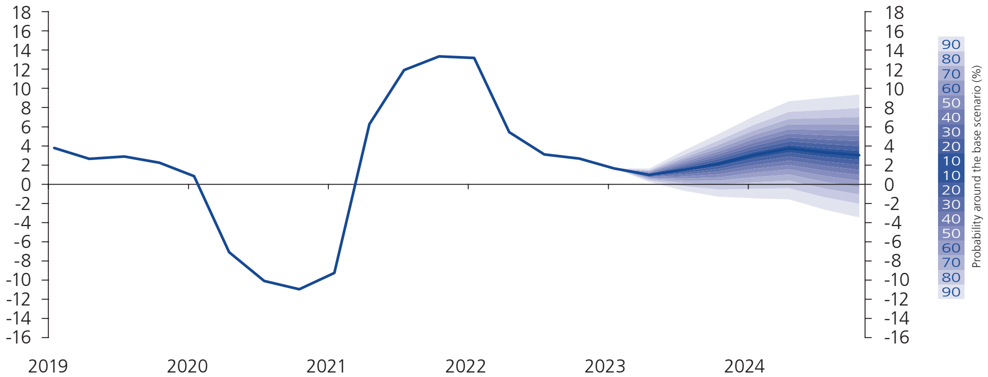
Graph 79
**OUTPUT GAP FORECAST: 2023-2024**
(Percentage of potential output, quarterly average)




Note: This Fanchart presents the distribution of the possible values of the output gap projection over the projection horizon. Its center line, the mode of the distribution, shows the baseline scenario projection presented in this Inflation Report. Each pair of bands of the fan (each shade) accumulates a 10% probability and indicates the possible values for the evolution of the output gap over the projection horizon associated with this confidence level.
Source: BCRP.

90. In line with the evolution of the output gap and estimated potential GDP, the level of economic activity is expected to grow moderately.

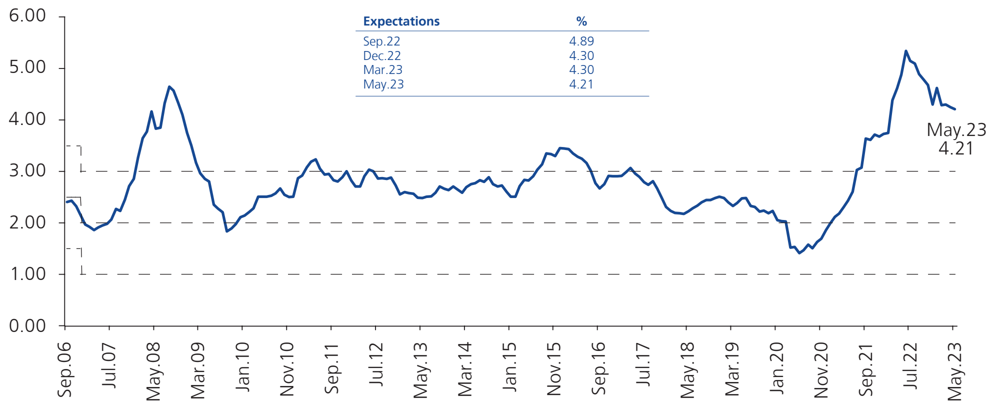
Graph 80
**OUTPUT GROWTH FORECAST: 2023-2024**
(Percentage change, 4 quarters moving average)




Note: This Fanchart presents the distribution of possible values of projected output growth over the projection horizon. Its center line is the mode of the distribution and shows the baseline scenario projection presented in this Inflation Report. Each pair of Fanchart bands (each shade) accumulates a 10% probability and indicates the possible values for the evolution of output growth over the projection horizon associated with this confidence level.
Source: BCRP.

91. Inflation expectations, calculated on the basis of surveys of representatives of financial and non-financial companies and economic analysts, show a range for the expected inflation rate between 4.90 and 6.00 percent for 2023 (between 4.0 percent and 5.5 percent in the March 2023 Inflation Report), and between 3.0 and 4.0 percent for 2024 (between 3.0 percent and 4.0 percent in the March 2023 Inflation Report). Twelve-month inflation expectations fell to 4.21 percent in May 2023, temporarily above the upper limit of the inflation target range.

Graph 81
**TWELVE-MONTH INFLATION EXPECTATIONS**
(Percentage points)




Source: BCRP.

Table 36
**INFLATION EXPECTATIONS SURVEY**
(%)

| | IR Dec.22 | IR Mar.23 | IR Jun.23* |
|---|---|---|---|
| **Financial entities** | | | |
| 2023 | 4.60 | 5.00 | 4.90 |
| 2024 | 3.50 | 3.50 | 3.50 |
| **Economic analysts** | | | |
| 2023 | 4.20 | 4.00 | 4.90 |
| 2024 | 3.00 | 3.00 | 3.00 |
| **Non-financial firms** | | | |
| 2023 | 4.50 | 5.50 | 6.00 |
| 2024 | 4.00 | 4.00 | 4.00 |

* Survey conducted as of May 31
Source: BCRP.

92. Another determinant of inflation is the imported component, which combines the effect of the international prices of the products that our country imports (such as crude oil, wheat, soybeans and maize) with the effect of the variation of the exchange rate (the PEN against the U.S. dollar).

Thus, average import prices are projected to fall by 6.6 percent in 2023, mainly due to lower prices for oil and some food products such as maize, wheat and soybeans. In 2024, the prices of these products are expected to fall by 0.6 percent. For its part, the expected exchange rate surveys as of May show levels between S/ 3.70 and S/ 3.80 for 2023 and between S/ 3.75 and S/ 3.80 for 2024.

Table 37
**EXCHANGE RATE EXPECTATIONS SURVEY**
(S/ per US$)

| | IR Dec.22 | IR Mar.23 | IR Jun.23* |
|---|---|---|---|
| **Financial entities** | | | |
| 2023 | 3.90 | 3.85 | 3.80 |
| 2024 | 3.90 | 3.85 | 3.75 |
| **Economic analysts** | | | |
| 2023 | 4.00 | 3.85 | 3.70 |
| 2024 | 4.00 | 3.92 | 3.80 |
| **Non-financial firms** | | | |
| 2023 | 3.95 | 3.90 | 3.80 |
| 2024 | 3.96 | 3.90 | 3.80 |

* Survey conducted as of May 31
Source: BCRP.

The above effects are expected to contribute to inflation returning to the target range over the projection horizon.

## Balance of risks to the inflation forecast

94. Risks to the inflation projection have shifted further to the upside in the balance of risks compared with the March report, based on the following shocks:

- **Domestic demand shocks**

  In the event of new episodes of political instability and social conflict, as well as the occurrence of natural phenomena, the prospects for growth in consumption and private investment would deteriorate and the execution of public spending would be lower. In turn, lower public and private investment spending would lead to lower capital accumulation and hence lower potential growth. In addition, domestic uncertainty would lead to an increase in the risk premium, which would trigger a depreciation of the local currency.

  Therefore, in the very short term, this contingent scenario would lead to higher inflation associated with the depreciation of the PEN. In the medium term, however, lower demand is expected to persist, leading to a lower increase in inflation. The expected impact of this risk remains the same as in the previous report.

- **External demand shocks**

  There is still a risk of a slowdown in global growth, which would imply lower demand for our main export products (external demand). This contingent scenario could be triggered by: (i) tighter international financial conditions due to banking crises in developed countries or a more rapid withdrawal of monetary stimulus in advanced economies, due to their efforts to control inflation and its possible impact on inflation expectations; (ii) greater geopolitical tensions; (iii) new disruptions in global supply chains (technological war between China and the United States and trade tensions between the European Union and the United States); (iv) the impact of inflation on consumption; and (v) the probable slowdown in China's economic growth. The expected impact of these risks remain the same as in the March Inflation Report.

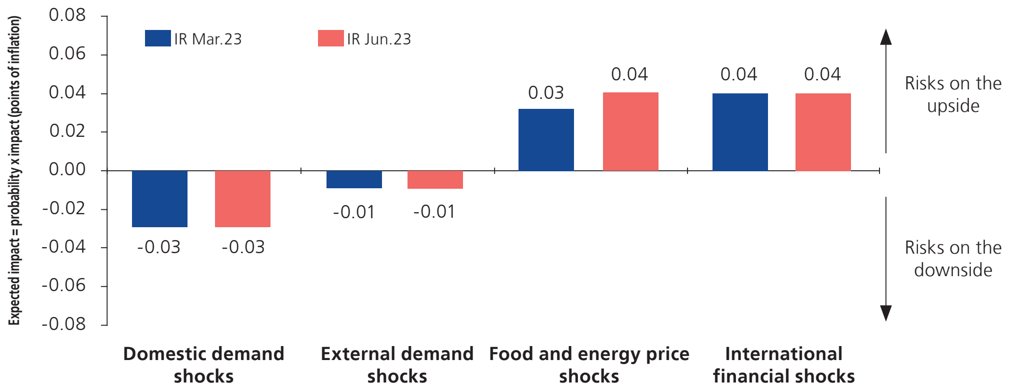
- **Food and energy price shocks**

  Geopolitical tensions in Eastern Europe and China continue, with a moderate risk of escalation, raising concerns of global food and energy shortages. In addition, recent trade tensions between the United States, China and other economies could create new risks of supply chain disruptions. On the other hand, new episodes of political instability and social unrest, as well as the occurrence of relatively intense natural phenomena, could disrupt the development of some economic activities, the movement of perishable goods and the supply of domestic markets. These potential events could result in higher fuel, food, fertilizer and transportation costs. The expected impact of this risk has increased from the March forecast.

- **Financial shocks**

  The more rapid withdrawal of monetary stimulus in advanced economies, slower global economic growth and increased risk aversion due to greater financial volatility in developed countries could trigger episodes of capital outflows. On the domestic side, new episodes of political uncertainty and social unrest could increase country risk and amplify capital outflows. These factors, together with increased volatility in financial markets, could put upward pressure on the exchange rate and thus contribute to higher inflation. The expected impact of these risks remains unchanged from the March Report.

Graph 82
**BALANCE OF RISKS AGAINST THE BASE SCENARIO**



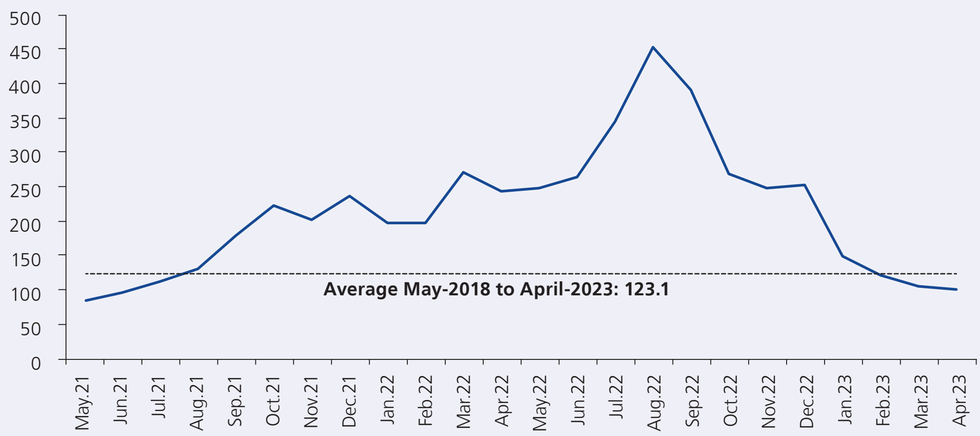

Source: BCRP.

## Box 6
## RECENT TRENDS IN RESIDENTIAL ELECTRICITY RATES IN THE REGION

Global energy price indicators have declined in recent months in relation to the maximum levels they reached in 2022, pressured by the war between Russia and Ukraine. The decline in these indicators is partly due to lower global growth forecasts, and is beginning to be reflected in the rates paid by residential users for energy. This box shows the evolution of electricity rates for residential consumers in Peru and in other countries in the region (Colombia, Mexico, Bolivia, Chile, Uruguay and Brazil).[38]

The main fossil fuels used to generate electricity around the world are natural gas, coal and oil.[39] While oil is being used less and less, it continues to drive the price of peak-hour electricity. In the last two years (from May 2021 to April 2023), the natural gas price index, which mainly tracks the price of gas in Europe, has risen steadily, especially from February 2022 due to the war between Russia and Ukraine. After that, since August 2022, the price of natural gas has recorded a gradual downward trend to position itself below the average of the last 5 years. According to World Bank forecasts, the price of natural gas in Europe is expected to continue its downward trend in 2023 and 2024 (-52.9 and -10.5 percent by the end of 2023 and 2024, respectively).

**NATURAL GAS PRICE INDEX**
(2010=100)




Source: World Bank commodity prices (The Pink Sheet).

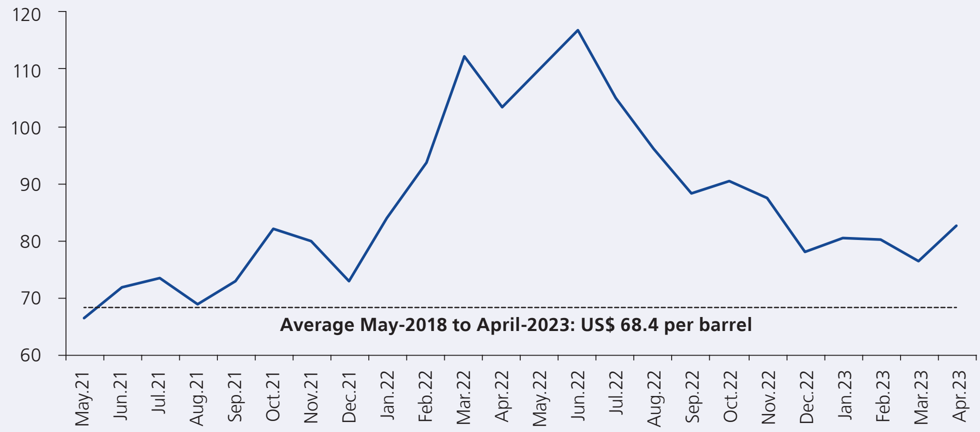
For its part, the price of crude oil (Brent, WTI and Dubai) reached levels of up to 1.7 times the 5-year average in June 2022. Since then, the price of crude oil has been on a general downward trend.

38 The analysis is based on the electricity component of each country's consumer price index (CPI). The share of electricity in the CPI varies between 1.5 and 4.3 percent in these countries.

39 For example, according to Amber Energy (UK), by the end of 2022, wind and solar sources will account for 22 percent of the European Union's generation fleet, followed by gas (20 percent) and coal (16 percent).

According to World Bank forecasts, this price is also expected to fall by 15.9 percent by the end of 2023 (BCRP forecasts also show a declining trend for the price of oil).

**AVERAGE PRICE OF CRUDE OIL CONSIDERING BRENT, WTI AND DUBAI CRUDE OIL**
(US$ per barrel)




Source: World Bank commodity prices (The Pink Sheet).

The declining trend in the global prices of these energy sources would be transmitted through different mechanisms to residential electricity rates in Latin American countries, although in a heterogeneous manner due to the different regulatory mechanisms.

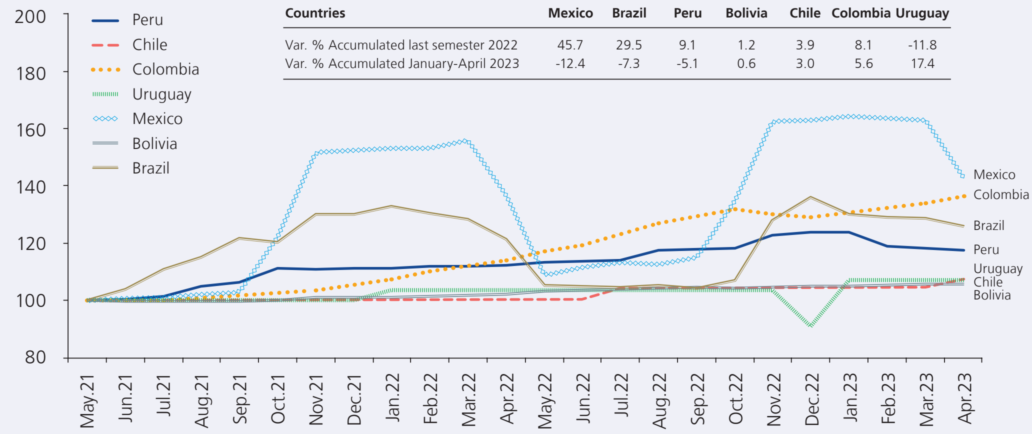
In the second half of 2022, most of the countries in the region's sample recorded an increase in electricity prices. However, in the first months of 2023, a decrease in electricity prices is observed in several countries in the region, and a slowdown in others.

For example, Mexico reported the highest increase of 45.7 percent during the second half of 2022, followed by Brazil with 29.5 percent. In Peru, the increase was 9.1 percent and in Colombia, 8.1 percent. Electricity prices rose to a lesser extent in Chile, with 3.9 percent, and Bolivia, with 1.2 percent. The only country to report a decrease was Uruguay, with 11.8 percent. In contrast, between December 2022 and April 2023, the electricity price index in Mexico, Brazil and Peru fell by 12.4 percent, 7.3 percent and 5.1 percent, respectively. In the case of Mexico, although there is a seasonal component of tariff reduction in the first months of the year, tariffs in April 2023 increased by 4.3 percent compared to the same month of 2022. In Brazil, the reduction is related to better weather conditions that allow for a higher supply of electricity from hydroelectric plants. In Peru, exchange rate appreciation contributed to the reduction in residential electricity rates, along with a lower premium for renewable electricity resources (RER) and a lower charge to cover the subsidy to the Electricity Social Compensation Fund (FOSE).

For their part, countries such as Uruguay, Colombia, Chile and Bolivia recorded increases of 17.4 percent, 5.6 percent, 3 percent and 0.6 percent, respectively, during the same period, but lower than those observed in the second half of 2022.

**RESIDENTIAL ELECTRICITY RATES**
(Index May 2021=100)

| Countries | Mexico | Brazil | Peru | Bolivia | Chile | Colombia | Uruguay |
|---|---|---|---|---|---|---|---|
| Var. % Accumulated last semester 2022 | 45.7 | 29.5 | 9.1 | 1.2 | 3.9 | 8.1 | -11.8 |
| Var. % Accumulated January-April 2023 | -12.4 | -7.3 | -5.1 | 0.6 | 3.0 | 5.6 | 17.4 |




Source: Statistical Institutes of each country and distributors in the capitals of each country.

On the other hand, similar trends are also observed in developed countries such as the United Kingdom, Spain, the United States, and Germany. In the United Kingdom, electricity rates increased by 17.2 percent in the last six months of 2022, but they decreased by 1.2 percent in the first four months of 2023. In the United States, rates went from a 5.9 percent increase to a 0.4 percent decrease between the two periods. For its part, Spain reported a drop in rates in both the second half of 2022 (-27.5 percent) and the first four months of 2023 (-16.9 percent).

In conclusion, at the global level, the pressures that drove up energy prices are reversing. In turn, the decline in international energy price indicators is translating into a reduction in electricity rates for residential consumers, which is contributing to a decline in the inflation rate in several countries, including Peru.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