2022

Economic Survey
of Latin America and the Caribbean

Trends and challenges of investing for a sustainable and inclusive recovery

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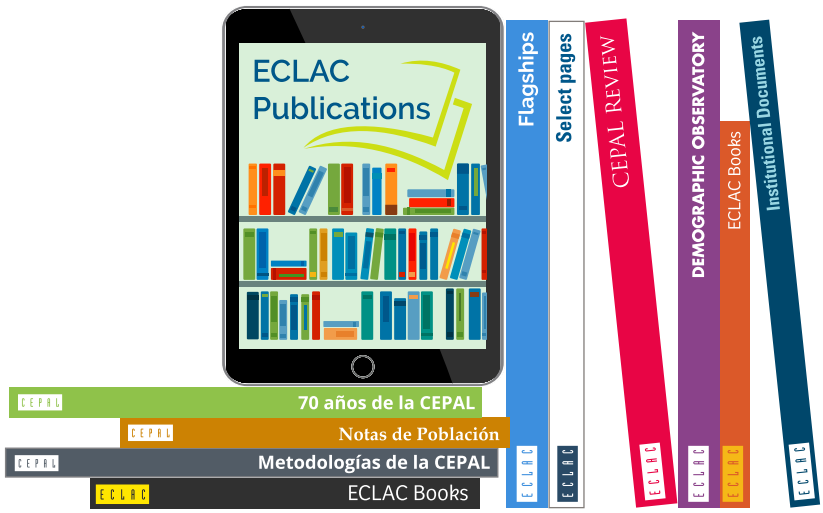

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Explanatory notes:

- Three dots (...) indicate that data are not available or are not separately reported.
- A dash (-) indicates that the amount is nil or negligible.
- A full stop (.) is used to indicate decimals.
- The word "dollars" refers to United States dollars, unless otherwise specified.
- A slash (/) between years (e.g. 2013/2014) indicates a 12-month period falling between the two years.
- Figures and percentages in graphs and tables may not always add up to the corresponding total because of rounding.

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Presentation

The 2022 edition of the *Economic Survey of Latin America and the Caribbean*, its seventy-fourth issue, consists of three parts. Part I outlines the region's economic performance in 2021 and analyses trends in the early months of 2022, as well as the outlook for growth for the year. It examines the external and domestic factors that have influenced the region's economic performance in 2021, trends for 2022, and how these factors will affect economic growth in the coming years.

Part II of this edition presents some of the main challenges the region faces in investing for sustainable and inclusive economic growth. It analyses the trends in total investment over the last 70 years and highlights the profound change brought about by the 1980s debt crisis, with a slowdown in investment from the 1990s onwards. This part also points to the low level of public investment in Latin America and the Caribbean, in relative and absolute terms, which has been significantly lower than those in the emerging and developing economies of Asia in recent decades, during which these countries have built dynamic and diversified economies. Limited investment flows have resulted in a stock of public capital that is insufficient to provide the economic and social services needed to boost growth and lay the foundations for sustainable and inclusive development. Lastly, it also examines the opportunities and challenges of investment in the region's copper, iron and lithium industries in the context of the energy transition, with a special focus on the role of what has been termed "green factors". Against a backdrop of increasing demand for minerals, public policies must help to transform the mining sector, placing priority on managing the societal and environmental impact of mining activities and on economic considerations.

Part III of this publication may be accessed on the website of the Economic Commission for Latin America and the Caribbean (www.eclac.org). It contains the notes relating to the economic performance of the countries of Latin America and the Caribbean in 2021 and the first half of 2022, together with their respective statistical annexes. The cut-off date for updating the statistical information in this publication was 15 July 2022.

Executive summary

A. Regional macroeconomic report and outlook for 2022

The countries of Latin America and the Caribbean face a complex economic and social environment in 2022. Weak economic growth is accompanied by strong inflationary pressures, slow job creation, falling investment and growing social demands. This situation has created major challenges in terms of macroeconomic policy, with a need to reconcile policies that promote economic recovery with policies to rein in inflation and make public finances sustainable.

The complex domestic situation in the region is compounded by an international landscape in which the war between the Russian Federation and Ukraine has heightened geopolitical tensions, dampened economic growth, reduced food availability and driven up energy prices, adding to existing inflationary pressure caused by supply shocks from the coronavirus disease (COVID-19) pandemic.

With increasing uncertainty about global growth, inflation trends and developed economies' monetary policy responses, international financial markets have become more volatile, creating more demanding conditions to obtain financing, which is detrimental to the countries of the region. In addition, the dollar has tended to appreciate against almost all currencies, which is also unfavourable for Latin American and Caribbean countries.

The region's external demand is expected to fall in 2022. Prior to the war in Ukraine, economic activity was already slowing and global GDP was forecast to grow by around 4.4% in 2022, down from the 6.1% recorded in 2021. As a result of the war, world GDP is expected to expand by 3.1%. In the United States, growth of 1.7% is expected, well below the 4% forecast before the conflict. Estimates for the eurozone have also been cut considerably, with projected growth of 2.6%, 1.4 percentage points less than expected before the war. In the case of China, after expanding by more than 8% in 2021, the economy has slowed sharply and growth of around 4% is now expected for 2022.

World trade has also been undermined by the invasion of Ukraine and is expected to increase in volume by 3% in 2022, down from the 4.7% that the World Trade Organization (WTO) projected before the conflict began.

Furthermore, although the Russian Federation and Ukraine account for a small share of world trade (1.9%), they are key suppliers of energy, food, metals and fertilizers, and supply in those markets has been affected by the war. The disruption of shipping and trade in the Black Sea has impacted transport of food and crude oil, while the need to divert ships from ports on its coast as a result of the conflict has led to increases in shipping costs, which had already reached historically high levels after the pandemic erupted.

The conflict in Ukraine has intensified the pattern of rises in commodity prices seen since the second half of 2020, pushing some products to record levels. In 2022, commodity prices are expected be around 21% above the levels recorded in 2021 on average. Energy product prices are set to rise most, to around 55% above the average levels seen in 2021, while agricultural product prices are forecast to climb by about 15%.

World average inflation hit 7.2% in May 2022, a rate last recorded in mid-2008 at the height of the global economic and financial crisis. In emerging economies, average inflation reached 7.1% and in advanced economies it was 7.5%. In the group of advanced economies, inflation in the United States hit a 40-year high of 9.1% in June 2022, while in the eurozone it reached 8.6% in the same month, the highest level since the launch of the euro.

Inflationary pressures have led central banks to withdraw monetary stimulus measures and raise monetary policy rates more quickly and in larger increments than anticipated at the start of the year. The United States Federal Reserve raised its policy rate by a total of 150 basis points to a range of 2.25%–2.50% in the first seven months of the year and a level of 3.25%–3.50% is projected for year-end (at the close of 2021 the rate forecast by the market for the end of 2022 was just 0.7%).

In the case of the European Central Bank (ECB), at its July meeting, the bank raised its benchmark rates by 50 basis points for the first time in 11 years (from around 0% to around 0.50%); at the end of 2021, ECB had viewed the rise in inflation as transitory and did not give any indication of rate hikes for 2022.

The deterioration in the outlook for the global economy and growing inflationary pressures have affected international financial markets. The tightening of global financial conditions seen in recent months has been accentuated, volatility has intensified and there has been a downturn in portfolio capital flows to emerging markets.

International financial markets have also been impacted by the decline in global liquidity. In 2022, the world's main central banks —the United States Federal Reserve, ECB, the Bank of England and the Bank of Japan— have maintained the downward trend in the growth of the money supply that began in 2021.

Although the rises in commodity prices have benefited countries in the region that export commodities —particularly hydrocarbons and food— on average the region is expected to see a 7% drop in the terms of trade for commodities. As usual, performance is expected to vary from one subregion to another and countries that are net exporters of hydrocarbons will benefit most from an increase in the terms of trade for commodities of around 17%. In contrast, the rise in energy prices is detrimental to hydrocarbon importers, particularly countries in the Caribbean (except Guyana and Trinidad and Tobago) and Central America, whose the terms of trade of commodities will deteriorate. In South America, the effect is mixed, as some countries are oil producers, so they are expected to benefit from the higher price, but they also import refined products, which are currently more expensive.

The value of exports is expected to rise by 22% in 2022 and the value of imports by 23%. As a result, the region's goods balance is projected to show a smaller surplus than in 2021 (0.3% of GDP, compared to 0.4% in 2021).

The income account deficit is set to widen in 2022, owing to higher interest payments on external debt and greater profit repatriation by foreign firms. The surplus of the transfers account is forecast to increase further in 2022 (to 2.7% of GDP), mainly thanks to the continued growth of remittances to the region, which are the main item in this account.

The current account of the balance of payments is therefore expected to remain negative in 2022 (-1.4% of GDP), close to the previous year's deficit (-1.5% of GDP). This would be the result of a larger surplus of GDP in the current transfers account, offsetting of GDP a slight deterioration in the other accounts (goods, services and income).

Although the region was a net recipient of capital in 2021 —with a financial account surplus of 2.8% of GDP, allowing it to accumulate international reserves and finance the current account deficit— available data for the first quarter of 2022 show inflows slowing. This is because of tightening of global financial conditions, owing mainly to the outbreak of the war in Ukraine, which has reduced alternatives for access to external financing for emerging economies, including Latin American and Caribbean countries.

After remaining stable in 2021, debt issuance by the region in international markets was down in the first four months of 2022, reflecting heightened uncertainty and financial volatility from March onward.

Latin America's sovereign risk varied little in 2021, but turbulence at the global level led to an uptrend in the indicator in the first four months of 2022, which hit 438 basis points at the end of April as measured by the J.P. Morgan Emerging Markets Bond Index Global (EMBI Global).

In the first quarter of 2022, Latin America's GDP growth began to slow, following rapid growth in 2021. Almost two years since the onset of the COVID-19 pandemic crisis, the region's GDP returned to pre-crisis levels in the fourth quarter of 2021, ending 0.4% above the level recorded in the fourth quarter of 2019. However, since the first quarter of 2022, after the strong rebound in 2021, growth rates are rapidly losing pace.

By subregion, both South America and Mexico and Central America exhibit declining growth rates in the first quarter of 2022 compared with the year-earlier quarter. In 2021 both subregions posted a recovery commensurate with the impact of the pandemic crisis, during which they suffered domestic shocks of similar magnitude, but external shocks of differing intensity. The external impact was greater in Mexico and Central America because their economies are linked most closely to the pace of growth in the United States, which was strongly impacted by the pandemic.

The economies of South America are expected to post average first-quarter 2022 growth of 2.3%, 1.2 percentage points less than in the prior quarter. Similarly, the Central American economies slowed by around 3.5 percentage points in the first quarter of 2022 compared to the last quarter of 2021, to a growth rate of 5.7%. In Central America and Mexico combined, the slowdown began in the last quarter of 2021 and carried over into the first quarter of 2022, when the year-on-year rate was 2.3%.

The seasonally adjusted figures suggest that this deceleration intensified in the second quarter of 2022, given that after falling by half in the first quarter, the growth rate is expected to have fallen by another third in the second quarter. This slower growth can be attributed to the end of the post-pandemic recovery, the lasting repercussions of the pandemic crisis and the detrimental effects of the war in Ukraine. As in previous crises, effects differ among subregions and among countries in the region. Rising commodity prices affected countries unevenly, with the economic impact determined by each country's degree of dependence on oil, gas and other commodities.

Since the first quarter of 2021, year-on-year growth in domestic demand has outpaced that of GDP. The trend in 2021 appears to be due to the recovery in private consumption and investment, while the contribution of net exports to GDP growth is negative. In the first quarter of 2022, the GDP of Latin America and the Caribbean grew by 2.3% year-on-year; domestic demand, however, climbed by 4.6%, driven mainly by private consumption.

The decline in activity is expected to come in a context of markedly different patterns in private consumption and investment. After a slowdown until the fourth quarter of 2021, private consumption maintained its growth rate and is continuing to make a substantial contribution. Data for the first quarter of 2022 show that, contrary to expectations, private consumption did not continue to lose momentum. Unlike consumption, investment did lose impetus in the first quarter of the year, growing by only 1.2% year-on-year. The stagnation of investment appears to have occurred in both construction and in machinery and equipment. Construction is being affected by rising credit costs and stagnant demand. The machinery and equipment component has also

been affected, particularly owing to slower growth in capital goods imports as a result of currency depreciation, which has increased their cost. Although investment grew rapidly in 2021, enabling a recovery, it did not return to pre-pandemic levels, owing to a lag in construction. Construction activity also grew on a quarterly basis, but without surpassing the levels prior to the shock from COVID-19.

The expansion in economic activity in the first quarter of 2022 was led by the services sectors: transport and communications, commerce, hotels and restaurants, and financial and business services. To a lesser extent, the manufacturing and construction sectors contributed to maintaining momentum. Following the reopening of economies during 2021, there was a robust recovery in the sectors of economic activity that were worst affected by the pandemic. Activity picked up in all of them, across the board; however, the rise was partly explained by the low basis of comparison from 2020, linked to the effects of the pandemic.

In keeping with the slowdown seen in the first half of 2022, after growth of 6.5% in 2021, the GDP of Latin America and the Caribbean is projected to expand at a rate of 2.7% on average for the year, returning to the path of low growth it was following before the pandemic. South America is projected to grow by 2.6% in 2022 (compared to 6.9% in 2021), the group comprising Central America and Mexico by 2.5% (5.7% in 2021) and the Caribbean —the only subregion that will grow more than in 2021— by 4.7%, if Guyana is excluded (4.0% in the previous year).

In line with the trend in economic activity, the number of employed persons has grown since the second quarter of 2021, but at an ever-slower pace. After a sharp drop in 2020, the number of persons employed in the region has recovered. Until the first quarter of 2021, growth rates see below remained negative but since the second quarter of that year they have been positive. As was foreseeable, the recovery in economic activity, the return to face-to-face classes and the relative normalization of daily activities following the lifting of movement restrictions put in place at the height of the pandemic has led to a recovery in employment in the region. In fact, in the second and third quarters of 2021, employment grew at double-digit rates of 14% and 11%, respectively. Over the fourth quarter of 2021 and the first quarter of 2022, employment continued to grow at a robust pace, with rates above 7%, but in line with the assumed normalization these rates are trending downward. More than two years after the onset of the pandemic, reported employment levels for the first quarter of 2022 are similar to those for the fourth quarter of 2019; which is to say that employment in the region has returned to pre-crisis levels, but took more than two years to do so.

The normalization of activities has driven a recovery in labour force participation rates in the region, and at the end of 2021 the overall participation rate was 62.6%. Despite this, the average participation rate of Latin American and Caribbean economies for the first quarter of 2022 remained 1 percentage point below that recorded in the fourth quarter of 2019.

The unemployment rate, meanwhile, has followed a downward trend since the third quarter of 2020 —when it hit 11.5%, the highest level in three decades— falling 3.3 percentage points between that quarter and the first quarter of 2022. The unemployment rate of 8.2% for the first quarter of 2022 is 0.4 percentage points above the rate for the fourth quarter of 2019. This means that at the end of the first quarter of 2022 there were 3.8% more unemployed people than in the fourth quarter of 2019.

Owing to the recovery in labour participation and population growth, the rise in employment has not been sufficient to absorb all the people who have joined the economically active population (EAP), which has resulted in a lower employment rate (number of employed persons with respect to EAP) of 62.4% at the end of the first quarter of 2022 than at the end of 2019 (63.4%).

In 2021, employment increased in all branches of activity. Nonetheless, at the end of the fourth quarter of 2021 only construction, basic services, other services and financial and business services had reached employment levels similar to those for the fourth quarter of 2019. However, these branches of activity account for less than a quarter of the total number of employed in the region. In contrast, activities such as community, social and personal services, commerce and manufacturing, which usually account for more than 60% of employment, have not yet fully returned to pre-crisis levels. Data for the first quarter of 2022, when compared to the same quarter of 2021, show that employment growth has continued in most activities and reached double digits in the restaurant and hotel (25.9%), construction (12.7%) and commerce (13.6%) sectors. However, agriculture and basic services recorded year-on-year declines in employment of 6.3% and 2.0%, respectively. Despite the significant growth in the restaurants and hotels sector, employment at the close of the first quarter of 2022 was lower than recorded in the fourth quarter of 2019.

Employment has recovered across the board in the various employment categories, which between the second quarter of 2020 and the first quarter of 2022 grew at average quarter-on-quarter rates of over 2%, more than double the pace in the pre-crisis period. However, by the end of the first quarter of 2022, employment had only returned to pre-crisis levels for the categories of wage earners and the self-employed.

In the same way that the crisis had a more severe impact on women's employment, the recovery in employment has also been uneven. While from the end of the second quarter of 2020 to the end of the first quarter of 2022 the unemployment rate for men fell 3.5 percentage points from 10.4% to 6.9%, the unemployment rate for women declined by 2.1 percentage points, from 12.1% to 10.0%. Also, while the recovery in men's employment began in the second quarter of 2020, after the unemployment rate peaked, the recovery in women's employment began one quarter later, after unemployment peaked in the third quarter of 2020.

Prior to the pandemic, labour force participation rates were 75% for men and 52.7% for women. After the onset of the pandemic, both rates fell, reaching their lowest level in the second quarter of 2020: 65.4% for men and 43.4% for women. At the end of the first quarter of 2022, participation rates had not returned to pre-crisis levels for either men or women; however, the participation rate for women (51.4%) exhibits a greater lag than that for men (74.2%). While in the case of women this rate is equivalent to 97.5% of the level in the fourth quarter of 2019, in the case of men it is equivalent to 99.0%. The delay in women re-entering the labour market is related to the slower recovery in the economic sectors that account for a larger proportion of women's employment and the heightened need for care that was greatly apparent during the pandemic.

On the fiscal front, government revenues, which reached historically high levels in 2021, are expected to decline relative to GDP. The factors that drove tax revenue growth in 2021 —such as robust expansion of private consumption and the withdrawal of tax relief measures— have faded, and a new round of tax relief is taking place, as part of the response to rising energy, food and agricultural input prices. Total revenues in the Caribbean are expected to climb in 2022, as a result of a recovery in receipts from taxes on consumption and larger external grants.

Central government public spending is expected to decline in 2022 relative to GDP, mainly as a result of a reduction in the subsidies and current transfers extended at the height of the pandemic in 2020. However, mounting pressures faced by countries from rising interest payments and support measures to counteract the effects of inflation on the most vulnerable groups could partially offset the projected reduction in total spending, if they persist or increase in scope. Expenditures on poverty- and

unemployment-related programmes could also increase, amid an economic slowdown and sluggish labour market recovery. In the Caribbean, public spending is expected to rise, reflecting increased capital expenditures.

In 2022, the overall deficit is expected to continue to shrink and average -3.4% of GDP, compared to -4.2% of GDP in 2021 and -6.9% of GDP in 2020. In the Caribbean, the projected trend for public revenue and spending should lead to a stable balance, with an overall deficit of 3.6% of GDP in 2022.

The public debt-to-GDP ratio in Latin America fell slightly in the first quarter, but remains high, similar to the levels seen 20 years ago. In March 2022, the gross public debt of the subregion's central governments reached 52.1% of GDP, compared to 53.4% of GDP in December 2021. The Caribbean also saw a slight improvement, with the average falling to 84.1% of GDP in the first quarter of 2022, compared to 88.1% at the end of 2021. Nevertheless, public debt in the Caribbean remains high, with gross public debt exceeding 90% of GDP in six countries. Higher interest rates, currency depreciation and higher levels of sovereign risk, in a context of high indebtedness, represent a major challenge for the countries of the region in terms of managing liabilities and accessing financing.

Although debt increases and the economic situation are creating a complex situation in terms of fiscal policy, premature and drastic fiscal adjustments should be avoided; policy design should aim for a new fiscal pact that lays the foundations for a fiscal sustainability framework focused on increasing permanent revenues to meet the well-being, investment and environmental sustainability needs of the public. It will be key, in designing fiscal policy, to strengthen the mobilization of permanent resources to meet the growing demands on public spending. Historically, public revenues have not covered spending needs, with a tendency toward deficits and constant pressure on debt levels.

Tax revenues, the main source of resources in the region, are low and skewed towards regressive taxes. As a result, the main tax gap between the countries of the region and those of the Organisation for Economic Co-operation and Development (OECD) is in direct tax collection, in particular personal income tax, which in turn limits the redistributive power of the tax system.

As a complement to strengthening the revenue base, a strategic approach to public spending policy is required to improve its effectiveness. It is key to focus public sector measures on actions that have a high economic, social and environmental return. Public spending must not only meet the needs of the current situation —protecting families and the productive structure— but also lay the foundations for sustainable and inclusive development in the medium and long term. As noted by the Economic Commission for Latin America and the Caribbean (ECLAC), there are opportunities to boost strategic sectors such as the digital economy, the circular economy, research and development and clean energy, among others. At the same time, it is essential to address the gaps in social protection systems, which became evident during the pandemic, and to close the many gaps in terms of resilient infrastructure that would mitigate the effects of climate change. In this context, public investment is a key tool for boosting economic growth and achieving the Sustainable Development Goals (SDGs).

This change in the fiscal policy paradigm must be based on a new generation of fiscal and social covenants. To strengthen tax collection for income, property and wealth taxes, agreement is required on the principle that those who have more should contribute more. It is also essential to improve the provision of quality public goods and services. In this context, it is crucial to improve the efficiency, effectiveness and equity of public

spending, and to prioritize spending on actions that stimulate economic growth and have a positive impact on social well-being, in particular investment and social protection. Seen in this light, fiscal policy has the potential to drive a new path of development in the region, based on building dynamic economies and more egalitarian societies.

Keeping pace with international inflationary pressure, inflation in the economies of Latin America and the Caribbean has also risen, reaching an average of 8.4% in June 2022, more than double the average for 2005–2019. In the subregions, the economies of South America posted the highest average inflation rate in June 2022 at 8.7%, followed by Central America and Mexico at 7.7% and the English-speaking Caribbean at 7.4%.

Higher inflation has been reflected in various components of the consumer price index (CPI), particularly in food and energy. Prices for these items have recorded increases not seen since 2008. Core inflation, which excludes food and energy, has been trending upward since January 2021; in December 2021, core inflation was 4.8%, and by mid-year 2022, it had reached 7.1%.

Breaking down the CPI by goods and services shows that inflation has risen more for tradable goods than for services, reflecting the effects of the war in Ukraine and changing spending patterns in households in the region to the detriment of services. By mid-year 2022, goods inflation had hit 10.7% and services inflation had risen to 7.0%.

Rising inflation in the region and worldwide has been driven by supply and demand shocks, whose relative significance has changed over time. Higher inflation in 2021 was driven by supply disruptions and higher commodity prices, especially for energy and food. Persistent global supply chain problems meant that aggregate world supply, far from being able to adjust to the additional uptick in demand as the post-crisis recovery began, was depleted, further fuelling global inflation, with knock-on effects in the region. Although at the end of 2021 estimates pointed to a slowdown of inflation both globally and in the region as a result of expected lower commodities prices, the war in Ukraine triggered a change in inflation patterns, pushing up both observed rates and projections. Not only did the conflict drive a rise in energy and food prices, it also exacerbated the problems in global supply chains, which had not yet recovered from the pandemic.

Future inflation patterns in the region will be closely linked to global inflation, as their determinants are very similar. Therefore, if the effects of the war in Ukraine on prices for raw materials persist, in particular for energy and food, inflation will remain high. If current levels of exchange-rate volatility continue and the dollar continues to rise on international markets, the prices of imported goods and supplies will also continue to climb, and, consequently, so will inflation. The demand factors that played a role in 2021 appear to cast little light on future inflation trends, given that estimates of GDP and aggregate demand continue to be revised downward.

Authorities in the region have geared monetary and exchange-rate policies towards curtailing the direct and indirect effects of inflation and exchange-rate fluctuations, but these efforts could drive the inflation curve up in the medium term and inhibit medium- and long-term investment, with knock-on effects on the supply of goods and services going forward.

However, other measures may be needed to slow the transmission of external inflation (mounting food and energy prices) to the region's economies, not only to prevent further erosion of living standards but also to prevent inflation from spreading to other components of the consumption basket through increased production costs.

In general, authorities have responded to rising inflation by tightening their monetary stance, raising policy rates and dampening growth in monetary aggregates. In March 2021, the Central Bank of Brazil was the first to raise its monetary policy rate, a decision followed by most of the monetary authorities in the region that opted for inflation targeting. Only the Central Bank of Honduras has kept its monetary policy rate unchanged. In terms of the magnitude of the adjustments, Brazil's rate has varied the most in absolute terms —11.25 percentage points— from 2.0% in December 2020 to 13.25% in July 2022, followed by Chile's rate, which was raised by 9.25 percentage points, from 0.5% in December 2020 to 9.75% in July 2022. Guatemala's rate varied the least, rising by 0.5 percentage points between December 2020 and July 2022. Given the 12-month inflation expectations reported by the region's central banks, monetary policy rates are positive in real terms in most cases, with the exception of the Dominican Republic, Guatemala and Jamaica.

Monetary aggregates have continued the slowdown begun in March 2021, reflecting the "normalization" of monetary policy as a result of the withdrawal of various stimulus packages adopted to address the pandemic. The measures adopted by central banks fuelled substantial growth in the monetary base in 2020; however, the pace has slackened since the first quarter of 2021 and continues to do so. This trend has prevailed in all monetary and exchange-rate policy schemes, albeit with minor variations.

In the first six months of 2022, exchange-rate volatility has worsened and currency depreciation has steepened in most of the region's economies, leading to an increase in foreign-exchange interventions and greater reliance on international reserves.

The region's monetary authorities face the challenge of adopting policies to contain inflationary pressures without causing a deeper economic slowdown. Doing so will require authorities to create policy space through the complementary use of fiscal, monetary, macroprudential and exchange-rate policies, coordinating and fine-tuning policy decisions. This is particularly important in the current context of high inflation, weaker growth forecasts and potentially heightened macrofinancial risk.

Given the nature of the inflationary process, with successive prevailing supply shocks, and a high degree of uncertainty about its duration and magnitude, a further increase in monetary policy rate measures is likely to complicate the dilemmas of macroeconomic stabilization even more and could implicitly afford the risk of financial instability too little importance in policy decisions. At present, the scope of macroprudential policy in the region is relatively broad and can contribute to monetary policy implementation, with a view to preserving financial stability, through its direct macroeconomic effects on the credit cycle as well as through its indirect effects, particularly on price levels and growth. The literature argues that the response of inflation to macroprudential measures is particularly relevant in an environment of low financial development, high indebtedness and less financial openness.

The transmission of macroprudential policy to the real sector is largely explained by its differentiated impacts compared to the broad-spectrum and undifferentiated impacts of changes in monetary policy rates, particularly on the components of aggregate demand. Thus, by reducing the exposure of the banking sector to risks from household and corporate behaviour, tighter macroprudential policy could reduce consumer credit growth without significantly affecting the dynamics of investment. Moreover, the use of macroprudential measures in coordination with other fiscal, financial and sectoral measures could support a reactivation of certain sectors whose recovery is lagging.

B. Trends and challenges of investing for a sustainable and inclusive recovery

Part II of the *Economic Survey of Latin America and the Caribbean, 2022* examines trends in public and private gross fixed capital formation in the countries of the region. Chapter II looks at trends in total investment over the past 70 years. One focus of the chapter is the profound change in the pattern of investment in the region after the 1980s debt crisis, with a slowdown in investment from the 1990s onward. Between 1951 and 1979, gross fixed capital formation (investment) grew by an average of 5.9% per year in real terms, while between 1990 and 2021, the average annual investment growth rate was 2.9%. The worst performance since the 1980s was seen between 2013 and 2021.

After reaching its highest decade average of 22% in the 1970s, investment as a share of GDP has been declining steadily since the 1980s. in other words, the region has never allocated more than 25% of GDP to investment. This situation means that the economies of Latin America and the Caribbean have a lower investment-to-GDP ratio than other emerging economies.

Chapter II also highlights that investment has become more volatile since the 1990s, with more frequent, more intense and longer cycles of contraction. Between 1950 and 1980, there were only three episodes of investment contraction, in 1953, 1958 and 1977; none lasted longer than one year, and only the 1953 contraction exceeded 0.5%. During this period, increasing investment was the norm. During the upswing phase, which lasted 18 years, a cumulative increase of 240% was recorded. Since 1981, there have been 15 periods of investment contraction lasting two or more years, between 1981 and 1983, 2001 and 2003, 2014 and 2016, and 2019 and 2020. On five of these occasions the reduction was 5%, and in four cases greater than 10%. Of the expansionary phases, the longest was between 1988 and 1994, generating a cumulative increase in investment of 37.8% with an average annual growth rate of 5.4%. Two other periods of expansion were seen, a five-year period from 2003 to 2008 with an average growth rate of 10.1% and a four-year period from 2009 to 2013 with an average growth rate of 6.7%.

Since the 1990s, machinery and equipment has been the segment with the fastest growth in investment. In fact, between 1990 and 2020, investment in machinery and equipment grew by an average of 4.4% per year compared to 2.8% for construction.

In terms of sectors of activity, investment in transportation and communications and commerce and mining have been the most buoyant since 1990 and have therefore seen their share of total investment expand. However, manufacturing (22.7%) and general services (21.1%) account for the largest shares of investment in the region.

The region is facing a major investment challenge. For the economies of the region to set a course of sustainable and inclusive development that will help reduce poverty and inequality and to make the changes required to reduce carbon dioxide (CO_2) emissions, a substantial increase in investment is required. Such an increase in investment would help lessen the coordination problems that hamper adoption of new and better technology and thus hinder the required productivity growth in the region's economies. The greatest investment should be in human, physical, social and natural capital. Although much of the financing to increase investment must come from domestic resource mobilization, the process must be supported by international cooperation. Therefore, official development assistance and financing from global financial institutions and development banks must be significantly increased.

In Chapter III of this Survey, it is argued that public investment in Latin America and the Caribbean is lower than in other regions of the world in both absolute and relative terms. On average, general government gross fixed capital formation in the region has been significantly lower than that recorded in emerging and developing Asian economies in recent decades, a period over which Asian countries have built dynamic and diversified economies. The limited flow of investment has also resulted in a stock of public capital that is insufficient to provide the economic and social services needed to boost growth and lay the foundations for sustainable and inclusive development in the region. Regrettably, public investment has been used as the main variable for fiscal adjustment over the past decade, which has weakened potential economic growth and left the region more vulnerable to the impact of the COVID-19 crisis.

It will be key to strengthen the resilience of the societies of the region to health, environmental and macroeconomic risks that could affect the pursuit of the SDGs. A key task in the transition to more resilient and productive economies in the medium and long term is designing comprehensive investment policies that focus on the goals of sustainable and inclusive development, strengthen the design of public investment projects and incentivize private participation in activities that contribute to achieving the SDGs. National systems for public investment and proper design of investment tax incentive programmes are some instruments that have great potential to help close structural development gaps in the region.

For investment policy to fulfil its aims, a series of cross-cutting actions should be undertaken to ensure proper coordination between national public investment systems and tax incentives for investment, and also to resolve some of the design and implementation shortcomings of both instruments. In the context of the region, it is particularly important to flexibly align the different investment programmes with national development policy; establish robust legal frameworks that define institutional responsibilities and inter-agency coordination mechanisms; develop performance indicators to monitor ongoing projects and measure their outcomes; identify the most cost-efficient initiatives from a social, economic and environmental point of view through cost-benefit analysis; make progress with evaluation of the direct and indirect outcomes of completed projects; and, lastly, to improve the transparency of investment project implementation through new mechanisms for accountability to the legislative branch and civil society.

Lastly, Chapter IV discusses investment challenges in the region's copper, iron and lithium industries, focusing on the role of green factors. Changes in the world economy under the new technical and economic paradigm are creating opportunities for countries that produce minerals, since new technologies make intensive use of these raw materials.

By 2030, demand for copper could increase by 30%, as it is likely to be used in all new technologies and there is little likelihood of its substitution. In terms of the iron and steel industry, it is widely accepted that demand will continue growing as emerging economies continue to develop and undergo a rural to urban demographic shift.

Although the demand-side effects are positive, adapting production to new environmental standards will require a significant investment effort. The energy transition will push the mining sector towards a shift in production technologies. To take advantage of the window of opportunity opened by growth in demand for minerals and to ensure that the mining sector plays an active role in the overall development strategy, mineral producers must make major investment efforts to enhance the capacity of mining companies to expand their production in a clean energy context. The efforts required are substantial and are made even greater by the changes and restrictions that the energy transformation entails.

Governments have opportunities to contribute to driving the energy transition of industries through regulations; however, regulations must be accompanied by policies that foster a technological change towards decarbonization, boosting investment in research and development and preservation of the region's environmental and cultural heritage.

PART

I

Regional macroeconomic report and outlook for 2022

CHAPTER I

Regional overview

A. The international context

The Russian Federation's invasion of Ukraine has created a new source of uncertainty for the global economy and intensified two pre-existing trends: global inflationary pressure —driven by supply constraints and rising transport costs— and lower levels of economic activity. Prior to the war, economic activity was slowing and global GDP was forecast to grow by 4.4% in 2022, compared to the 6.1% recorded in 2021. World GDP is now expected to grow by 3.1% (1.3 percentage points less than before the war).

The war is affecting the economies of Latin America and the Caribbean through several channels: trade (lower external demand for the region), commodity prices (a terms of trade effect and problems arising from climbing global and regional inflation) and the financial channel (a worsening of global financial conditions).

1. In 2021 the world economy underwent a post-crisis rebound, growing more than 6%, but in 2022 the rebound effect has disappeared and the war in Ukraine is hampering global economic performance, with growth of just 3.1% expected

The war is hampering global economic activity, including the GDP trends of Latin America and the Caribbean's main trading partners (the United States, China and the European Union), with consequences for the region's external demand.

The largest forecast decline in GDP for this year is that in the Russian Federation (almost 9%). In addition to the countries directly involved in the war, other regions and countries have seen their projections cut considerably. In the case of the United States, in December 2021 the Federal Reserve was projecting 4% growth for 2022, but by the time of its June meeting it was projecting just 1.7% growth (Federal Open Market Committee, 2022) (see table I.1). In this context, inflation hit a 40-year high (9.1% in June) and monetary policy becoming restrictive, weakening both consumer confidence and performance of investments. Projections for the eurozone have also been cut significantly. In July, the European Commission projected growth of 2.6%, 1.4 percentage points less than before the war (European Union, 2022). Inflation had reached 8.6% by June, the highest level since the launch of the euro, and is causing a decline in real disposable income and reducing the real value of the large volume of savings accumulated during the pandemic, dampening private consumption. In addition, sanctions on imports of Russian energy —on which the eurozone is heavily dependent— and supply shortages in various sectors are affecting manufacturing output.

In the case of China, the economy has slowed sharply, after growth of more than 8% in 2021. Growth slackened to 0.4% year-on-year in the second quarter of 2022 and for the full year a rate of around 4% is expected. In this context, with inflation rates still contained, Chinese authorities have been applying expansionary monetary policy. At the end of May, they reaffirmed the need for more economic stimulus measures. These include, in addition to monetary stimulus packages, fiscal stimulus policies, stabilization of supply and production chains (resumption of certain critical activities), measures to support consumption and the housing market, and the pursuit of energy security (BBVA, 2022).

As table I.1 shows, following the damage caused by the coronavirus disease (COVID-19) pandemic to productive capacity, the Russian Federation's invasion of Ukraine has intensified the slowdown in global economic growth, increasing the risks of stagflation.

Table I.1
Selected regions and countries: GDP growth rate, 2020–2022, projections for 2022 before the war in Ukraine and difference with current projection
(Percentages)

	2020	2021	2022	Pre-war projection for 2022	Difference
World	-3.1	6.1	3.1	4.4	-1.3
Developed economies	-4.5	5.2	2.6	3.9	-1.3
United States	-3.4	5.7	1.7	4.0	-2.3
Japan	-4.6	1.8	1.7	3.0	-1.3
United Kingdom	-9.3	7.5	3.3	5.0	-1.7
Eurozone	-6.3	5.4	2.6	4.0	-1.4
Emerging and developing economies	-2.0	6.8	3.5	5.1	-1.6
Emerging and developing economies in Asia	-0.8	7.3	4.6	6.4	-1.8
China	2.2	8.1	4.0	5.7	-1.7
India	-6.6	8.9	7.4	7.9	-0.5
Emerging and developing economies in Europe	-1.8	6.7	-1.4	3.8	-5.2
Russian Federation	-2.7	4.7	-8.9	2.8	-11.7
Middle East and North Africa	-2.9	5.7	4.8	4.1	0.7
Sub-Saharan Africa	-1.7	4.5	3.7	3.8	-0.1

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Organisation for Economic Co-operation and Development (OECD), *OECD Economic Outlook,* June 2022; International Monetary Fund (IMF), *World Economic Outlook Update: Gloomy and More Uncertain,*, July 2022; World Bank, *Global Economic Prospects,* Washington, D.C., June 2022; European Union, *European Economic Forecast - Summer 2022,* 14 July 2022 [online] https://economy-finance.ec.europa.eu/economic-forecast-and-surveys/economic-forecasts/summer-2022-economic-forecast-russias-war-worsens-outlook_en; Capital Economics, Global Economics, 13 June and United States Federal Reserve, "Summary of Economic Projections", 16 June [online] https://www.federalreserve.gov/monetarypolicy/fomcprojtabl20210616.htm.
Note: The figures for India are for the fiscal year, which begins in April and ends in March of the following year.

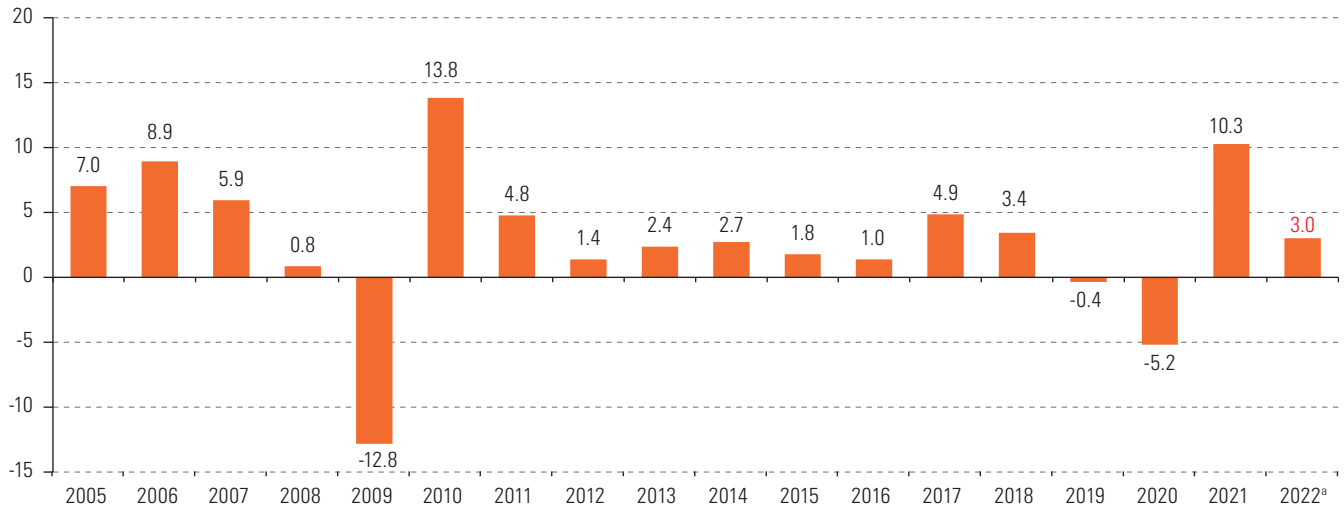
2. After ending 2021 with a rise of more than 10%, growth in the volume of trade looks set to slow to 3% in 2022

The volume of global trade grew by more than 10% in 2021, closing the year 9% higher than in December 2019, prior to the pandemic. However, thus far in 2022, increases in volumes have been losing pace, with accumulated year-on-year growth of 4.2% from January to April. Like economic growth, world trade has been undermined by the invasion of Ukraine. The World Trade Organization (WTO) estimates that the volume of world trade will grow by 3.0% in 2022, down from the 4.7% it projected prior to the Russian Federation's invasion of Ukraine (see figure I.1) (WTO, 2022).

Firstly, the war has affected world trade, owing to the effects on economic activity and external demand. Furthermore, although the Russian Federation and Ukraine account for a small share of world trade (1.9%), they are key suppliers in some markets, such as energy, food, some metals and fertilizers, and supply in those markets has been affected by the war. Together, the two countries account for almost 30% of world trade in wheat, 14% in maize and more than 50% in sunflower oil (UNCTAD, 2022). In the energy markets, the Russian Federation is the world's largest exporter of natural gas and the second largest exporter of oil after Saudi Arabia. In markets for fertilizers, which are inputs for farming, the Russian Federation is the world's leading exporter of nitrogen-based fertilizers, the second largest exporter of potassium-based fertilizers and the third largest exporter of phosphorus-based fertilizers.[1] It is also the main producer of palladium (44% of world production and 38% of global trade), and the disruption in trade of this metal has affected a number of sectors, such as those that produce automotive catalytic converters, jewellery, medical devices and appliances, and timepieces.

[1] The data refer to 2021. See FAO (2022).

Figure I.1
World trade volume growth, 2005–2021, and World Trade Organization (WTO) projection for 2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Netherlands Bureau of Economic Policy Analysis (CPB), World Trade Monitor [online database] https://www.cpb.nl/en/worldtrademonitor, and World Trade Organization (WTO), April 2022, for 2022 projection.
[a] Projection.

The disruption of shipping and trade in the Black Sea has impacted transport of food and crude oil, while the need to divert ships from ports on its coast as a result of the conflict has led to increases in shipping costs, which had already reached historically high levels during the pandemic.

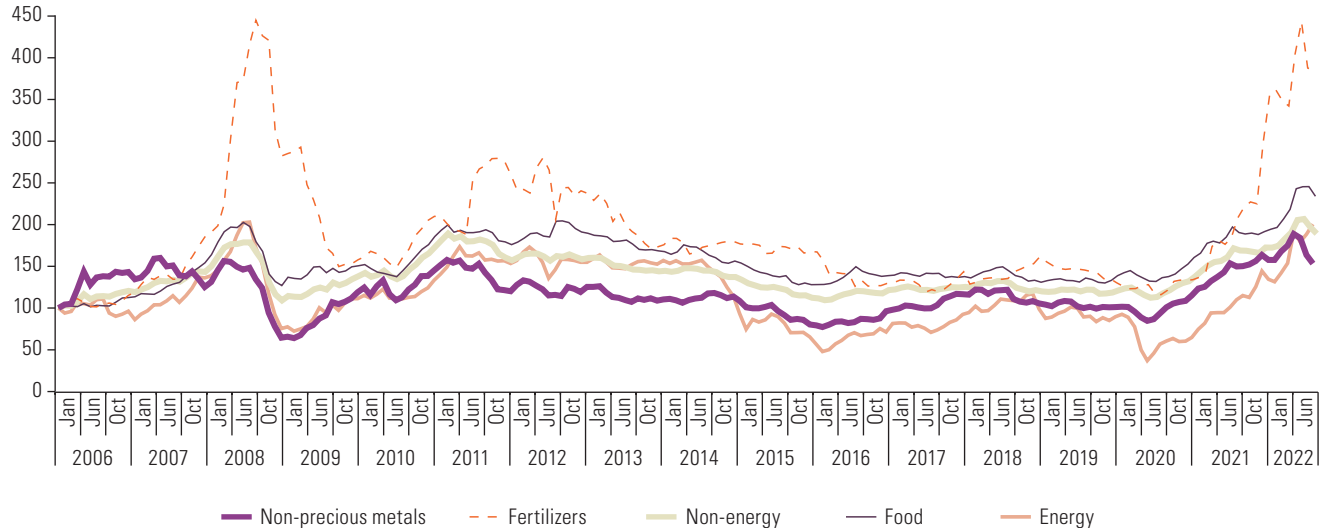
3. The Russian Federation's invasion of Ukraine has intensified the uptrend in commodity prices seen since the second half of 2020, pushing some commodities to record highs

Although after commodity prices rose sharply in 2021 (39%) they were then projected to remain relatively stable on average in 2022 or even drop slightly (ECLAC, 2022a), the Russian Federation's invasion of Ukraine has instead intensified the pattern of rises seen since the second half of 2020.

As previously mentioned, the war has significantly disrupted the supply of commodities of which the two countries are key exporters (such as energy, agricultural products, fertilizers and some metals). This disruption has added to the existing price pressures in commodity markets following the economic recovery from the COVID-19 pandemic, which led to a rebound in global demand and limited supply from 2020 onward. Thus, prices of several commodities topped the levels recorded during the 2008 global financial crisis (see figure I.2) and some even reached their highest level since price series have existed,[2] for example agricultural products (particularly food) and non-precious metals and minerals (World Bank, 2022).

[2] Based on the nominal price indices for commodities prepared by the World Bank since 1960.

Figure I.2
International commodity price indices, January 2006–June 2022
(Baseline January 2006=100)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Bank, "World Bank Commodities Price Data (The Pink Sheet)" [online] https://www.worldbank.org/en/research/commodity-markets.

In 2022, commodity prices are expected be an average of 21% above the levels seen in 2021. Energy product prices are set to rise most, to 55% above the average levels recorded in 2021, while agricultural products are forecast to climb by 15% (see table I.2).

Table I.2
Variation in international commodity prices, 2021 and projections for 2022

	2021	2022[a]
Agricultural products	**24**	**15**
Foods, beverages and oilseeds	30	17
Food	22	17
Tropical beverages	38	21
Oils and oilseeds	38	17
Agricultural and forestry raw materials	4	3
Minerals and metals	**37**	**0**
Energy	**62**	**55**
Crude oil	67	51
Petroleum products	38	51
Coal	83	115
Natural gas	91	67
Total	**39**	**21**
Total without energy products	**31**	**6**

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Bank, *Commodity Markets Outlook: The Impact of the War in Ukraine on Commodity Markets*, Washington, D.C., April 2022; International Monetary Fund (IMF), World Economic Outlook Database, April 2022 [online] https://www.imf.org/en/Publications/WEO/Issues/2022/04/19/world-economic-outlook-april-2022; The Economist Intelligence Unit, "CountryData" [online] https://store.eiu.com/product/countrydata; United States Energy Information Administration, *Short Term Energy Outlook*, 2 June 2022; Bank of Chile, *Informe de Política Monetaria: junio 2022*, Santiago, 2022; Central Reserve Bank of Peru, *Reporte de Inflación: panorama actual y proyecciones macroeconómicas 2022-2023*, Lima, June 2022; data from Bloomberg and the Chilean Copper Commission (COCHILCO).

[a] Projections.

Through prices of energy products, the war is also affecting prices of oils and oilseeds that can be used for fuel. For soybean, smaller harvests in Argentina and Brazil have also contributed to price increases (Espina, 2022 and CONAB, 2022).

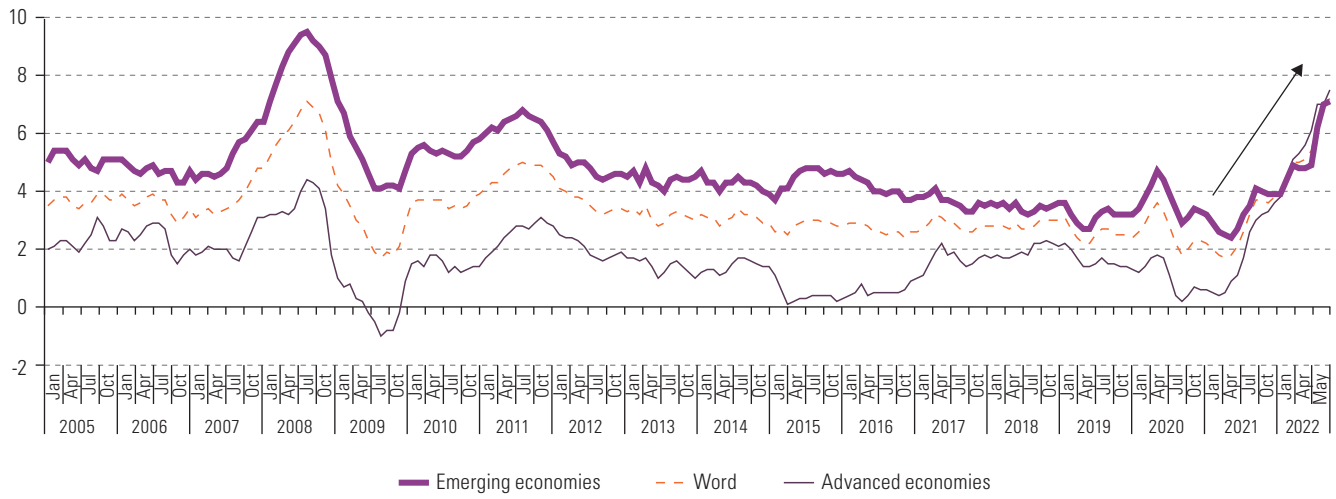
On average, metals and minerals are expected to hold their 2021 price levels, albeit with different patterns for each material. On one hand, the prices of metals whose supply has been disrupted by the war in Ukraine, such as aluminium and nickel, are showing an upward trend. On the other hand, the prices of metals whose supply is less affected by the war, such as iron and copper, are falling or remaining stable, even though demand is being dampened by the global economic slowdown (World Bank, 2022).

4. Global inflationary pressures have been exacerbated by the war, leading central banks to withdraw monetary stimulus measures and raise monetary policy rates faster and in larger increments than anticipated at the start of the year

World average inflation hit 7.2% in May 2022, a rate not seen since mid-2008 at the height of the global economic and financial crisis. In emerging economies, average inflation reached 7.1% and in developed economies it was 7.5% (see figure I.3).[3] In the case of developed economies, inflation in the United States hit a 40-year high in June while in the eurozone it reached the highest level since the launch of the euro.

In 2021, a post-crisis rebound in demand, coupled with supply and demand problems, high international transport costs and rising commodity prices had already resulted in rising inflation in several developed and emerging economies. The war in Ukraine has accentuated several of these trends. In particular, rises in food and fuel prices and appreciation of the dollar have led to higher production costs and in several cases domestic inflation rates that had not been seen in decades.[4]

Figure I.3
Year-on-year inflation rate, January 2005–May 2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Capital Economics, CE interactive and Global Inflation Watch.

3 Data from Capital Economics. If China is not included, inflation was even higher (8.8%).
4 For Latin American and Caribbean countries, see the section on inflation and monetary policy in this chapter.

The response to this from central banks has been to continue with monetary policy interest rate hikes —which in several cases had already been applied in 2021— but more quickly and in larger increments than expected before the war.[5]

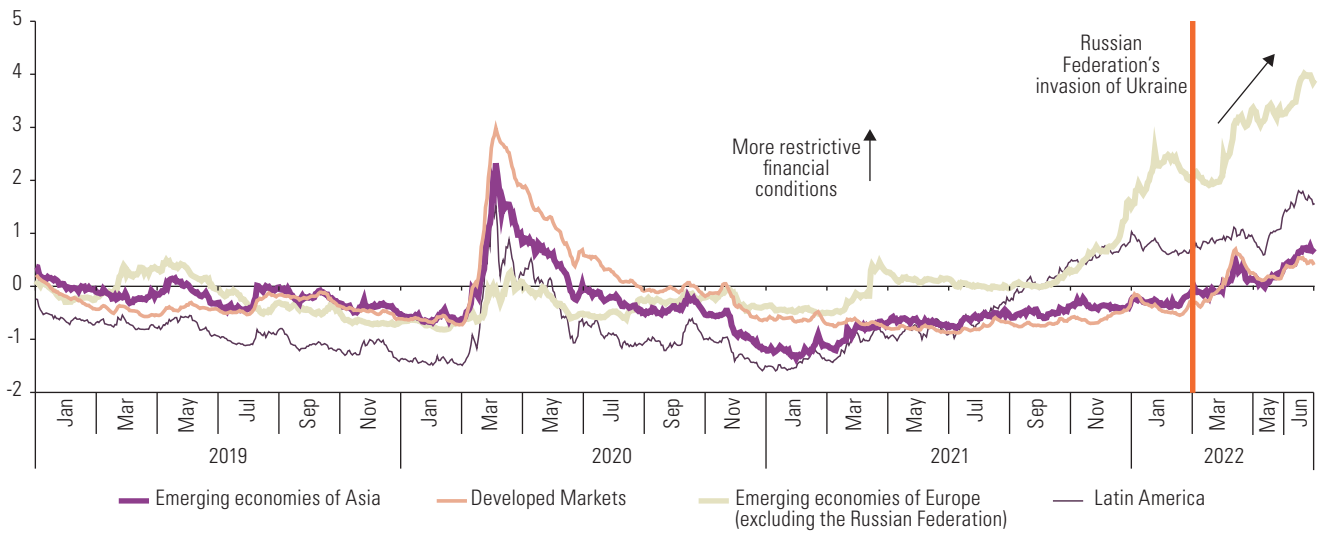
In the case of the United States, for example, at the end of 2021, markets expected three hikes in the federal funds rate, leading to rate at year end of 0.7%. However, by July 2022, the Federal Open Market Committee (FOMC) had raised the target range to 2.25%–2.5% and projections suggested it could reach 3.25%–3.50% by the end of the year.[6]

In the case of the eurozone, at the end of 2021, ECB viewed the rise in inflation as temporary and did not give any indication of rate hikes for 2022 (ECLAC, 2022a). However, at its July 2022 meeting, ECB raised the monetary policy rates by 50 basis points, from around 0% to 0.50%.

5. The deterioration in the outlook for the global economy and growing inflationary pressure have affected financial markets

The war between the Russian Federation and Ukraine has added to the tightening of global financial conditions seen in recent months, as well as driving up volatility. As shown in figures I.4 and I.5, financial markets have become more restrictive and there has been a downturn in portfolio capital flows to emerging markets, especially to equity markets.

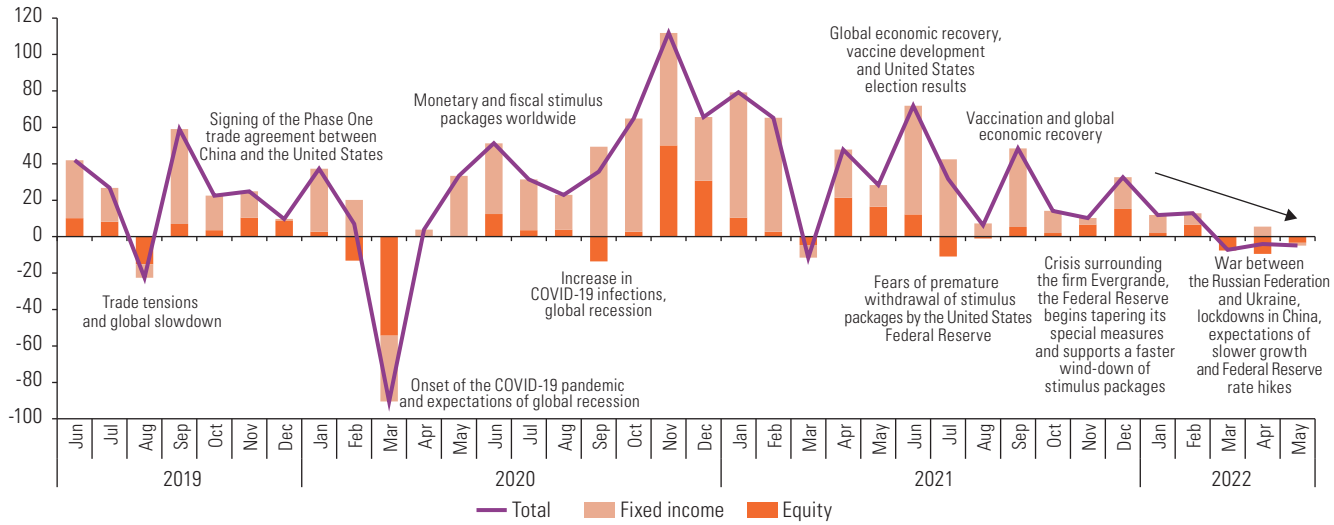
Figure I.4
Selected regions: financial conditions index, January 2019–June 2022
(Billions of dollars)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Capital Economics, CE interactive and Global Inflation Watch.
Note: Capital Economics' financial conditions indices are constructed from a variety of financial market variables and are standardized to z-scores, such that 0 represents average financial conditions and the index value represents by how many standard deviations each observation is above or below that average. Rises in the indices suggest tighter conditions.

[5] An exception to this trend is China, which, as previously mentioned, is not yet exhibiting major inflationary pressure and has continued to apply a monetary policy of lowering interest rates.
[6] The rate hikes applied at the FOMC meetings in June and July were both 0.75 percentage points, making them the largest since 1994.

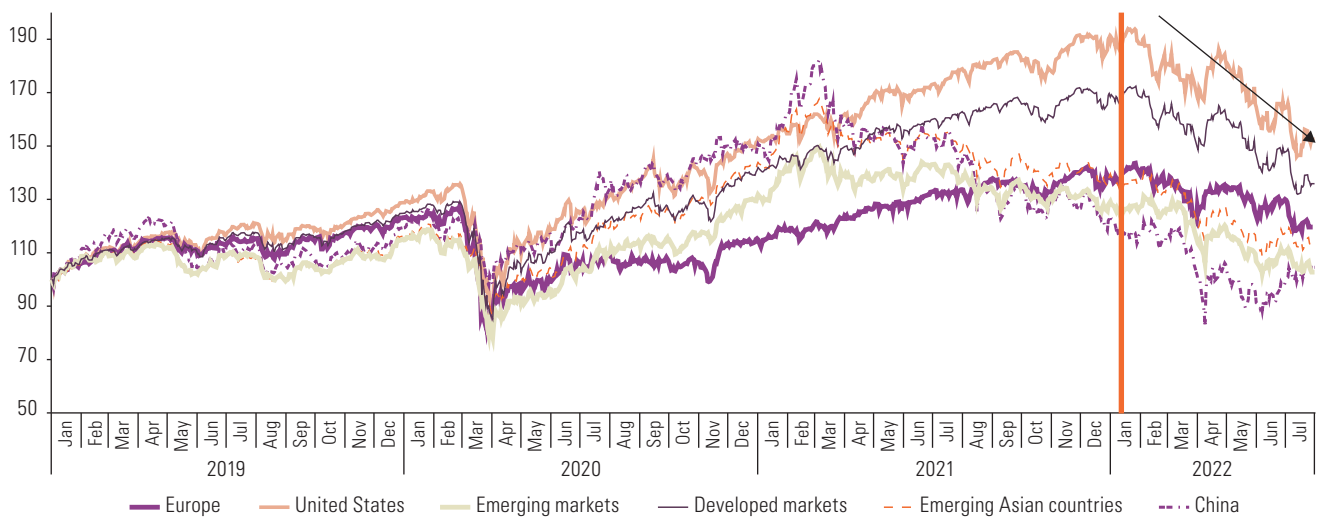
Figure I.5
Non-resident portfolio capital flows to emerging markets, June 2019–May 2022
(Billions of dollars)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Institute of International Finance (IIF) and Central Reserve Bank of Peru, *Reporte de Inflación: panorama actual y proyecciones macroeconómicas 2022-2023*, Lima, June 2022.

Indeed, equity markets have been affected not only by the worse global economic outlook, but also by inflationary pressure that brings with it expectations of increasingly restrictive monetary policy. The MSCI Emerging Markets (EM) Index for equity is down 20% from the beginning of the 2022, while the MSCI World Index for developed markets is 21% lower. At the country and regional levels, the United States index is down 21% from the start of the year, Europe 16%, Emerging Asian markets 19% and China 11% (see figure I.6).

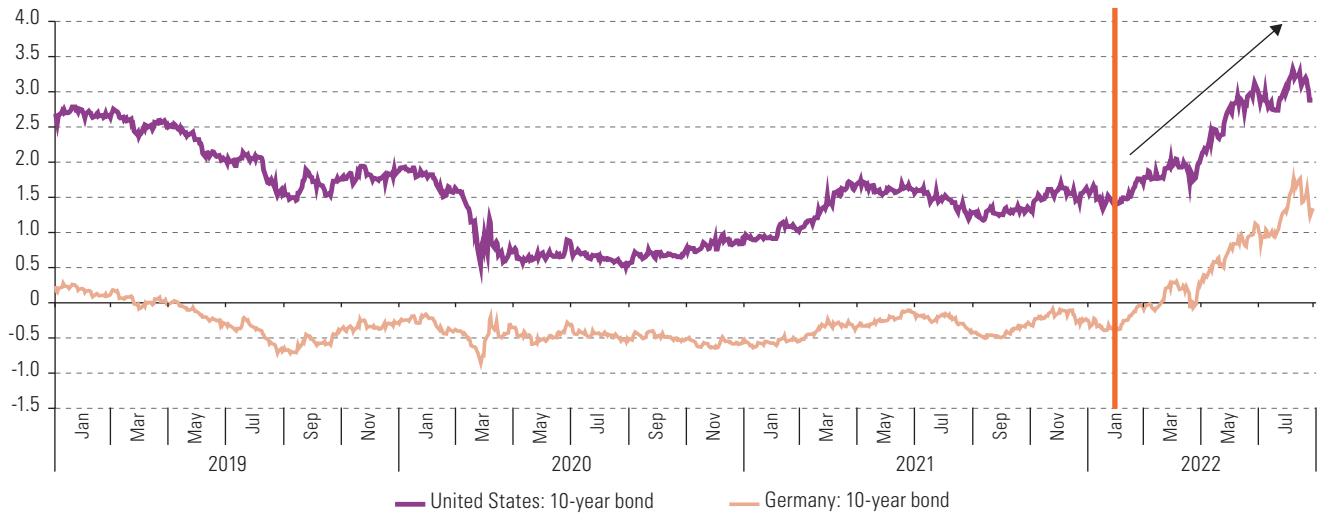
Figure I.6
Equity market indices, January 2022–4 July 2022
(MSCI developed and emerging market indices, baseline 1 January 2019=100)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Bloomberg.

In fixed-income markets, bond yields have risen sharply in developed economies, owing to higher inflation and expectations of a more pronounced tightening of monetary policy, with interest rate hikes and the end of central banks' asset purchase programmes (see figure I.7). In the United States, yields peaked at nearly 3.5%, even higher than during financial turmoil caused by Federal Reserve announcements in 2013 (known as the taper tantrum).[7]

Figure I.7
United States and Germany: ten-year sovereign bond yields, January 2019, at 4 July 2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Bloomberg.

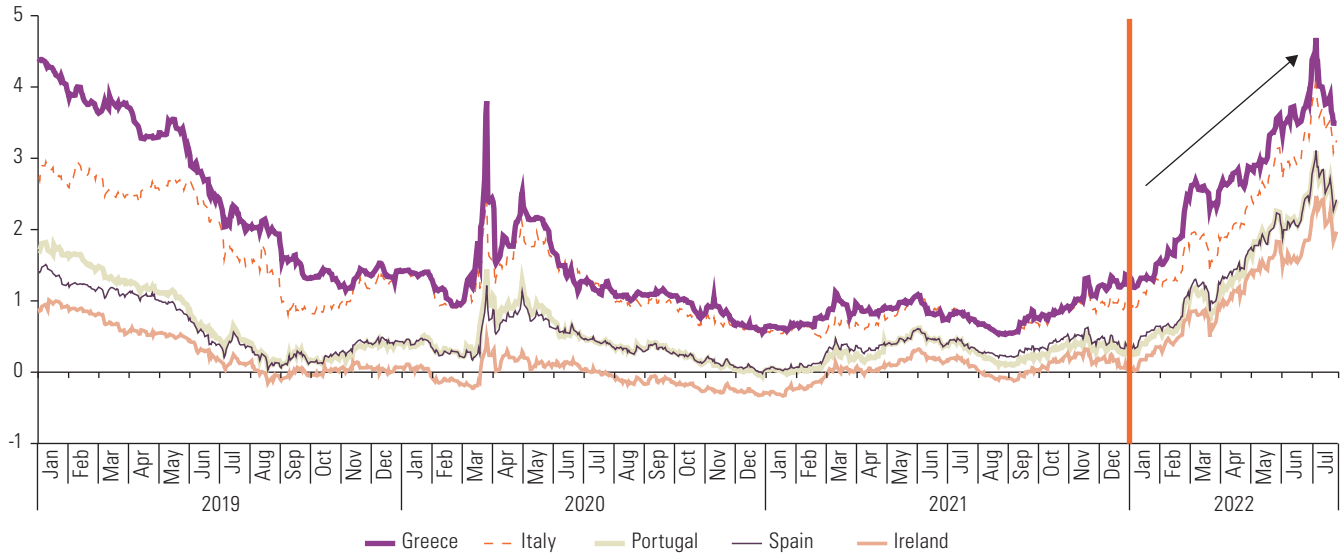
6. Tighter monetary policy will have a more marked effect on financing conditions if the tightening by major central banks is faster and more intense

Higher interest rates from major banks pass through to the cost of financing for economies. In Europe, for example, sovereign yields have soared in Greece, Ireland, Italy, Portugal and Spain (see figure I.8) because of the perception that monetary policy of higher rates and the end of ECB public asset purchases will drive up governments' financial costs.

The sovereign yield spread of emerging countries, measured by the J.P. Morgan Emerging Markets Bond Index Global (EMBIG), has shown a similar upward trend in the year to date (see figure I.9). After hovering around 300 basis points for almost all of 2021, in early July it stood at 460 basis points.

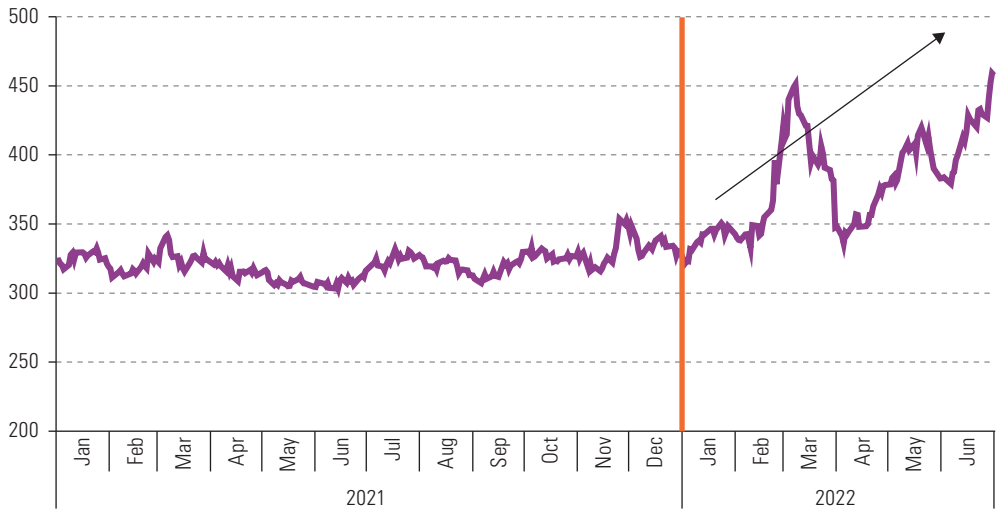
[7] The announcement of the start of monetary normalization in May 2013 made by former Federal Reserve Chairman Ben Bernanke raised the prospect of tapering of quantitative easing by reducing purchases of treasury bonds and other instruments. The announcement surprised a significant portion of the market, leading to a sweeping sell-off of these bonds in response to the prospect of a future fall in bond prices. This triggered the abrupt fall in prices, sharply increasing the yield, which by the end of 2013 had risen to 3%, a period which came to be known as a taper tantrum (ECLAC, 2022a).

Figure I.8
Greece, Ireland, Italy, Portugal and Spain: ten-year sovereign bond yields, January 2019–4 July 2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Bloomberg.

Figure I.9
Emerging economies: sovereign risk measured by the J.P. Morgan Emerging Market Bond Index Global (EMBIG), December 2019–June 2022
(Basis points)



	EMBI Global
31 December 2019	277.39
31 December 2020	322.97
30 June 2021	312.50
31 December 2021	330.27
31 January 2022	344.25
28 February 2022	410.99
1 March 2022	420.88
31 March 2022	347.42
29 April 2022	378.50
31 May 2022	383.07
30 June 2022	459.58

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Invenómica, "Riesgo País EMBI – América Latina – Serie Histórica" [online] https://www.invenomica.com.ar/riesgo-pais-embi-america-latina-serie-historica/.

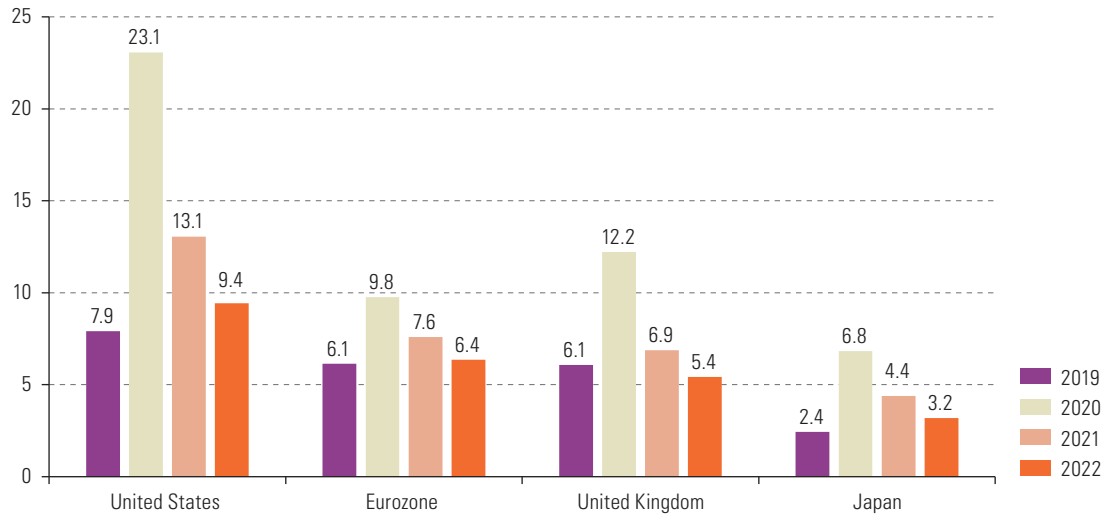
B. Global liquidity trends

1. In 2022, global liquidity contracted owing to shifts in the monetary policy stance of the major central banks in developing countries

In their initial response to COVID-19, the world's major central banks significantly increased liquidity. In 2019, the broad money supply grew from 7.9% to 23.1% in the United States, from 6.1% to 9.8% in the Eurozone, from 6.1% to 12.2% in the United Kingdom, and from 2.4% to 6.8% in Japan.

From 2021, growth in the money supplies of the United States Federal Reserve, the European Central Bank, the Bank of England and the Bank of Japan began to decline, as they began to taper the monetary stimulus. Thus, money supply growth rates fell to 13.1% in Unites States, 7.6% in the Eurozone, 6.9% in the United Kingdom, and 4.4% in Japan (see figure I.10).

Figure I.10
United States, Eurozone, United Kingdom and Japan: rate of growth of the broad money supply, annual averages based on monthly data, January–June 2019–2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (CEPAL), on the basis of Federal Reserve Bank of St Louis, Federal Reserve Economic Data (FRED), 2022 [online] https://fred.stlouisfed.org/ and Bank of England, "Statistics", 2022 [online] https://www.bankofengland.co.uk/statistics.

In 2022, this withdrawal of monetary stimulus was intensified amid more persistent inflation, which forces central banks to increase monetary policy rates, on the one hand, and to start reducing their balance sheets, on the other.

In the United States, the effective federal funds rate rose from 0.08% to 1.21% between February and June 2020, the largest increase since 1994. For the first time in 11 years, the European Central Bank announced a 0.25% increase in its main interest rates in July 2022. The Bank of England raised its monetary policy rate from 0.1% in December 2021 to 1.25% in June 2022. Despite these increases, interest rates remain historically low. In the United States, the current effective federal funds rate levels have only surpassed those in 2010–2011 —as a result of countercyclical policy implemented to counter the effects of the global financial crisis (2008–2009)— and the rate seen during the COVID-19 crisis.

Similarly, a decrease was observed in the aggregate balance sheets of the world's largest banks, after an increase of US$ 10 trillion between March 2020 and the end of 2022, up from US$ 15 trillion to US$ 25 trillion. This drop is mostly explained by a reduction in the assets of the Bank of Japan, from US$ 6.2 trillion to US$ 5.4 trillion between January and June 2022. By the end of 2023, the balance sheets of the world's major banks are expected to contract by US$ 4 trillion (Martin and Smith, 2022).

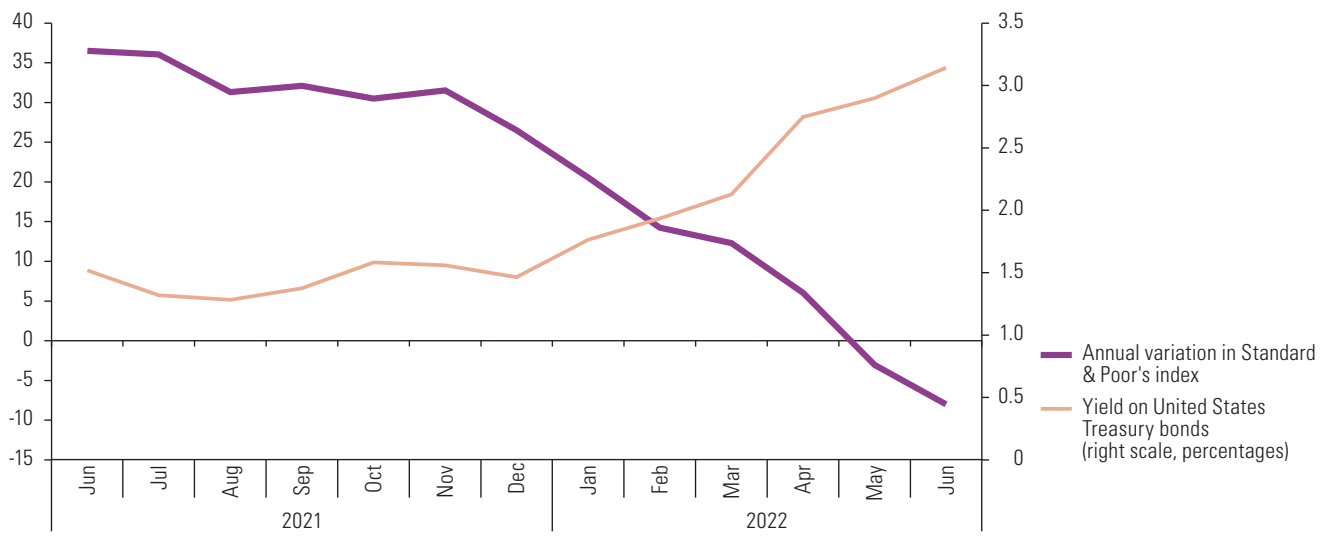
The balance sheet of the United States Federal Reserve contracted by a smaller percentage, from US$ 8.97 trillion to US$ 8.89 trillion between January and July 2022. The Federal Reserve has set a target of reducing its balance sheet by US$ 47.5 billion per month between June and August, before steepening the decrease to US$ 95 billion per month starting in September (US$ 60 billion in treasury bonds and US$ 35 billion in mortgage-backed securities).[8]

2. The conditions for accessing financial markets have been tightened

This context has translated into a tightening of liquidity conditions, as reflected in a number of indicators, in particular a widening of credit spreads (the difference in yield between treasury bonds and corporate bonds), a rise in nominal interest rates and the yield on United States Treasury bonds, as well as a drop in stock market values.

Empirical evidence shows that the current financial context has reinforced the upward trend of long-term interest rates in developed economies. Data for the United States show that this uptrend began in mid-2020 and gained momentum from July 2021 onward (see figure I.11), coinciding with the rise in inflation. The monthly inflation rate in the United States rose from 1% –2% in early 2021 to 5% as of May 2021 and remained steady until September. It then stood at 7% between November 2021 and February 2022 before reaching over 8% as of March 2022.

Figure I.11
United States: year-on-year variation in the Standard & Poor's index and yield on 10-year government Treasury bonds, June 2021–June 2022



Source: Economic Commission for Latin America and the Caribbean (CEPAL), on the basis of Federal Reserve Bank of St Louis, Federal Reserve Economic Data (FRED), 2022 [online] https://fred.stlouisfed.org/.

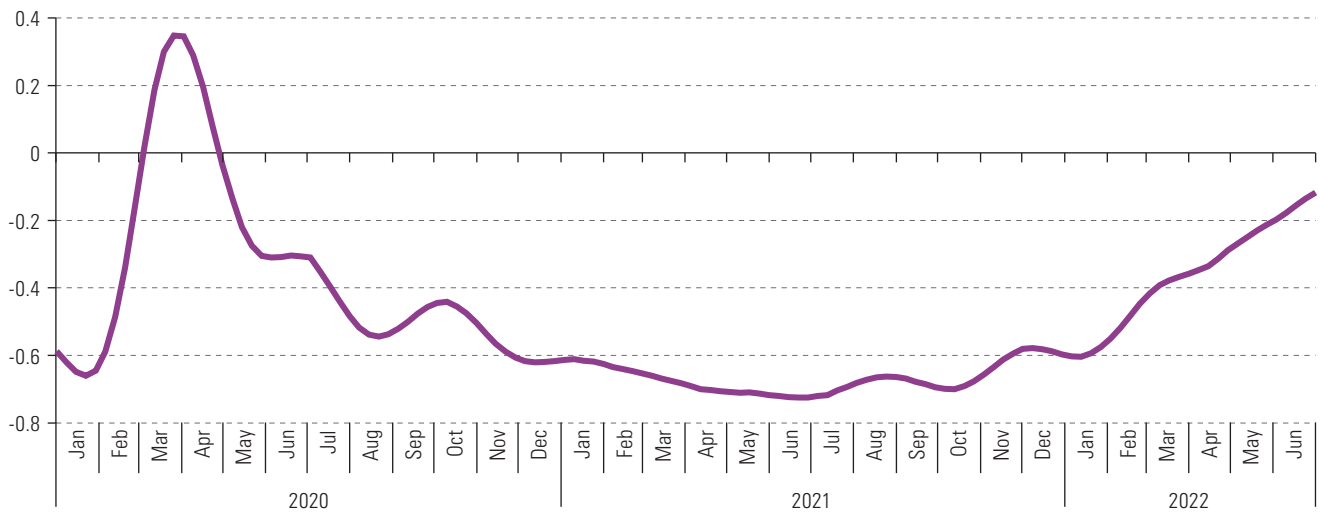
8 The value of Treasury bonds on the balance sheet of the Federal Reserve is approximately US$ 6 billion.

Between July 2020 and June 2022, 10-year United States Treasury bond yields rose from 1.32% to 3.14%, a level not seen since October 2018. Similar patterns were seen in Treasury bonds with longer maturities. The yield on 30-year bonds rose from 1.31% to 3.25% over the same period. Similarly, measured in real terms, yields on 10-year and 30-year Treasury bonds have turned positive for the first time since 2019 (Schwab Asset Management, 2022).

The increase in long-term interest rates has been accompanied by a decline in stock market indices. Between January and July 2022, the Standard & Poor's, National Association of Securities Dealers Automated Quotations (NASDAQ) and Dow Jones stock indexes fell 20.6%, 30% and 15%, respectively.

This context is reflected in the National Financial Conditions Index (NFCI) of the United States, which has risen steadily 2022 onward, showing the existence of tighter financial conditions. A breakdown of the index shows that the segments most affected by the credit squeeze are the credit markets and financial market segments which rely on leverage. The credit and leverage component accounts for 84% of the total variation of this index (between May and July 2022) (see figures I.12 and I.13).

Figure I.12
United States: National Financial Conditions Index, 1 January 2020–1 July 2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Federal Reserve Bank of Chicago, "National Financial Conditions Index (NFCI)" 2022 [online] https://www.chicagofed.org/publications/nfci/index#:~:text=The%20Chicago%20Fed's%20National%20Financial,and%20%E2%80%9Cshadow%E2%80%9D%20banking%20systems.

Note: The National Financial Conditions Index is a weighted average of 105 risk, credit and leverage indicators in the financial system. The risk component refers to both the premium on risky assets embedded in their returns and the volatility of asset prices. The credit component refers to the willingness to both borrow and lend at prevailing prices. The leverage component refers to the share of debt in the financing of assets. Positive values in the Index indicate tighter financial conditions than the average, while negative values indicate looser average financial conditions.

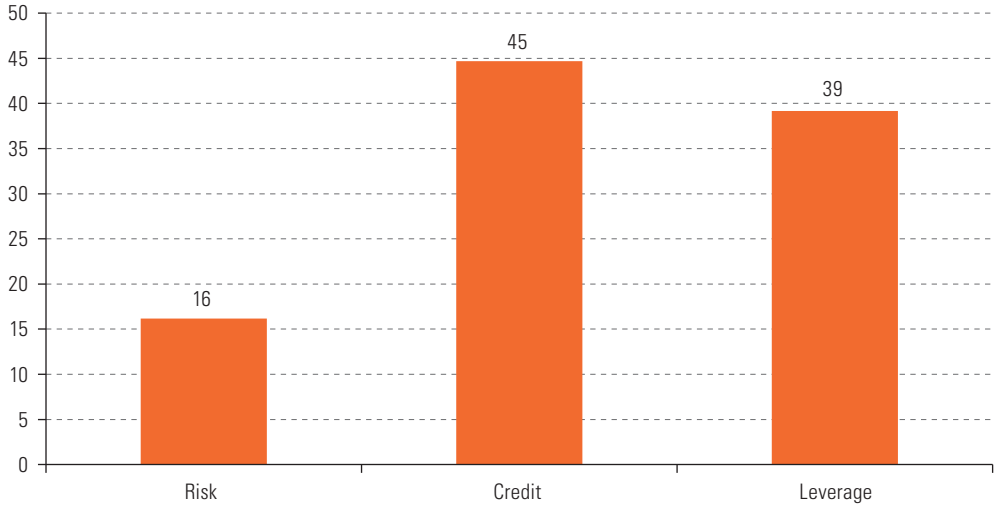


Figure I.13
United States: breakdown of risk, credit and leverage in the National Financial Conditions Index, 13 May 2022–1 July 2022
(Percentages)

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Federal Reserve Bank of Chicago, "National Financial Conditions Index (NFCI)" 2022 [online] https://www.chicagofed.org/publications/nfci/index#:~:text=The%20Chicago%20Fed's%20National%20Financial,and%20%E2%80%9Cshadow%E2%80%9D%20banking%20systems.

3. The impact of quantitative tightening on medium- and long-term economic performance and global liquidity is still uncertain

There are several areas of uncertainty regarding the impact of quantitative tightening on global liquidity (under these policies, a central bank does not reinvest proceeds from matured securities on its balance sheet). In accounting terms, quantitative tightening reduces commercial bank liquidity by decreasing their reserves and, at the same time, changes the liquidity composition of the non-bank financial system, increasing its proportion of bonds in relation to deposits.

First, it should be noted that the United States Federal Reserve —the central bank that guides monetary policy and whose decisions determine global liquidity levels— plans to reduce its balance sheet twice as fast as it did in 2017 when it normalized monetary policy in the aftermath of the global financial crisis. Those measures came to an end in September 2019 owing to a sharp contraction in liquidity and a significant increase in the cost of credit (Duguid, Smith and Stubbington, 2022). Over the 2017–2019 period, the Federal Reserve shed approximately US$ 650 billion from its balance sheet. The largest single drop in the balance sheet in this period was US$ 50 billion in one month, nearly half the target set for September 2022 (US$ 95 billion).

Uncertainty regarding the effects of quantitative tightening on the credit market is deepened by the fact that no estimate exists of the minimum level of reserves required by the financial market to function and meet the liquidity needs of the economy. Adding to the uncertainty, quantitative tightening is expected to affect short-term sovereign bonds as well as long-term securities, so the range of instruments affected by this policy is broader. The Federal Reserve began reducing its bond holdings in June by letting the bonds reach maturity and not injecting their redemption value into the economy —precisely what it has done to support the economy, along with other measures, since the start of the pandemic.

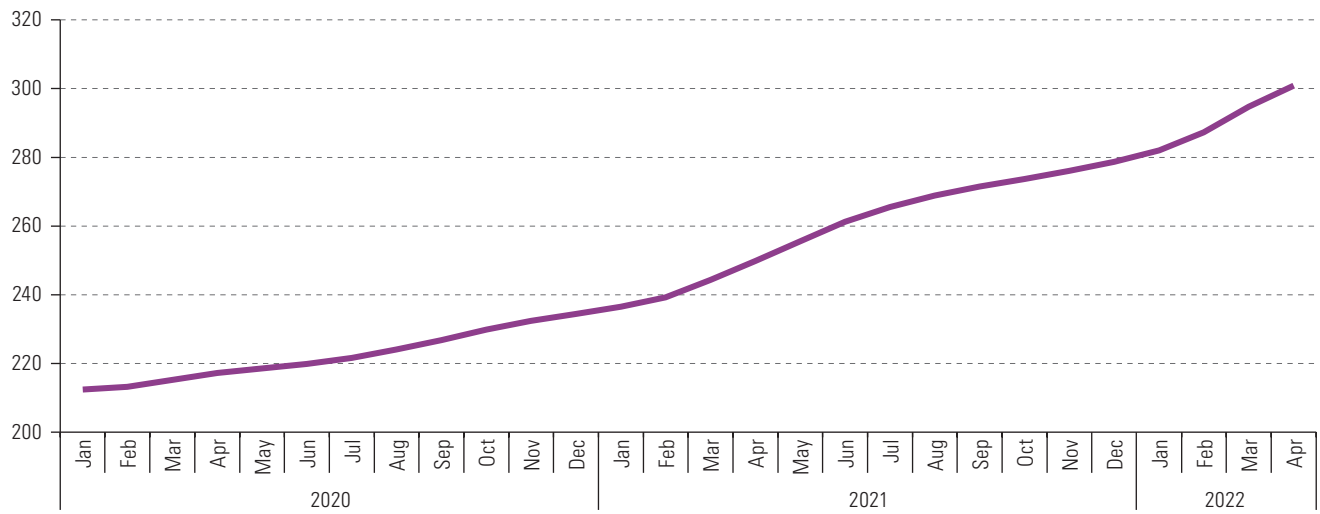
To date, the Federal Reserve has met its target (in June 2022 bonds worth US$ 48 billion came to maturity). It could fall short of its target if at any point its

portfolio does not hold the required value for long-term bond maturities. Should this occur, in a quantitative tightening scenario the yields of one-year bonds and Treasury Bills would not be reinvested, and monetary policy would be made all the more contractionary.

Another issue is the impact of the Federal Reserve's balance sheet runoff on the mortgage market. An increase in the supply of mortgage-backed securities could lead to a glut that could prevent the mortgage market from absorbing newly issued bonds. The Federal Reserve holds the equivalent of US$ 3 trillion in mortgage-backed securities on its balance sheet.

An increase in supply in the mortgage-backed securities market —which is much less liquid and has fewer buyers than the market for Treasury bonds— could apply downward pressure on property values in the real estate market. This market is already suffering from a drop in demand (in the United States, the average number of residential units for sale fell from 6.4 million to 5.1 million between January and May 2022). This would exacerbate the recessionary impact of quantitative tightening, and moreover, would occur in a context of historically high real estate prices (see figure I.14).

Figure I.14
United States: Standard & Poor's/Case-Shiller Home Price Index for residential real estate, January 2020–April 2022
(Index: January 2000=100)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Federal Reserve Bank of St Louis, Federal Reserve Economic Data (FRED), 2022 [online] https://fred.stlouisfed.org/.

The leveraged loan market is especially vulnerable, as borrowers in this market generally have poorer credit ratings and deal with multiple short-term debts.

According to Barclays, loans maturing in two to three years make up 12% of the leveraged loan market, which is estimated at US$ 1.4 trillion. Comparative data show that maturities are twice as high as in previous years. The proportion of loans due in one to two years is almost three times higher than it was in 2018 (Harrison, 2022).

Finally, it is worth noting that there has been no precedent for this situation, in which the world economy faces a generalized fall in liquidity (in this case via quantitative tightening measures by the world's largest central banks).

4. Tighter liquidity conditions in international capital markets have had a significant impact on developing economies

One of the most significant impacts of quantitative tightening has been the worsening of liquidity conditions in international capital markets, which are the principal source of financing worldwide. In 2021, global financing through bond issuance reached US$ 9.8 trillion, or 56% of the total (see figure I.15).

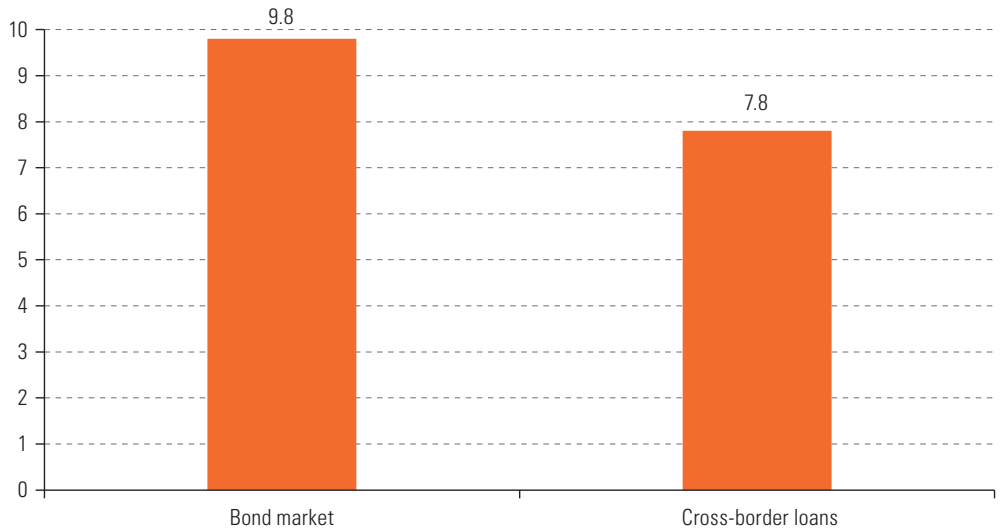


Figure I.15
Breakdown of global financing on the international capital market and cross-border lending, 2021
(Trillions of dollars)

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Bank for International Settlements (BIS), "Global liquidity indicators", 13 June 2022 [online] https://www.bis.org/statistics/gli.htm.

As noted by ECLAC (2019 and 2021), one of the main impacts of the rise in interest rates is on the price of demand for financial assets. There is a direct negative correlation between the present value of bonds and the discount rate (i.e. interest rate). The higher the interest rates, the lower a bond's present value.

On the supply side, a higher interest rate increases the cost of external borrowing (to which must be added current and expected exchange-rate depreciation), which reduces the incentive to issue bonds on the international market as a form of financing. On the demand side, there is also a disincentive to hold bonds due to the loss of present value, which translates, all else being equal, into a decrease in the value of the asset on any balance sheet.

These transmission mechanisms wield a powerful effect on developing countries. All regions of the developing world, without exception, have reported increased levels of both government indebtedness and debt service measured in terms of exports of goods and services, as a consequence of the policies implemented to deal with the effects of the pandemic.

In the first half of 2022, investors pulled US$ 50 billion from emerging and developing market bond funds, the heaviest net outflow from fixed income funds in 17 years.[9]

[9] This refers to a situation in which the yield on a sovereign bond is 10 percentage points above that of a United States Treasury bond with a similar maturity period. See Asgari (2022).

This context has affected sovereign bonds, whose returns have fallen by 18.6% in 2022.[10] Currently, approximately 10% of dollar-denominated sovereign bonds are at risk of default, and it is estimated that the sovereign bond yields of at least 19 developing economies reflect debt distress.[11] Table I.3 shows credit default swap spreads, an indicator of potential default over the past five years for a sample of selected countries, along with the yields of the most recent sovereign bonds and their debt status.

Table I.3
Credit default swap spreads, government bond yields and general government gross debt as a percentage of GDP, 10 July 2022

Country	Credit default swap spreads of the last five years	Government bond yields *(percentages)*	General government gross debt as a percentage of GDP *(percentages)*
Ukraine	10 856	60.4	49.0
Argentina	4 470	20.7	74.4
El Salvador	3 376	31.8	82.6
Ghana	2 071	17.1	84.6
Pakistan	1 492	16.8	71.3
Tunisia	1 200	32.1	87.3
Kenya	1 134	14.6	70.3
Ecuador	1 006	13.3	62.2
Gabon	873	11.7	57.4
Angola	834	12.0	57.9
Senegal	602	10.2	75.3
Namibia	593	9.4	69.6
Rwanda	567	8.9	72.0
Egypt	368	13.2	94.0
Morocco	330	7.3	77.1
Bahrain	327	6.6	116.5
South Africa	315	7.3	70.2
Brazil	299	6.0	91.9

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of J. Maki, "Historic cascade of defaults is coming for emerging markets", Bloomberg, 12 July 2022 [online] https://www.bloomberg.com/news/articles/2022-07-07/why-developing-countries-are-facing-a-debt-default-crisis.

This increase in sovereign risk has a direct impact on macroeconomic performance in that increased sovereign debt service and burden contributes to reducing fiscal space. Also, in developing countries, variation in sovereign risk is closely linked to variation in the nominal exchange rate, leading to a feedback dynamic between the two variables (Pérez Caldentey, Nalín and Rojas, 2022).

5. The tightening financial cycle will also negatively impact the non-financial corporate sector

The impact of the tightening financial cycle will be felt in the non-financial corporate sector in developing countries due to the likely decline in sales and profits as a result of lower demand and more limited access to local and international financing.

Empirical evidence shows that variations in sovereign risk have the same causal effect on non-financial corporate sector risk, which affects the financial positions of companies that issue debt in the international bond market and indirectly impacts gross

10 It is the worst annual performance on record according to J.P. Morgan's EMBI Global Diversified index.
11 See Maki (2022). The International Monetary Fund (IMF) estimates that 33% of developing countries are in a position of debt distress, including 60% of low-income countries. See IMF (2022).

fixed capital formation (Pérez Caldentey, Nalín and Rojas, 2022). By the end of 2021, the stock of international debt in the non-financial corporate sector in emerging economies stood at US$ 804 billion. In the case of Latin America and the Caribbean, the value of bonds issued on the international capital market reached US$ 338 billion.[12]

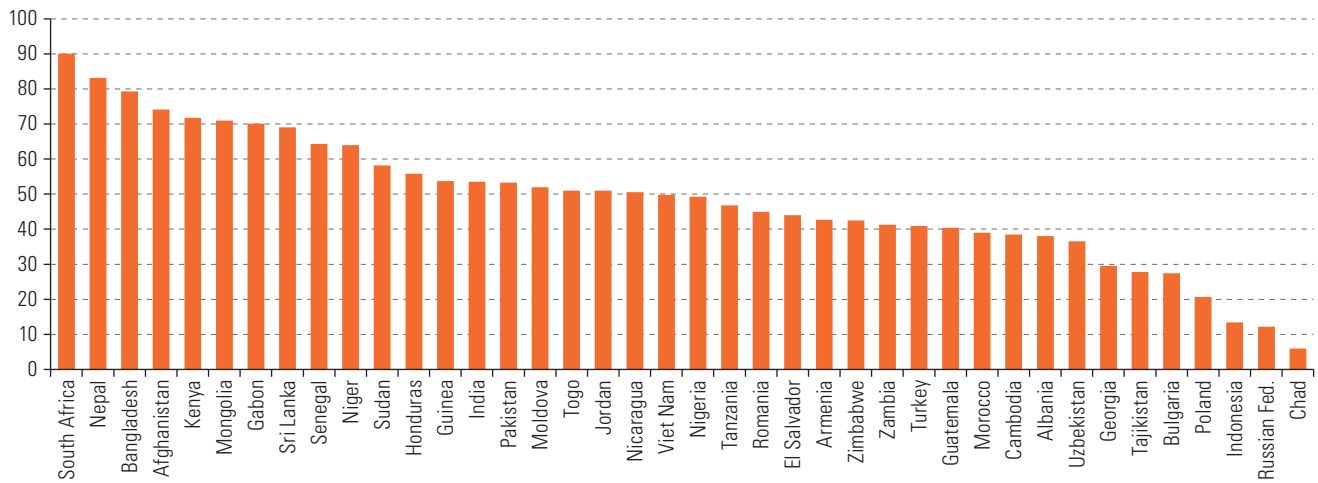
Added to the interaction between the supply and demand of capital goods, which determines trends in investment (an increase in interest rates can translate into a drop in investment by negatively affecting the demand price of a capital good and decreasing its profitability in relation to supply) are changes in how borrowers and lenders perceive risk.

Lenders' risk reflects the view that a higher exposure to debt default is justified only if it is offset by potential gain, expressed in a higher premium on a given rate of return (i.e. the coupon value of a non-financial corporate sector debt security) and also, in some cases, in legal provisions in contracts that minimize the lender's exposure to a higher risk of default by the borrower.

Borrowers' risk arises when the borrower's default risk is increased by acquiring more debt. To compensate for their higher risk, borrowers reduce the price at which they are willing to buy a capital good (Minsky, 1986). The impact of variations in borrowers' and lenders' risk on investment can be aggravated by a currency mismatch, which is a characteristic of non-financial corporate sector operations in the developing world (ECLAC, 2020).

In addition, the current phase of the financial cycle coincides with a state of financial fragility. An April 2022 sample of 41 countries in different parts of the developing world shows that, on average, more than 40% of firms in those countries expect to fall into debt arrears within six months (see figure I.16).

Figure I.16
Selected developing countries: companies expecting to fall into debt arrears within six months, April 2022
(Percentages)



Source: World Bank, "COVID-19 Business Pulse Survey Dashboard", 2022 [online] https://www.worldbank.org/en/data/interactive/2021/01/19/covid-19-business-pulse-survey-dashboard.

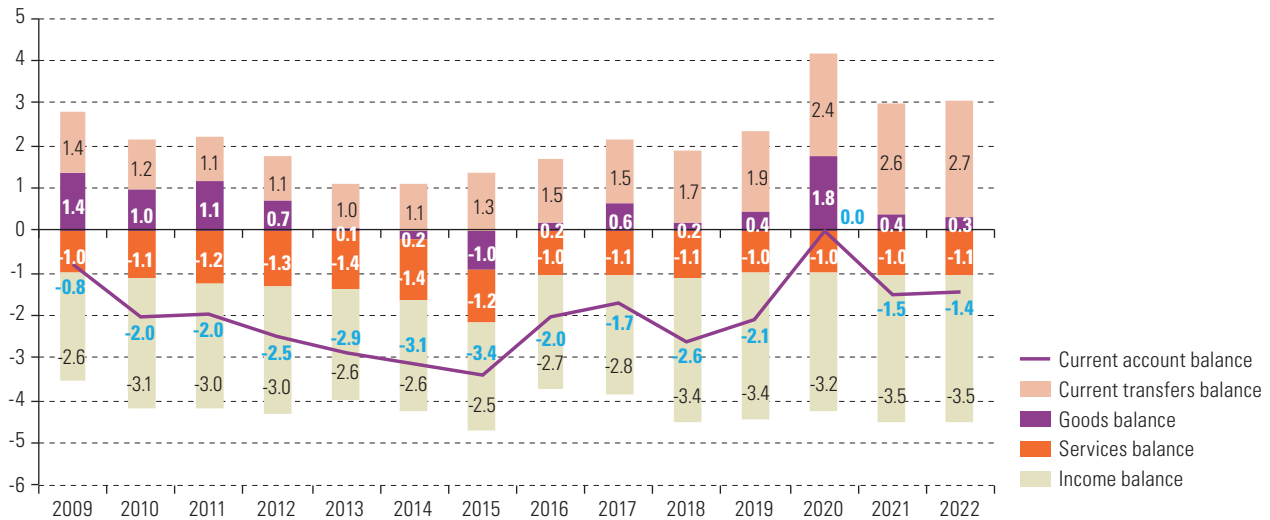
[12] By way of comparison, the stock of international debt for general government in developing countries and in Latin America and the Caribbean reached US$ 1.5 billion and US$ 481 billion, respectively. See BIS (2022b).

C. The external sector

1. The balance of payments current account will remain negative in 2022, broadly replicating the previous year's deficit

After posting a deficit of 1.5% of GDP in 2021, the balance of payments current account is projected to record a similar shortfall in 2022, of 1.4%. This will be the result of a larger surplus on current transfers offsetting a slight deterioration in the goods, services and income accounts (see figure I.17).

Figure I.17
Latin America (19 countries): balance of payments current account, by components, 2009–2022[a]
(Percentages of GDP)

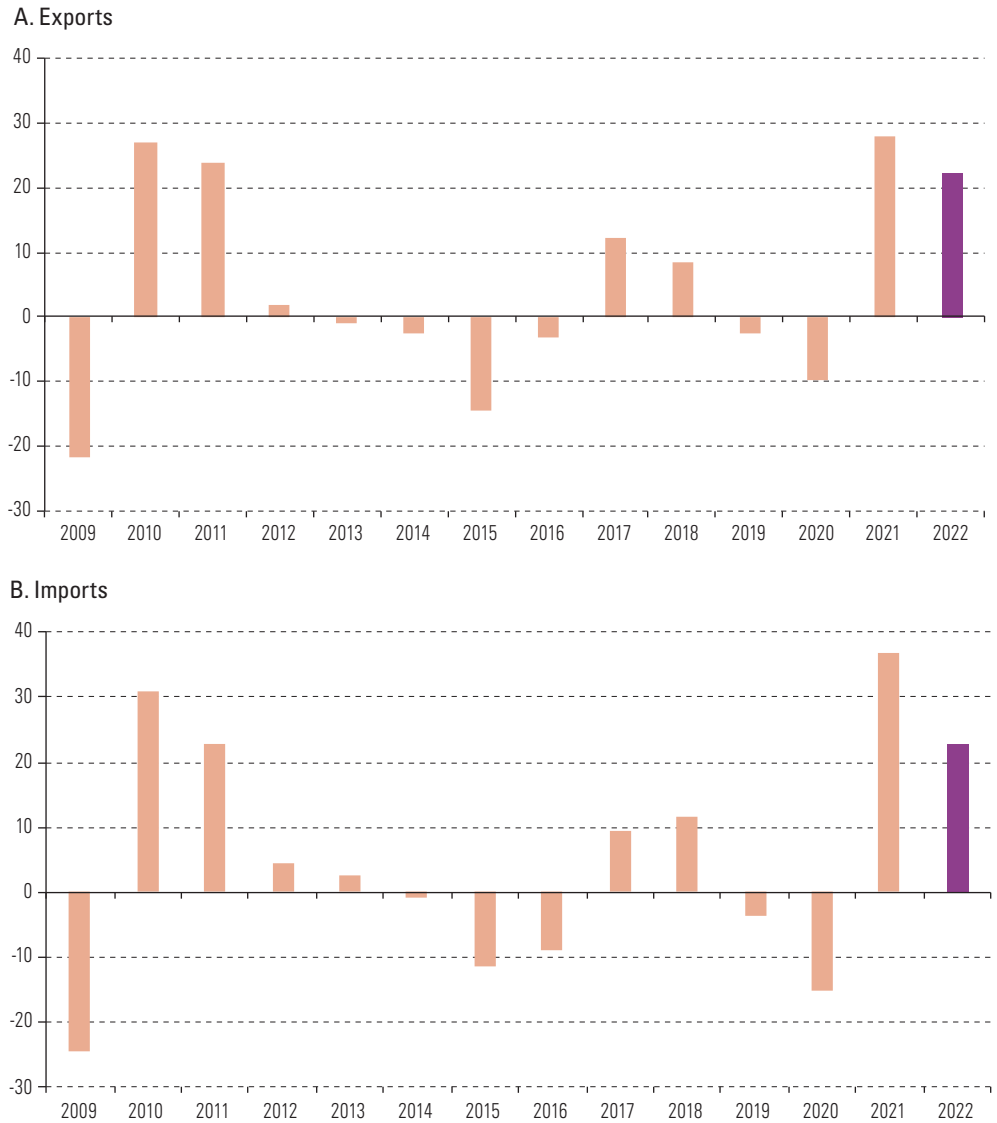


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official data.
[a] Figures for 2022 are projections.

2. The goods balance will return a surplus again in 2022, albeit slightly smaller than in the previous year, as imports have grown faster than exports in value terms

After growing by 28% in 2021, the value of exports is expected to increase by 22% in 2022 (see figure I.2A) —due mainly to higher prices rather than larger volumes, as volumes are being affected by lower external demand. Imports are set to grow by 23%, following the previous year's 37% increase. Again, this mainly reflects higher prices, as volume growth is being affected by slower economic growth (see figure I.18B). High international energy prices, disruptions to global supply chains and persistently high transportation costs have been passed on to domestic production costs. These then fuel a global inflationary process, which is also reflected in the prices of the products that countries export and import.

Figure I.18
Latin America: rate of growth of goods exports and imports in value terms, 2009–2021 and projection to 2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official data.

As a result of the projected trend of exports and imports, the region's goods balance is again projected to be in surplus, albeit somewhat smaller than in 2021 (0.3% of GDP, compared to 0.4% in 2021).

The war between the Russian Federation and Ukraine has only a minor direct impact on the region's trade; just 0.6% of its exports go to these two countries and the same proportion of its imports are sourced from them. However, there are some countries and sectors for which these two markets are more important.

In terms of exports, Paraguay, Jamaica and Ecuador send 5.6%, 5.5% and 4.5%, respectively, of their total exports to the Russian Federation and Ukraine. On the import side, the disruption of supply chains for some intermediate inputs alters specific production processes in certain sectors and countries. In Brazil, 1.8% of imports come from these two countries; in the Plurinational State of Bolivia, 1.6%; and in Paraguay, 1.2%.

3. The region's commodity terms of trade are projected to fall by an average of 7%

Rising commodity prices on international markets affect the countries' commodity terms of trade (that is, excluding manufactured products), according to the relative weight of these products in their respective export and import baskets. In 2022, the regional commodity terms of trade are expected to fall by an average of 7%, as a result of a 20% rise in the prices of commodity exports and a 29% increase in the case of commodity imports.

As usual, performance will vary from one subregion to another. Net hydrocarbon exporting countries will benefit most in 2022 from an increase in the commodity terms of trade of around 17%. The countries in this group are the Bolivarian Republic of Venezuela, Colombia, Ecuador, the Plurinational State of Bolivia, and Trinidad and Tobago. This group also includes Guyana and Suriname, which, although they have a small share of the world oil market, have significant reserves and major production potential. Although some of these countries, along with the rest of the region, need to import refined products to meet their domestic demand, they maintain a hydrocarbon trade surplus (ECLAC, 2022b).

In contrast, the rise in energy prices is detrimental to hydrocarbon importers, particularly the other Caribbean countries (mainly exporters of services) and those of Central America, whose commodity terms of trade will deteriorate.

In South America, the effect is mixed, as some countries are oil producers, so they benefit from the higher price; but they also import refined products, which are currently more expensive (for example Argentina and Peru, see ECLAC 2022b). In the case of net mineral exporters (such as Chile and Peru), the adverse effect is likely to predominate, and their terms of trade will also worsen.[13]

4. The services deficit is expected to widen slightly in 2022 and end the year at 1.1% of GDP

Latin America's services balance recorded a deficit of 1.0% of GDP in 2021; and this is projected to increase by 1 tenth of a percentage point, to reach 1.1% of GDP by the end of 2022.

After expanding by 23% in 2021, imports of services are expected to increase by a further 21% in 2022, in line with the projected growth of goods imports and, by extension, imports of transportation and other associated services.

Exports of services are projected to grow by 25% in 2022. Among these, tourism was already signalling a recovery in 2021 after collapsing in 2020 in the wake of the COVID-19 pandemic. While data on monetary receipts from international tourism in the countries of the region are not yet available, information on international tourist arrivals show that in the first quarter of 2022 the different subregions saw a much larger number of tourists arriving than in the year-earlier period. In the case of South America, the increase is 278%, in Central America it is 183%, and in the Caribbean 113% (UNWTO, 2022).

Nonetheless, despite this remarkable recovery in the number of tourists entering the region, arrivals are still well below the levels recorded in 2019, before the pandemic; so there is still plenty of room for further improvement in this account.[14]

[13] Countries that are net mineral exporters will require energy at a higher cost for their production, as will exporters of agribusiness products, which are impacted by the higher cost of both energy and fertilizers.

[14] In South America, tourist arrivals in the first quarter of 2022 were 70% lower than in the first quarter of 2019, the year prior to the start of the pandemic. In Central America arrivals were 34% lower and in the Caribbean 26% lower.

5. The income account deficit is set to widen in 2022, owing to higher interest payments on the external debt and greater profit repatriation by foreign firms

Although the income account balance relative to GDP is forecast to remain constant at 3.5% in 2022, will be 9% larger in current dollars.[15]

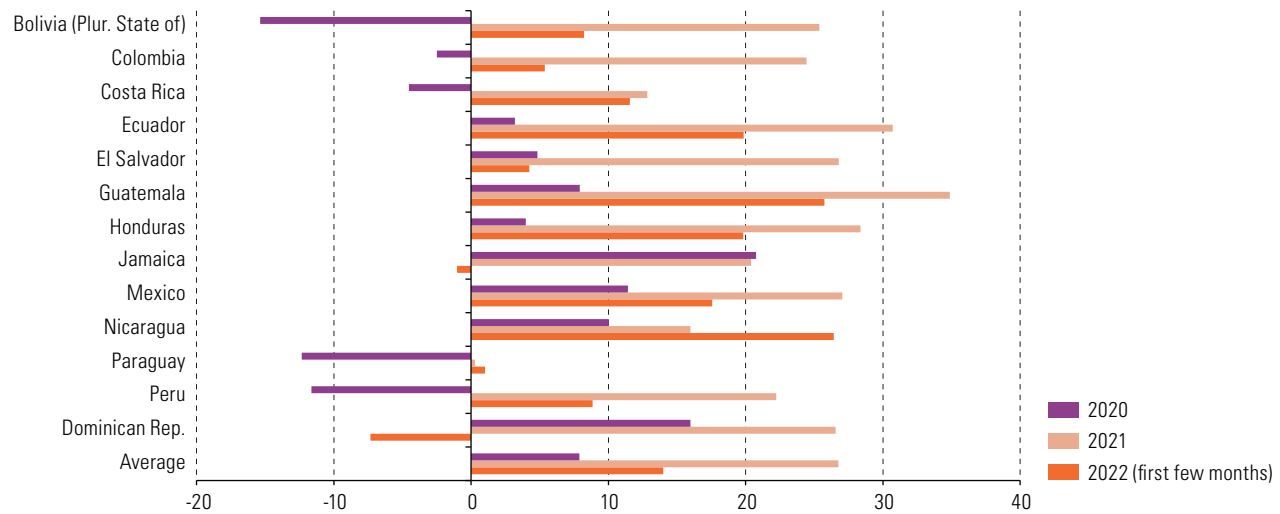
This is due mainly to the conjunction of two factors. The first is the increase in the prices of the region's export commodities, which generates higher rents for foreign firms established in the region, especially for those that export such products. These firms, as usual, then repatriate larger profits to their parent companies abroad. The second factor is an increase in interest paid on the foreign debt, not only because of the higher debt balance —following the increase in public expenditure to finance the measures adopted in response to the pandemic in 2020 and 2021— but also due to the effect of rising interest rates caused by the tighter monetary policy being applied by the main central banks.

6. The surplus on the transfers account will increase further in 2022, mainly thanks to the continued growth of remittances to the region

Latin America's transfers account surplus is set to reach 2.7% of GDP in 2022 (up from the previous year's 2.6%), owing to the continued increase in migrant remittances to the region, which are the main item in this account.

Following the largest increase in remittances of the previous ten years (+27% in 2021), these flows are expected to continue to grow in 2022, albeit at a more moderate pace. In fact, in the first few months of the year, the growth rate of remittances has been below the 2021 rate for all the countries analysed, except for Nicaragua and Paraguay (see figure I.19).

Figure I.19
Latin America and the Caribbean (selected countries): rate of variation in emigrant remittance inflows, 2020–2022[a]
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official data.

[a] Figures for 2022 refer to the first few months of the year, covering a period that varies from country to country: January–May for Guatemala; January–April for Colombia, the Dominican Republic, El Salvador, Honduras, Jamaica, Mexico and Paraguay; and January–March for Costa Rica, Ecuador, Nicaragua, Peru and the Plurinational State of Bolivia.

[15] The income balance is expected to be unchanged relative to GDP in 2022, because, in current-dollar terms, both GDP and the income account deficit are forecast to grow by a similar amount.

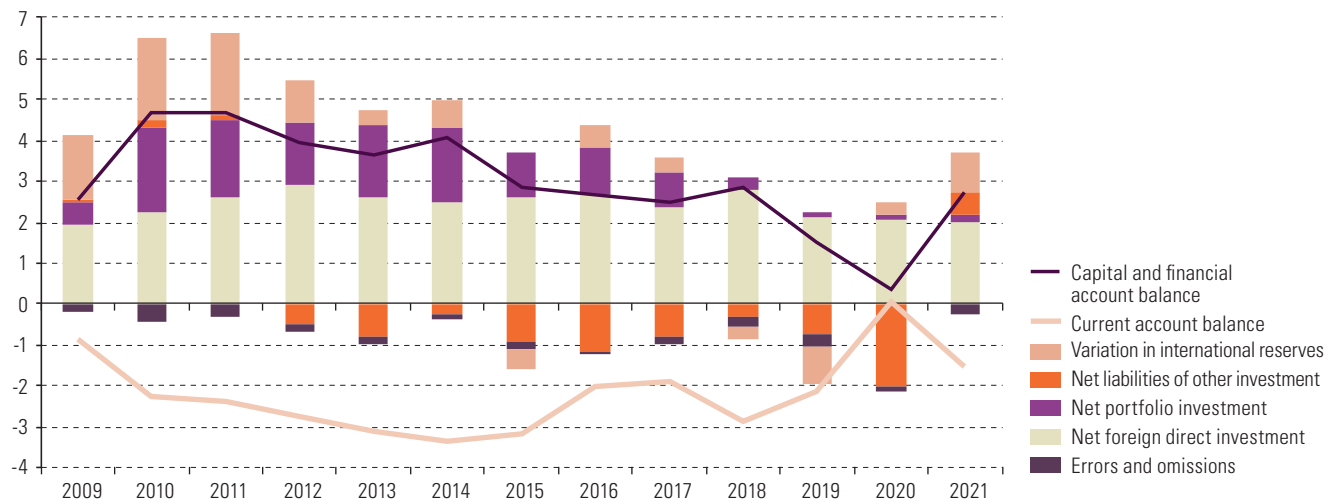
In the first few months of 2022, remittances have increased by 14%, and the World Bank is projecting growth of around 9% for the full year.

Subregional differences still persist, however. While remittances continue to grow at double-digit rates in most Central American countries and Mexico, flows to South America are increasing more slowly.

7. Financial flows returned to the region in 2021, making it possible to finance the current account deficit and accumulate international reserves; but in 2022 there are already signs that capital inflows are faltering

The balance of payments financial account posted a surplus of 2.8% of GDP in 2021 (see figure I.20). In contrast to the situation in 2020 when the pace of flows slackened (a reduction in net direct investment and larger net outflows of portfolio capital and other investments), in 2021 there was an increase in capital movements and positive net flows were recorded in all components of that account. Net direct investment totalled US$ 97 billion (2% of GDP), thanks to inflows of US$ 137 billion and outflows of investment abroad of US$ 40 billion. Portfolio investment recorded a small surplus of US$ 8.7 billion, equivalent to 0.2% of GDP, mainly owing to debt issuance by residents, governments and firms to finance measures to deal with the effects of the pandemic. Lastly, the "Other investment" item, which encompasses flows other than direct and portfolio investment (trade credits, allocations of special drawing rights (SDR) and others), recorded a surplus of US$ 28 billion (0.6% of GDP), explained by the SDR allocation made by the International Monetary Fund (IMF) in August 2021.[16]

Figure I.20
Latin America (17 countries): capital and financial account of the balance of payments, by component, 2009–2021
(Percentages of GDP)



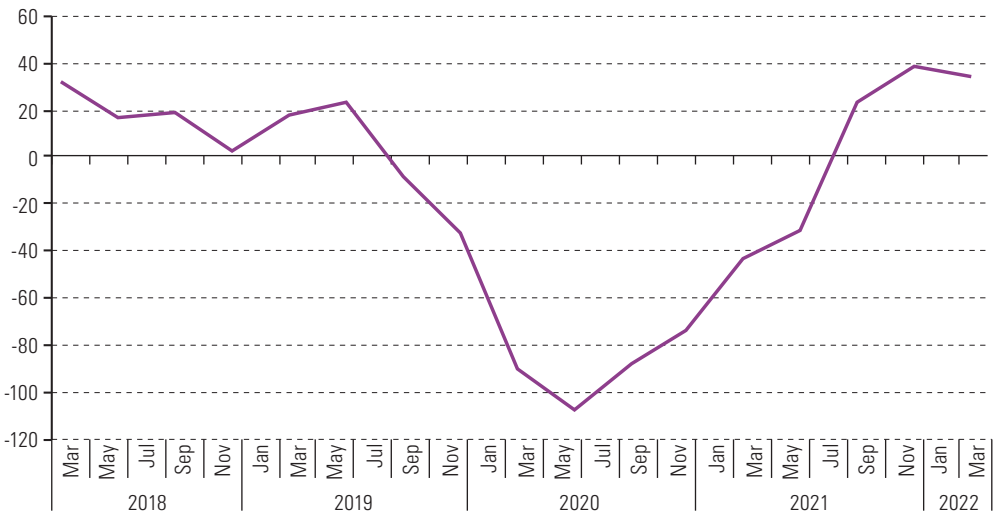
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official data.

[16] The SDR is an international reserve asset created in 1969 by the IMF to supplement the official reserves of its member countries (IMF, 2021). Its valuation is based on a basket of currencies involving the dollar, euro, renminbi, yen and pound sterling. Since its creation, the IMF has allocated SDR 660.7 billion, equivalent to approximately US$ 943 billion. This includes the allocation approved in August 2021 of about SDR 456 billion, the largest in history, which was intended to meet long-term, global reserve requirements and help member countries cope with the impact of the COVID-19 pandemic (see IMF, 2021).

Thus, net capital inflows into the region, which generated a financial account surplus, more than offset the current account deficit of 1.5% of GDP. As a result, the region added US$ 49 billion to its international reserves —an increase equivalent to 1% of GDP.

As of the third quarter of 2021, the region became a net recipient of financial flows (excluding net direct investment) for the first time in two years. However, while data available as of the first quarter of 2022 show that the region remains a net recipient, the cumulative annual total for four quarters shows a fall of 13% from the preceding four quarters (see figure I.21). This is explained by the tightening of global financial conditions, owing mainly to the outbreak of the war in Ukraine, which has reduced alternatives for access to external financing for emerging economies, including Latin American and Caribbean countries.

Figure I.21
Latin America (17 countries): net capital flows, excluding direct investment, March 2018–March 2022
(Cumulative four-quarter figures in billions of dollars)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official data.
Note: The following countries are included in the Latin American total: Argentina, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, the Plurinational State of Bolivia and Uruguay.

8. Having remained stable in 2021, debt issuance by the region in international markets was down in the first few months of 2022, although green and social bond issues continue to gain ground

Debt issuance on international markets totalled US$ 148.699 billion in 2021, 2% up on the 2020 figure (see table I.4). The corporate and sovereign sectors are the main drivers of debt issuance, accounting for 80% of the total issued. The 2021 result is explained mainly by a 65% increase in corporate debt, which totalled US$ 61.605 billion, after falling sharply in 2020. Thanks to this expansion, corporate issues grew from 25% of the total in 2020 to 41% in 2021.

Table I.4
Latin America: debt issues on international markets, by sector, 2021 and January–April 2022
(Millions of dollars and percentages)

	Private banks	Private non-banks	Quasi-sovereign enterprises	National governments (sovereign issues)	Supranational entities	Total
Total 2021	8 619	61 605	14 966	57 968	5 541	**148 699**
Year-on-year growth *(percentages)*	-31	65	-41	-11	12	**2**
Share of total *(percentages)*	6	41	10	39	4	**100**
January to April 2022	917	12 515	2 920	20 129	1 466	**37 947**
Year-on-year growth *(percentages)*	-73	-51	-12	-33	-51	**-42**
Share of total *(percentages)*	2	33	8	53	4	**100**

Source: Economic Commission for Latin America and the Caribbean (ECLAC).

In contrast, sovereign debt issues declined by 11% in 2021 to US$ 57.968 billion, while retaining a significant 39% share of the total. As international financial conditions remained stable, with sovereign risk levels not rising significantly, the reduction in sovereign debt issuance largely reflects the fact that 2020 sets a high base for comparison, since it was the first year of the pandemic, and many countries to sought financing for their assistance programs (ECLAC, 2021). Moreover, 85% of sovereign issues were made by countries with investment grade ratings from the main credit agencies.[17] Lastly, 35% of the total amount of government debt issued in 2021 was used to finance green or social projects, a larger share than in 2020 (12%) or in 2019 (6%).

Quasi-sovereign issues, which accounted for 10% of the total, fell by 41% in 2021, to US$ 14.966 billion. Bank issuance, accounting for 6% of the total, dropped by 31%, while supranational issuance expanded by 12% to US$ 5.541 billion, representing 4% of the total.

In terms of countries, 64% of total debt issuance in the region in 2021 came from entities (government or corporations) in Brazil, Chile and Mexico —each of these countries accounting for about 21% of the regional total. However, the composition differs: whereas in Brazil and Mexico private companies represented the largest share, in Chile the government was the largest issuer. In contrast, Peru (10% of the total, mainly sovereign issues) and Colombia (9%, also mostly sovereign debt) account for relatively smaller amounts.

As was the case in earlier years, corporate issues come mainly from firms in Brazil and Mexico, which between them account for almost 70% of the total in this sector in 2021. The largest operations include the following: a bond issue by the Mexican firm América Móvil, for US$ 2.67 billion; two issues by the Brazilian firm JBS, for US$ 2 billion and US$ 1.5 billion; one by MC Brazil Downstream Trading, for US$ 1.8 billion; two by Cementos Mexicanos (CEMEX), for US$ 1.750 billion and US$ 1 billion; issues by Braskem, in Mexico, and ISA Interchile, each for US$ 1.2 billion and by the Argentine firm MercadoLibre, for US$ 1.1 billion. There was also a local currency bond issue by the Brazilian mining company Vale, for 8.49 billion reais.

In the first four months of 2022 debt issuance weas down sharply relatively to a year-earlier. The total amount issued declined by 42% to US$ 37.947 billion, with all sectors, without exception, recording double-digit rate reductions (see table I.4). These reductions are explained mainly by the high base of comparison in 2021, since they still do not capture the effect of the greater uncertainty and financial volatility that has prevailed since March 2022. In fact, an analysis of sovereign issues in this period still reveals placements at favourable rates attracting strong investor demand (see table I.5).

[17] Investment grade corresponds to the rating applied by the credit agencies Moody's (rating above Baa3), Standard & Poor's and Fitch (in both cases, rating BBB- or above). Countries in the region in this category are Chile, Colombia (Moody's only), Mexico, Panama, Peru, Uruguay and Trinidad and Tobago (Standard & Poor's only).

Table I.5
Latin America: sovereign debt issuance, January 4–March 2, 2022
(Millions of dollars, percentages and number of times)

Date	Country	Amount *(millions of dollars)*[a]	Interest rate *(percentages)*	Oversubscription *(by factor)*[b]	Use of proceeds
4 January 2022	Mexico[c]	5 800	3.95	2.5	Liability management and coverage of financing needs
11 January 2022	Panama[c]	2 500	4.02	-	Liability management and coverage of financing needs
20 January 2022	Paraguay	501	3.85	4	Liability management and coverage of financing needs
27 January 2022	Chile[c]	4 000	3.34	4.9	Green and social projects
8 February 2022	Mexico	915	2.38	2.1	Liability management
16 February 2022	Dominican Republic[c]	3 564	5.75	2.4	Liability management and coverage of financing needs
24 February 2022	Bolivia (Plurinational State of)	850	7.50	-	Liability management
2 March 2022	Chile	2 000	4.34	4.1	Sustainability-linked sovereign bond

Source: Economic Commission for Latin America and the Caribbean (ECLAC).
[a] All debt issues were in dollars, except for Mexico's on 8 February 2022, which was for an original amount of € 800 million (equivalent to US$ 915 million at the transaction date).
[b] Oversubscription is measured as the number of times the amount demanded exceeds the amount offered in the issue.
[c] Issued in several tranches.

Seventy percent of the proceeds of sovereign debt issues in the first few months of 2022 have been used for liability management and to cover national budget financing needs. The remaining 30% corresponds to Chile, which issued the world's first sustainability-linked bonds (SLBs),18 along with other securities to finance green and social projects.

Since 2017 there have been 117 green, social, sustainable and sustainability-linked (GSSS) bond issues in the region totalling US$ 77 billion (see table I.3). By sector, 47% of bonds of this type are issued by national governments, followed by private non-bank firms (38%). By country, the largest issuers are Brazil and Chile, which jointly account for 70% of total issues of this type.

Table I.6
Latin America: green, social and sustainability-linked bond issuance, by sector and country, total issued between 2017 and April 2022
(Millions of dollars)

	Private banks	Private non-banks	Quasi-sovereign enterprises	National governments (sovereign issues)	Supranational entities	Total
Argentina		766	100			866
Brazil	2 000	14 539	1 500			18 039
Chile	317	5 044		30 923		36 284
Costa Rica			300			300
Ecuador				327		327
Guatemala		1 800		500		2 300
Mexico		5 490	2 250	2 371		10 112
Panama		263				263
Paraguay	300					300
Peru		980	600	2 157		3 737
Dominican Republic		300				300
Uruguay		350				350
Supranational entities					4 016	4 016
Total	2 617	29 531	4 750	36 279	4 016	77 193

Source: Economic Commission for Latin America and the Caribbean (ECLAC).

18 Unlike green and other similar bonds, these bonds are not intended to finance a specific project, but are associated with sustainability-related goals. If the goal is not achieved, as measured by a series of key performance indicators defined by the issuer, the bond's interest rate is raised.

Cross-referencing the information by country and sector shows that the Government of Chile is responsible for 40% of GSSS bond issues since 2017, for a total of nearly US$ 31 billion; while 19% of the total corresponds to private non-bank firms in Brazil (see table I.3). The remainder is accounted for by other private firms (19% of the total); sovereign issues by Ecuador, Guatemala, Mexico and Peru (7%); and issues by quasi-sovereign enterprises, supranational entities (Development Bank of Latin America (CAF) and Central American Bank for Economic Integration (CABEI)), and private banks.

9. The region's sovereign risk remained stable in 2021, but global turbulence has pushed the indicator up in 2022 thus far

Sovereign risk in Latin America, as measured by the global emerging market bond index (EMBIG), stood at 438 basis points in late April 2022. This indicator, which measures the spread between the interest rate on a country's debt relative to the rate on United States government securities, which are considered safety benchmark, has trended up in the first four months of 2022, reflecting increased uncertainty globally (see table I.7).

Table I.7
Latin America: sovereign risk index as measured by the J.P. Morgan Emerging Market Bond Index (EMBIG), 2019–April 2022
(Basis points)

	2019	2020	March 2021	June 2021	September 2021	2021	31 March 2022	29 April 2022
Argentina	1 744	1 368	1 589	1 596	1 607	1 688	1 718	1 801
Bolivia (Plurinational State of)	218	461	501	481	472	412	509	487
Brazil	212	250	272	256	304	306	280	291
Chile	135	144	122	135	150	153	158	182
Colombia	161	206	216	247	301	353	338	375
Ecuador	826	1 062	1 201	776	835	869	810	816
Mexico	292	361	351	348	360	347	349	391
Panama	114	149	155	170	186	187	192	223
Paraguay	203	213	212	216	230	229	239	278
Peru	107	132	152	163	180	170	171	218
Uruguay	148	135	125	129	140	127	127	151
Venezuela (Bolivarian Republic of)	14 740	24 099	26 168	31 091	31 941	55 310	37 945	32 691
Latin America	**346**	**386**	**390**	**380**	**399**	**399**	**397**	**438**

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of J.P. Morgan.

There are significant differences between countries. The Bolivarian Republic of Venezuela has the highest EMBIG, which climbed to 55,000 basis points in late 2021 before dropping back to 32,000 in April 2022 (see table I.4). Argentina also has a high EMBIG, although at much lower levels —1,688 basis points in late 2021 and 1,801 in April 2022. Ecuador maintained similar levels to those of Argentina in 2020 and early 2021, but has managed to lower its EMBIG to around 850 basis points in recent quarters.

In contrast, Uruguay, Chile and Peru, in that order, are the countries with the lowest sovereign risk in the region, a status that they have maintained for the last three years, with EMBIG levels that remain below 200 basis points.

D. Domestic performance

1. Growth in 2021 has been followed by a slowdown in the first quarter of 2022

In the first quarter of 2022, Latin America's GDP began to adjust after the high growth rates of the preceding quarters, which had reflected recovery from the economic crisis caused by the COVID-19 pandemic. At the regional level, this recovery process ended in the fourth quarter of 2021, when, two years after the onset of the crisis, GDP regained its previous level (see figure I.22), with growth of 0.4% compared to the fourth quarter of 2019. The economic recovery of 2021 has thus run its course and growth rates appear to be returning to the slack, pre-crisis level of just 0.6% per year on average in the period 2014–2019.

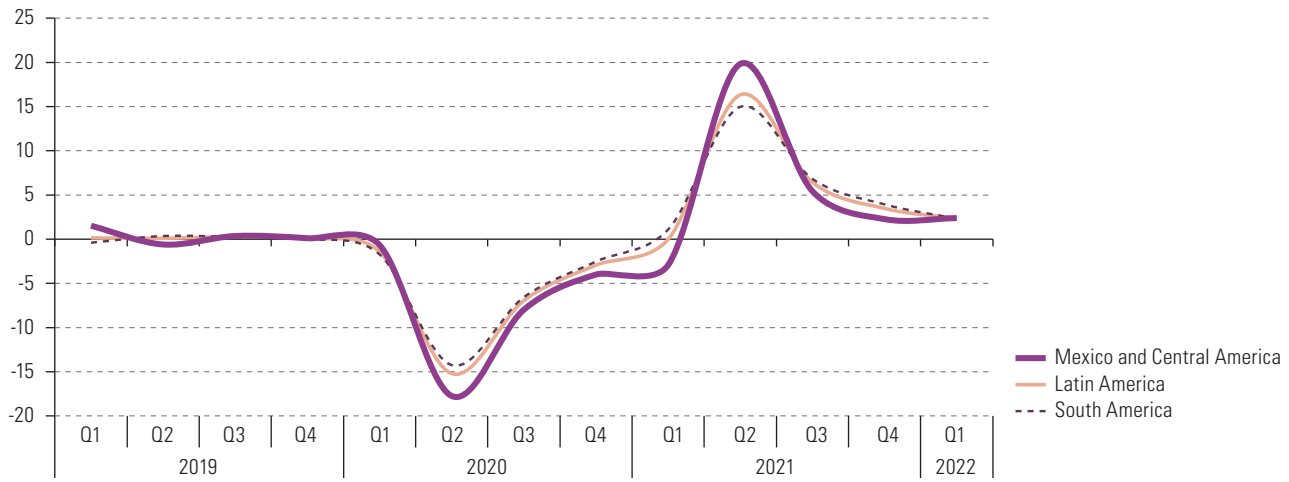
Figure I.22
Latin America: gross domestic product, 2019–2022
(Trillions of dollars at constant 2018 prices)

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

By subregion, both South America and Mexico and Central America show declines in growth rates in the first quarter of 2022 compared with the year-earlier quarter (see figure I.23). In 2021 both subregions posted a recovery commensurate with the impact of the crisis caused by the pandemic. They both suffered domestic shocks of similar magnitude, but differed in the intensity of the external shock. The external impact was greater in Mexico and Central America because their economies are linked most closely to the rate of growth in the United States, which was badly affected by the COVID-19 pandemic.

In the first quarter of 2022, the South American economies are expected to grow at an average rate of 2.3%, 1.2 percentage points down on the preceding quarter, while the Central American economies slowed by around three and a half percentage points, to a growth rate of 5.7%. In Central America and Mexico combined, the slowdown began in the last quarter of 2021 and carried over into the first quarter of 2022, with a year-on-year rate of 2.3%.

Figure I.23
Latin America: year-on-year GDP growth rate, 2019–first quarter of 2022
(Percentages, dollars at constant 2018 prices)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

The seasonally adjusted figures suggest that the slowdown intensified in the second quarter of 2022, given that after falling by half in the first quarter, the growth rate is expected to fall by another third in the second. Moreover, cumulative four-quarter growth shows a heavy contraction, from 6.8% to 3.5%, between the last two quarters (see figure I.24). This slower growth may be attributed both to the end of the post-pandemic recovery and to the effects of the war in Ukraine. As in previous crises, effects differ between subregions and between countries in the region. Rising commodity prices affected countries unevenly, with economic impact determined by the degree of each country's dependence on oil, gas and other commodities.

Figure I.24
Latin America: variation in seasonally adjusted GDP and in four-quarter GDP
(*Percentages*)

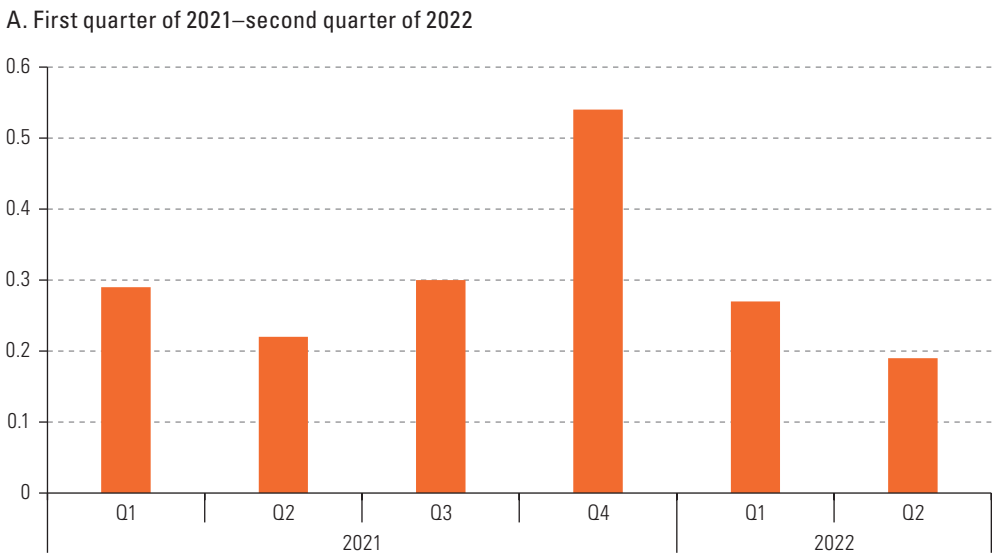
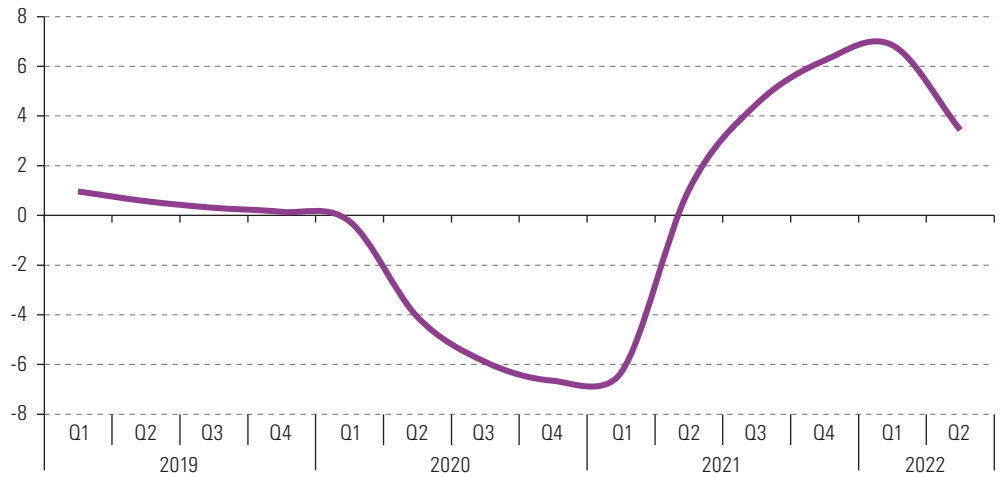


Figure I.24 (concluded)

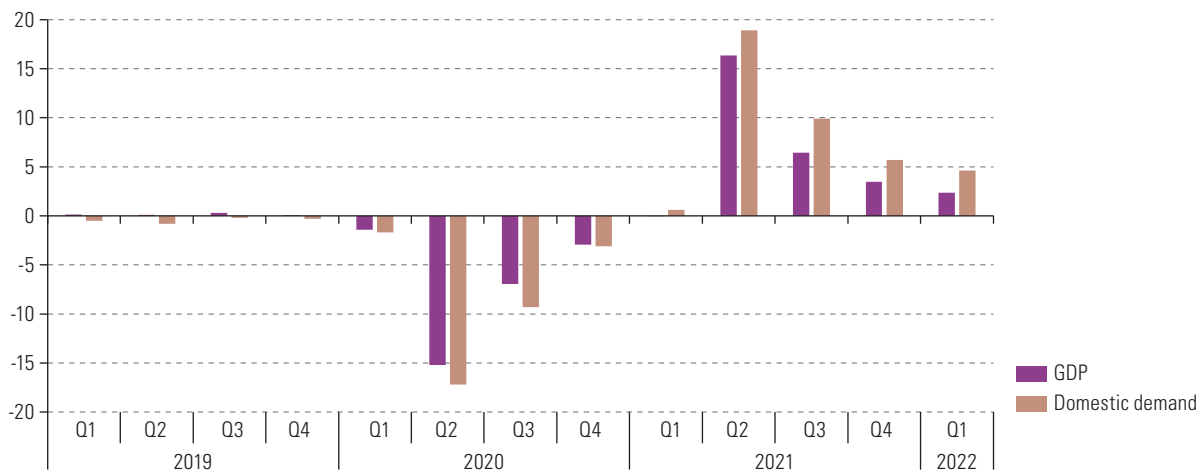
B. 2019–second quarter of 2022



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: The figures for the second quarter of 2022 are estimates.

In the first quarter of 2022, GDP was up by 2.3% compared to the prior-year period, while domestic demand increased by 4.6%, driven mainly by private consumption (see figure I.25). Annual growth in domestic demand has exceeded that of GDP since the first quarter of 2021, likely reflecting the upturn in both private consumption and investment. Conversely, net exports have made a negative contribution to GDP growth.

Figure I.25
Latin America: GDP and domestic demand growth rates, 2019–first quarter of 2022
(Percentages)

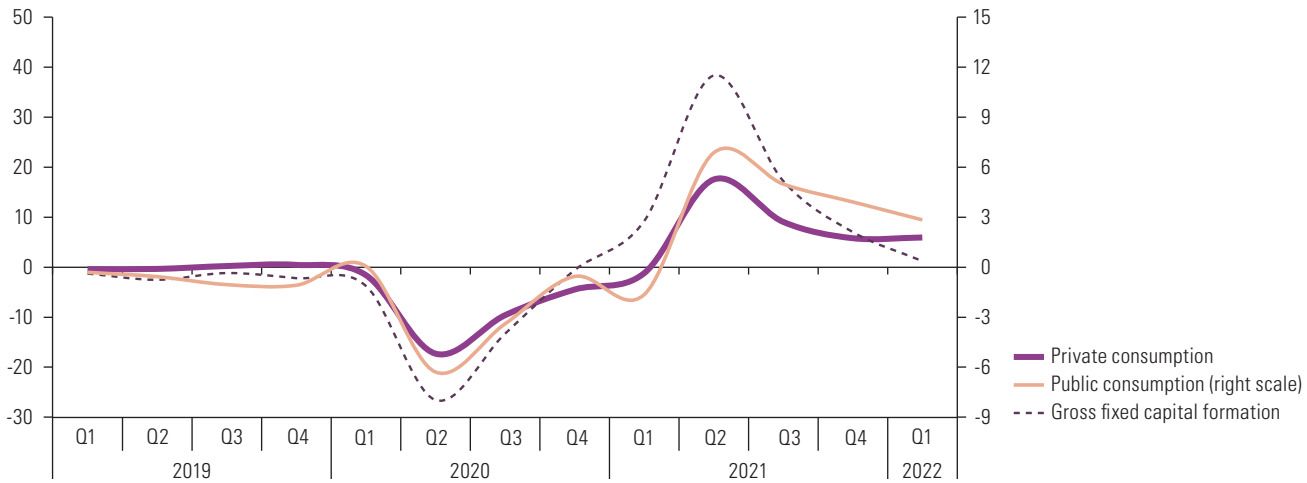


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

2. Gross fixed capital formation shows signs of slowing and remains far below pre-pandemic levels

In line with the end of the recovery, in the first quarter of 2022 most expenditure components underperformed previous quarters. For example, gross fixed capital formation declined sharply, registering an increase of only 1.2% year-on-year (see figure I.26). Public consumption has been affected similarly to the other spending components, only slightly up from the same period the previous year. However, it may gain new momentum in the coming quarters as a result of countercyclical policies aiming at increasing public spending rates and execution.

Figure I.26
Latin America: variation in private consumption, public consumption and gross fixed capital formation, 2019–first quarter of 2022
(*Percentages*)



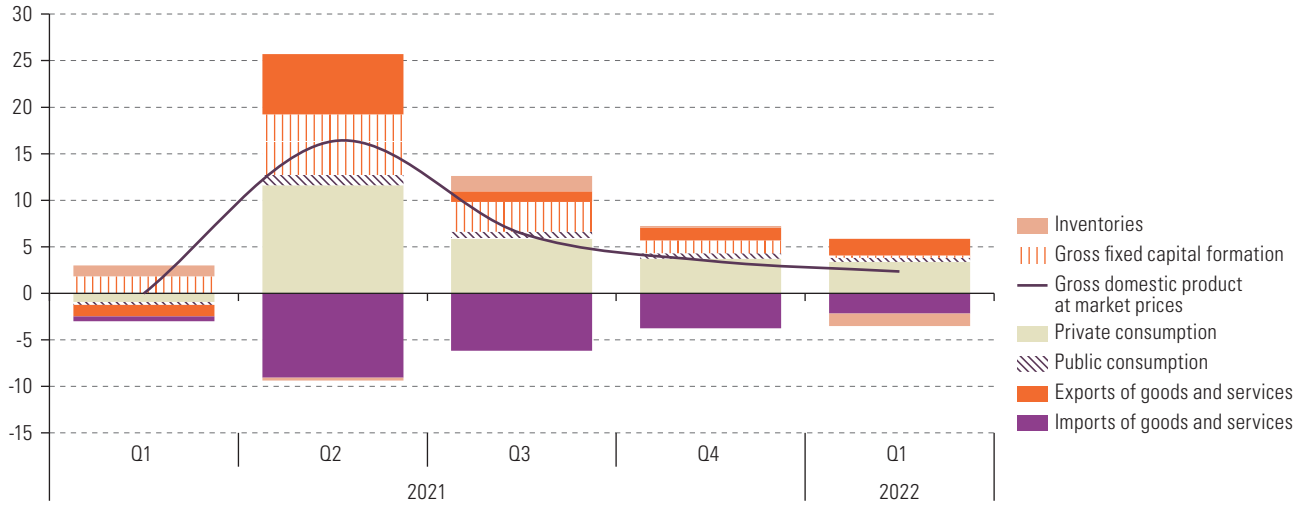
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

This adjustment in activity shows a marked difference between private consumption and investment: private consumption slowed until the fourth quarter of 2021, then held a steady growth rate thereafter and continues to account for a high proportion of total demand (see figure I.27). Contrary to expectations, first-quarter data indicate that the slowdown in private consumption did not continue, which likely reflects a return to pre-crisis levels of employment. The fact that the rise in private consumption remains moderate, however, appears to reflect the easing of unmet demand following the reopening of all activities, the impact of high food prices on household spending, weak real wage gains, higher borrowing costs and falling consumer confidence.

Unlike consumption, investment has lost momentum. In the first quarter of the year, gross fixed capital formation virtually stagnated, gaining just 1.2% year-on-year. Both the construction and machinery and equipment components were affected: the first by rising credit costs and stagnant demand, and the second by a slowdown in capital goods imports, as costs were driven up by local currency depreciation.

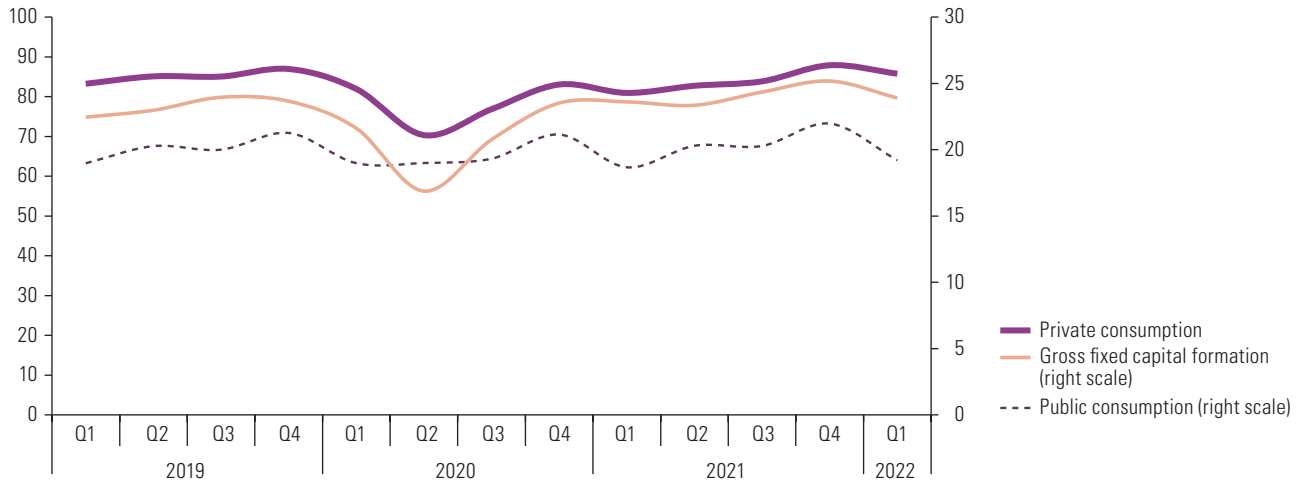
Despite robust growth in investment in 2021, which enabled some recovery, it did not reach pre-pandemic levels (see figure I.28), owing to the lag in the construction sector, where activity levels have risen quarterly but have not yet passed pre-pandemic levels.

Figure I.27
Latin America: contribution of expenditure components to GDP, 2021 and first quarter of 2022
(*Percentages*)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

Figure I.28
Latin America: variation in private consumption, public consumption and gross fixed capital formation, 2019–2022
(Billions of dollars at constant 2018 prices)

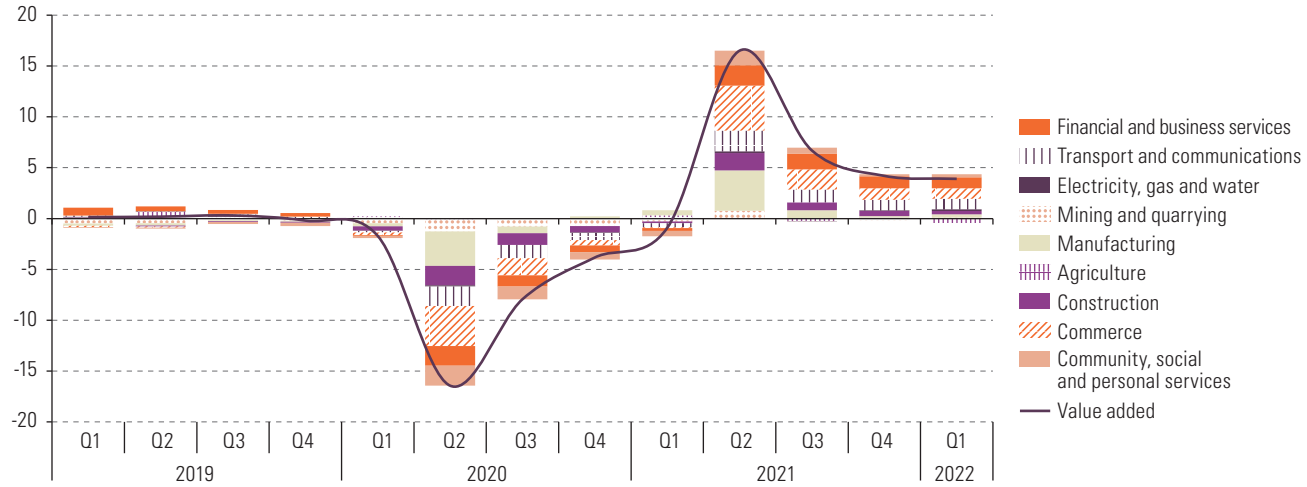


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

3. Services sectors drive slight growth in economic activity in the first quarter of 2022

The expansion in economic activity in the first quarter of 2022 was led by the services sectors: transport and communications, commerce, hotels and restaurants, and financial and business services. To a lesser extent, the manufacturing and construction sectors contributed to maintaining momentum. When economies re-opened in 2021, the sectors worst affected by the pandemic displayed a strong recovery, and all saw a broad-based rise in activity (see figure I.29).

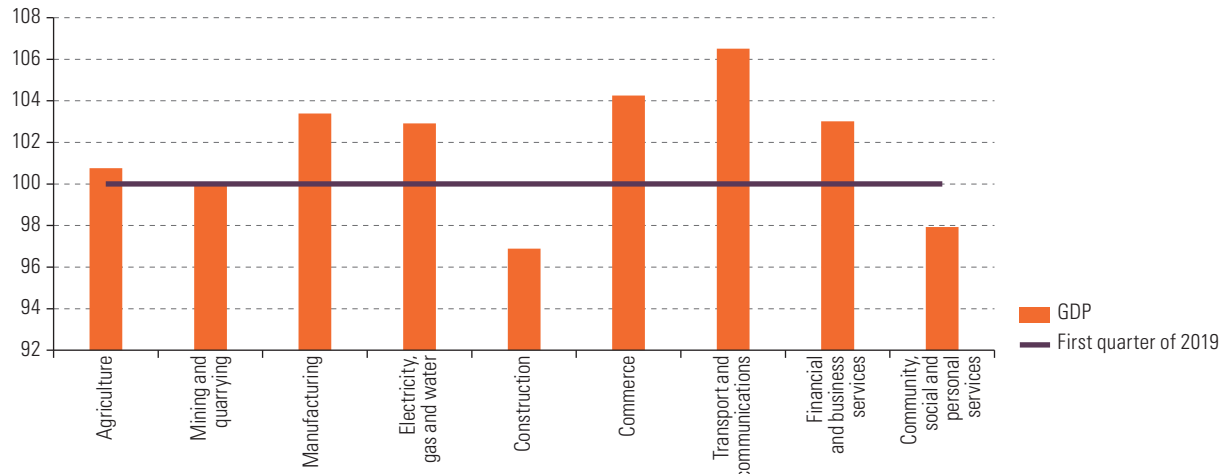
Figure I.29
Latin America: growth in value added and contribution by economic sector to growth in value added, 2019–first quarter of 2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

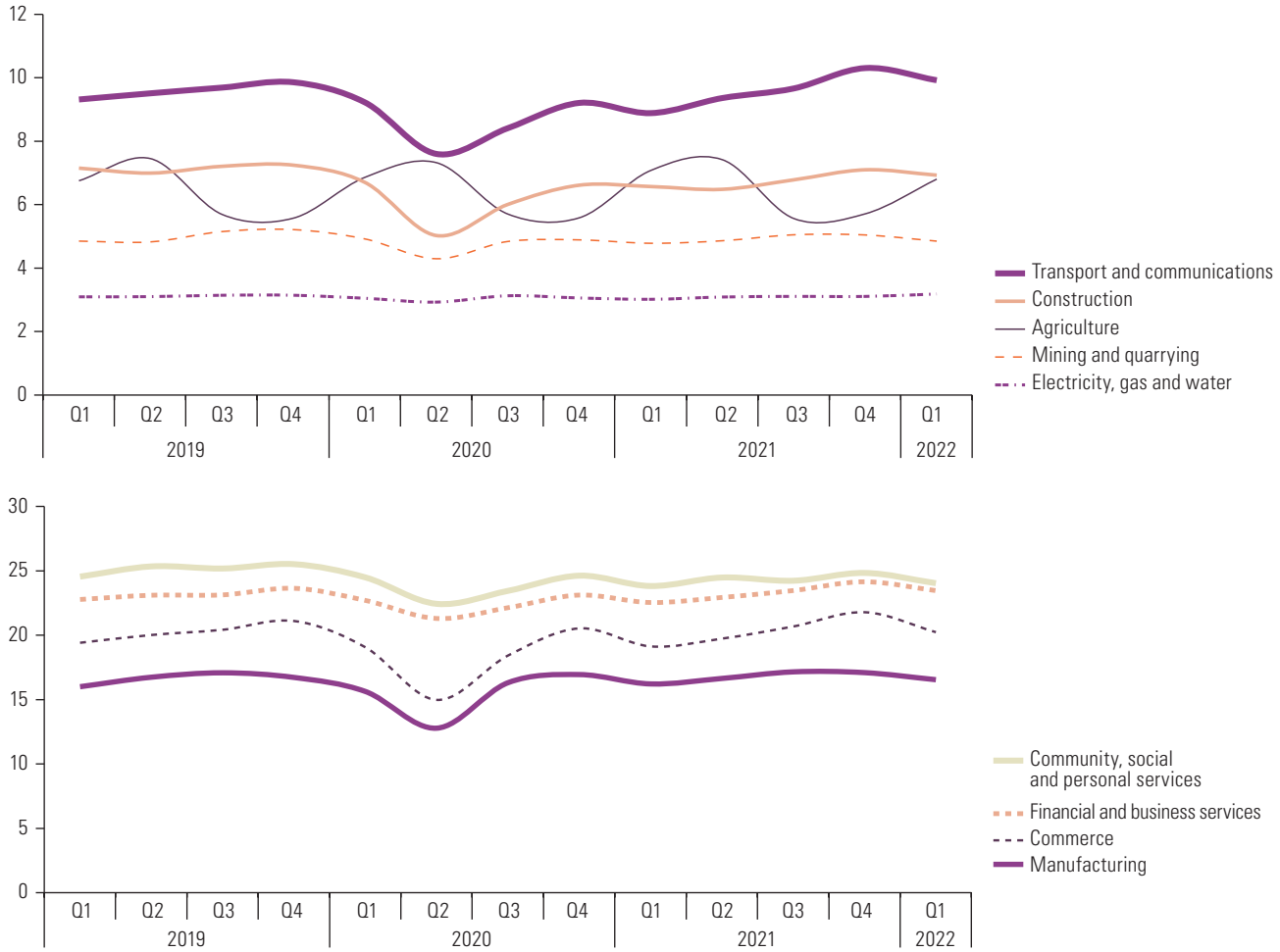
Activity increased across the board in 2021, largely reflecting the low basis for comparison in 2020 amid the pandemic. Increased mobility and the easing of restrictions boosted a wide range of activities. The rise in economic activity was uneven across sectors, but most reached their pre-crisis production levels by the first quarter of 2022, with the exception of two: construction and community, social and personal services (see figures I.30 and I.31). The most dynamic sectors were transport and communications, commerce, financial and business services, and manufacturing, growth in the latter industry having begun to slow down in the first quarter of 2022 in response to lower domestic demand.

Figure I.30
Latin America: value added by sector of economic activity, 2019–2022
(Index: first quarter of 2019=100)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

Figure I.31
Latin America: value added by sector of economic activity, 2019–first quarter of 2022
(Billions of dollars at constant 2018 prices)

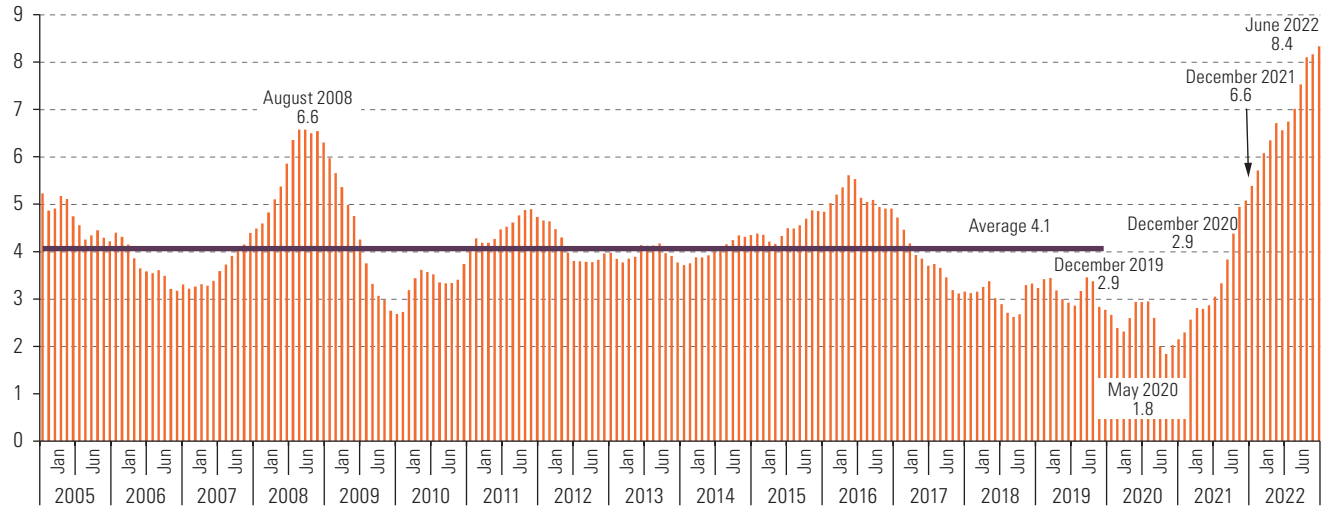


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

4. Burgeoning global inflation has accelerated the rise in prices in the economies of Latin America and the Caribbean

Inflation in the economies of Latin America and the Caribbean has been trending upward since May 2020, when it stood at 1.8%. Inflation approached pre-pandemic levels at the end of 2020 and in 2021 reached levels similar to those recorded during the global financial crisis. As of June 2022, regional inflation stood at 8.4%, up 1.8 percentage points from the rate seen during that crisis and more than twice the average for the period between January 2005 and December 2019 (see figure I.32).

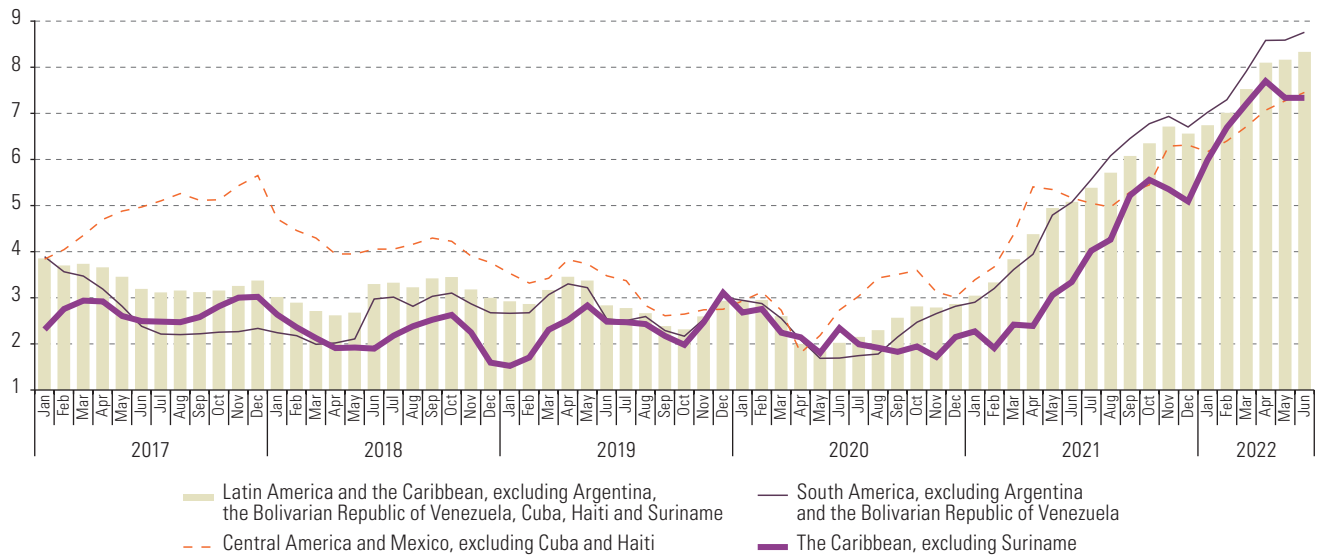
Figure I.32
Latin America and the Caribbean: 12-month variation in the consumer price index (CPI), January 2005–June 2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: Does not include averages from economies with chronic inflation (Argentina, Bolivarian Republic of Venezuela, Cuba, Haiti and Suriname).

Although inflationary pressure has been generalized in all the subregions, as of June 2022, the economies of South America show the highest average inflation rate, at 8.7%, followed by Central America and Mexico with a rate of 7.7%, while the economies of the English-speaking Caribbean have the lowest average inflation rate, at 7.4%. It is notable that after inflation surged in the economies of Central America and Mexico between January and May 2021, it has since slowed compared to other subregions.

Figure I.33
Latin America and the Caribbean: 12-month rates of variation of the consumer price index, by subregion, January 2017–June 2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: Does not include averages for economies with chronic inflation (Argentina, the Bolivarian Republic of Venezuela, Cuba, Haiti and Suriname).

Table I.8 shows that inflation has affected the majority of countries in the region, with 29 posting increases by December 2021. In 19 of those countries, inflation was higher in 2021 than the average between 2005 and 2019. In 2021, inflation fell in only four countries: Antigua and Barbuda, Bolivarian Republic of Venezuela, Guatemala and Uruguay. It also increased in the first half of 2022, excepting only three economies, the Bolivarian Republic of Venezuela, Cuba and Saint Kitts and Nevis. In total, in that first half-year, 28 countries reported an inflation rate that exceeded the averages between January 2005 and December 2019. As of June 2022, the year-on-year rate was over 10% in 13 countries, and in 20 countries, it had doubled from the year-earlier rate.

Table I.8
Latin America and the Caribbean: rates of variation of the consumer price index, December 2020–June 2022
(Percentages)

	December 2020	December 2021	June 2021	June 2022
Latin America and the Caribbean	**2.9**	**6.6**	**5.1**	**8.4**
South America	**2.8**	**6.7**	**5.1**	**8.7**
Bolivia (Plurinational State of)	0.7	0.9	0.2	1.8
Brazil	4.5	10.0	8.3	11.9
Chile	3.0	7.2	3.8	12.5
Colombia	1.6	5.6	3.6	9.7
Ecuador	-0.9	1.9	-0.7	4.2
Paraguay	2.2	6.8	4.5	11.5
Peru	2.0	6.4	3.3	8.8
Uruguay	9.4	8.0	7.3	9.3
Central America and Mexico	**3.0**	**6.3**	**5.2**	**7.7**
Costa Rica	0.9	3.3	1.9	10.1
Dominican Republic	5.6	8.5	9.3	9.5
El Salvador	-0.1	6.1	2.6	7.8
Guatemala	4.8	3.1	3.9	7.6
Honduras	4.0	5.3	4.7	10.2
Mexico	3.2	7.4	5.9	8.0
Nicaragua	2.6	7.3	4.1	10.2
Panama	-1.6	2.6	1.6	5.2
The Caribbean	**2.1**	**5.1**	**3.3**	**7.4**
Antigua and Barbuda	2.8	1.2	0.6	10.5
Bahamas	1.2	4.1	2.7	6.2
Barbados	1.3	5.0	2.9	9.3[a]
Belize	0.4	4.9	3.0	6.6[a]
Dominica	-0.7	3.8	0.6	5.3[b]
Grenada	-0.8	1.9	1.5	2.9[b]
Guyana	0.9	5.7	6.5	4.7
Jamaica	4.5	7.3	4.4	10.9
Saint Kitts and Nevis	-1.2	1.9	1.4	1.2[b]
Saint Lucia	-1.0	3.4	1.9	5.2
Saint Vincent and the Grenadines	-0.4	4.1	2.9	6.2[b]
Trinidad and Tobago	0.8	3.5	1.8	4.9
Argentina	34.1	51.4	48.3	65.0
Cuba	18.5	77.3	74.8	28.9
Haiti	19.2	24.6	12.5	29.2
Suriname	60.7	60.7	54.0	55.1
Venezuela (Bolivarian Republic of)	2 959.8	686.4	2 507.9	157.2

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: Regional and subregional averages weighted by population size. Regional and subregional averages do not include data for economies with chronic inflation (Argentina, Bolivarian Republic of Venezuela, Cuba, Haiti and Suriname).
[a] Data as of May 2022.
[b] Data as of March 2022.

5. Although all components of the consumer price index have been affected by inflation, rates are highest for food and energy

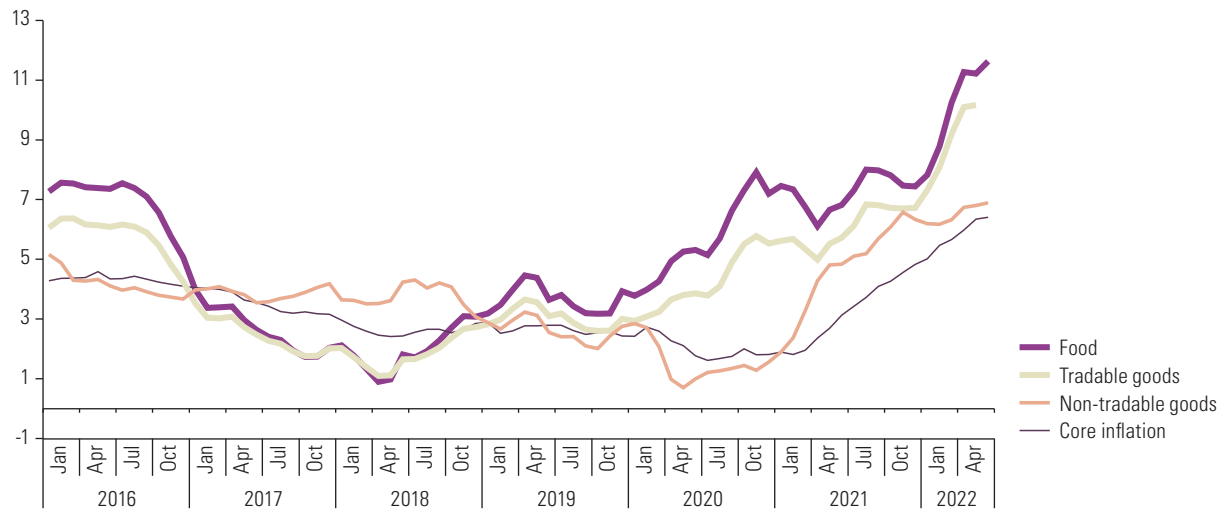
Higher inflation has been reflected in various components of the consumer price index (CPI), particularly in food and more broadly in tradable goods, including energy. Prices in those sectors have increased at rates not seen since 2008, during the global financial crisis.

In the case of food, the rising trend that had begun in September 2019 continued, even through the pandemic crisis (see figure I.34). Despite a drop in early 2021, inflation has continued to grow steadily since then. At the 2021 year-end, food inflation in the region sat at 7.4%, and by June 2022 it had reached 11.9%. At the subregional level, in 2021, the economies of Central America and Mexico posted the highest inflation, at 8.7%, while during the first half of 2022, the economies of South America had the highest rate, at 11.9%. At the country level, food inflation was on the rise in 24 countries in 2021, while during the first six months of 2022, 29 countries saw an uptick.

The core inflation rate, which excludes food and energy, has been trending upward since January 2021, and despite being the component with the slowest growth, it increased by more than 3 percentage points in 2021, from 1.8% in December 2020 to 4.8% in December 2021. At mid-year, core inflation sat at 7.1%. By subregion, core inflation in 2021 was highest in Central America and Mexico, at 6.1%, while in the first six months of 2022, the economies of South America reported the highest rate, at 7.2%. By this measure, inflation rose in 26 economies in both 2021 and 2022.

Since core inflation estimates exclude the direct impact of food and fuel prices, its recent increase shows that the steep rise in those prices has permeated other prices in the region's economies. This underscores the important role of food and fuel as inputs for other goods, which do make up part of the basket included in the overall consumer price index. This argument is particularly relevant in a context of slackening aggregate demand.

Figure I.34
Latin America and the Caribbean: 12-month variation in the components of the consumer price index, January 2016–April 2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: Regional and subregional averages weighted by population size. Regional and subregional averages do not include data from economies with chronic inflation (Argentina, Bolivarian Republic of Venezuela, Cuba, Haiti and Suriname).

Breaking down the consumer price index by goods and services shows that inflation has risen more for tradable goods than for services. This gap widened significantly during the pandemic, reflecting changing spending patterns in households in the region to the detriment of services (see figure I.34). By the 2021 year-end, goods inflation had reached 6.7%, while services inflation was 6.3%. By mid-year 2022, food inflation had hit 10.7% and services inflation had risen to 7.0%. In the subregions, Central America and Mexico experienced the highest goods inflation in 2021, at 7.0%, while during the first half of 2022, goods inflation was highest in the economies of South America, at 11.4%.

Regarding prices for services, the highest inflation was seen in the economies of South America in both 2021 and the first half of 2022, at 6.9% and 7.7%, respectively.

Demand stimulus policies adopted by tax authorities, central banks and supervisory authorities in the region led to a rebound in consumption in 2021. The pandemic also triggered changes in consumption patterns, with expenditures shifting towards goods and away from in-person services, in the light of mobility restrictions and physical distancing measures that remained in effect through much of 2021. The combined effect of those demand factors pushed up prices for goods on the back of inelastic supply. As pandemic control measures were loosened, prices for services caught up to those for goods between May and November 2021, although since March 2022, that dynamic has reversed again.

6. Rising inflation worldwide, including in the region, has been driven by the dynamics of supply and demand factors, whose relative significance has changed over time

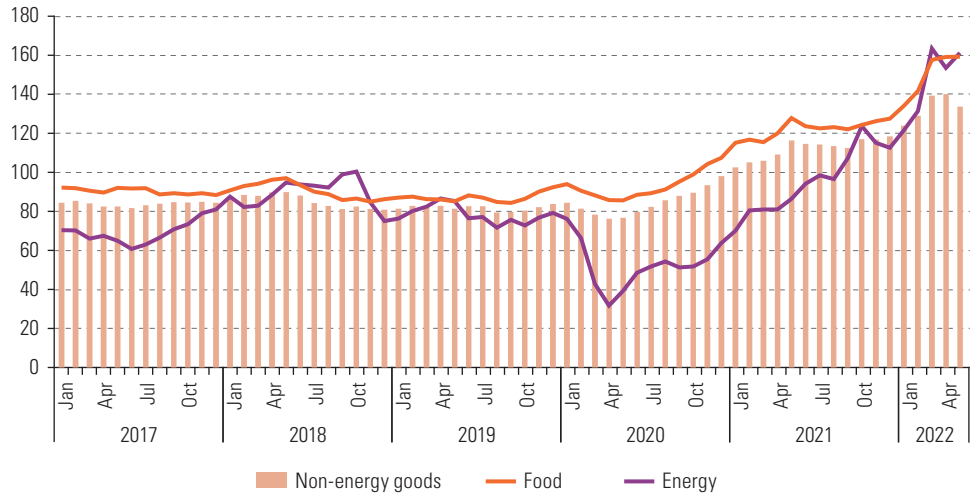
ECLAC (2022a, 2021a), Reifschneider and Wilcox (2022) and Gagnon (2022) argue that higher inflation in 2021 was driven by a recovery in consumption, supply disruptions and higher commodity prices, especially for energy and food. Persistent global supply chain problems meant that global supply, far from being able to adjust to the boost in demand, was depleted, giving additional impetus to global inflation, with knock-on effects in the region. Geopolitical factors also contributed to the intensification of financial volatility, and consequently global inflation.

Driven by the economic recovery, higher prices for international commodities, especially energy, also contributed to the uptick in global inflation in 2021. After the fall caused by the pandemic, the prices of energy, non-energy goods, and food in particular, increased significantly, with energy surging by 255% between April 2020 and December 2021, non-energy goods climbing by 55% and food rising by 49% (see figure I.35).

By mid-2021, although it had been accepted that inflation would rise in 2021 and during the first half of 2022, a slowdown was generally expected to follow, in particular during the second half of 2022, as the factors driving the rise in 2021 eased (ECLAC 2022 and Ha and others 2022).

In fact, December 2021 forecasts for 2022 predicted a slight drop in commodity prices of around 3.2%. Metals and minerals were expected to fall the most (by 8.4% compared to 2021 averages) (ECLAC 2022a and Ha and others 2022). Prices for energy and agricultural products were projected to remain relatively stable, with little change compared to 2021 averages (0.3% and -0.4%, respectively). The supply of oil, natural gas and coal was expected to recover and be able to meet the higher demand forecasted as transportation and production were normalized worldwide.

Figure I.35
Commodity price index: energy, non-energy goods and food, January 2017–May 2022
(Index: 2010=100)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Bank, "World Bank Commodities Price Data (The Pink Sheet)" [online] https://www.worldbank.org/en/research/commodity-markets.

Box I.1
The sychronization of inflationary pressures reflects the growing interrelationship between global and regional inflation

In 2022, to date, most countries in the region have seen inflation that was both synchronized and more persistent than expected. Although this has been the subject of greater analysis in developed countries, where it has been more noticeable in recent years, synchronous domestic price movement has increased, as has its effects on developing economies, including those in the region (Ha and others 2019; Tiwari and others 2021). These inflation co-movements suggest, in particular, the key role played by a variety of external conditions, which are a shared component in setting domestic prices, apart from the role of idiosyncratic factors.

In the current context of high uncertainty caused by escalating geopolitical tensions and the adverse effects of climate change, such as drought, several factors signalled in benchmark empirical studies[a] seem to be coalescing to cause more pressing global disruptions, including: (i) widespread inflation, in particular affecting the main trading partners of the countries of the region; (ii) lower growth forecasts, both globally and regionally; (iii) greater vulnerability to international price volatility, not only for energy but also for base metals, fertilizer and agricultural products, which could lead to extreme hardship and food insecurity; and (iv) high exposure to external supply shocks, driven by more open trade and finance and by more intricate and integrated production processes.

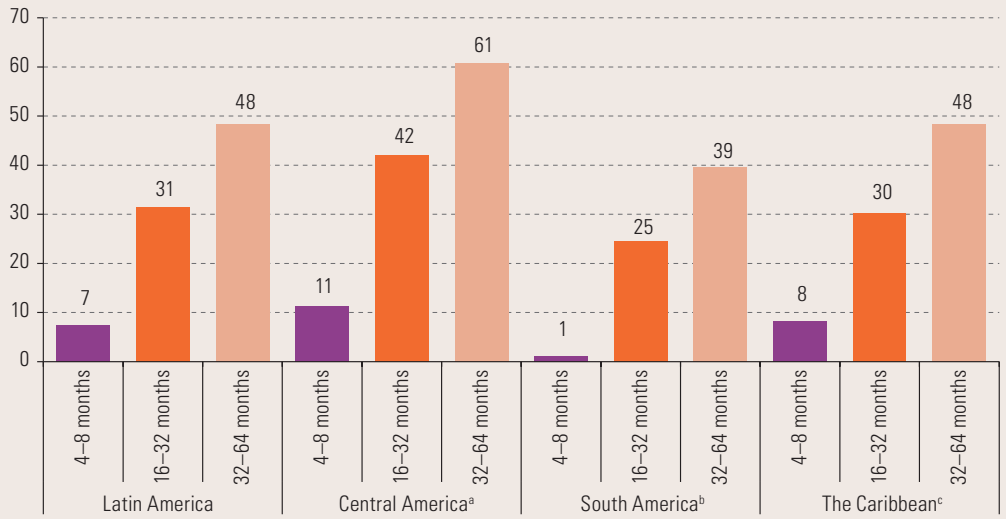
The figure shows the value of the correlation coefficients as an indicator of the degree of dependence between the inflation rates of selected countries in the region, in the short term (4–8 months), medium term (16–32 months) and longer term (32–64 months). The correlation coefficient is low over the short term, both for the region and its subregions. This seems to indicate that fluctuations correspond to factors that are largely idiosyncratic, including, for example, subsidies and specific decisions on regulating the prices of certain goods. Over the medium term, the value of the correlation coefficients trends upward, with the highest figures seen in Central America, at 42%, followed by the Caribbean at 30% and South America at 25%. Over the longer term, meaning a period longer than 5 years, this connection between inflation rates increases to 49% at the regional level, also increasing for each subregion, with a figure that is particularly high for Central America, at 61%.

Synchronous price movement in the region thus corresponds to the combined dynamics of changing global growth trends, bilateral trade relations, the degree of similarity between countries' macroeconomic policy decisions, in particular for monetary policy, the setting of inflation expectations based on common determinants, and food and energy price volatility (Szafranek 2021). In that regard, synchronous movement of domestic prices and raw material price volatility are both increasing, driven by increasing financialization and speculation, such that changes observed in international markets are not solely the result of the interplay between global supply and demand (Arezki and others 2014).

Box I.1 (concluded)

Figure

Latin America and the Caribbean (27 countries): interconnection between inflation rates by time period, 2000–2021
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: The breakdown by time period was done using wavelet analysis, which was applied at the country level based on data for monthly consumer price index variation over 12 months for the period 2000–2021. The figures shown in the graphic represent the medians of the correlation coefficients obtained at different frequencies.
[a] Central America includes Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua and Panama.
[b] South America includes Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, the Plurinational State of Bolivia and Uruguay.
[c] The Caribbean includes Antigua and Barbuda, Bahamas, Barbados, Dominica, the Dominican Republic, Grenada, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines and Trinidad and Tobago.

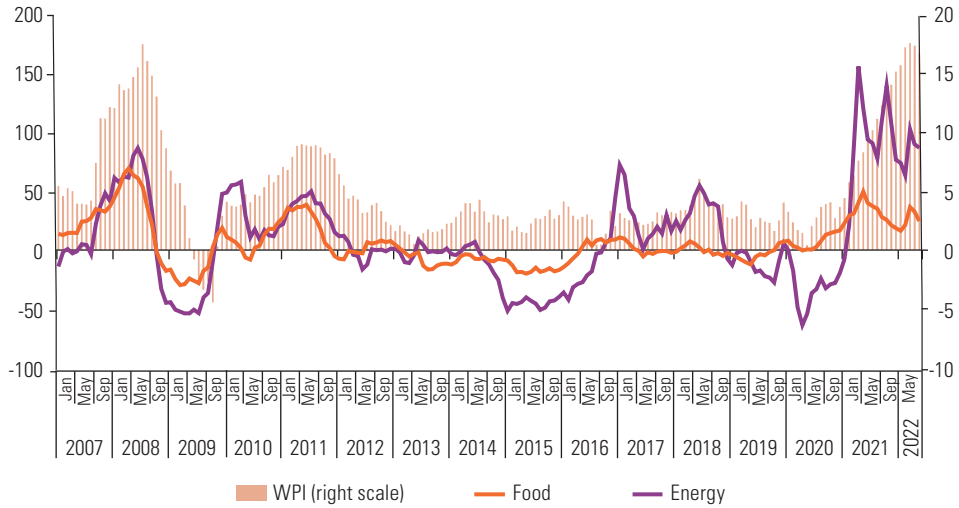
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures; J. Ha and others, "Understanding global inflation synchronization", *Inflation in Emerging and Developing Economies: Evolution, Drivers, and Policies*, J. Ha, M.A. Kose and F. Ohnsorge (eds.), World Bank Publications, 2019; A. K. Tiwari and others, "Inflation co-movement dynamics: a cross-country investigation using a continuous wavelet approach", *Journal of Risk and Financial Management*, vol. 14, No. 12, 2021; K. Szafranek, "Evidence on time-varying inflation synchronization", *Economic modelling*, vol. 94, 2021 and R. Arezki and others, "Understanding international commodity price fluctuations", *Journal of International Money and Finance*, vol. 42, 2014.
[a] M. Ciccarelli and B. Mojon, "Global inflation", *Review of Economics and Statistics*, vol. 92, No. 3, 2010; C. J. Neely and D. E. Rapach, "International comovements in inflation rates and country characteristics", *Journal of International Money and Finance*, vol. 30, No. 7, 2011; M. Föster and P. Tillmann, "Reconsidering the international comovement of inflation", *Open Economies Review*, vol. 25, No. 5, 2014.

The invasion of Ukraine triggered a change in inflation dynamics, driving up both observed rates and projections. The invasion produced another surge in raw materials prices: between December 2021 and May 2022, energy prices jumped by 43%, food prices climbed by 24% and prices for non-energy goods rose by 12%. More than half of the rise in food and energy prices occurred after the invasion; it also worsened global supply chain problems, which had not yet recovered from the pandemic. The need for some ships to change course to avoid the Black Sea, among other problems, exacerbated shipping disruptions and further increased shipping costs.

In addition, greater uncertainty in international financial markets has heightened exchange-rate volatility in the region, triggered increases in the prices of imported goods and accelerated inflation.

Figure I.36 shows the median value of wholesale price index variation for the 12 economies of the region that report this variable, as well as an index reflecting international energy and food prices. As of May 2022, wholesale price index inflation was slightly higher than the rate recorded during the global financial crisis, an increase of 17.1 percentage points compared to the May 2020 level (0.4%).

Figure I.36
Latin America and the Caribbean (12 countries):[a] 12-month rates of variation in the wholesale price index and in food and energy price indices, January 2007–May 2022



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of World Bank, "World Bank Commodities Price Data (The Pink Sheet)" [online] https://www.worldbank.org/en/research/commodity-markets.

[a] The countries included are Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, Nicaragua, Paraguay, Peru and Uruguay.

The figure also shows the effect of commodity price shocks on wholesale prices through costs, now as in the past. Higher wholesale price inflation has coincided with sharp increases in international energy and food prices; similarly, lower inflation is correlated with lower prices.

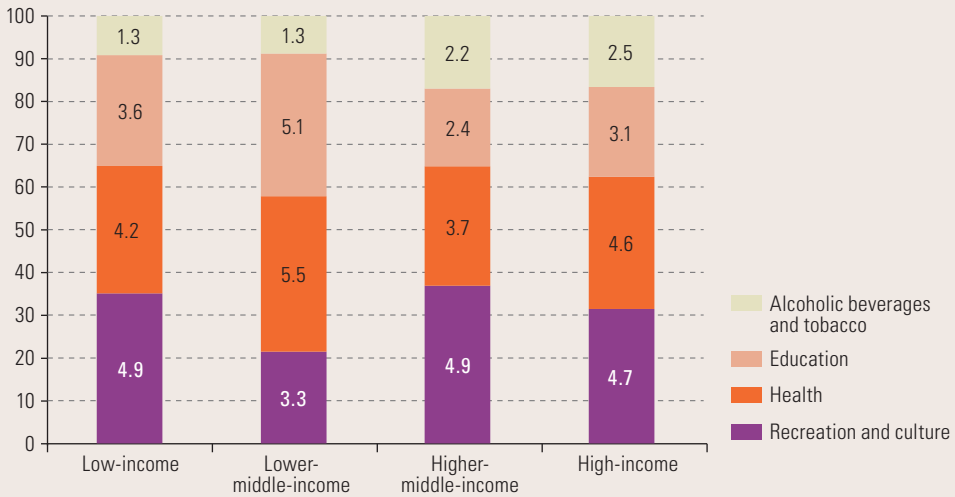
Box I.2
The economies of Latin America and the Caribbean are highly vulnerable to rising energy and food prices

As illustrated in figure 1, the pass-through of upward pressure on international commodity prices to domestic prices is strengthened, in particular, by the composition of the reference basket of goods and services of the countries of the region. In concrete terms, basic and essential items in the reference basket —food (24%), housing (19%) and transportation (14%)— make up, on average, 57% of its total.

Figure 1
Latin America and the Caribbean (30 countries), weighting by consumption category, by per capita income level
(Percentages)

Box I.2 (concluded)

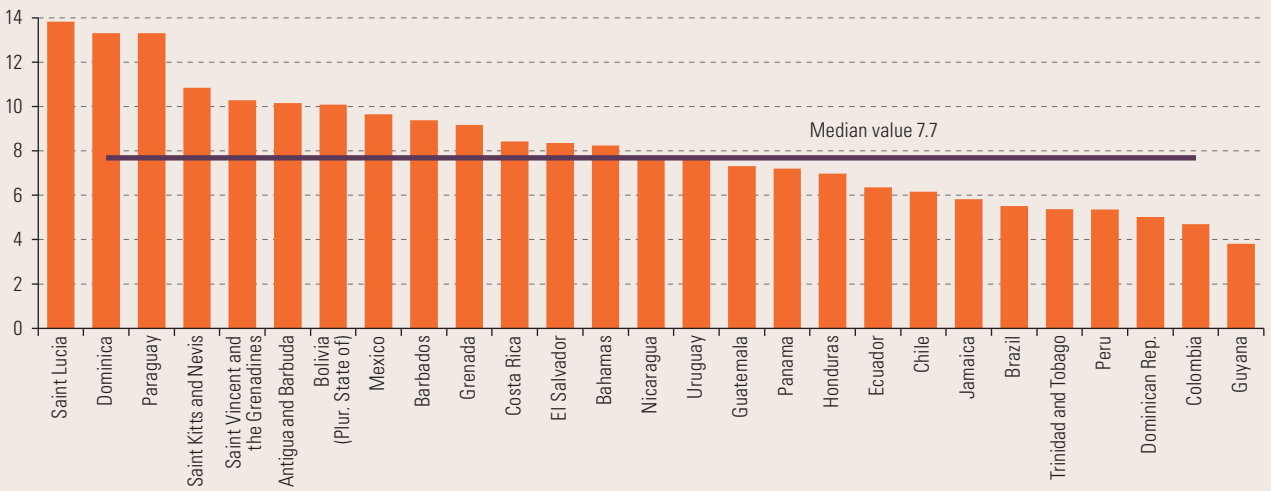
B. Breakdown of the "Other" category



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Notes: Group of low-income countries: Bolivarian Republic of Venezuela, Belize, El Salvador, Guatemala, Honduras, Jamaica, Nicaragua and Plurinational State of Bolivia; group of lower-middle-income countries: Brazil, Colombia, Dominican Republic, Ecuador, Paraguay, Peru and Suriname; group of upper-middle-income countries: Argentina, Dominica, Grenada, Mexico, Panama, Saint Lucia and Saint Vincent and the Grenadines; group of high-income countries: Antigua and Barbuda, Bahamas, Barbados, Chile, Costa Rica, Saint Kitts and Nevis, Trinidad and Tobago and Uruguay.
The figures in the graphic represent the average for each group of countries based on the most recent weighting structure. The official data of the countries selected have been adjusted in keeping with the Classification of Individual Consumption According to Purpose (COICOP), which includes 12 categories, where "housing" means "housing, water, power, gas and other fuels" and "household maintenance" means "equipment and household maintenance". Classification by per capita income is based on per capita gross national income (most recent year), taken from the database of the Statistics Division of the United Nations.

This has been compounded by the pass-through of volatility and higher international commodity prices to local production costs owing to dependence on imported goods along with any potential exchange rate fluctuations, which ultimately place additional pressure on the price of final goods, as mentioned above. As indicated in figure 2, because inflation is occurring worldwide, the countries of the region face mounting inflation arising from the bilateral relationship with their main import partners, which is likely to be transmitted to both consumer goods and local production costs.

Figure 2
Latin America and the Caribbean (27 countries): weighted inflation rate of the main importing countries
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations, UN Comtrade Database.
Note: Inflation rates represent the median value of weighted inflation rates by share of main importing countries (10 main markets) for each country of the region.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the United Nations Commodity Trade Database (COMTRADE) and countries' official figures.

7. Outlook

Future inflation patterns in the region are closely linked to global inflation, as their determinants are very similar. For that reason, if the effects of the invasion of Ukraine on prices for raw materials persist, in particular for energy and food, inflation will remain high. If current levels of exchange-rate volatility continue and the dollar continues to rise on international markets, the prices of imported goods and supplies and inflation will also continue to climb.

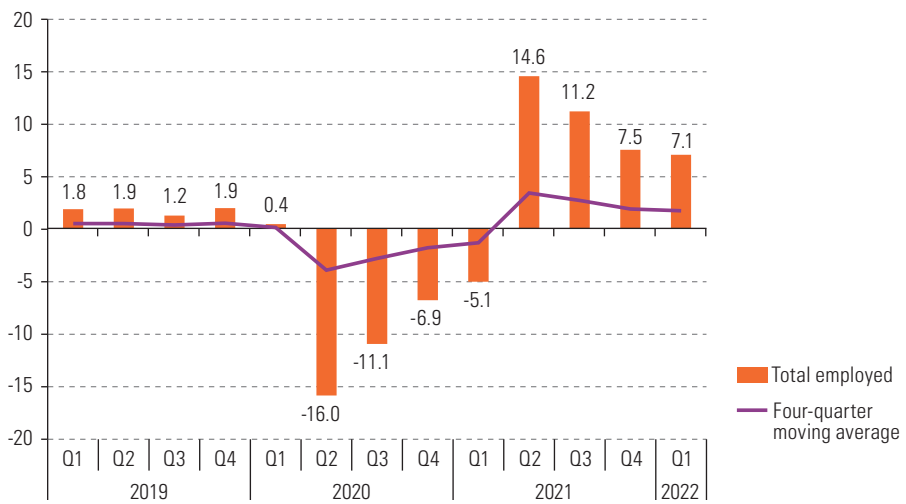
The demand factors that drove inflation in 2021 appear to cast little light on its future trends, given that estimates of GDP and aggregate demand continue to be revised downwards. Authorities in the region have geared monetary and exchange-rate policies towards curtailing the indirect effects of inflation and exchange-rate fluctuations, but these efforts could change the inflation curve going forward and could also affect medium- and long-term investment plans, with knock-on effects on the supply of goods and services.

Other measures may be needed to slow the transmission of external inflation (mounting food and energy prices) to the region's economies, not only to avoid further erosion of living standards but also to prevent inflation from spreading to other components of the consumption basket.

8. The number of employed has been growing since the second quarter of 2021, but the pace of growth has slowed

Figure I.37 shows the year-on-year growth in the number of employed in the region. A sharp drop was recorded in 2020 and a gradual recovery in the number of employed since then. Until the first quarter of 2021, growth rates were recovering, but remained negative; since the second quarter of 2021, growth rates have been positive. As was foreseeable, the recovery in economic activity, the return to face-to-face classes and the normalization of daily activities owing to lifting of movement restrictions put in place during the pandemic has led to a recovery in employment in the region. The figure below shows how the rebound caused by normalization was concentrated in the second and third quarters of 2021, when employment grew at double-digit rates. Over the fourth quarter of 2021 and the first quarter of 2022, employment continued to grow at a robust pace, with rates above 7%, but given the assumed normalization these rates are trending downward.

Figure I.37
Latin America and the Caribbean (14 countries):[a] growth rates in the number of employed and four-quarter moving average, first quarter 2019–first quarter 2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Argentina, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, Jamaica, Mexico, Nicaragua, Paraguay, Peru, the Plurinational State of Bolivia and Uruguay.

Figure I.38 shows that the employment recorded in the first quarter of 2022 was close to the levels seen in the fourth quarter of 2019, meaning that the region has returned to pre-crisis numbers, but took two years to do so.

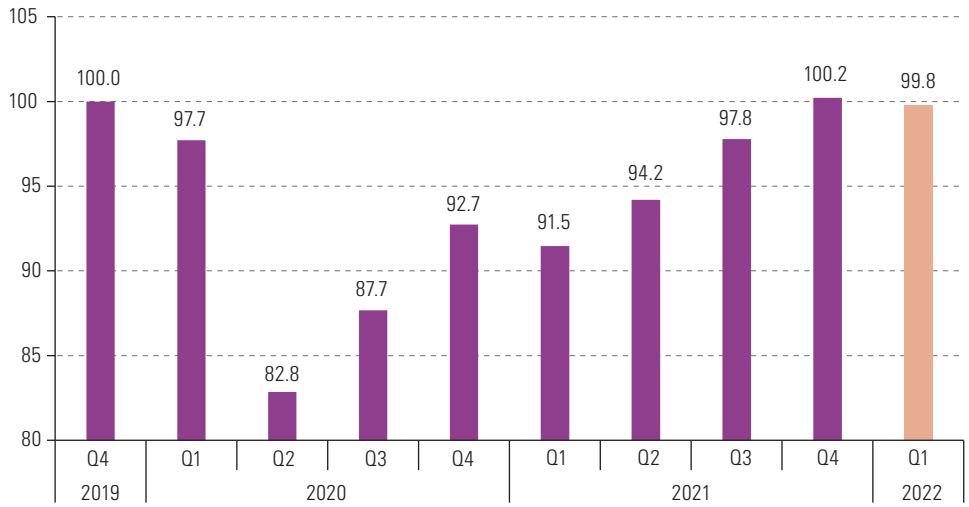


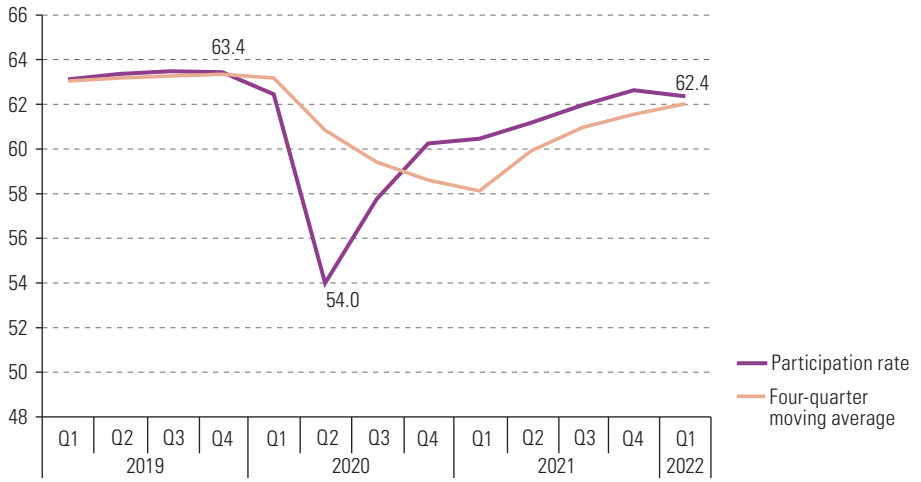
Figure I.38
Latin America and the Caribbean (14 countries):[a] employment, fourth quarter 2019 –first quarter 2022
(Fourth quarter 2019=100)

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Argentina, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, Jamaica, Mexico, Nicaragua, Paraguay, Peru, the Plurinational State of Bolivia and Uruguay.

9. Despite the increase in the participation rate since the third quarter of 2020, it has not surpassed pre-crisis levels

Normalization of activities has driven a recovery in participation rates in the region, which have been above 60% since the fourth quarter of 2020 (see figure I.39). In 2021, participation continued to recover, but increasingly slowly, and by the end of the year the rate was 62.6%. In the first quarter of 2022, there was a slight decline (0.2 percentage points) in the participation rate with respect to the fourth quarter of 2021, but as shown by the four-quarter moving average, the path towards recovery has continued. Despite these trends, the average participation rate of Latin American and Caribbean economies in the first quarter of 2022 remained 1 percentage point below that recorded in the fourth quarter of 2019. The decline in the participation rate in the first quarter of 2022 could mean that the region's labour markets are approaching a new equilibrium in which persistent restrictions mean fewer people, especially women, decide to participate in the labour market.

Figure I.39
Latin America and the Caribbean (14 countries):[a] total participation rate, first quarter 2019 –first quarter 2022
(Percentages)

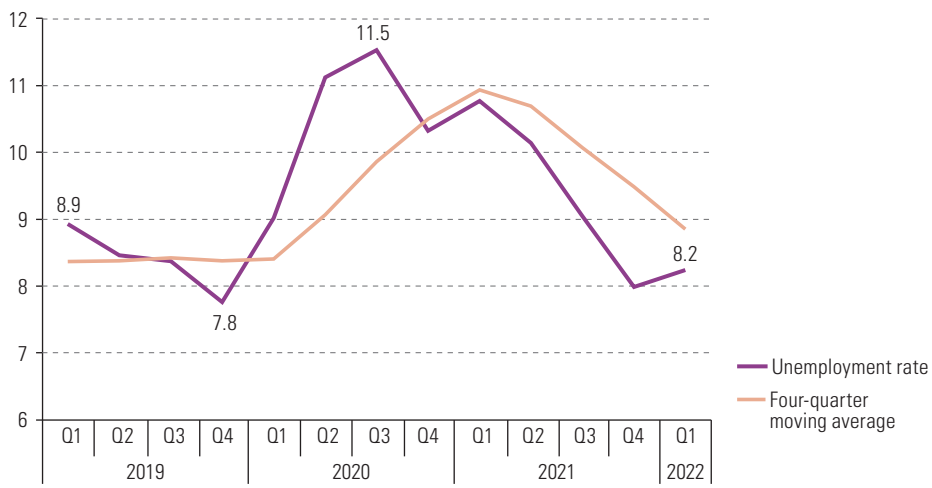


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Argentina, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, Jamaica, Mexico, Nicaragua, Paraguay, Peru, the Plurinational State of Bolivia and Uruguay.

10. The unemployment rate has declined since the third quarter of 2020, but remains above the levels recorded in the fourth quarter of 2019

The unemployment rate has followed a downward trend since the third quarter of 2020, when it reached around 11.5%, the highest level in three decades. Figure I.40 shows this downtrend; despite a slight rise of 0.2 percentage points in the first quarter of 2022 compared to the end of 2021, the unemployment rate fell by 3.3 percentage points between the third quarter of 2020 and the first quarter of 2022.

Figure I.40
Latin America and the Caribbean (14 countries):[a] total unemployment rate, first quarter 2019 –first quarter 2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Argentina, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, Jamaica, Mexico, Nicaragua, Paraguay, Peru, the Plurinational State of Bolivia and Uruguay.

Even with this decline, the unemployment rate of 8.2% for the first quarter of 2022 is 0.4 percentage points above the rate for the fourth quarter of 2019. This means that at the end of the first quarter of 2022 there were 3.8% more unemployed people than in the fourth quarter of 2019. However, the unemployment rate for the first quarter of 2022 was lower than for the first quarter of 2021 (8.9%).

Box I.3
Determinants of labour participation

The participation rate (the proportion of the population aged over 15 working or actively seeking work) reflects the willingness to work or seek work as opposed to alternatives such as attending school, caring for family members or retiring. The decision on whether or not to participate in the labour market depends on the demographic characteristics of individuals, such as gender, age, migration status, schooling, household income, marital status, and the presence of young children, older persons or ill people in the household.

Economic conditions and expectations also affect this decision. Recessions tend to reduce the labour force participation rate, and periods of growth tend to increase it. During periods of slow economic growth, the lack of good job opportunities discourages some people from seeking employment, because they believe that they would not be able to find a job even if they looked for one. The lack of work opportunities also encourages some people to engage in other activities, such as staying at home to care for a family member (as is mainly the case for women), studying or retiring.

Several studies show that longer or more severe recessions tend to have a longer-lasting impact on participation. Short recessions generally lead to small falls in participation, which are typically reversed when the cycle enters a period of expansion. However, when GDP contractions are deep and protracted, market normalization takes more time, and the probability of finding a job remains limited for longer, making the incentive to participate in the market unusually low.

Following the global financial crisis, various studies have found that in advanced economies, and particularly in the United States, falls in labour participation have been long-lasting, which is explained by demographic factors (retirement of those born during the baby boom), a significant fall in the probability of finding a job and the effect of social programmes that benefit a significant portion of the population and that have been in place for an unusually long time (see Aaronson, Davis and Hu (2012), Hall (2014), Braun and others (2014), Congressional Budget Office (2014) and Council of Economic Advisors (2014)).

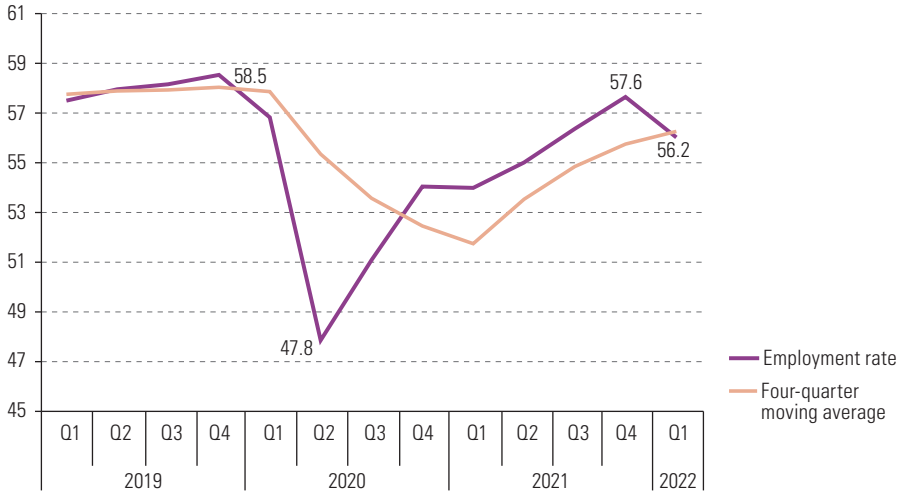
In the case of Latin American and Caribbean economies, factors such as prolonged restrictions on movement to combat the pandemic, a sharp contraction in gross domestic product (GDP) in 2020, a slow recovery in labour markets since then, and an increase in the number of people in households (children, older persons and the ill) have discouraged many people from seeking work. This caused historically large decline in labour participation in 2020 and also a slow and partial return of this indicator to pre-crisis levels (see ECLAC (2022) and ECLAC/ILO (2022)).

Source: Economic Commission for Latin America and the Caribbean (CEPAL), on the basis of D., J. Aaronson, Davis and L. Hu, "Explaining the decline in the U.S. labor force participation rate", *Chicago Fed Letter*, vol. 296, 2012; R. E., Hall, "Quantifying the lasting harm to the U.S. economy from the financial crisis", *NBER Working Paper*, No. 20183, 2014; S. Braun and others, "Understanding the decline in the labour force participation rate in the United States", VOXEU, 2014 [online] https://voxeu.org/article/decline-labour-force-participation-us; Congressional Budget Office, *The Slow Recovery of the Labor Market*, February 2014 [online] https://www.cbo.gov/publication/45011; Council of Economic Advisers of the Office of the President of the United States, *The Labor Force Participation Rate Since 2007: Causes and Policy Implications*, July 2014; Economic Commission for Latin America and the Caribbean (ECLAC), *Repercussions in Latin America and the Caribbean of the war in Ukraine: how should the region face this new crisis?*, Santiago, June 2022; Economic Commission for Latin America and the Caribbean (ECLAC)/International Labour Organization (ILO), "Real wages during the pandemic: trends and challenges", *Employment Situation in Latin America and the Caribbean*, No. 26 (LC/TS.2022/71), Santiago, 2022.

11. The regional employment rate has tended to rise since the third quarter of 2020, although at the end of the first quarter of 2022 it remained below pre-crisis levels

Figure I.41 shows the sustained rise in the employment rate since the third quarter of 2020, with a cumulative increase of 9.8 percentage points between the second quarter of 2020 and the fourth quarter of 2021. Despite this, at the end of the fourth quarter of 2021 the regional employment rate was lower than in the fourth quarter of 2019. In other words, there was less capacity to absorb people into the economically active population at year-end 2021 than at the close of 2019. The figure also shows that the capacity of the region's economies to absorb people into the economically active population declined in the first quarter of 2022, meaning that the employment rate fell by 1.6 percentage points, the first drop in this indicator since the second quarter of 2020.

Figure I.41
Latin America and the Caribbean (14 countries):[a] total employment rate, first quarter 2019–first quarter 2022
(Percentages)



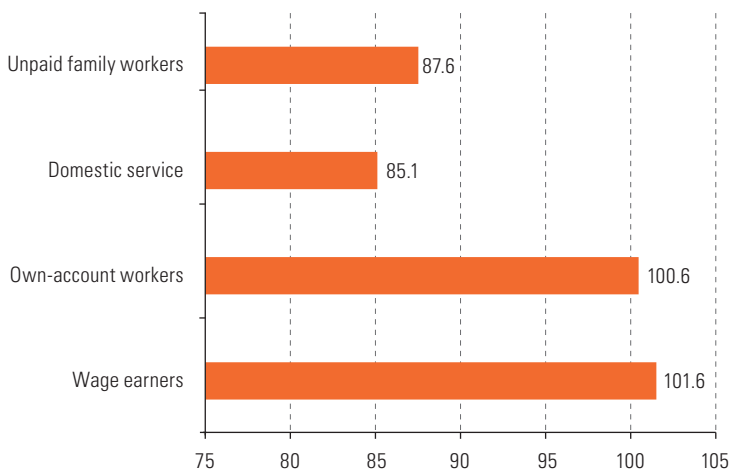
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Argentina, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, Jamaica, Mexico, Nicaragua, Paraguay, Peru, the Plurinational State of Bolivia and Uruguay.

12. Employment has returned to pre-crisis levels for wage earners and self-employed workers, but not for unpaid family workers and those in domestic service

The pandemic and restrictions on movement caused an unparalleled drop in employment in the region, in all employment categories; however, wage earners were the least affected (ECLAC, 2021). Employment has since recovered across the board: between the second quarter of 2020 and the first quarter of 2022, all employment categories grew at average quarter-on-quarter rates of over 2%, more than double the pace in the pre-crisis period.

Figure I.42 illustrates the relationship between the level of employment recorded in the first quarter of 2022 and that of the fourth quarter of 2019, in the categories of unpaid family workers, domestic service workers, own-account workers and wage earners. As shown, despite faster growth, at the end of the first quarter of 2022 only the employment of wage earners and self-employed workers had returned to pre-crisis levels. The category whose recovery is lagging the most is domestic service, which is almost 15% below the level recorded in the fourth quarter of 2019, going some way to explaining the sluggish recovery in women's participation that will be discussed later in this section.

Figure I.42
Latin America and the Caribbean (11 countries):[a] employment levels, by category, fourth quarter 2019 and first quarter 2022
(Fourth quarter 2019=100)

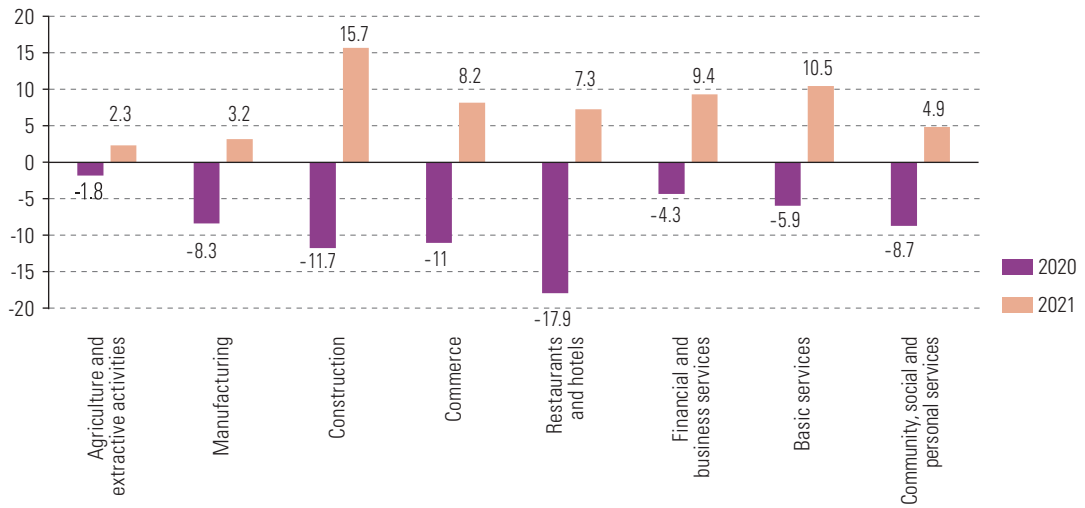


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Argentina, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, Mexico, Paraguay, Peru and the Plurinational State of Bolivia.

13. The number of employed persons has grown in almost all branches of economic activity, except agricultural and extractive activities and basic services

In 2021, employment increased in all branches of activity, following a fall across the board in 2020 (see figure I.43). The figure shows that both the 2020 contraction and the 2021 recovery were asymmetric. In the fall, three branches underwent double-digit declines: restaurants and hotels (17.9%), construction (11.7%) and commerce (11.0%). In the recovery, only two branches grew more than 10%: construction (15.7%) and basic services (10.5%).

Figure I.43
Latin America and the Caribbean (11 countries):[a] variation in level of employment, by branch of economic activity, 2020–2021
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Argentina, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Jamaica, Mexico, Paraguay, Peru and the Plurinational State of Bolivia.

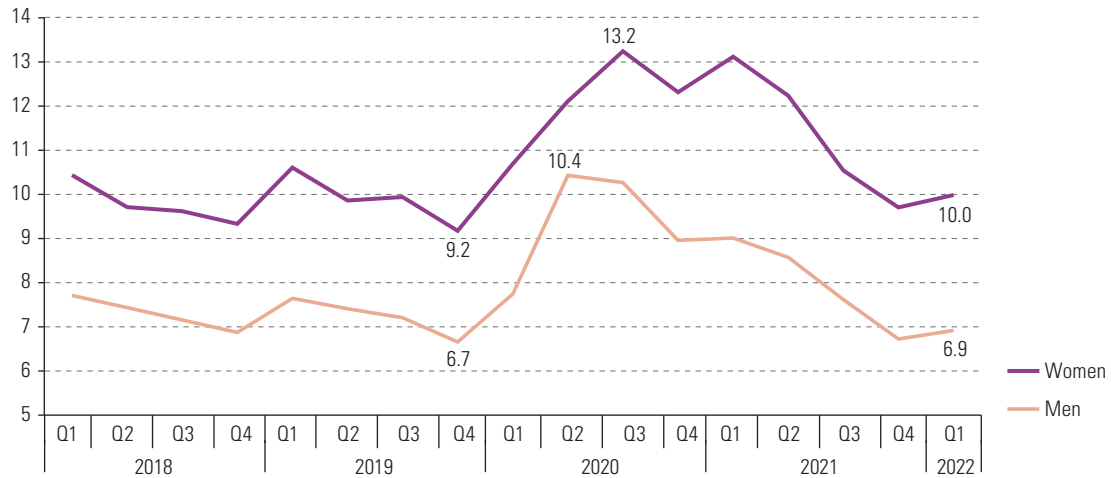
Owing to these asymmetries, at the end of the fourth quarter of 2021 only construction, basic services and financial and business services had reached employment levels similar to those of the fourth quarter of 2019. These branches of activity account for less than a quarter of the total number of employed persons. In contrast, activities such as community, social and personal services, commerce and manufacturing, which usually account for more than 60% of employment, have not yet fully returned to pre-crisis levels.

Data show that in the first quarter of 2022, employment growth was continuing in most activities, and at double-digit rates in the restaurants and hotels (25.9%), construction (12.7%) and commerce (13.6%) sectors, compared to the first quarter of 2021. However, agriculture and basic services recorded year-on-year declines of 6.3% and 2.0%, respectively. Despite the significant growth in the restaurants and hotels sector, at the close of the first quarter of 2022 the number of employed persons in this activity was lower than recorded in the fourth quarter of 2019.

14. Gender asymmetries have been maintained in the labour market recovery, which is slower and more incomplete for women

The crisis triggered by COVID-19 hit the region's labour markets hard, and although it affected both men and women, the impact was undoubtedly greater in the case of women. Figure I.44 shows the trends in unemployment rates for men and women since 2018. The first characteristic that stands out is that women tend to have a higher unemployment rate than men. Before the pandemic, the unemployment rate for women was 9.2%, while for men it was 6.7%. During the pandemic there were several changes in the patterns of these variables. The unemployment rate for men rose in the first quarter of 2020, and again in the second, when it peaked. The unemployment rate for women climbed steadily from the first to the third quarter of 2020. The difference between the unemployment rate in the fourth quarter of 2019 and the peak rate during the pandemic was greater for women (4.0 percentage points, from 9.2% to 13.2%) than for men (3.8 percentage points). The recovery phase has also been asymmetric: although unemployment rates have fallen among both men and women, the decline has been greater for men than for women (3.5 percentage points versus 3.2 percentage points).

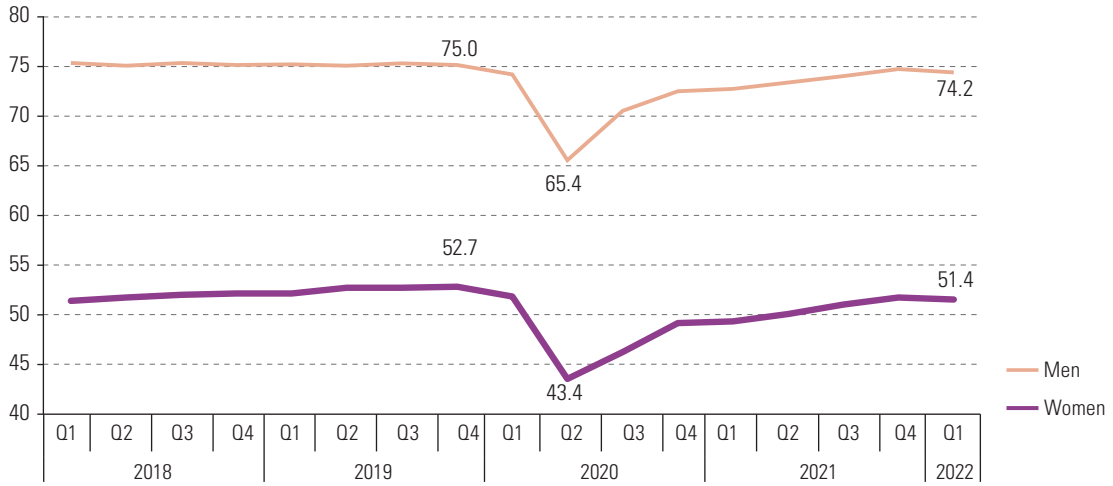
Figure I.44
Latin America and the Caribbean (14 countries):[a] unemployment rate, by sex, first quarter 2018–first quarter 2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Argentina, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, Jamaica, Mexico, Nicaragua, Paraguay, Peru, the Plurinational State of Bolivia and Uruguay.

The situation with regard to the participation rate is similar to that of the unemployment rate, insofar as the gaps between the rates for men and women widened during the crisis and did not narrow during the labour market recoveries. Before the pandemic, the gap between participation rates was 22.3 percentage points: the participation rate for men was 75% and for women 52.7% (see figure I.45). During the pandemic, both rates fell, reaching their lowest levels in the second quarter of 2020. The difference between the two rates then narrowed, because participation fell more for men than for women in that quarter, but once participation rates began to rise once more, the gap widened again. In the third quarter of 2020, the difference between the rates reached 24.3 percentage points (70.3% for men and 46.1% for women). At the end of the fourth quarter of 2021, the gap was 23 percentage points, and at the end of the first quarter of 2022, it was 22.8 percentage points. While participation rates have not returned to pre-crisis levels in either case, rates are lagging more for women than for men: while the rate of 51.4% for women in the first quarter of 2022 is equivalent to 97.5% of its level at year-end 2019, the rate of 74.2% for men is equal to 99.0% of the figure from the end of 2019.

Figure I.45
Latin America and the Caribbean (14 countries):[a] participation rate, by sex, first quarter 2018–first quarter 2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Argentina, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, Jamaica, Mexico, Nicaragua, Paraguay, Peru, the Plurinational State of Bolivia and Uruguay.

The lag in women re-entering the labour market in the wake of the pandemic is also related to the slower recovery in the economic sectors that account for a larger proportion of women's employment (such as services, restaurants and hotels, and other activities linked to tourism and commerce) in comparison to other sectors. The fact that women's return to the labour market has been gradual likewise reflects the heightened need for care that was greatly apparent during the pandemic. Many of the women who withdrew from the labour market took on caregiving tasks, and may now be facing economic barriers to finding a someone else to perform those tasks, especially in the case of those working in lower-paying sectors. Likewise, expectations of limited job opportunities or lower income mean that in some multiparent households the traditional roles of the man as breadwinner and the woman as caregiver are being maintained.

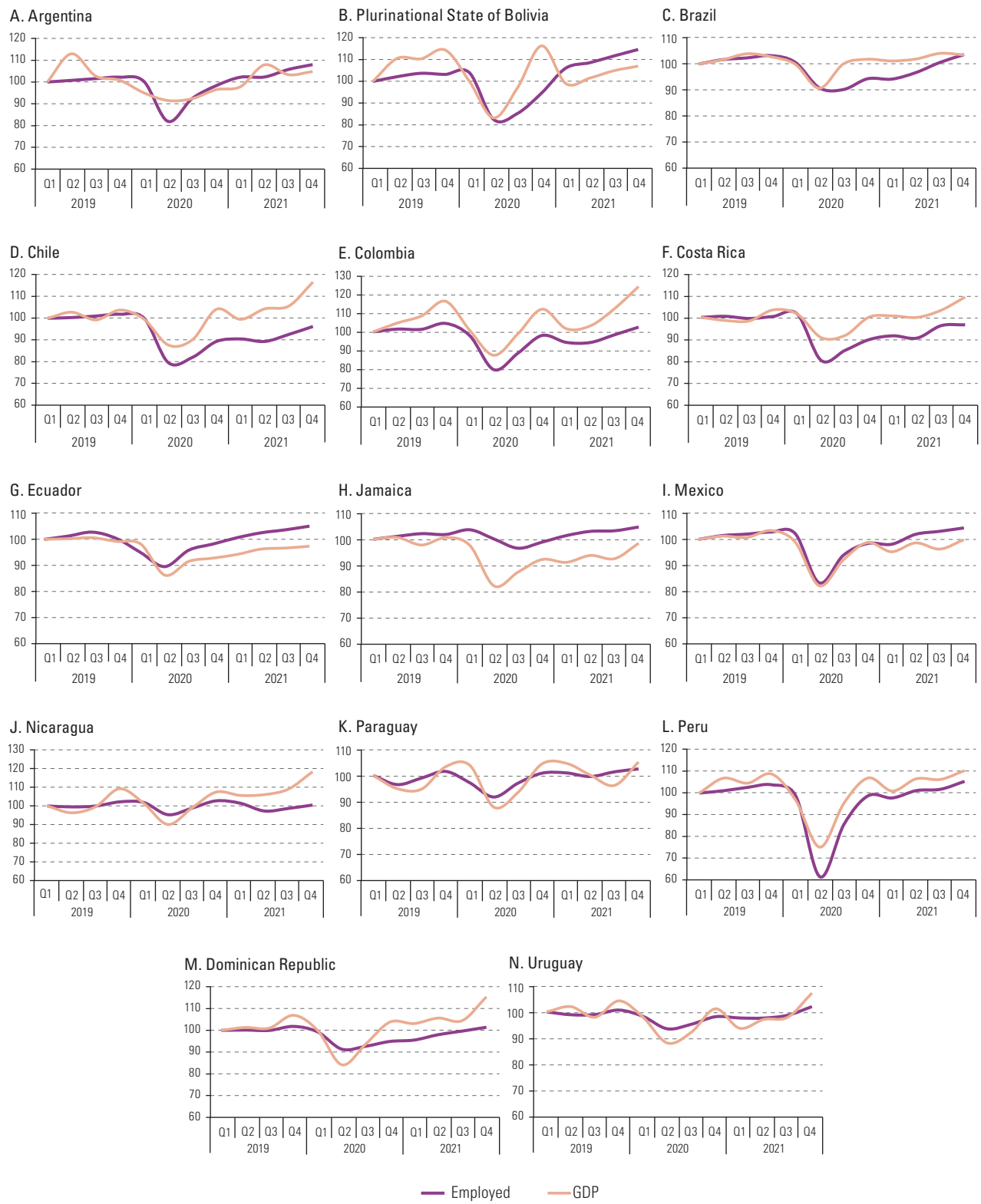
Gender asymmetries are also present in employment rates. At the end of the first quarter of 2022, the figures were lower than those recorded in the fourth quarter of 2019 for both men and women, and the ratios of employed men and employed women to the economically active population were lower in the first quarter of 2022 than in the fourth quarter of 2019, but the lag was greater for women (98.6%) than for men (96.5%).

15. In most of the region's economies, employment has recovered more slowly than economic activity

By the fourth quarter of 2021, the vast majority of countries had returned to pre-crisis GDP levels, but in many this was not accompanied by a recovery to pre-pandemic employment levels. As shown in figure I.46, the drop in the number of employed was sharper than the decline in GDP. Furthermore, in countries such as Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Jamaica, Mexico, Nicaragua and Peru, the curve reflecting the performance of employment is almost always below the curve for economic activity.

As already noted by ECLAC (2021), this lag in the recovery of employment as compared to activity sets this crisis apart from previous contractions in GDP.

Figure I.46
Latin America and the Caribbean (14 countries): number of employed persons and GDP, by quarter, 2019–2021
(Fourth quarter 2019=100)

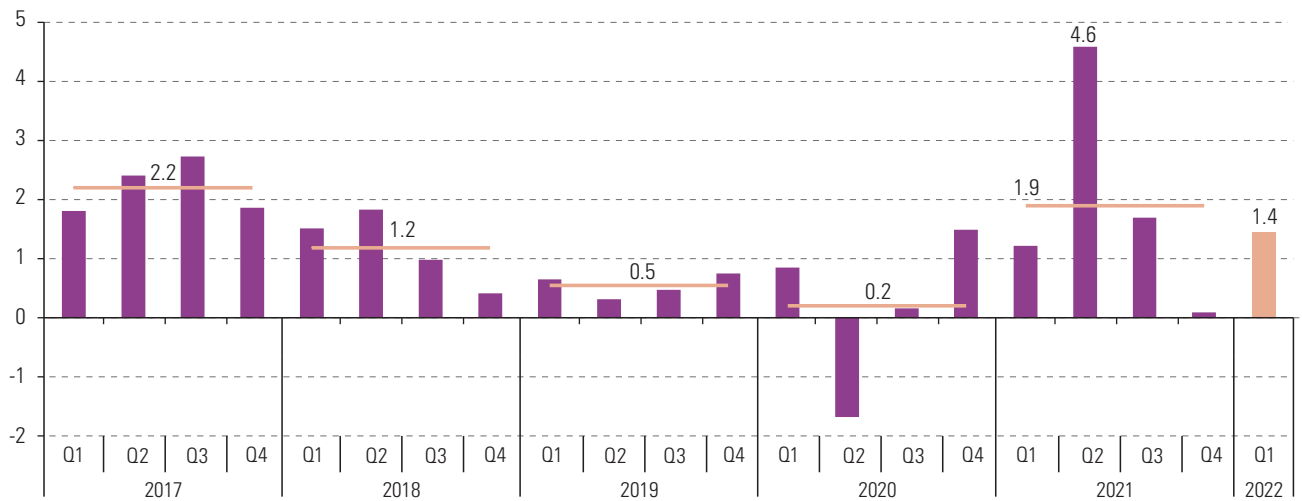


Source: Economic Commission for Latin America and the Caribbean (ECLAC) and International Labour Organization (ILO), on the basis of official data from the countries.

16. The trend in average wages in the region has been of a slowdown prior to the COVID-19 pandemic, decline in the second quarter of 2020 and subsequent recovery

Figure I.47 shows the pattern in average year-on-year growth rates of wages in the region since 2017. As illustrated by the figure, even before the pandemic, the growth rate of wages in the region was slowing, despite remaining positive. In the second quarter of 2020, the average year-on-year variation was -1.7%, reflecting the major impact in the region on economies and especially labour markets. Since that quarter, the average salary has been recovering, with positive growth rates, and in 2021 the average was 1.9%. The 4.6% year-on-year rise in the second quarter of 2021 is particularly noteworthy, although this reflects the low basis of comparison from the second quarter of 2020. In the first quarter of 2022, the average again showed a year-on-year increase in wages (1.4%).

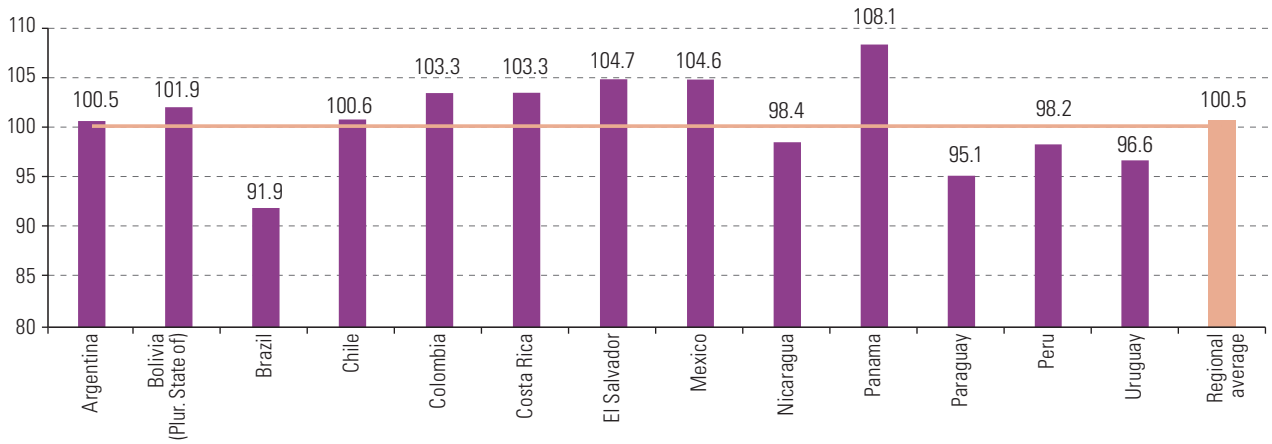
Figure I.47
Latin America and the Caribbean (14 countries):[a] regional average year-on-year variation in average real wage, first quarter of 2017–first quarter of 2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Argentina, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Mexico, Nicaragua, Paraguay, Peru, the Plurinational State of Bolivia and Uruguay.

Despite the average increase in real wages in the region, by the fourth quarter of 2021 the regional average wage was similar to that of the fourth quarter of 2019, and in five of the countries included in the sample (Brazil, Nicaragua, Paraguay, Peru and Uruguay) it was lower (see figure I.48).

Figure I.48
Latin America and the Caribbean (14 countries):[a] average real wage, fourth quarter 2021 compared to fourth quarter 2019
(Fourth quarter 2019=100)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Argentina, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Mexico, Nicaragua, Paraguay, Peru, the Plurinational State of Bolivia and Uruguay.

17. The outlook for the labour market

The region's labour markets have recovered from the levels seen during the pandemic, but only partially and asymmetrically. Although the total number of employed persons in the first quarter of 2022 was similar to pre-crisis levels, the pace of job creation was not sufficient to absorb the increase in the economically active population, and unemployment rates were higher than before the pandemic. In addition, employment had not recovered in the same way in all branches of activity; in fact, in many sectors, the number of employed had not returned to pre-pandemic levels. What is more, the recovery has been different for each job category: in particular, there has been a marked lag in the recovery of employment for women domestic workers. In terms of gender, the recovery has been slower in employment indicators for women; the female unemployment rate has fallen less and the female employment rate has recorded a smaller rise than the corresponding rates for men.

Once again, these substantial differences can be to some extent attributed to the slow recovery in activities that account for a larger proportion of female employment, such as services (including restaurants and hotels), and the burden shouldered by women in care activities. When attempting to determine the potential future performance of the labour market, the relationship with the trend in economic activity must be taken into account. Economic activity will be to a great degree determined by the repercussions of the current situation, characterized by a slowdown in global economic activity, growing inflationary pressure, more volatile exchange rates and less room for expansionary policies.

Thus, the activities that have previously created the most jobs, such as construction, may be severely affected by higher interest rates and potentially a slowdown in lending. Activities in which employment has not yet returned to pre-crisis levels, such as the industrial sector, are facing a sizable supply shock from rises in the price of energy and other inputs, as well as climbing financing costs as a result of the increase in interest rates and depreciation of currencies. These sectors could also suffer a demand shock from possible credit restrictions and lower real household income owing to higher inflation and depreciation of currencies.

Given the expectations of slower job creation growth, the trend in labour participation remains to be seen, as the situation is one in which earning income is increasingly necessary, but the prospects of finding quality work seems more and more remote.

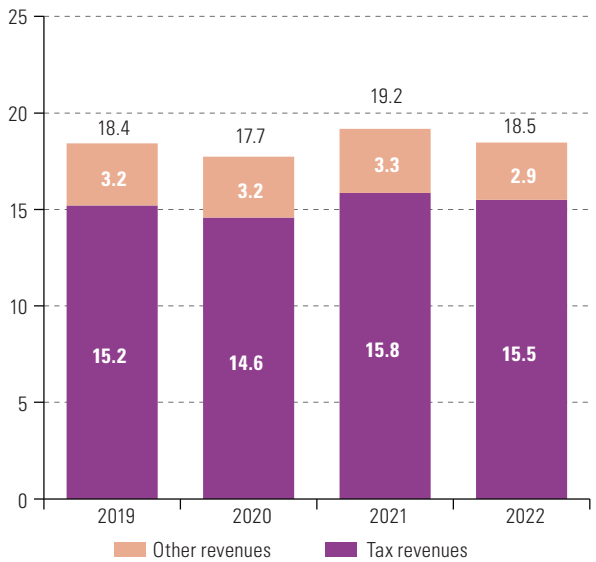
E. Macroeconomic policies

1. Growth in government revenues is expected to slow in 2022 as a result of a downturn in tax revenues

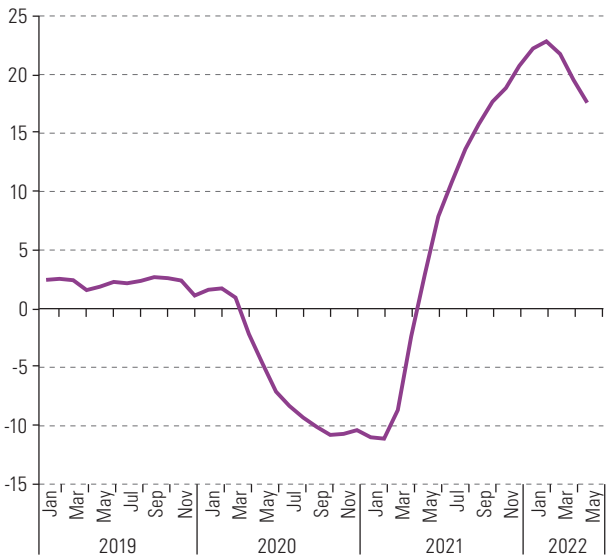
Following historically high revenue levels in 2021, growth in government revenues is expected to slow in Latin America in 2022, owing to a downturn in economic activity and private consumption. As a result, central government revenues are expected to return to around the levels recorded before the pandemic (see figure I.49). Given the slowdown in economic growth, the region's tax revenues are also expected to decline on average with respect to 2021, despite remaining above 2019 levels. The pattern in public revenues in the year will depend considerably on macroeconomic factors such as inflation, exchange rates and commodity prices. Some countries could benefit from these factors —particularly exporters of energy, minerals and metals, and agricultural products— but in others tax collection could be lower than expected.

Figure I.49
Latin America (16 countries):[a] total revenues and tax revenues of central governments, 2019-2022[b]

A. Composition of total central government revenues
(percentages of GDP)



B. Year-on-year variation in the 12-month moving average of tax revenues, excluding social contributions, at constant prices, January 2019–May 2022
(percentages)

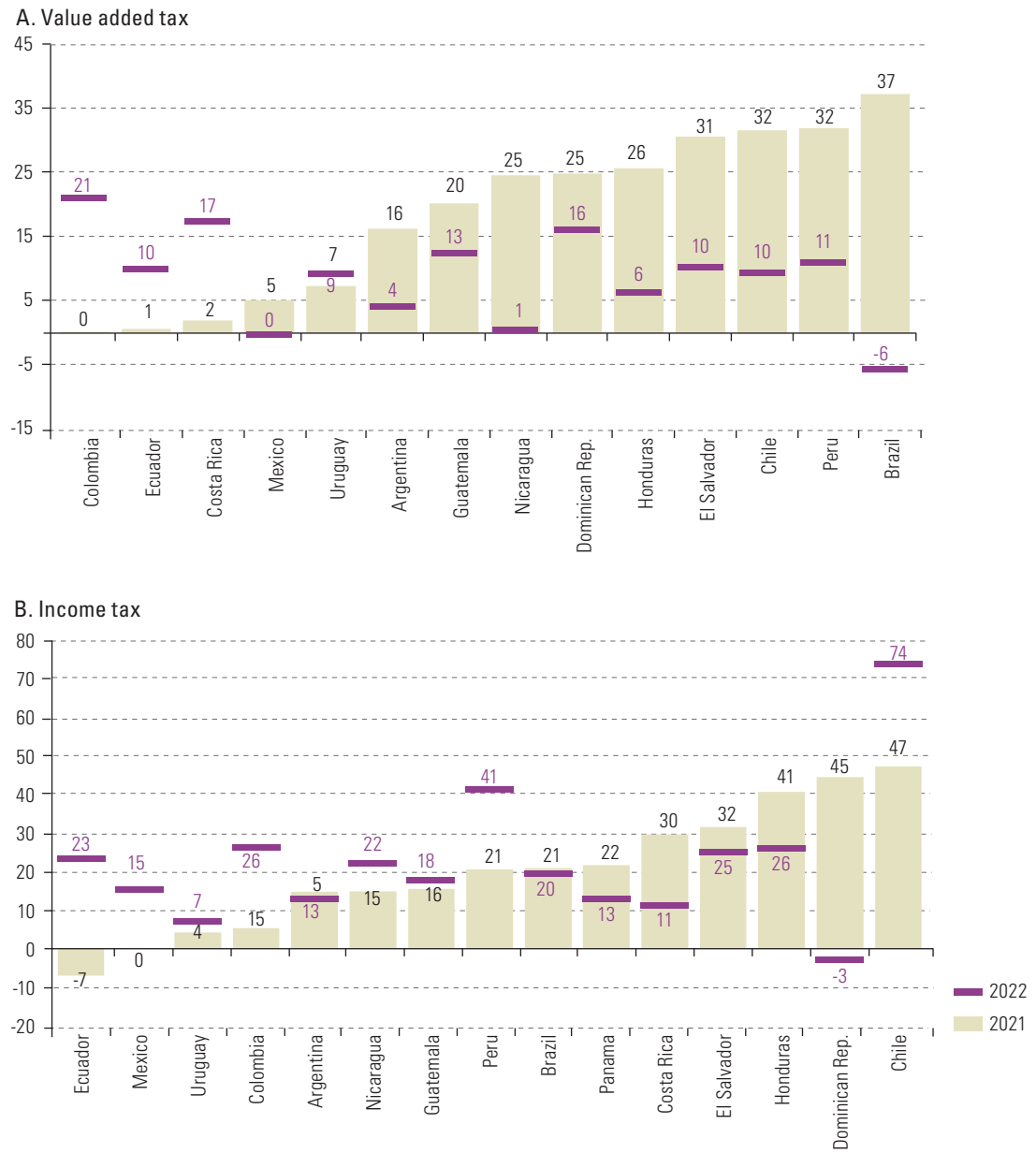


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: The individual figures may not add up to the corresponding total because of rounding.
[a] The countries included are: Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru and Uruguay.
[b] Simple averages. Data for 2022 are official estimates. In the cases of Argentina, Mexico and Peru, the figures refer to the national public administration, the federal public sector and general government, respectively.

The slowdown in tax collection can be seen in the pattern of revenues from the region's main taxes during the first half of 2022. Value added tax (VAT) revenues have begun to weaken in several countries, after growing by more than 20% in 2021 (see figure I.50). Nonetheless, VAT revenue growth has notably picked up in Costa Rica and Ecuador. In the case of income tax, although revenues have followed a downward

trend, situations vary across the region. In particular, income tax revenues have grown rapidly in countries that are producers of minerals and metals, owing to the high profits recorded in the prior year and larger payments on account in the current year. In Chile, accumulated tax revenues from large-scale private mining to May 2022 grew by 88.0% annually in real terms and accounted for 13.9% of the central government's tax revenue growth (DIPRES, 2022). Similarly, tax revenues from hydrocarbon extraction and mining in Peru —excluding royalty payments— rose by 127.9% year-on-year in real terms in the first five months of the year, and contributed half (51%) of the growth in tax revenues for the period.

Figure I.50
Latin America (selected countries): year-on-year variation in value added tax and income tax revenues at constant prices, January–May 2021 and January–May 2022
(Percentages)

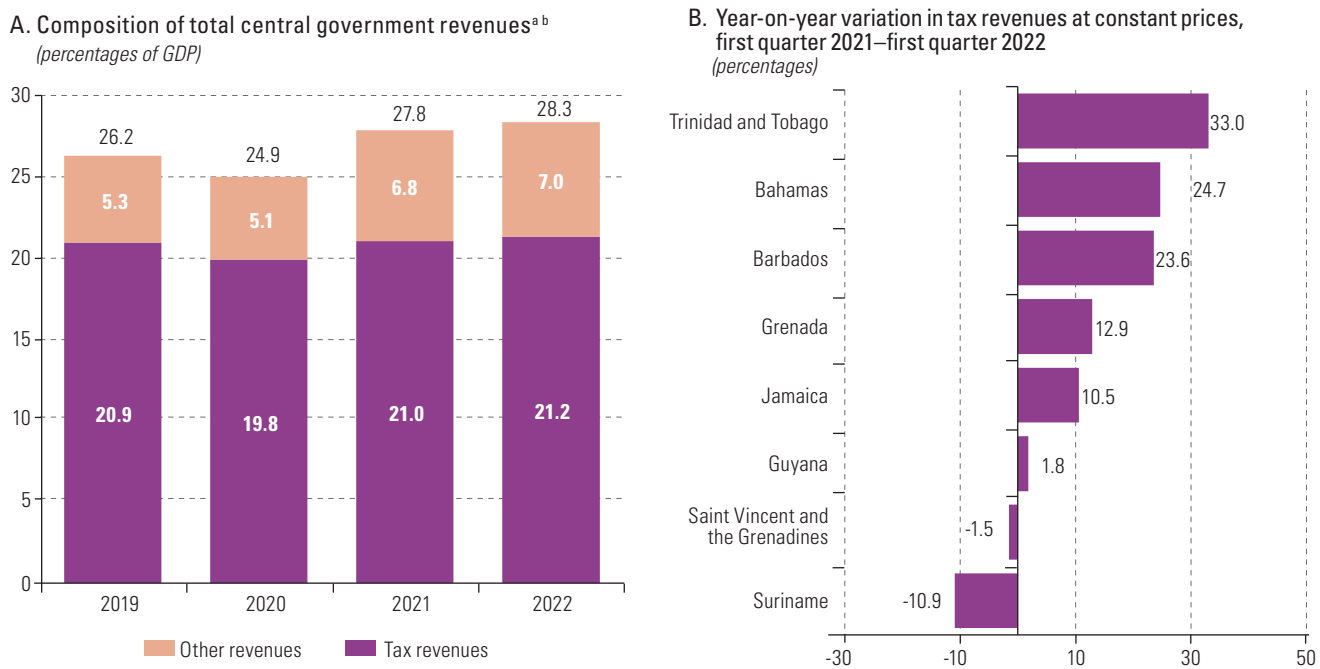


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

In the current context of rising inflation, several countries have applied tax exemptions to purchases of basic goods, fuels and energy. Although the impact of these measures on tax revenues may be limited, the effect will increase if they are extended or expanded. The effects of these exemptions were already seen in several countries in the first half of 2022. In Peru, revenues from the selective consumption tax on fuel declined by 20.2% year-on-year in real terms for the first five months of 2022, largely owing to the impact of Supreme Decree No. 068–2022-EF, which excluded a wide range of fuels from selective consumption tax and the general sales tax and which allowed the measure to potentially be extended by six months (Government of Peru, 2022). Similarly, in Brazil, a zero rate was adopted for the Contribution to the Financing of the Social Security System (COFINS) and the Social Integration Programme/Civil Servant Investment Programme (PIS/PASEP) taxes applied to diesel, biodiesel and liquefied petroleum gas, among others, until the end of the year (RFB, 2022).

In the Caribbean, total revenues are expected to increase again in 2022, driven mainly by rises in tax revenues and revenues from other sources, such as non-tax revenues, capital revenues and external grants (see figure I.51). This increase reflects rapid growth in tax revenues in the first few months of the year in several countries. In the cases of the Bahamas, Barbados and Trinidad and Tobago, the trend in tax revenues is primarily explained by growth in the amount collected through value added tax. Non-tax revenues are expected to increase slightly, driven by larger external grants in several countries. In the case of Guyana, non-tax revenues are expected to rise substantially owing to a first withdrawal of resources from the sovereign wealth fund, in which the country deposits its revenues from crude oil production.

Figure I.51
The Caribbean (selected countries): total central government revenues, 2019–2022
(Percentages of GDP and percentage points of GDP)

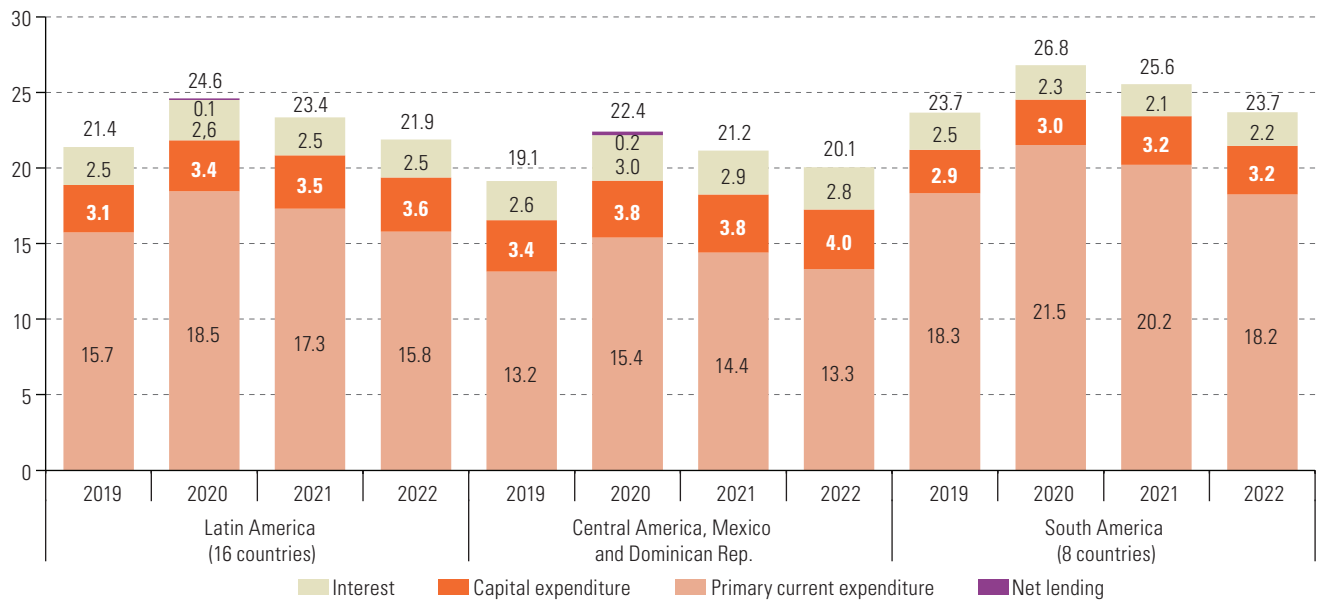


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: The individual figures may not add up to the corresponding total because of rounding. Figures for Barbados, Belize and Jamaica are official estimates.
[a] The countries included are: Antigua and Barbuda, Bahamas, Barbados, Belize, Grenada, Guyana, Jamaica, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Saint Lucia, Suriname and Trinidad and Tobago.
[b] Simple averages. Data for 2022 are projections. The figures for Barbados correspond to the non-financial public sector, and those for Saint Kitts and Nevis to the federal government.

2. The slowdown in public spending looks set to continue in 2022, although inflation trends have created additional pressure to implement support programmes

The decline in public spending that began in 2021 is expected to continue in 2022. Total central government spending in Latin America is expected to fall to 21.9% of GDP in 2022, from 23.4% of GDP in 2021 (see figure I.52). The anticipated drop in total spending is primarily a result of a downturn in primary current spending, including lower outlays on subsidies and current transfers. Conversely, capital expenditure is expected to rise, mainly because of the expected trends in Central American countries, Mexico and the Dominican Republic. Interest payments, meanwhile, are forecast to remain stable on average, although with opposing trends in the two subgroups of Latin American countries. Despite these stylized facts, countries' public spending is under growing pressure to respond to the current context of rising inflation. Several countries are already rolling out new subsidies or expanding existing programmes to offset the erosion of the population's purchasing power and safeguard the agricultural sector. These actions could partially offset the projected fall in primary current spending, assuming that they are extended over time or increased in scope. Slowing economic growth could also lead to a rise in spending on programmes linked to poverty and unemployment in the region.

Figure I.52
Latin America (16 countries):[a] composition of total central government spending, 2019–2022[b]
(Percentages of GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: The individual figures may not add up to the corresponding total because of rounding.
[a] The countries included are: Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru and Uruguay.
[b] Simple averages. Data for 2022 are projections. In the cases of Argentina, Mexico and Peru, the figures refer to the national public administration, the federal public sector and general government, respectively.

Patterns in public spending in Latin America have been greatly conditioned by trends in subsidies and current transfers. This component of spending has shrunk, after reaching a historically high level in 2020, when countries implemented programmes to alleviate the impact of the pandemic, including the creation of special grants and expanding the coverage of existing programmes. Subsidies and current transfers are therefore expected to return to pre-crisis levels in 2022 (see figure I.53). In line with this trend, there was a decline in these types of expenditure during the first five months of the year in countries such as Chile and Peru. In Chile, the fall was a result of a higher basis of comparison from the same period in 2021, when the country spent considerable amounts on pandemic-related benefits, such as an employment subsidy and an Emergency Family Income Programme (DIPRES, 2022). Similarly, in Peru, there has been a progressive withdrawal of temporary emergency programmes, beginning in 2021. Transfers through COVID-19-related programmes in the country were down from an estimated 2.3% of GDP in 2020 to 1.1% of GDP in 2021, and outlays of around 0.2% of GDP are expected in 2022 (MEF, 2022).

Despite the expected decline in subsidies and current transfers by the end of the year, the slowdown in economic activity and the rise in inflation are putting growing pressure on this component of public spending. Higher energy prices are having a particularly marked impact, leading to increases in energy subsidies in several countries. In Argentina, cumulative financial subsidies for energy to May —essentially transfers to Compañía Administradora del Mercado Eléctrico Mayorista (CAMMESA) to compensate for the difference between production costs and rates paid— were 49% higher year-on-year in real terms (OPC, 2022). Similarly, in the Dominican Republic, cumulative electricity subsidy expenditures to April were 71% higher year-on-year in real terms. In Guatemala, the Law on Temporary Social Support for Regular Diesel and Gasoline Consumers, passed in March, was accompanied by additional subsidies for consumption of propane and electricity. In Brazil, there was higher spending on the Bolsa Família conditional cash transfer programme and Auxílio Brasil programme, as well as larger payments associated with the wage credit and unemployment benefits (National Treasury of Brazil, 2022).

Figure I.53
Latin America (selected countries): central government spending on subsidies and current transfers, 2015–2022

A. Subsidies and current transfers, 2015–2022[a b]
(percentages of GDP)

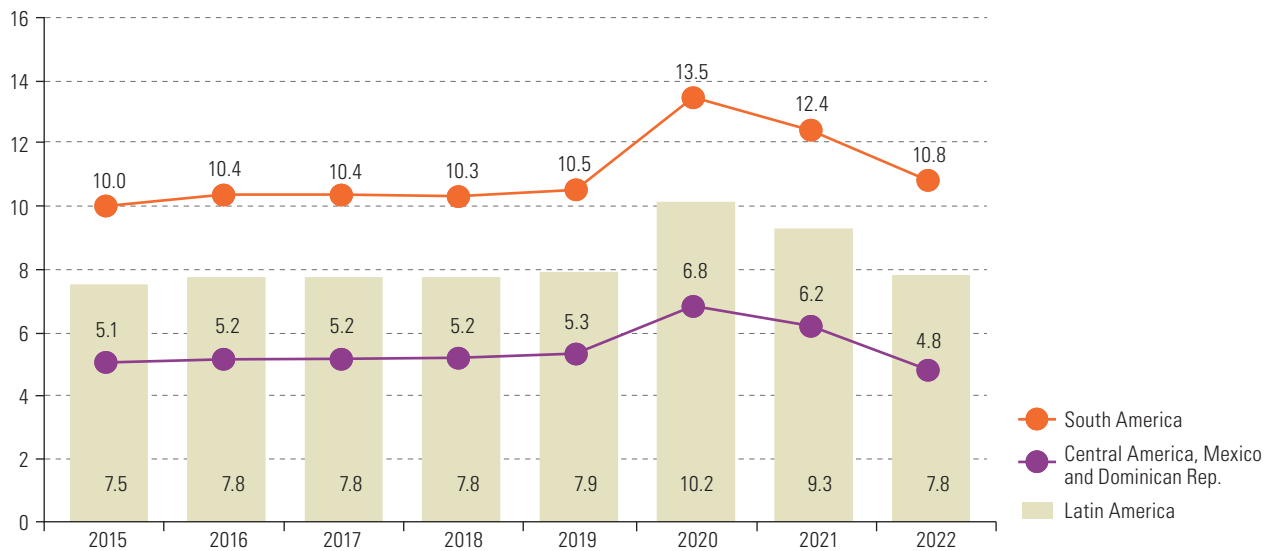
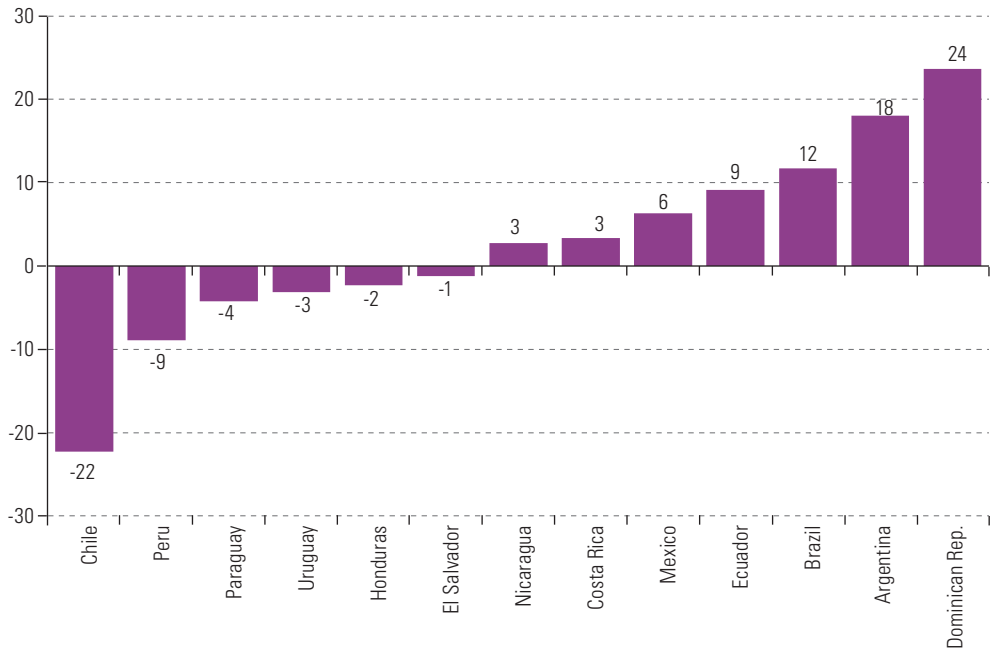


Figure I.53 (concluded)

B. Year-on-year variation in subsidies and current transfers at constant prices, January–May 2021 and January–May 2022
(percentages)



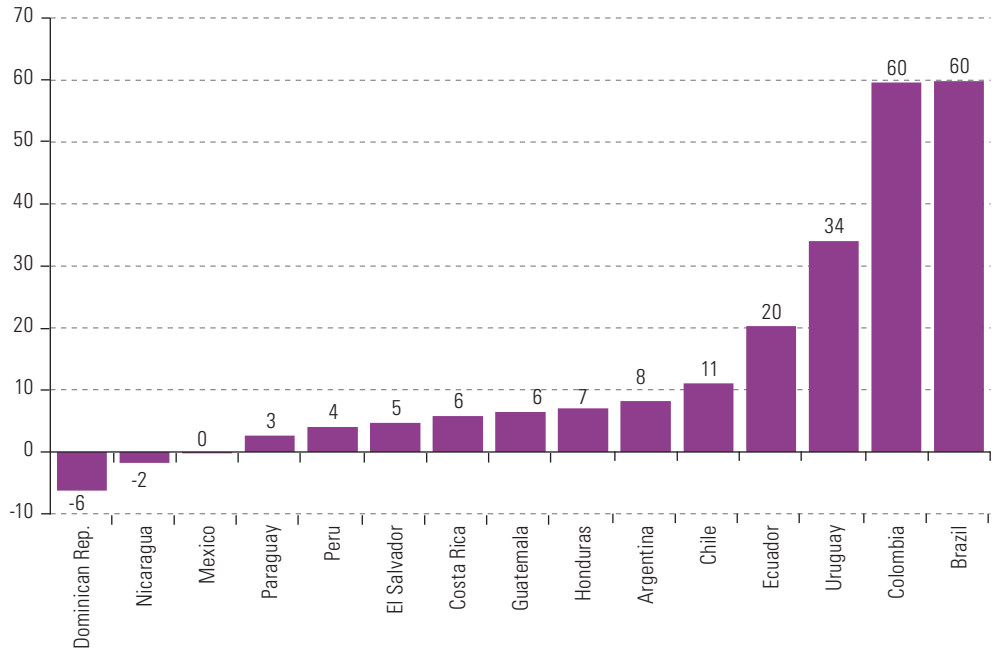
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] The countries included are: Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru and Uruguay.
[b] Simple averages. Data for 2022 are projections. In the cases of Argentina, Mexico and Peru, the figures refer to the national public administration, the federal public sector and general government, respectively.

Capital expenditure is expected to increase in Latin America in 2022, although there could be falls towards the end of the year. Significant increases in capital expenditure are expected in Central America, Mexico and the Dominican Republic. In Panama, capital expenditure nearly doubled in the first quarter (up 94% year-on-year in real terms), driven by road projects and investments in schools (Ministry of Economy and Finance of Panama, 2022). In the Dominican Republic, central government gross fixed capital formation has risen, owing to projects such as the subway expansion and housing construction (DIGEPRES, 2022).

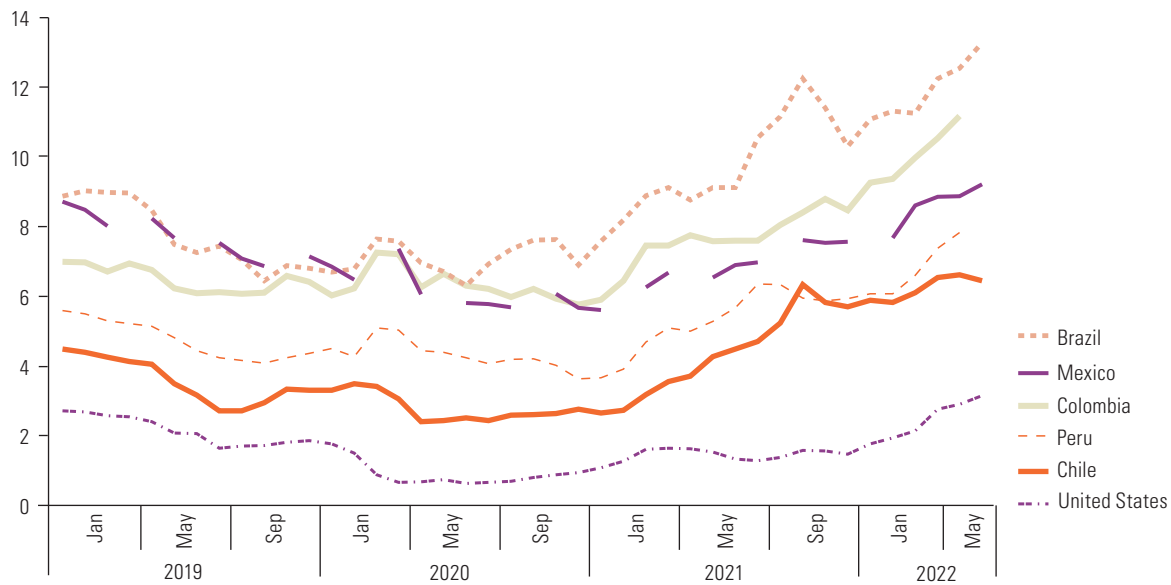
Interest payments are rising in Latin America, but are expected to remain stable relative to GDP in 2022. The increase in public debt, driven by fiscal efforts in 2020, has led to a concomitant rise in interest payments for most countries in the first five months of 2022 (see figure I.54). However, some countries have experienced a significant increase as a result of the progressive rise in monetary policy rates and long-term bond yields. In the case of Brazil, the combination of the structure of public debt —a large portion of which is short-term—and the increase in the Special System of Clearance and Custody (SELIC) rate, which climbed by 925 basis points between the end of May 2021 and the end of May 2022, has driven up interest payments (Central Bank of Brazil, 2022). In Colombia, the upswing is explained by more interest being accrued on inflation-indexed central government bonds in local currency (Ministry of Finance of Colombia, 2022).

Figure I.54
Latin America (15 countries)[a] and the United States: central government interest payments and ten-year interest rates on public debt, 2019–2022[b]

A. Year-on-year variation in central government interest payments at constant prices, January–May 2021 and January–May 2022
(percentages)



B. Long-term interest rate, January 2019–May 2022
(percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

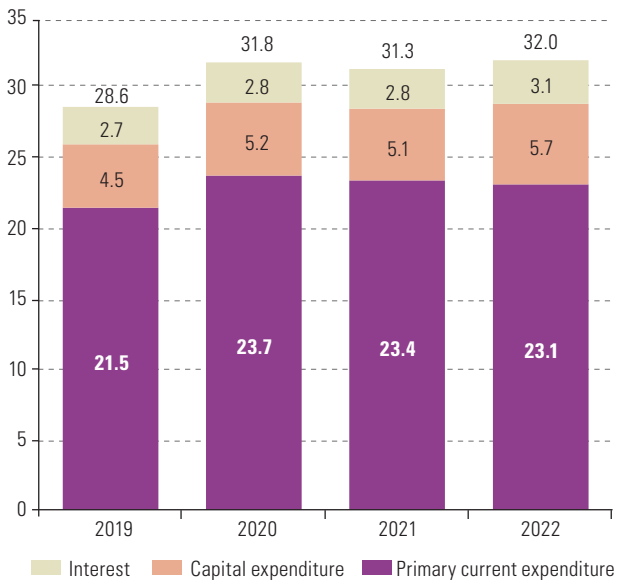
[a] The countries included are: Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Paraguay, Peru and Uruguay.

[b] Simple averages. In the cases of Argentina, Mexico and Peru, the figures refer to the national public administration, the federal public sector and general government, respectively.

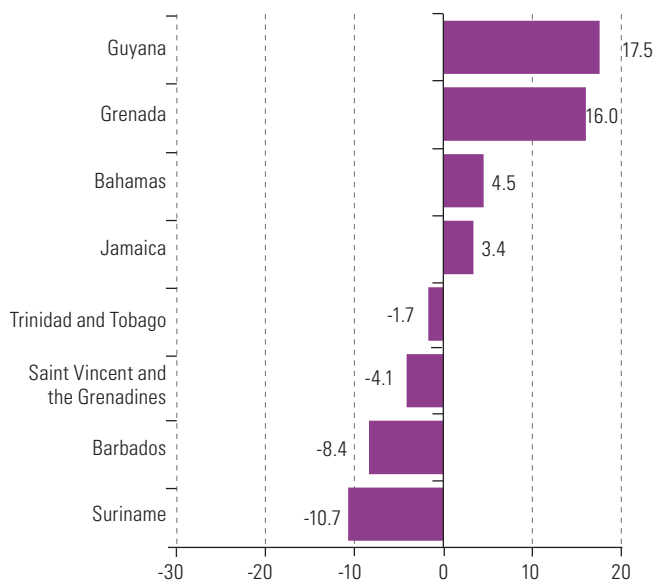
In the Caribbean, public spending is expected to grow in 2022, driven by public investment and higher interest payments (see figure I.55). In line with the expected trend in Latin America, primary current spending is expected to contract during the year, mainly owing to lower outlays on pandemic-related subsidies. In contrast, capital expenditure looks set to increase significantly, although this is highly dependent on inflows from external grants. At the country level, a significant expansion of public investment is expected in Guyana, financed in part by a withdrawal of resources from the new sovereign wealth fund financed by oil revenues. Interest payments are expected to rise again, in line with higher projected expenditure for some countries, such as Barbados (where interest payments grew by more than 100% in real terms in the year to March), Saint Vincent and the Grenadines and Suriname.

Figure I.55
The Caribbean (selected countries): total expenditure and central government primary expenditure, 2019–2022

A. Composition of total central government expenditure[a b]
(percentages of GDP)



B. Year-on-year variation in primary expenditure at constant prices. first quarter 2021–first quarter 2022
(percentages)



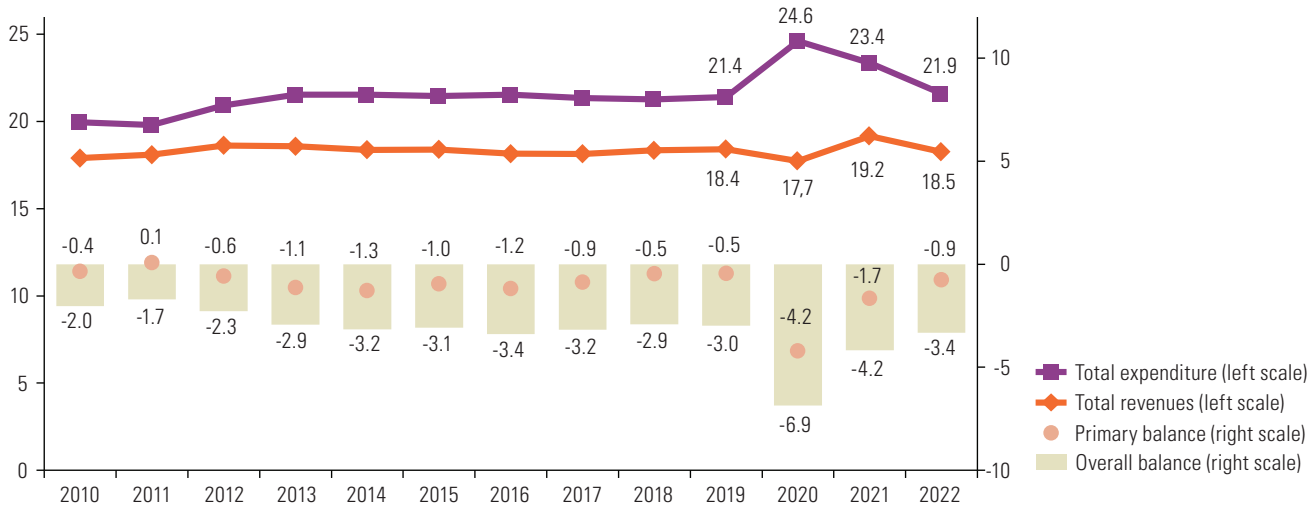
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: The individual figures may not add up to the corresponding total because of rounding. Figures for Barbados, Belize and Jamaica are official estimates.
[a] The countries included are: Antigua and Barbuda, Bahamas, Barbados, Belize, Grenada, Guyana, Jamaica, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Saint Lucia, Suriname and Trinidad and Tobago.
[b] Simple averages. Data for 2022 are projections. The figures for Barbados correspond to the non-financial public sector, and those for Saint Kitts and Nevis to the federal government.

3. The pattern of fiscal consolidation is expected to continue in 2022, in a context of low growth

In Latin America, the primary balance is expected to average -0.9% of GDP in 2022, compared to -1.7% of GDP in 2021 (see figure I.56). This trend is driven by the pattern of public spending, with a fall in spending that is forecast to exceed the decrease in total revenues. This situation contrasts greatly with the trends seen in 2021, when the primary deficit shrank as a result of a large increase in public revenues and a fall in total expenditure. If this projection were to materialize, the average fiscal deficit would approach pre-pandemic levels. However, the current fiscal situation is characterized by a complex macroeconomic landscape, with many unknowns regarding the performance

of the global economy, international financial markets and commodity prices. Added to this are economic challenges at the national level, including inflation, which have a considerable impact on fiscal aggregates. Current projections are therefore particularly sensitive to short-term cyclical factors that could affect fiscal balances and even result in pressure for further cuts to public spending.

Figure I.56
Latin America (16 countries):[a] central government fiscal indicators, 2010–2022[b]
(Percentages of GDP)



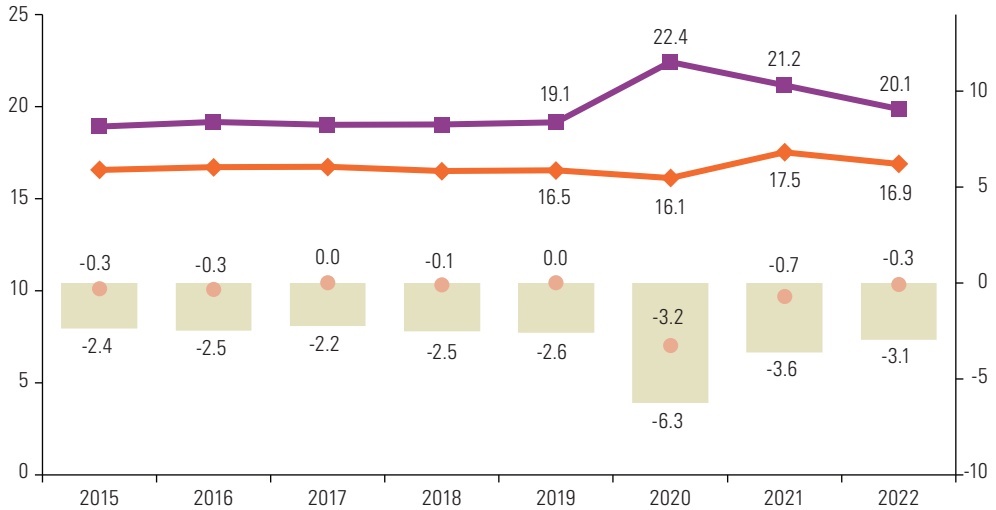
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] The countries included are: Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru and Uruguay.
[b] Simple averages. Data for 2022 are projections. In the cases of Argentina, Mexico and Peru, the figures refer to the national public administration, the federal public sector and general government, respectively.

These general trends are repeated in the different subregions of Latin America. The primary and overall balances are expected to decline as a result of a larger decrease in public spending than in total revenues (see figure I.57). However, fiscal circumstances differ from country to country. In Central America, Mexico and the Dominican Republic, the primary balance is projected close to equilibrium for 2022, with a deficit equivalent to 0.3% of GDP, near levels from before the pandemic. In contrast, in South America the primary deficit is expected to be greater than in the pre-crisis period and much larger than in Central America, Mexico and the Dominican Republic Nonetheless, these averages hide a variety of country-level situations in each group, with both substantial primary deficits and primary surpluses.

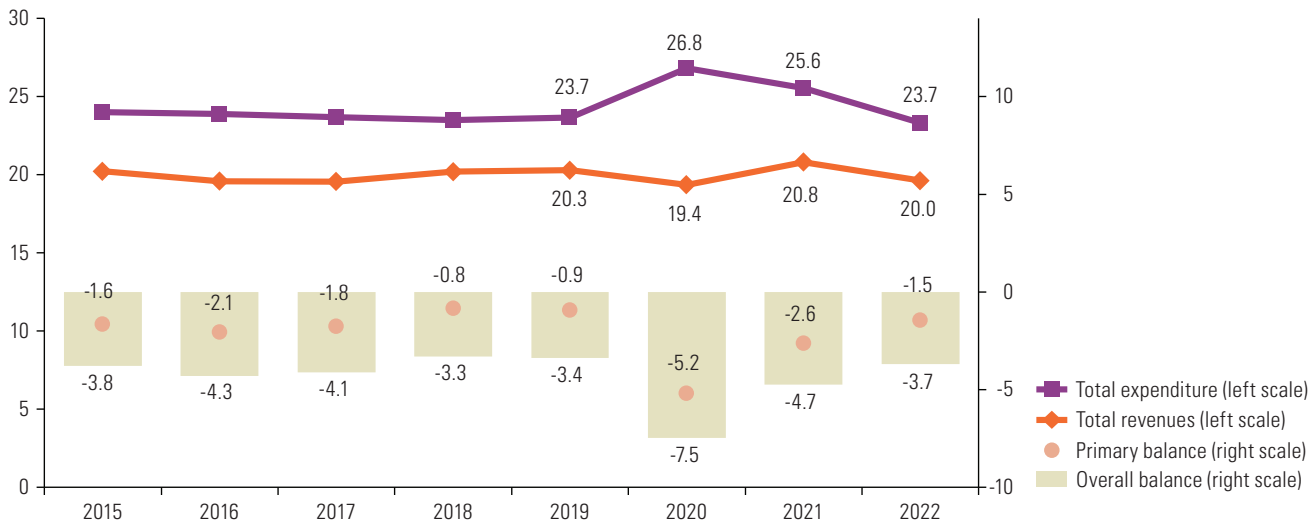
In the Caribbean, fiscal balances are expected to remain close to last year's levels. Although the primary balance is forecast to average -0.4% of GDP (-0.7% of GDP in 2021), it is anticipated that growth in interest payments will result in a slight increase in the overall deficit (see figure I.58). However, these averages hide a wide variety of projected balances at the country level. For example, the primary balance is expected to turn into a surplus in Antigua and Barbuda and Barbados; in Saint Kitts and Nevis, in contrast, the primary surplus is expected to be significantly smaller, after reaching 8.4% of GDP in 2021 as a result of a rise in income through the citizenship by investment programme. The high level of public debt in the Caribbean puts management of fiscal accounts under considerable pressure. In that regard, persistent primary and overall deficits affect debt patterns and gross borrowing requirements, which are already high in some countries.

Figure I.57
Latin America (16 countries): central government fiscal indicators, by subregion, 2015–2022[a]
(Percentages of GDP)

A. Central America (6 countries),[b] Mexico and Dominican Republic

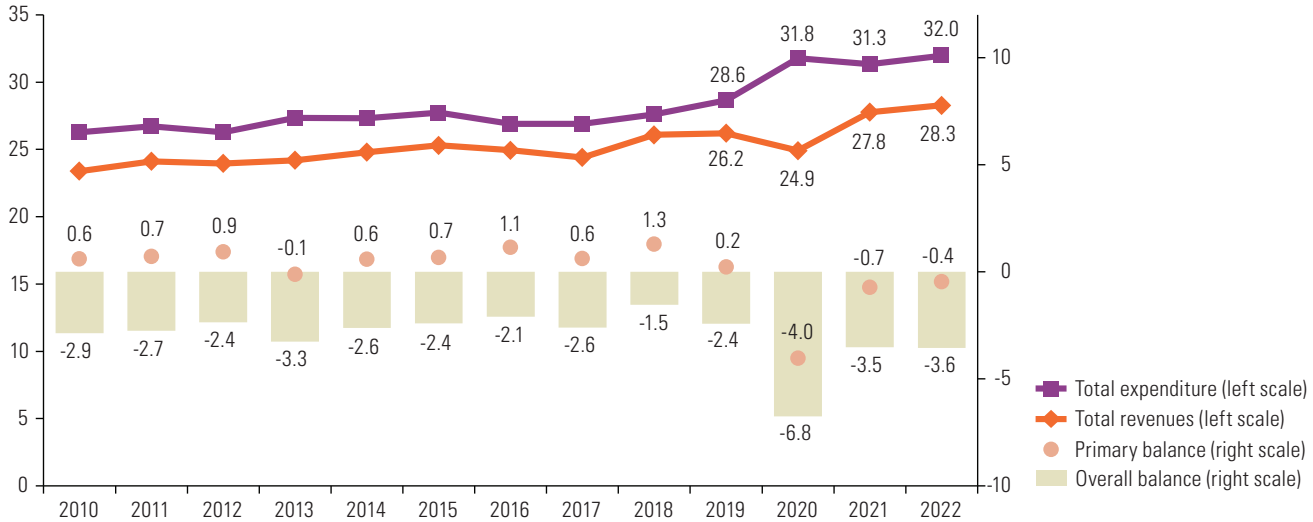


B. South America (8 countries)[c]



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Simple averages. Data for 2022 are projections. In the cases of Argentina, Mexico and Peru, the figures refer to the national public administration, the federal public sector and general government, respectively.
[b] The countries included are: Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama.
[c] The countries included are: Argentina, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru and Uruguay.

Figure I.58
The Caribbean (12 countries):[a] central government fiscal indicators, 2010–2022[b]
(Percentages of GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: The individual figures may not add up to the corresponding total because of rounding. Figures for Barbados, Belize and Jamaica are official estimates.
[a] The countries included are: Antigua and Barbuda, Bahamas, Barbados, Belize, Grenada, Guyana, Jamaica, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Saint Lucia, Suriname and Trinidad and Tobago.
[b] Simple averages. Data for 2022 are projections. The figures for Barbados correspond to the non-financial public sector, and those for Saint Kitts and Nevis to the federal government.

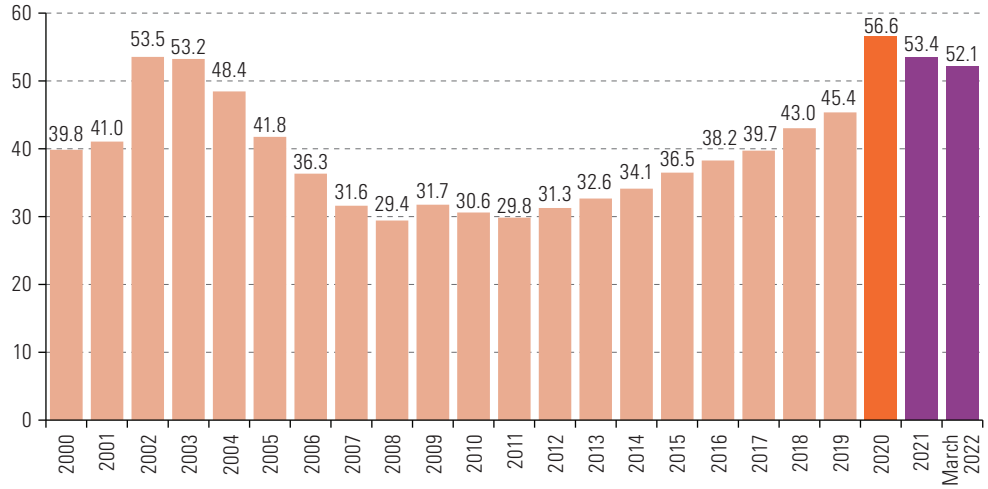
4. Public debt-to-GDP ratios set to decline

The central government public debt-to-GDP ratio of the countries of the region fell slightly in the first few months of 2022, primarily owing to a recovery in economic activity. Although this decline is a continuation of a trend that began in 2021, by March 2022 the average public debt-to-GDP ratio of 16 Latin American countries had reached 52.1%, 1.3 percentage points lower than at the end of 2021 (see figure I.59). In terms of subregions, in South America and the group of countries comprising Central America, Mexico and the Dominican Republic, public debt-to-GDP ratios stood at 54.1% and 50.2% in March 2022, respectively. The public debt-to-GDP ratio levels recorded between 2020 and 2022 reflect the substantial financing that countries in the region have required to meet the high costs of the pandemic. Although public debt levels improved in 2021 and 2022, they remain high in historical terms, and close to those recorded 20 years ago.

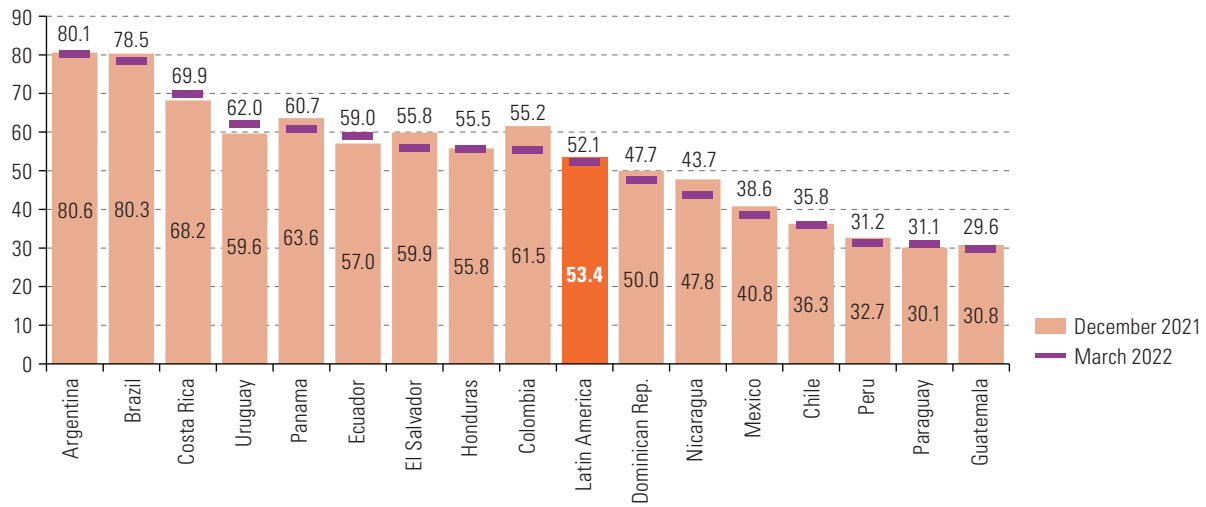
In Latin America, at the country level, Argentina had the highest public debt-to-GDP ratio in March 2022, at 80.1%, followed by Brazil with 78.5%, Costa Rica with 69.9% and Uruguay with 62%. In contrast, the countries with the lowest public debt-to-GDP ratios were Guatemala with 29.6%, Paraguay with 31.1% and Peru with 31.2%. Nominal GDP growth has had a noteworthy effect on public debt trends in the countries of the region through to March 2022. In the case of Brazil, whose debt-to-GDP ratio was 1.8 percentage points lower in March 2022 than at that the end of 2021, the fall is primarily a result of interaction among the different components of public debt dynamics, including the contribution of GDP growth. For example, the growth in GDP led to a large fall in the ratio that offset the rise in nominal accrued interest (Central Bank of Brazil, 2022).

Figure I.59
Latin America (16 countries): central government gross public debt, 2000–2022
(Percentages of GDP)

A. Central government gross public debt, 2000–March 2022



B. Central government gross public debt, by country, December 2021 and March 2022

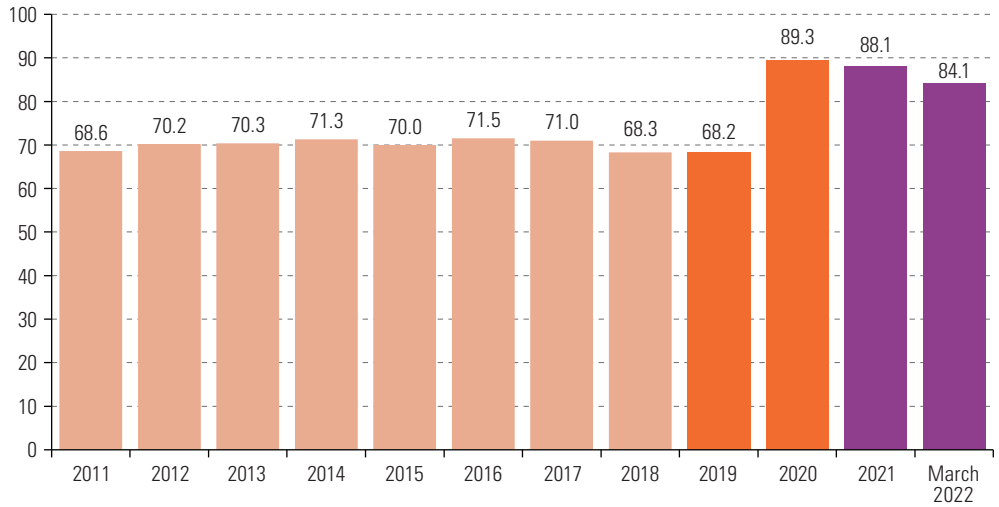


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: Figures for Brazil refer to the general government.

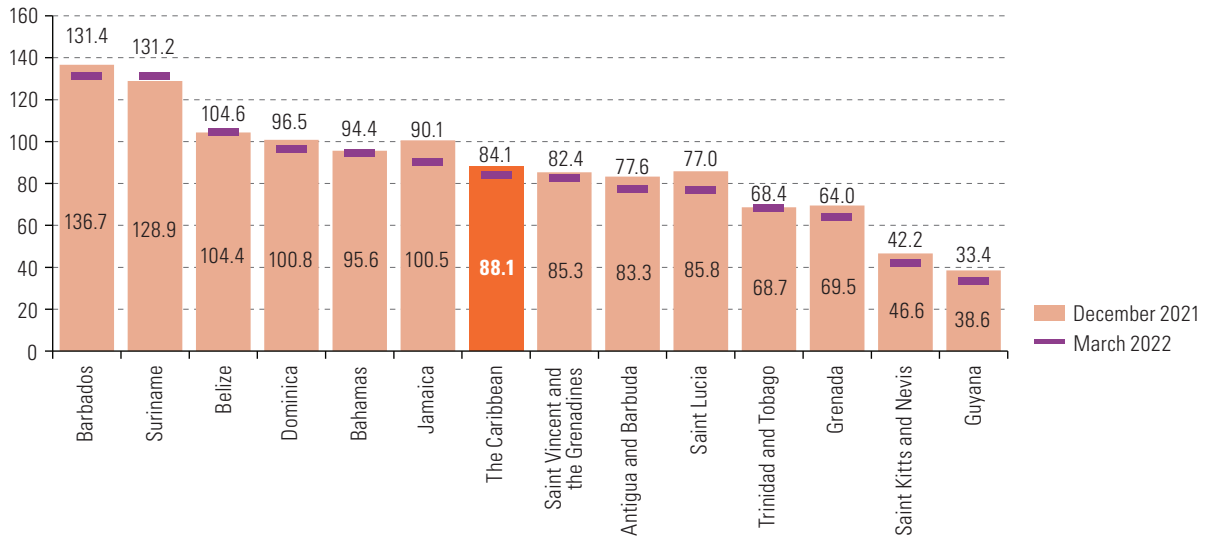
In the case of the Caribbean, the ratio of central government gross public debt to GDP reached 84.1% in March 2022, 4.0 percentage points lower than at the end of 2021 (see figure I.60). Barbados and Suriname stand out, with ratios of 131.4% and 131.2%, respectively. In the case of Suriname, the sharp rise in the debt-to-GDP ratio is primarily explained by the devaluation of the national currency. Despite the relative stability of the subregional average, the Caribbean countries still have very high debt levels compared to other regions with similar income levels. The effects of the pandemic on the subregion have considerably increased levels of public debt, with debt-to-GDP ratios of over 80% in the last few years.

Figure I.60
The Caribbean (13 countries): central government gross public debt, 2011–2022
(Percentages of GDP)

A. Central government gross public debt, 2011–March 2022



B. Central government gross public debt, by country, December 2021 and March 2022



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: Figures for Guyana refer to the public sector.

Trends in public debt-to-GDP ratios reflects rates of GDP growth, implicit interest rates and exchange rates. Given the current situation in the region, marked by hikes in local monetary policy rates across the board, together with monetary policy tightening in the United States, financing costs will foreseeably rise in 2022. The degree to which public accounts are sustainable will depend on the proactive management of debt portfolios; It is therefore extremely important for Latin American countries to analyse the risks related to their debt structures, by currency and domiciles of creditors. Higher levels of public debt are also eroding the medium-term sustainability of public finances, mainly owing to higher debt servicing costs, which have led to a worsening of the region's fiscal accounts (see box I.4).

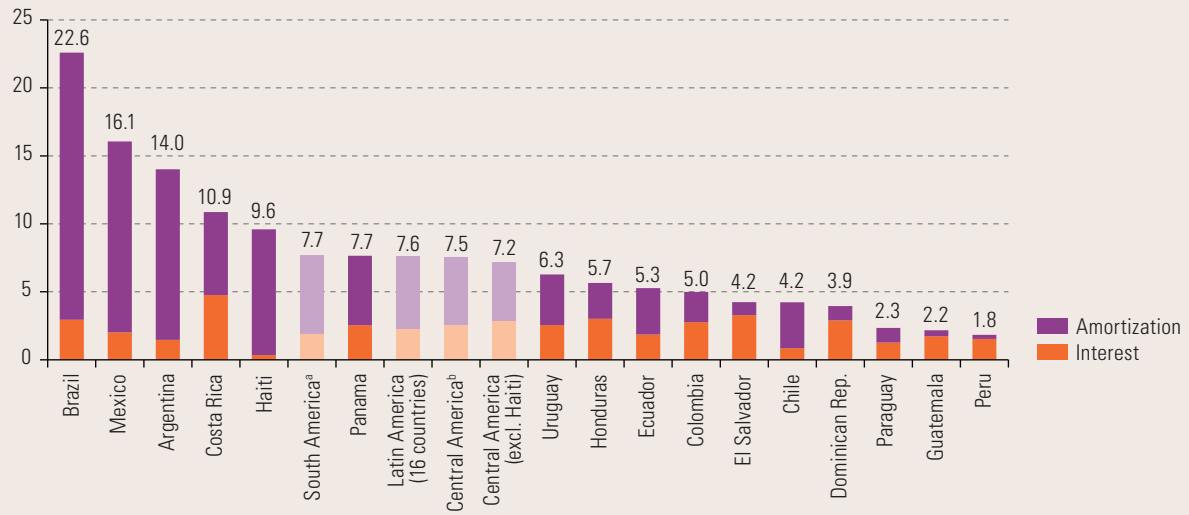
Box I.4
Public debt servicing pressure on the rise in Latin America in the wake of the COVID-19 pandemic

The stock of public debt is a useful measure of the financial position of Latin American governments, based on the nominal present value of their liabilities. Public debt service, understood as interest payments and repayment of principal, provides more precise information on the fiscal cost of the public debt stock. This information is key to fiscal and budgetary analysis, because it enables measurement of the financial flows related to public debt in a given year and the identification of potential liquidity problems that a country may face in the short term.

Over the course of 2021, the 16 Latin American countries for which information is available spent US$ 705.6 billion to service public debt, equivalent, on average, to 7.6% of GDP (see figure 1). A comparison of total public debt service as a proportion of GDP shows similar levels by subregion: 7.7% in South America and 7.5% in Central America (including Haiti and the Dominican Republic). However, ratios are very varied at the country level, ranging from 1.8% of GDP in Peru to 22.6% of GDP in Brazil.

To a certain extent, each country's interest and principal payments reflect its public debt stock, but it is important to consider that it depends mostly on the maturities of each public debt instrument and agreed interest. As a result, there are cases in which the gross stock of public debt is lower than in other countries, but the fiscal cost is higher in a given year. One case of this is Haiti, where public debt service was equivalent to 9.6% of GDP in 2021, but mainly comprised principal repayments (amortization), owing to the maturities of a significant portion of its treasury bonds in the domestic financial market. Conversely, in Colombia, the Dominican Republic, El Salvador, Guatemala, Honduras, Paraguay and Peru, public debt service during 2021 was below the regional average, but most outlays were interest payments.

Figure 1
Latin America (16 countries): total central government public debt service, 2021
(Percentages of GDP)

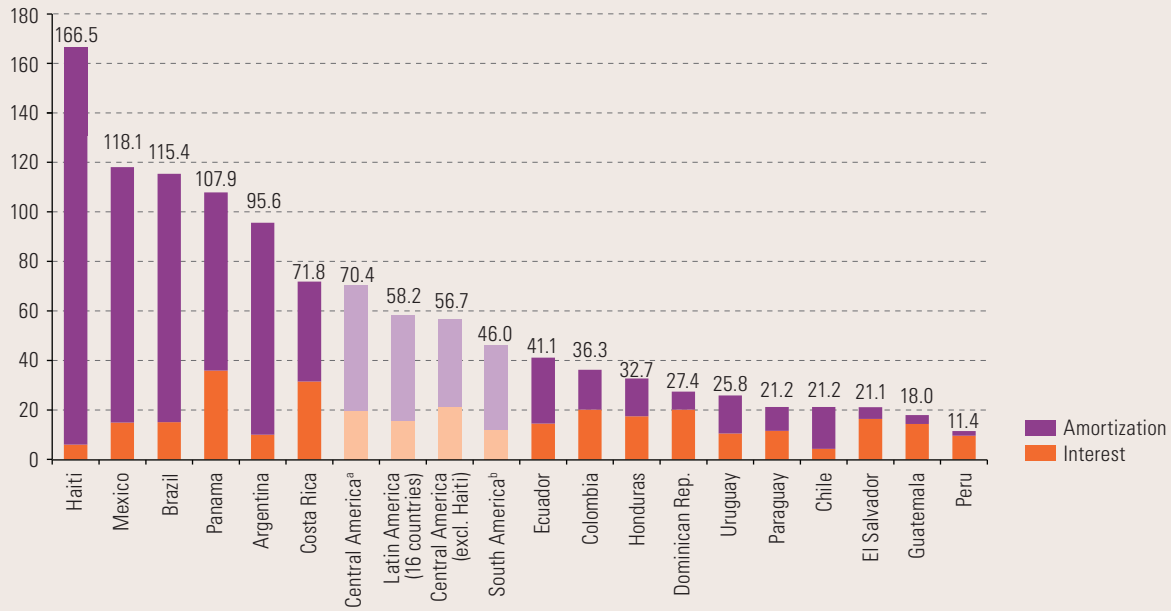


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: Figures for Argentina and Paraguay refer to the total for the public sector.
[a] Argentina, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru and Uruguay.
[b] Costa Rica, Dominican Republic, El Salvador, Guatemala, Haiti, Honduras, Mexico and Panama.

Another key indicator of liquidity risks for the region's central governments is total public debt service as a proportion of tax revenues. This indicator reveals governments' capacity to meet their financial commitments from their own recurrent resources.[a] At the regional level, for the 16 countries included in the sample, in 2021 total public debt service averaged 58.2% of tax revenues (see figure 2). This represented significant pressure on countries' financing requirements, since three quarters of the resources employed for repayments were obtained by issuing new debt securities.

Box I.4 (concluded)

Figure 2
Latin America (16 countries): total public debt service as a percentage of total central government revenues, 2021
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: Figures for Argentina and Paraguay refer to the total for the public sector.
[a] Costa Rica, Dominican Republic, El Salvador, Guatemala, Haiti, Honduras, Mexico and Panama.
[b] Argentina, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru and Uruguay.

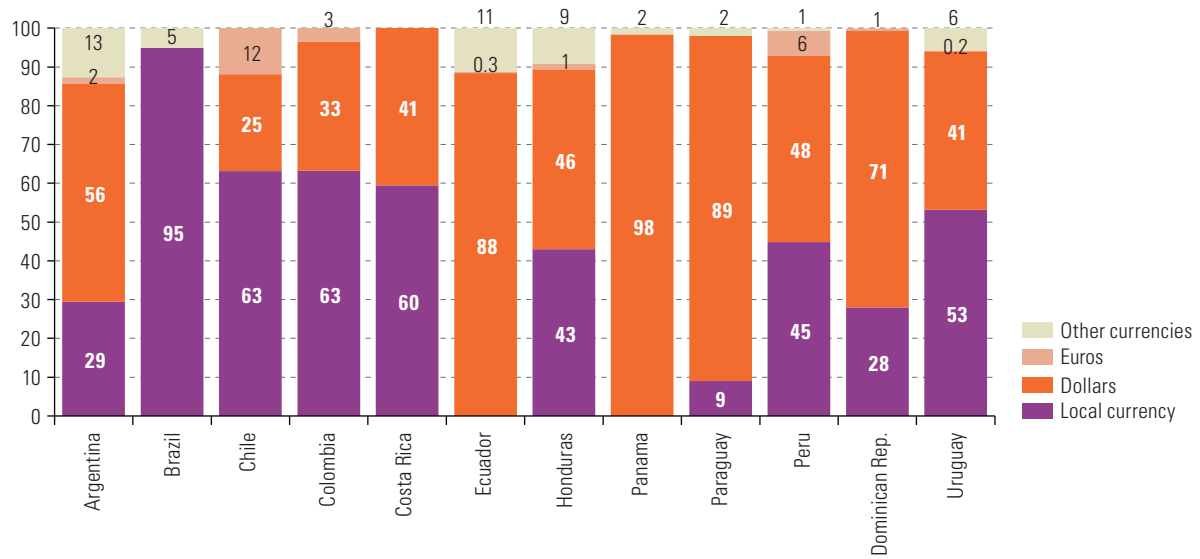
There is a marked difference between subregions: in 2021, public debt service of Central American countries was equivalent to 70.4% of tax revenues, compared to 46% in South America. The figure for Central America was substantially affected by Haiti's debt service payments, equivalent to 166.5% of tax revenues. These financial obligations were mainly serviced by issuing new treasury bonds in the domestic market, to refinance those that matured in 2021. Excluding the figures for Haiti, the Central American average is 10 percentage points above that of the South American countries (see figure 2).

The variety of situations among countries in terms of the ratio of public debt service to GDP is repeated when debt service is compared to tax revenues, but with some noteworthy differences. Brazil and Mexico also have the highest ratios among countries analysed in this case, with debt service equivalent in 2021 to 115.4% and 118.1% of tax revenues, respectively, but with lower interest payments than the other countries in the region that have lower ratios. In Costa Rica and Panama, debt service —equivalent to 107.9% and 71.8% of tax revenues, respectively— is also above the regional average, but with higher interest payments than Brazil and Mexico (see figure 2).

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Ratios of debt service to tax revenues should be interpreted with caution, as they do not reflect the proportion of tax resources that are actually used to service debt: repayments of principal are generally made by issuing new debt securities. The ratio of public debt service to tax revenues therefore provides insight into pressure on financing requirements and the rollover risks faced by countries in the short term.

By currency, the stock of public debt of the countries of the region is mostly denominated in dollars. At the country level, around 80% of the total debts of Argentina, the Dominican Republic, Ecuador, Panama and Paraguay is denominated in foreign currency, with large percentages in dollars (see figure I.61). The countries whose debt is mainly in local currency are Chile, Colombia and Costa Rica, with shares of dollar-denominated debt of less than 40%. In Brazil, the vast majority of public debt is denominated in local currency, and in dollarized countries such as Ecuador, El Salvador and Panama, financing is 100% dependent on other economies.

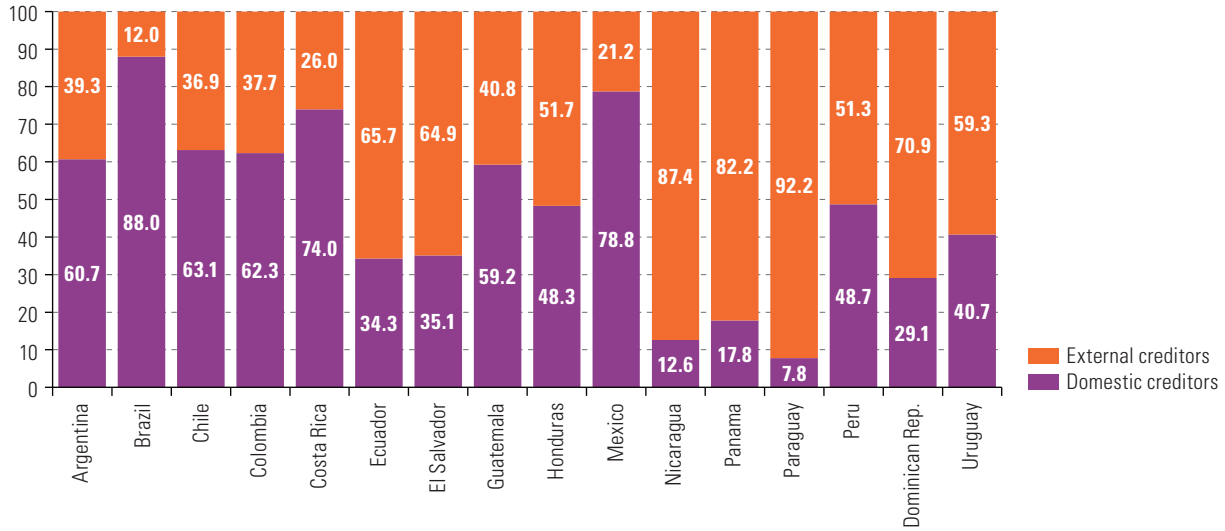
Figure I.61
Latin America (12 countries): central government gross public debt, by currency, March 2022
(Percentages of total)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: In the cases of Argentina, Chile, Costa Rica, Honduras and Paraguay, the figures shown correspond to the central government; in the case of Brazil, to the general government; in the case of Colombia, to national central government; in the cases of Ecuador, Panama, Peru and Uruguay, to the public sector; and in the case of the Dominican Republic, to the non-financial public sector. The figures for Ecuador and Honduras refer to December 2021.

Another key factor is the residence of the creditor and the share of each type of residence in central government financing. Although the region on average maintains a balanced structure between domestic and external creditors, the situation varies considerably from country to country. In the cases of Nicaragua and Paraguay, external creditors account for around 90% of total debt, highlighting the potential vulnerabilities to financial conditions in international markets (see figure I.62). In contrast, countries such as Brazil, Costa Rica and Mexico, with higher proportions of domestic financing, of more than 70% of total debt, are not as exposed to external vulnerabilities, but are significantly impacted by changes in local interest rates and the growth rate of the economy, among other domestic economic challenges.

Figure I.62
Latin America (16 countries): central government gross public debt, by residence of creditor, March 2022
(Percentages of total)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: Figures for Brazil refer to the general government.

5. Amid a persistent rise in domestic prices and lower growth prospects, the region's monetary authorities face the policy challenge of curbing inflationary pressures without exacerbating the economic slowdown

Although they recognize that current inflation is strongly supply-driven, central banks in the region have shifted their monetary policy stance from the pandemic-response emphasis on stimulating aggregate demand and promoting a recovery in supply, to policies aimed at preventing a misalignment of inflation expectations.

The biggest risk of this policy is that it may do little to attenuate inflationary pressures, which are largely external in origin (supply shock) but can exacerbate downward pressure on economic activity, especially investment, and pose a risk to financial stability. Nor are such measures very effective in anchoring inflation expectations, which in the current context are spurred mainly by uncertainty surrounding geopolitical tensions in commodity markets (energy and agricultural products in particular). Similarly, inflation expectations depend on the approach taken to solving persistent supply chain problems and rising international transportation costs.

Second-round or indirect exchange-rate effects will depend in part on anchoring inflation expectations and currency depreciation, which are influenced in turn by the ability of monetary authorities to mitigate destabilizing exchange-rate variations, especially those linked to the performance of international financial markets.

The COVID-19 crisis showed that policymakers in the region are willing to expand their range of action and use the tools at their disposal. Hence, in the present context, central banks must continue to use every tool available to avoid propagating the current external shock through the region's economies and prevent the economic slowdown from worsening. In order to preserve macrofinancial stability and rein in the pass-through of excessive exchange-rate variations, the authorities of the region will need to use and diversify exchange-rate tools, such as by intervening in foreign-exchange markets and adopting macroprudential measures targeting foreign-currency transactions, including the active management of international reserves, as well as the regulation of capital flows.

6. Authorities have responded to the upturn in inflation by tightening their monetary stance, raising policy rates and dampening growth in monetary aggregates

In March 2021, the Central Bank of Brazil began to raise its monetary policy rate, a decision followed by most of the monetary authorities in the region that opted for inflation targeting (see figure I.63). Only the Central Bank of Honduras has kept its monetary policy rate unchanged.

Table I.9 shows the adjustments made to monetary policy rates since January 2019. Most of the central banks adopted similar strategies, except for the Central Bank of Honduras, which has left its monetary policy rate unchanged since October 2020. This contrasts with the Central Bank of Peru, which has revised its rate 12 times.

Figure I.63
Latin America and the Caribbean (selected countries): monetary policy interest rate, January 2019–July 2022
(Percentages)

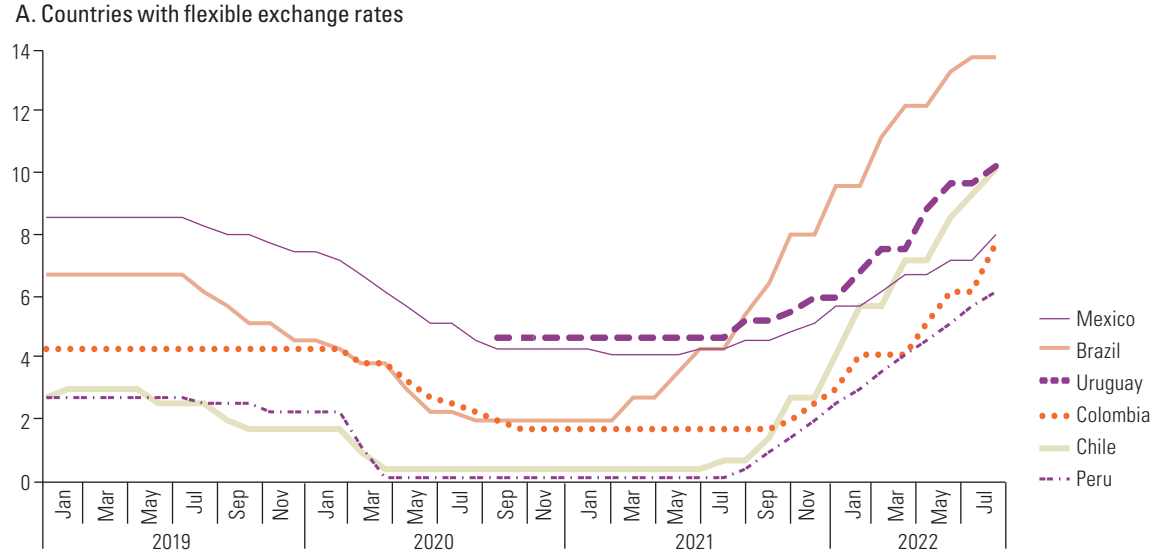
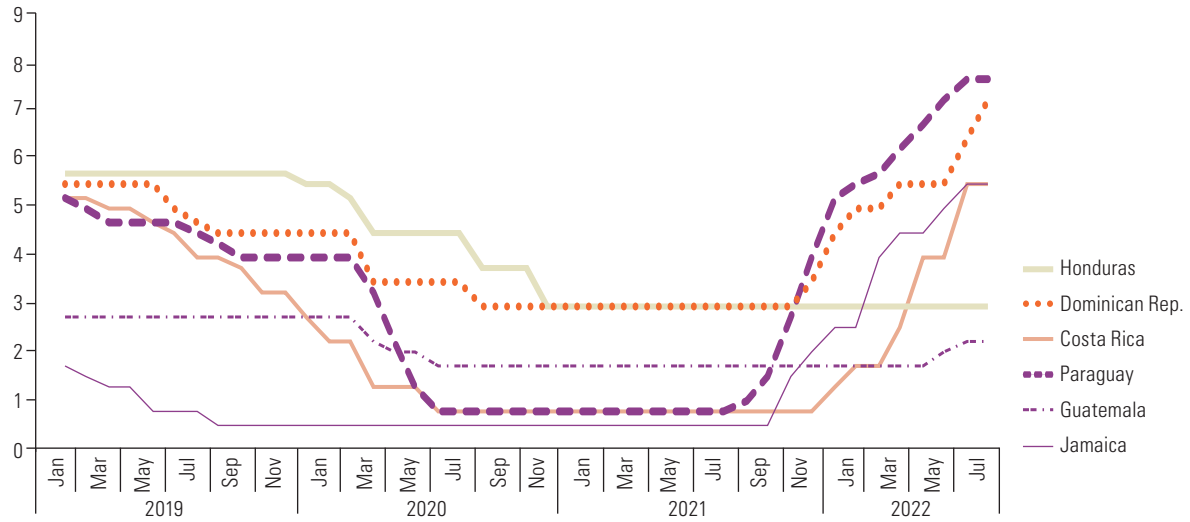


Figure I.63 (concluded)

B. Countries with intermediate exchange rates



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

Table I.9
Latin America and the Caribbean (countries that use the interest rate as the main monetary policy tool): variation in monetary policy rates, December 2020–July 2022
(Percentages and percentage points)

	Monetary policy rate, 31 December 2020 *(percentage)*	Beginning of the rate rise	Monetary policy rate, 15 July 2022 *(percentage)*	Variation *(percentage points)*	Number of rate increases	Average variation *(percentage points)*	Ratio between values at July 2022/ December 2020
Brazil	2.00	March 2021	13.25	11.25	11	1.02	6.6
Chile	0.50	July 2021	9.75	9.25	9	1.03	19.5
Colombia	1.75	October 2021	7.50	5.75	7	0.82	4.3
Costa Rica	0.75	December 2021	5.50	4.75	5	0.95	7.3
Dominican Republic	3.00	November 2021	7.25	4.25	6	0.71	2.4
Guatemala	1.75	May 2022	2.25	0.50	2	0.25	1.3
Honduras	3.00		3.00	0.00			
Jamaica	0.50	October 2021	5.50	5.00	7	0.71	11.0
Mexico	4.00	June 2021	7.75	3.75	9	0.42	1.9
Paraguay	0.75	August 2021	7.75	7.00	10	0.70	10.3
Peru	0.25	August 2021	6.00	5.75	12	0.48	24.0
Uruguay	4.50	August 2021	9.75	5.25	8	0.66	2.2

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.In terms of the magnitude of the adjustments, Brazil's rate has varied the most in absolute terms —11.25 percentage points— from 2.0% in December 2020 to 13.25% in July 2022, followed by Chile's rate, which increased 9.25 percentage points, from 0.5% in December 2020 to 9.75% in July 2022. Guatemala's rate varied the least, rising by 0.5 percentage points between December 2020 and July 2022.

In general, central banks recognize that a short-term increase in inflation is inevitable given that much of it stems from factors beyond their control, such as the price of energy and other commodities. However, they also argue that action is needed to bring short-term inflation expectations back to values consistent with the targets.[19]

[19] According to reports from the region's central banks, medium- and long-term expectations are within the accepted ranges for inflation targeting.

Table I.10 presents target inflation rates, maximum tolerance levels, core inflation and the date on which target inflation was exceeded. In most of these economies, inflation breached the upper limit of its target range in 2021, except in the Dominican Republic and in Costa Rica, where this occurred in September 2020 and February 2022, respectively. In other words, despite the efforts of monetary authorities, inflation has remained consistently outside the target range.

Table I.10
Latin America and the Caribbean (countries that use the interest rate as the main monetary policy tool): inflation rates, December 2020–July 2022
(Percentage)

Country	Inflation target	Maximum tolerance	Inflation (12 months)	Core inflation	Maximum tolerance exceeded	
			June 2022	June 2022	Date	Value
Brazil	3.5 ± 1.5%	5	12.0 [a]	9.6 [a]	February 2021	5.2
Chile	3 ± 1%	4	12.5	9.9	July 2021	4.5
Colombia	3 ± 1%	4	9.7	8.8	August 2021	4.4
Costa Rica	3 ± 1%	4	10.1	4.7	February 2022	4.9
Dominican Republic	4 ± 1%	5	9.5	7.1	September 2020	5.0
Guatemala	4 ± 1%	5	7.6	3.9	May 2021	6.0 [b]
Jamaica	4–6 %	6	10.9	10.3 [a]	August 2021	6.1
Mexico	3 ± 1%	4	7.7	7.8	March 2021	4.7
Paraguay	4 ± 2%	6	11.5	5.5	September 2021	6.4
Peru	2 ± 1%	3	8.8	3.6	June 2021	3.3
Uruguay	3–7 %	7	9.3	7.7	June 2021	7.3

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] May 2022.
[b] Maximum value, February 2022.

Also of note, given the 12-month inflation expectations reported by the region's central banks, monetary policy rates are positive in real terms in most of the countries, with the exception of the Dominican Republic, Guatemala and Jamaica (see table I.11).

Table I.11
Latin America and the Caribbean (selected countries): monetary policy rates, inflation expectations and monetary policy rates in real terms, June 2022
(Percentages)

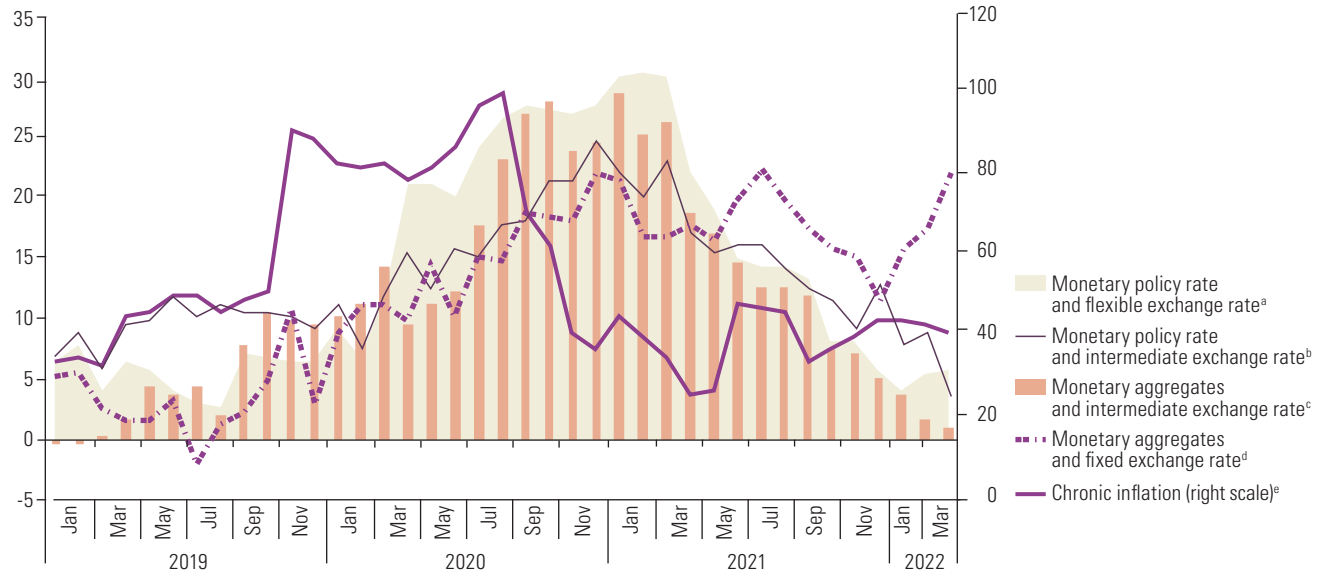
		Brazil	Chile	Colombia	Dominican Republic	Costa Rica	Guatemala	Jamaica	Mexico	Paraguay	Peru	Uruguay
Monetary policy rate	(a)	13.25	9.00	6.00	6.50	5.50	2.00	5.00	7.75	7.75	5.50	9.25
Inflation expectations	(b)	7.02	6.20	2.78	6.66	2.92	4.29	12.1 [a]	4.82	5.10	4.89	6.83
Real rate	(a-b)	6.23	2.80	3.22	-0.16	2.58	-2.29	-7.10	2.93	2.65	0.61	2.42

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: Information as of 26 June 2022.
[a] Data for March 2021.

Monetary aggregates have continued the slowdown begun in March 2021, reflecting the "normalization" of monetary policy following the withdrawal of various stimuli adopted to address the pandemic.

Figure I.64 shows how the monetary base has evolved since January 2019 in the region's economies, grouped by their monetary and exchange-rate frameworks. The figure indicates that the measures adopted by central banks fuelled substantial growth in the monetary base in 2020; however, the pace has slackened since the first quarter of 2021 and continues to do so. This dynamic has prevailed in all monetary and exchange-rate policy schemes, albeit with minor variations.

Figure I.64
Latin America and the Caribbean: monetary base, median 12-month rate of variation by country grouping, January 2019–March 2022
(Percentages)



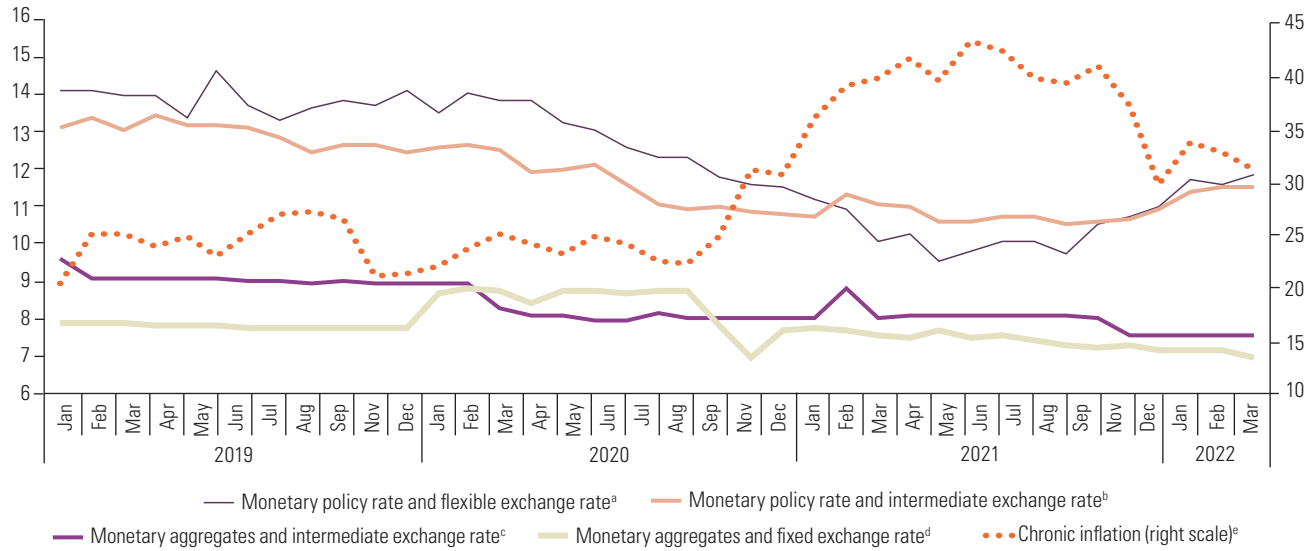
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: The classification of countries by their monetary and exchange-rate framework is based on the method described in IMF (2020).
[a] Brazil, Chile, Colombia, Peru, Mexico and Uruguay.
[b] Costa Rica, Dominican Republic, Guatemala, Honduras, Jamaica and Paraguay.
[c] Guyana, Nicaragua, Plurinational State of Bolivia, and Trinidad and Tobago.
[d] Economies with fixed exchange rates: Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines. Dollarized economies: Ecuador, El Salvador and Panama.
[e] Argentina, Bolivarian Republic of Venezuela, Haiti and Suriname.

Both in economies that use the monetary policy rate as their main instrument, and in those that use aggregates as their main instrument and have an intermediate exchange rate, monetary base growth in 2022 has been slower than before the pandemic began. In countries with chronic inflation, monetary base growth began to slow in August 2020, sooner than in the other groupings, in tandem with the efforts of authorities to curb high levels of inflation. In economies that target monetary aggregates and have fixed exchange rates, the monetary base has expanded since January 2022.

7. In economies that use the monetary policy rate as their main instrument, lending rates have increased since September 2021, whereas in economies that target monetary aggregates, lending rates continue to drop

Figure I.65 shows that in economies that use aggregates as their main policy instrument, lending rates declined steadily between January 2019 and September 2021. In economies using monetary aggregates and an intermediate exchange rate, a cumulative decrease of 2.0 percentage points, from 9.6% to 7.6%, was recorded between January 2019 and March 2022, while in fixed exchange-rate economies that target monetary aggregates, lending rates fell 1.0 percentage point, from 7.9% to 6.9%.

Figure I.65
Latin America and the Caribbean: median lending rates by country grouping, January 2019–March 2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: The classification of countries by their monetary and exchange-rate framework is based on the method described in IMF (2020).
[a] Brazil, Chile, Colombia, Peru, Mexico and Uruguay.
[b] Costa Rica, Dominican Republic, Guatemala, Honduras, Jamaica and Paraguay.
[c] Guyana, Nicaragua, Plurinational State of Bolivia, and Trinidad and Tobago.
[d] Economies with a fixed interest rate: Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia and San Vincent and the Grenadines. Dollarized economies: Ecuador, El Salvador and Panama.
[e] Argentina, Bolivarian Republic of Venezuela, Haiti and Suriname.

In the group of countries that use the monetary policy rate as their main tool and have a flexible exchange rate, nominal lending rates fell between January 2019 and September 2021, by 4.4 percentage points, from 14.1% to 9.7%. In economies with an intermediate exchange rate and where the monetary policy rate is the main tool, rates fell 2.6 percentage points, from 13.1% to 10.5%. However, this downward trend in lending rates reversed in September 2021 and rates have risen since. In flexible exchange rate economies, the increase between September 2021 and March 2022 was 2.2 percentage points. In those with an intermediate exchange rate, the increase was one percentage point. In economies with chronic inflation, lending rates have behaved differently, first rising by 22.8 percentage points between January 2019 and June 2021, then falling by 11.9 percentage points since.

8. Since the second quarter of 2020, growth in domestic credit to the private sector has slowed, with real rates lower than they were before the start of the pandemic

Significant monetary and fiscal stimulus measures adopted by authorities during the health crisis boosted lending in the first half of 2020, and in the second quarter in particular. Credit expansion then slowed in real terms throughout the region, however, as the crisis dragged on amid household and corporate debt, the uptick in inflation, toughened lending conditions and the consequent rise in credit risk, and strengthened provisions by financial institutions.

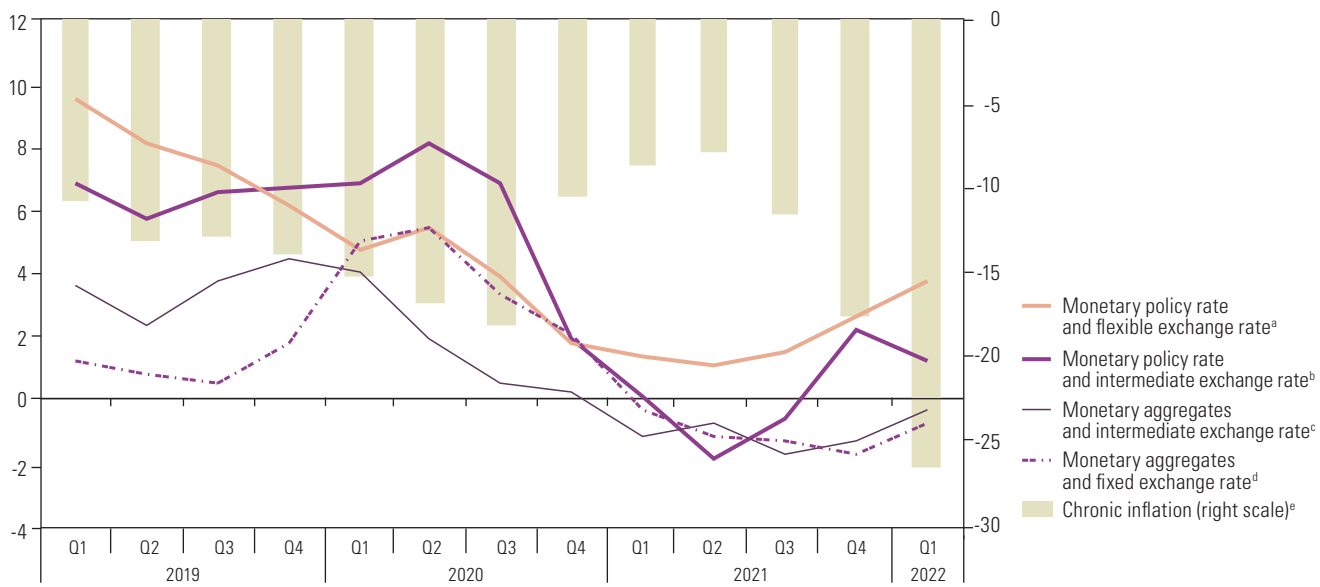
In flexible exchange rate economies using the monetary policy rate, the slowdown in private domestic credit growth in real terms became an outright contraction in the second and third quarters of 2021, with growth rates of -0.2% and -0.1%, respectively. However, in the fourth quarter of 2021 and the first quarter of 2022, domestic credit to the private sector returned to growth in real terms, but at much lower rates than those recorded pre-pandemic (2.7% and 1.2% respectively). In economies with an intermediate exchange rate that use the monetary policy rate as their main tool, growth in lending to the private sector has continued throughout the period under analysis. The average annual growth rate was 7.8% in 2019, 4.0% in 2020 and 1.7% in 2021. Notably, in the fourth quarter of 2021 and the first quarter of 2022, domestic lending to the private sector expanded, at rates of 2.7% and 3.8%, respectively.

In economies with fixed exchange rates, domestic credit to the private sector grew by an average of 1.1% in 2019 and 4.0% in 2020, and has contracted since the first quarter of 2021, with average rates of -1.1% in 2021, and -0.7% in the first quarter of 2022.

In economies that use monetary aggregate targets as the main policy instrument and maintain an intermediate exchange rate regime, policymakers' efforts failed to boost credit growth, which has been in decline since the third quarter of 2019.

Lastly, for economies with chronic inflation problems, credit to the private sector has been declining since 2015. For this group of countries, the easing of inflation and stronger nominal lending growth softened real-term contractions between the fourth quarter 2020 and the second quarter of 2021 compared to the fall seen between the first quarter of 2019 and the third quarter of 2020, but the pace of contraction has picked up again since the third quarter of 2021 (see figure I.66).

Figure I.66
Latin America and the Caribbean: trend of real domestic credit to the private sector, median annualized rates by country grouping, first quarter of 2019–third quarter of 2021
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: The classification of countries by their monetary and exchange-rate framework is based on the method described in IMF (2020).
[a] Brazil, Chile, Colombia, Peru, Mexico and Uruguay.
[b] Costa Rica, Guatemala, Honduras, Jamaica, Paraguay and Dominican Republic.
[c] Guyana, Plurinational State of Bolivia, Nicaragua, and Trinidad and Tobago.
[d] Economies with fixed exchange rates: Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines. Dollarized economies: Ecuador, El Salvador and Panama.
[e] Argentina, Bolivarian Republic of Venezuela, Haiti and Suriname.

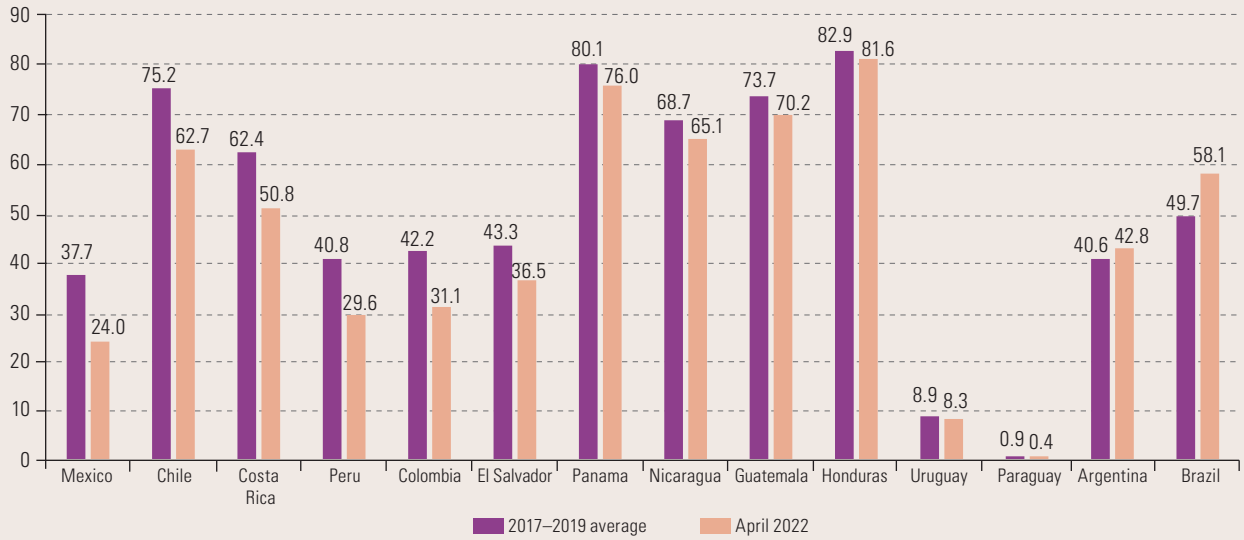
Box I.5
Higher exchange rate volatility since the outbreak of the pandemic has increased misalignments between debt maturities and the deposit-taking by financial institutions

Financial intermediaries usually match long-term financing needs with short- or medium-term savings or funding sources[a] and assume the inherent liquidity risk. However, since the beginning of the pandemic, mismatches between debt issuance and funding terms have increased, prompting financial intermediaries to adjust in different ways. In effect, time deposits dropped between 13.6 and 0.5 percentage points of total deposits (see the figure), reflecting a growing preference on the part of savers to have free access to their resources, weaker savings capacity amid casualization of the labour market and mounting inflation, as well as negative real deposit rates that have not responded to monetary policy rate hikes as keenly as in the past.

Fixed-term financing fell more sharply in economies such as Chile, Mexico and Peru, partly owing to the withdrawal of pension funds contributions in order to mitigate the negative impact of COVID-19 on households. This measure reduced the resources available to institutional investors with long-term portfolios in the financial system.

Greater uncertainty regarding the stability of funding sources due to the restructuring of maturities has driven financial institutions to channel activity into variable-rate and 'hybrid' loans, which combine a fixed rate and one that fluctuates according to market conditions. This adversely impacts borrowers' repayment capacity, an effect that is expected to worsen with monetary policy tightening. Alternatively, loan portfolios have been restructured towards shorter maturities, such as consumer and commercial loans. This strategy allows financial institutions to increase short-term returns and spread their risks more widely, since these loan categories carry higher interest rates and channel smaller sums of money.

Latin America and the Caribbean (14 countries): time deposits as a proportion of total deposits in financial systems, 2017–2019 average and April 2022
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

Source: Economic Commission for Latin America and the Caribbean (ECLAC).
[a] Origin of monetary resources used to channel credit, such as deposits by the public.

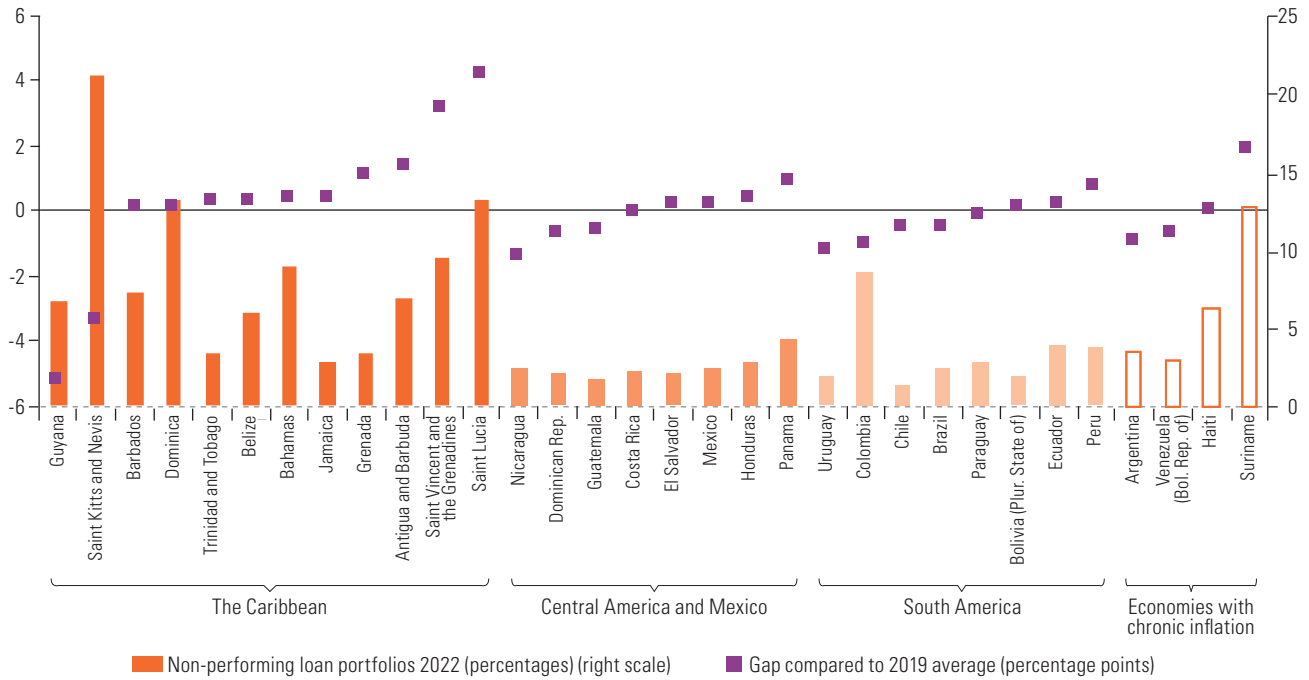
9. The non-performing loans portfolio has increased across the region in 2022

In the context of the crisis generated by the pandemic, governments and monetary authorities in the region adopted various measures to mitigate potential risks to financial stability linked to deteriorating loan portfolios. These measures included the easing of certain rules regarding the accounting treatment of loan portfolios, such as the establishment of grace periods, rescheduling of payments and restructuring of

existing loans in 2020. These measures sought to assist borrowers by giving them extra time to repay their debts, to avoid temporary liquidity problems triggering insolvency. For financial institutions, it implied changing the method used to calculate non-performance, to prevent a supposedly temporary deterioration in credit quality from affecting mandatory loan-loss provisions.

However, in light of the slow and patchy recovery of economic activity in the region in 2021 and as regulatory easing and other credit stimulus measures were wound down, in the first half of 2022 non-performing portfolios grew in comparison to average 2019 rates in 19 of the 32 countries considered —over half of the region's economies (see figure I.67). The regional median shows an increase in overdue payments of 0.11 percentage points between 2019 and 2022.

Figure I.67
Latin America and the Caribbean (32 countries): recent variations in non-performing loan portfolios in the region's financial systems, January–May 2022
(Percentage points and percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

Figure I.67 shows that the largest increase in non-performing loans occurred in Caribbean economies — more than one percentage point in the cases of Antigua and Barbuda, Grenada, Saint Lucia, and Saint Vincent and the Grenadines. Loan non-performance in the Caribbean reflects a sluggish recovery in the hotel and tourism sectors, as well as the effects of Hurricane Elsa in 2021. Other economies, such as Panama, Peru and Suriname, have also recorded an increase in non-performing loans.

The uptrend in loan portfolio arrears may continue in the coming months as regulatory standards increasingly return to pre-crisis patterns, in addition to the effects of slow GDP and employment growth amid rising interest rates. It is important to monitor this variable, and to standardize its accounting treatment between entities and countries, as a sustained expansion of non-performing portfolios could compromise the resilience of the region's financial systems.

10. In 2022, exchange-rate volatility has worsened and currency depreciation has steepened in most of the region's economies, leading to an increase in foreign-exchange interventions and greater reliance on international reserves

Current conditions, characterized by growing global inflationary pressure and lower global growth forecasts, as well as a harshening of external financial conditions —judging by recent announcements by the United States Federal Reserve and the European Central Bank (IMF 2022b)— is likely to heighten macrofinancial risks faced by countries in the region (with greater volatility in international capital flows and excessive exchange-rate volatility, among others).

Recent years have seen growing exposure in the region to the risks generated by the link between exchange-rate fluctuations and international capital flows, largely due to increased trade and financial openness (BIS, 2019). Previous crises have also shown that tightening monetary policy in advanced economies places pressure on the financial systems of developing countries, including those in the region, resulting in severe and prolonged repercussions in the real sector (Arteta and others, 2015).

Thus, in the first half of 2022, exchange-rate volatility, as measured by the half-yearly average daily exchange-rate variation, in absolute terms, increased for most of the economies in the region with an adjustable exchange rate. In total, 14 economies in the region experienced higher exchange-rate volatility in the first half of 2022 than in the second half of 2021. In nine cases, this higher volatility in the first half of 2022 exceeded 2021 levels for the same period, and in seven, it exceeded the volatility for the whole of 2021 (see figure I.68).

Figure I.68
Latin America and the Caribbean (18 countries): nominal exchange-rate volatility, six-month average of absolute daily variations, first half of 2020–first half of 2022
(Percentages)

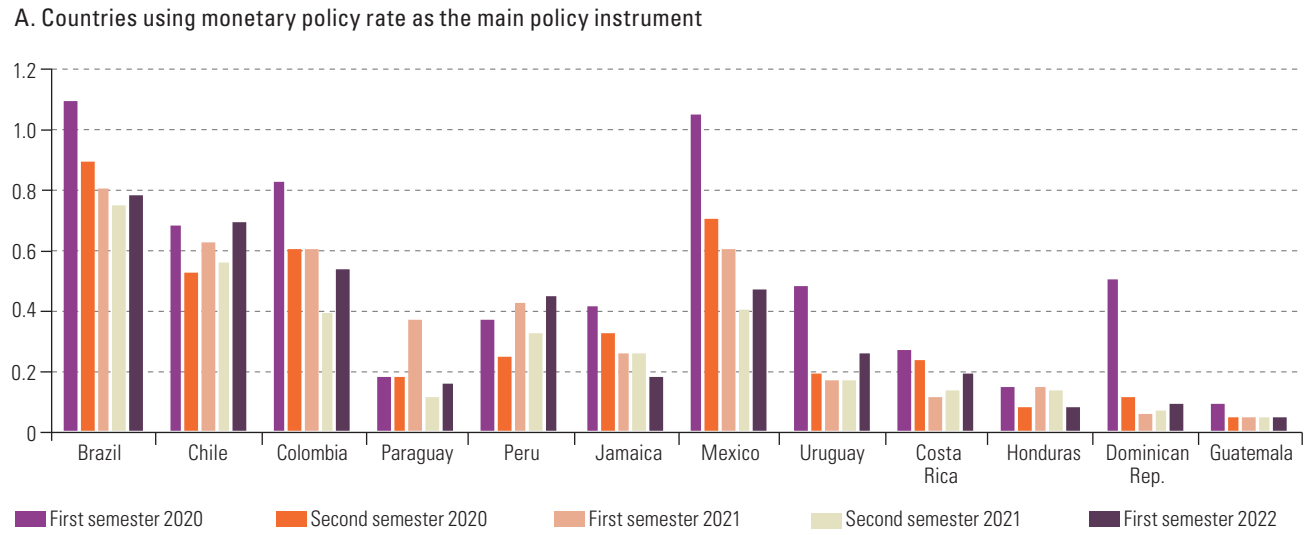
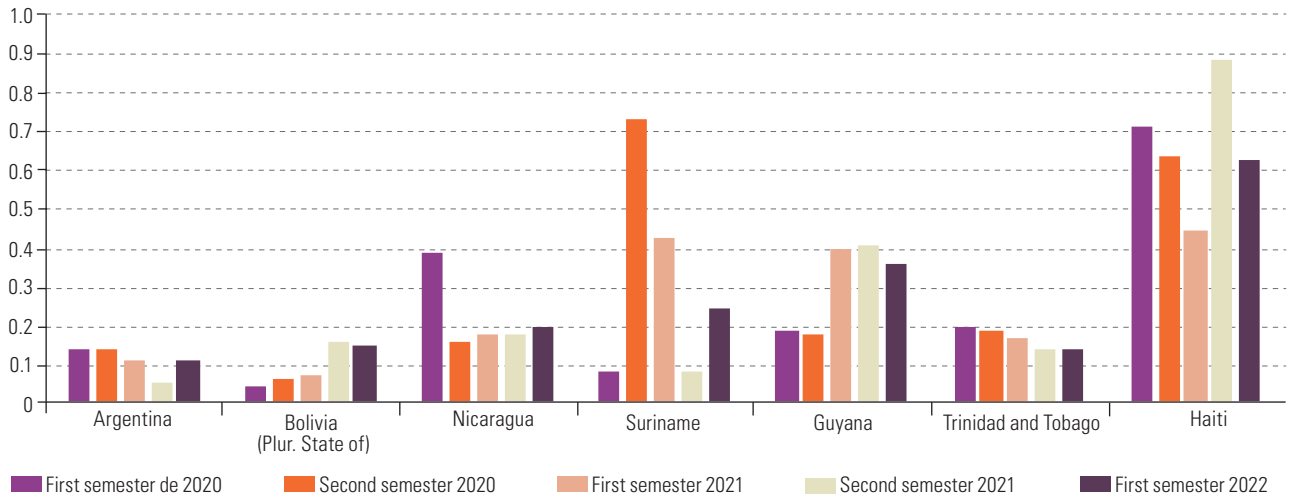


Figure I.68 (concluded)

B. Countries using aggregates as the main policy instrument[a]



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Includes countries with chronic inflation.

In the first half of 2022, 12 of the region's economies reported currency depreciation against the dollar as compared to late 2021. Average depreciation in the region's currencies in the first half of 2022, excluding the economies with chronic inflation, was 3.3% (see table I.12). In economies with chronic inflation, the rate of depreciation climbed over the period, with rates of 26.9% in Argentina, 14.0% in Haiti and 9.1% in Suriname. In the Bolivarian Republic of Venezuela, bolivar depreciation slowed from 42.7% in the second half of 2021 to 20.4% in the first half of 2022.

Table I.12
Latin America and the Caribbean (20 countries): half-yearly variations in nominal exchange rates for the dollar, first six months of 2021–first six months of 2022
(Percentage)

A. Economies using monetary policy rate and a flexible exchange rate							B. Economies using monetary policy rate and an intermediate exchange rate					
	Brazil	Chile	Colombia	Mexico	Peru	Uruguay	Costa Rica	Honduras	Jamaica	Paraguay	Dominican Republic	Guatemala
First half 2020	35.9	9.2	14.4	21.5	6.7	13.0	1.2	0.5	5.9	5.5	9.5	0.0
Second half 2020	-5.0	-13.5	-8.8	-13.4	2.2	0.1	5.7	-2.5	1.3	1.4	-0.1	1.2
First half 2021	-4.3	3.4	9.5	0.1	6.9	3.2	1.0	-0.9	6.2	-2.3	-2.0	-0.5
Second half 2021	12.1	16.0	8.3	3.0	3.4	2.3	3.7	2.4	2.2	1.8	0.4	-0.4
First half 2022	-3.0	10.4	9.1	-0.4	-2.2	-6.4	4.7	0.5	-1.1	0.2	-5.0	0.5

C. Economies using aggregates and intermediate exchange rates					D. Economies with chronic inflation			
	Bolivia (Plurinational State of)	Nicaragua	Guyana	Trinidad and Tobago	Argentina	Haiti	Suriname	Venezuela (Bolivarian Republic of)
First half 2020	0.0	1.2	1.0	-0.4	17.7	14.5	4.8	325.1
Second half 2020	-0.3	1.2	0.0	0.3	19.4	-4.2	81.6	458.7
First half 2021	0.0	0.4	0.0	0.4	13.8	-13.8	48.1	190.9
Second half 2021	0.2	1.2	-1.0	-0.1	7.3	10.3	0.8	42.7
First half 2022	-0.2	1.0	0.6	0.2	26.9	14.0	9.1	20.4

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

In addition, since the beginning of the pandemic crisis, sudden capital outflows and the consequent cumulative depreciation of local currencies have revived some exchange-rate pass-through channels to the real, monetary and financial sectors, according to the specific characteristics of each country (production structure, depth of capital markets, role of bank and non-bank intermediation, partial dollarization and performance of fintech companies, as well as the degree of trade and financial integration).[20]

Through imports, local-currency depreciation can directly accelerate inflation, owing to the high share of tradable goods in the reference consumption basket (food and energy) and, indirectly, from the pass-through of global inflation to domestic prices through higher production, distribution and transportation costs, as rising international prices for raw materials spread to all components of the basket.

At the same time, the capital flow volatility closely associated with extreme exchange-rate fluctuations may intensify exchange-rate pass through via the financial channel and adversely impact domestic financial conditions. High exchange-rate volatility triggers currency mismatch risks —in particular where countries engage in considerable foreign-currency intermediation— both directly, for bank balance sheets, and indirectly, for household and corporate balance sheets. As a result, persistent local-currency depreciation can push up the debt burden and the cost of debt servicing, and, in turn, increase credit risk, triggering sudden capital outflows along with tighter financing conditions and successive exchange-rate depreciations. This is in addition to the impact of the exchange rate on capital markets with a large share of more risk-averse international investors.

Finally, the impact of exchange-rate fluctuations on the real sector, through trade, highlights the increasing relevance of trade finance, insofar as dollar appreciation pushes up the cost of commercial borrowing in local currency. In this scenario, local-currency depreciation does not provide an automatic boost for the exports of the countries in the region.

Monetary authorities in the region should therefore continue to use multiple tools, such as intervention in foreign-exchange markets and diversification of foreign-exchange instruments, in addition to macroprudential foreign-exchange and capital control measures, to preserve macrofinancial stability and avoid amplifying the channels for pass-through of excessive exchange-rate fluctuation at times when this is liable to occur.

Box I.6

In recent years, the mismatch between the loan portfolio and foreign-exchange holdings has increased, reflecting the impact of higher macrofinancial volatility

The uncertainty generated by the COVID-19 pandemic, growing international financial volatility and the corresponding fluctuations in the region's currencies have caused shifts in agents' portfolios in some countries, which in turn have translated recently into changes in levels of financial dollarization, defined as the ratio between deposits and loans in United States dollars and total deposits and loans. The high rates of inflation are tending to intensify the currency reconfiguration of portfolios.

Financial dollarization has different implications for savers, borrowers and financial intermediaries, and where mismatches exist, could pose a risk to the stability of financial systems. An increase in foreign-currency savings in the local financial system reflects depositors' intention to hedge against exchange-rate movements while keeping their assets in the local system. In this transaction, financial institutions' profits are diminished amid any significant acceleration in local-currency depreciation, which in turn could increase liquidity risk in the event of a rush to withdraw funds. On the credit side, financial institutions borrow more in foreign currency to hedge against the risk of exchange-rate fluctuation eroding the value of their loan portfolio. In this transaction, it is borrowers who assume the foreign-exchange risk. For financial institutions, this risk diversification strategy could come at a cost of greater credit risk, inasmuch as exchange-rate volatility affects borrowers' ability to repay.

The figure shows the evolution of the dollar-denominated deposit-to-loan ratio in four countries in the region: Chile, Paraguay, Peru and Uruguay. These countries employ a similar monetary scheme, where the monetary policy rate is the main policy instrument and exchange rates are flexible. In addition, agents in these countries can take out loans and make deposits in foreign currency within their financial system, as reflected in the levels of financial dollarization, which, as of the first quarter of 2022, stood at 19% in Chile, 46% in Paraguay, 29% in Peru and 65% in Uruguay.

[20] On this point, see BIS (2021).

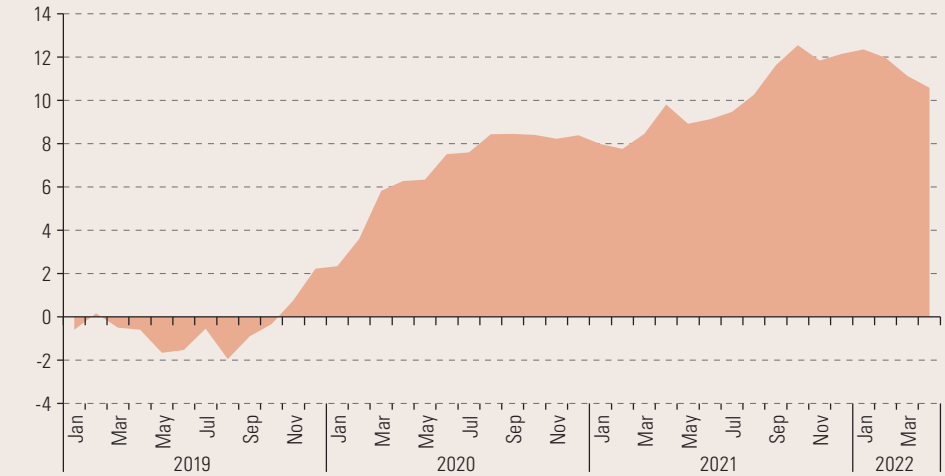
Box I.6 (continued)

Latin America (4 countries): mismatches between dollar-denominated deposits and loans in financial systems, January 2019–April 2022

(Billions of units in local currency)

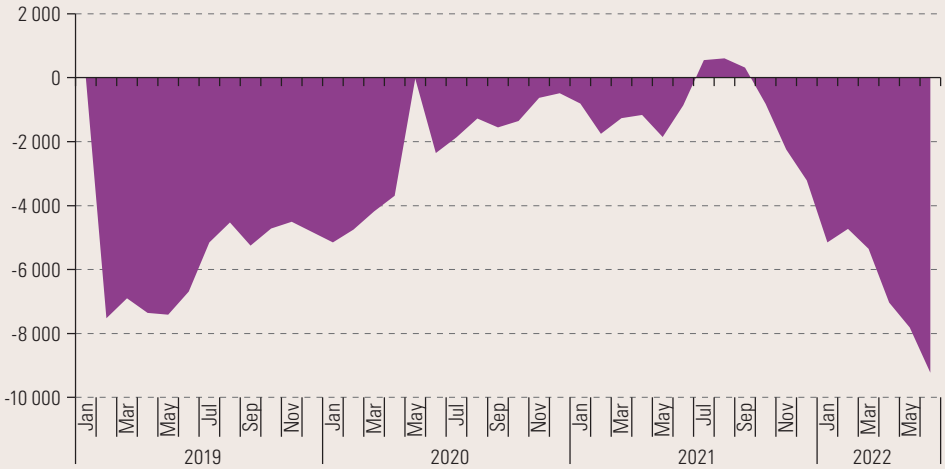
A. Chile

(billions of Chilean pesos)



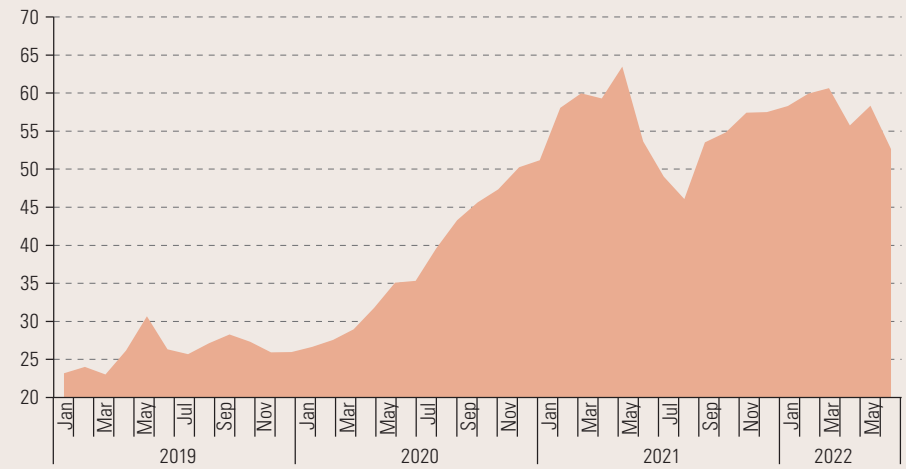
B. Paraguay

(billions of guaranies)



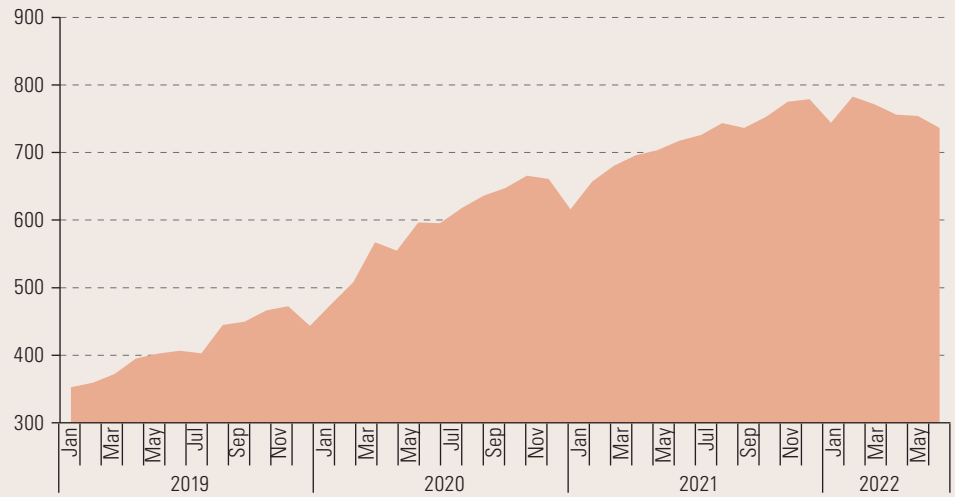
C. Peru

(billions of soles)



Box I.6 (concluded)

D. Uruguay
(billions of Uruguayan pesos)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

The figure shows the difference between loans and deposits in foreign currency in the financial system of these countries, reflecting the mismatch. In all four economies, the mismatch widened in the first four months of 2022 compared to 2021 averages. Secondly, while in Chile, Peru and Uruguay, the mismatch translates into a higher growth rate for foreign-currency deposits than loans, leading to a positive mismatch indicator, in Paraguay, the foreign-currency loan growth rate is higher than the deposit growth rate, and the mismatch indicator is therefore negative.

In Chile, the significant change in the level of mismatch since the end of 2019 and the increase since mid-2021 are both notable. In the case of Uruguay, the mismatch has increased steadily since January 2019. In Paraguay, it peaked in the fourth quarter of 2018 and then declined between the fourth quarter of 2020 and the fourth quarter of 2021. In 2022, mismatch levels in Paraguay were similar to January 2019 levels. In Peru, the level of mismatch increased at the beginning of the pandemic, in March 2020, and subsequently decreased beginning in April 2021.

Source: Economic Commission for Latin America and the Caribbean (ECLAC).

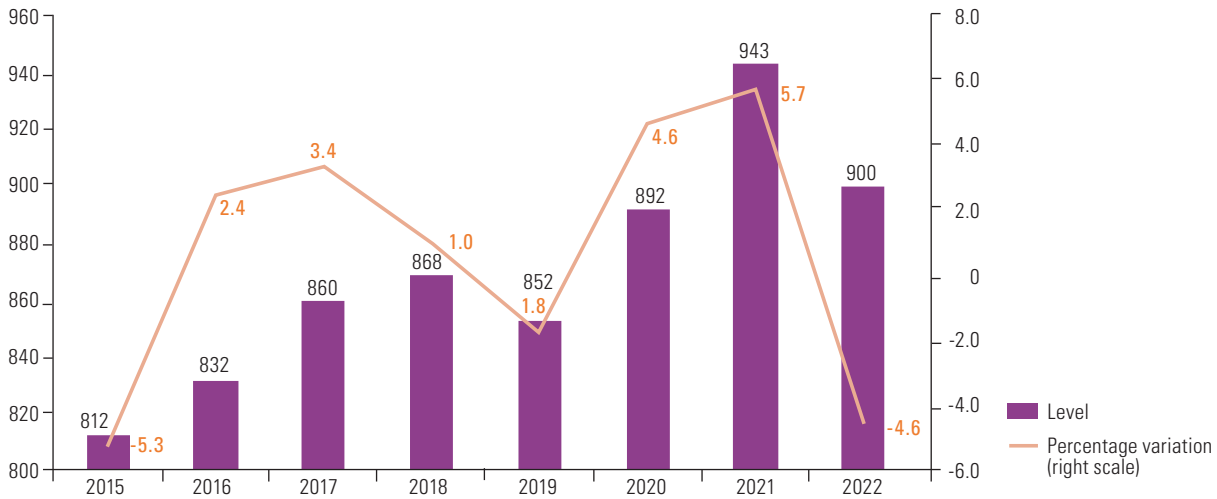
11. After growing in 2020 and 2021, international reserves in Latin America and the Caribbean shrank during the first half of 2022

Since the onset of the COVID-19 crisis, central banks in the region have adopted a range of measures to dampen exchange-rate volatility, absorb sudden, voluminous capital outflows and deal with significant currency depreciations and rising risk premia (ECLAC 2021a and 2021b).

The establishment of swap lines and liquidity facilities with the United States Federal Reserve and international financial institutions, together with increased bond issuance on the voluntary markets and improved terms of trade since mid-2020, which became more pronounced in 2021, were among the factors that enabled countries in the region to strengthen their foreign asset position. The evolution of reserves through 2021 also benefited from a stronger recovery in exports compared to imports, an increase in remittances and the rise in value of central bank gold reserves, as well as the transfer of special drawing rights by the International Monetary Fund in August 2021. On the other hand, reduced revenues from tourism activities, increased imports and growing efforts to stabilize the foreign-exchange market have dissipated reserves in some of the region's economies.

This overall picture of growing international reserves in the region shifted in the first half of 2022, when they fell by 4.6%, following expansions of 4.6% and 5.7% in 2020 and 2021, respectively (see figure I.69). Despite the drop in reserves, the levels observed as of June 2022 exceeded those of 2020.

Figure I.69
Latin America and the Caribbean: variation in international reserves, 2015–June 2022
(Billions of dollars and percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

International reserves shrank in 18 countries, 12 in Latin America and 6 in the Caribbean, while they grew in 13, of which 6 were in Latin America and 7 in the Caribbean (see figure I.70). The economies with the largest reserves increases were Saint Lucia (86.2%), Antigua and Barbuda (49.8%), Ecuador (46.2%) and Saint Vincent and the Grenadines (29.3%), while those with the sharpest contractions were Saint Kitts and Nevis (21.8%), Chile (14.1%) and Costa Rica (13.2%). The sum of the value of the decreases in international reserves in Brazil, Mexico and Chile represents 96% of total losses recorded by the region, reflecting the relative size of these markets.

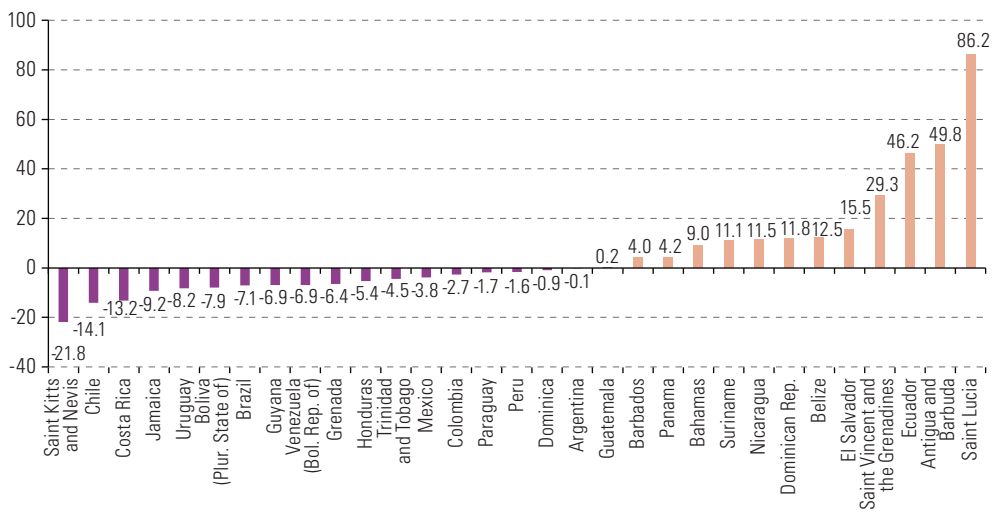


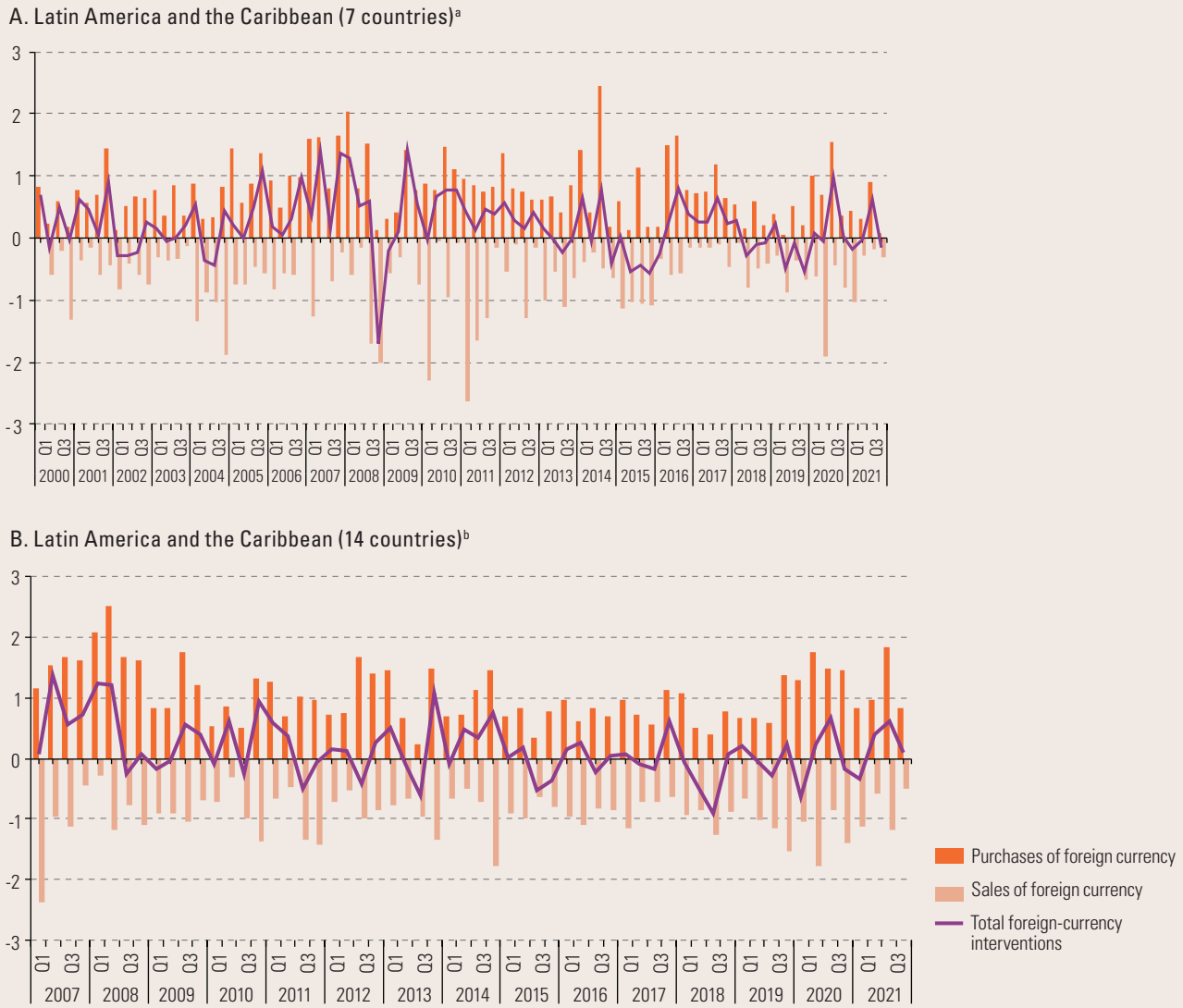
Figure I.70
Latin America and the Caribbean (31 countries): variation in international reserves, December 2021–June 2022
(Percentages)

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

Box I.7
Foreign-exchange interventions have been widely used in the region to deal with increased financial volatility and, in recent years, they have been complemented by more active use of macroprudential measures

As shown in figure 1, the close link between capital flow volatility and sudden movements in the exchange rate has prompted countries to engage in foreign-exchange market interventions. Even those with a flexible exchange-rate system tend to intervene frequently in the foreign-exchange market, which reflects monetary authorities' concern with attenuating high exchange-rate volatility.

Figure 1
Latin America and the Caribbean (selected countries): foreign-exchange interventions by quarter, 2000–2021
(Percentages of GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of G. Adler and others, "Foreign exchange intervention: a dataset of public data and proxies", *IMF Working Paper Series,* Washington, D.C., International Monetary Fund (IMF), 2020.

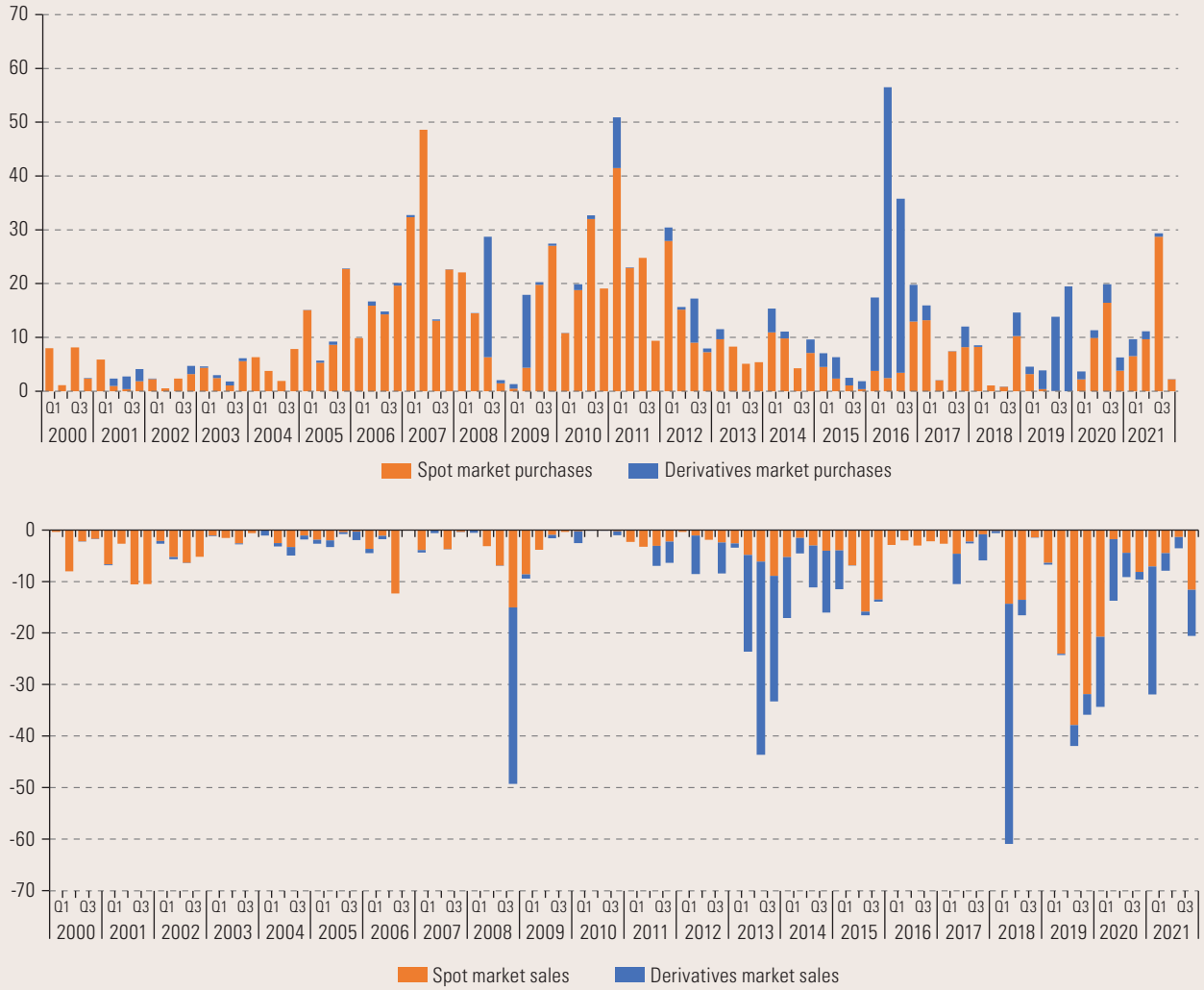
[a] Countries with a flexible exchange rate and an inflation target (Brazil, Chile, Colombia, Jamaica, Mexico, Peru and Uruguay).

[b] Group of countries with various exchange rate schemes and monetary policy targets (Argentina, Bahamas, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Nicaragua, Panama, Paraguay, Plurinational State of Bolivia and Trinidad and Tobago).

Box I.7 (continued)

Although these interventions are mostly concentrated in the spot market, derivatives have also been used to complement traditional interventions in periods of high tension, which can destabilize the exchange-rate trend with harmful effects on the real sector (see figure 2).

Figure 2
Latin America and the Caribbean (21 countries): foreign-exchange interventions by type of instrument, by quarter, 2000–2021
(Billions of dollars)

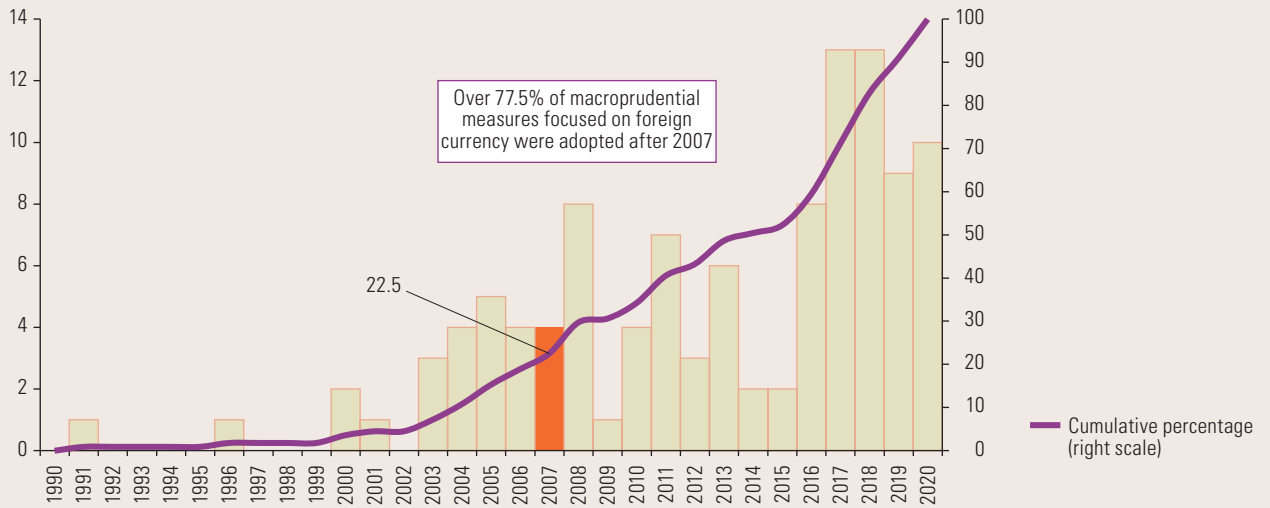


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of G. Adler and others, "Foreign exchange intervention: a dataset of public data and proxies", *IMF Working Paper Series,* Washington, D.C., International Monetary Fund (IMF), 2020.
Note: Includes the following countries: Argentina, Bahamas, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Plurinational State of Bolivia, Trinidad and Tobago, and Uruguay.

In fact, as shown in figure 3, foreign-exchange interventions have been accompanied by an increase in macroprudential measures associated with foreign currencies, and over 70% of all measures between 1990 and 2020 were implemented after 2007. This has also been reflected in the implementation of both capital controls and macroprudential management of international reserves (see ECLAC 2021).

Box I.7 (concluded)

Figure 3
Latin America and the Caribbean (17 countries): macroprudential measures concerning foreign currencies and their concentration over time, 1990–2020
(Number of measures and percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of International Monetary Fund (IMF), "Integrated Macroprudential Policy (iMaPP) Database" [online] https://www.elibrary-areaer.imf.org/Macroprudential/Pages/iMaPPDatabase.aspx.
Note: The measures included are those that are directly associated with the use of foreign currency. The countries are Argentina, Bahamas, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Honduras, Jamaica, Mexico, Paraguay, Peru, Saint Kitts and Nevis, Trinidad and Tobago, and Uruguay.

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of ECLAC, *Economic Survey of Latin America and the Caribbean, 2021* (LC/PUB.2021/10-P/Rev.1), Santiago, 2021, and *Preliminary Overview of the Economies of Latin America and the Caribbean, 2020* (LC/PUB.2020/17-P/Rev.1), Santiago, 2021.

12. The space created by complementarity between monetary, macroprudential and exchange-rate policies must be used to coordinate and calibrate policy decisions amid high inflation, weaker growth forecasts and potentially heightened macrofinancial risks

Given the nature of the inflationary process, with successive prevailing supply shocks, and a high degree of uncertainty about its duration and magnitude, greater reliance on monetary policy rate measures could further complicate the dilemmas of macroeconomic stabilization and, implicitly, subordinate risk of financial instability in policy decisions.

As the economic and social fallout from the recent crisis wears on, further rises in the monetary policy rate could both erode the resilience of regional financial systems (asset quality, profitability and solvency) and intensify pre-existing vulnerabilities by affecting household and corporate balance sheets. Businesses' credit ratings could be hurt by higher borrowing costs and the most vulnerable firms could even risk bankruptcy, with knock-on effects on investment and employment. For households, higher interest rates would increase defaults, interest payments and other financial difficulties possibly amplified by possible job losses. In certain circumstances, given the partial dollarization of the economies, additional macrofinancial risks exist because of excessive exchange-rate fluctuations (see, for example, Yeyati 2021).

Considering that the goals of macroeconomic and financial stability are highly interrelated, monetary policy and macroprudential policy tend to feed into each other (Bussière and others 2021). Thus, the objective of financial stability must be fully embedded in the monetary policy framework of the region's policymakers. Proper coordination between monetary and macroprudential policies is needed, as is timely calibration of the mix of related tools, in which macroprudential policy actions may be conditioned by the nature of the prevailing shock (demand, supply or financial) (Nalban and Smadu 2022). In the same vein, Ceccheti and Kohler (2014)[21] highlight the following in terms of policy coordination: (i) irrespective of the shock (supply or demand), full coordination between both monetary and macroprudential policies is a better solution for achieving monetary and financial stability objectives simultaneously; (ii) in a context of demand shock, partial coordination leads to over-adjustment of the monetary policy rate, disrupting macrofinancial stability to a greater degree; (iii) in the event of a supply shock, however, even partial coordination is preferable, given that macroprudential measures can play part of the role of policy rate adjustments, reducing adverse effects on the economy in the event of tightening of both types of instruments (monetary and macroprudential).

In the case of Latin American countries, Gambacorta and Murcia (2020)[22] show, in particular, significant association between the conditions generated by monetary policy and the effectiveness of macroprudential policy, as the policies are mutually reinforcing. A simple way to understand this last point is to admit the possibility that macroprudential policy, by affecting credit conditions, can affect interest rates and thus monetary policy stance, even in the absence of deliberate adjustments in the monetary policy rate.

At present, the scope of macroprudential policy in the region is relatively broad and can contribute to monetary policy implementation, with a view to preserving financial stability, through its direct macroeconomic effects on the credit cycle as well as through its indirect effects, particularly on price levels and growth. In particular, Kim and Mehrotra (2019) argue that the consumer price index (CPI) tends to respond more strongly to macroprudential policy in an environment of shallow financial development, high indebtedness and less financial openness.[23]

The transmission of macroprudential policy to the real sector is largely explained by its differentiated impacts compared to the broad-spectrum and undifferentiated impacts of interest rates, particularly on the components of aggregate demand. Thus, by mitigating the exposure of the banking sector to risks arising from household and corporate behaviour, tighter macroprudential policy dampens consumption by reducing households' access to credit, while investment should remain stable or even increase in the long run, depending on the length of exposure to the measures implemented (Teixiera and Venter 2022).[24]

Although both countries' specific features[25] and the choice of macroprudential measures must be considered, the potential of interaction between monetary and macroprudential policy is important for addressing the dilemmas arising from the current context, given the nature of the external shock and the great uncertainty over its duration and magnitude. Moreover, even in the presence of more persistent demand shocks, policymakers should complement monetary policy rate measures with macroprudential measures.

21 Using a theoretical approach, the authors model the interaction between monetary policy rate and capital requirements, as a macroprudential tool, in keeping with Basel III. The financial stability target is calculated using the spread between the lending rate and the monetary policy rate (funding rate).

22 The authors conducted a meta-analysis during a research project, in cooperation with the central banks of five countries in the region (Argentina, Brazil, Colombia, Mexico and Peru), based on records with confidential bank credit data.

23 The authors use impulse response functions to examine the effect of tightening the macroprudential policy index and monetary policy rate, on private sector lending (financial stability), the consumer price index (price stability target) and real GDP, variables that reflect the macroeconomic stabilization target. A sample of 32 developed and emerging countries was used, based on quarterly data from 2000 to 2014.

24 The causal effect of macroprudential measures focused on credit demand was explored (limits on loan-to-value ratio and on debt service-to-income ratio and other restrictions) for a sample of 21 European countries with quarterly data over the period 2000–2019.

25 See ECLAC (2020) for a classification of macroprudential measures adopted in the countries of the region by level of development of the financial system.

F. Growth prospects for Latin America and the Caribbean in 2022

1. The GDP of Latin America and the Caribbean is returning to a path of low growth in 2022, in an international landscape that has been made more complex by the war in Ukraine and an internal situation with limited room for monetary and fiscal policy

After climbing by 6.5% in 2021, the GDP of Latin America and the Caribbean is projected to grow at a rate of 2.7% on average in 2022, returning to the path of low growth it was following before the pandemic.

The economic slowdown has been magnified by the repercussions of the war between the Russian Federation and Ukraine, adding to the growing constraints on domestic macroeconomic policy aimed at driving growth.

Although some countries in the region —primarily net energy exporters— have benefited from high prices on international markets, most countries are experiencing declines in their terms of trade, together with slowdowns in exports. Tighter financial conditions on international markets and greater risk aversion among investors are also affecting financial flows to the region and the cost of borrowing it must bear.

At the internal level, inflationary pressures have been compounded by rises in food and energy prices, leading monetary authorities to accelerate monetary policy rate hikes and resulting in declines in monetary aggregates. On the fiscal front, the countries' official projections suggest that public spending cuts will continue in 2022, to reduce fiscal deficits and stabilize public debt, which rose sharply in 2020. Economic activity is being hindered by there being less support through monetary and fiscal policy, and already slowed in the first two quarters of 2022.

Therefore, South America is projected to grow by 2.6% in 2022 (compared to 6.9% in 2021), the group comprising Central America and Mexico by 2.5% (5.7% in 2021) and the Caribbean —the only subregion that will grow more than in 2021— by 4.7% (4.0% in the previous year)[26] (see figure I.71).

[26] The average for the Caribbean excluding Guyana.

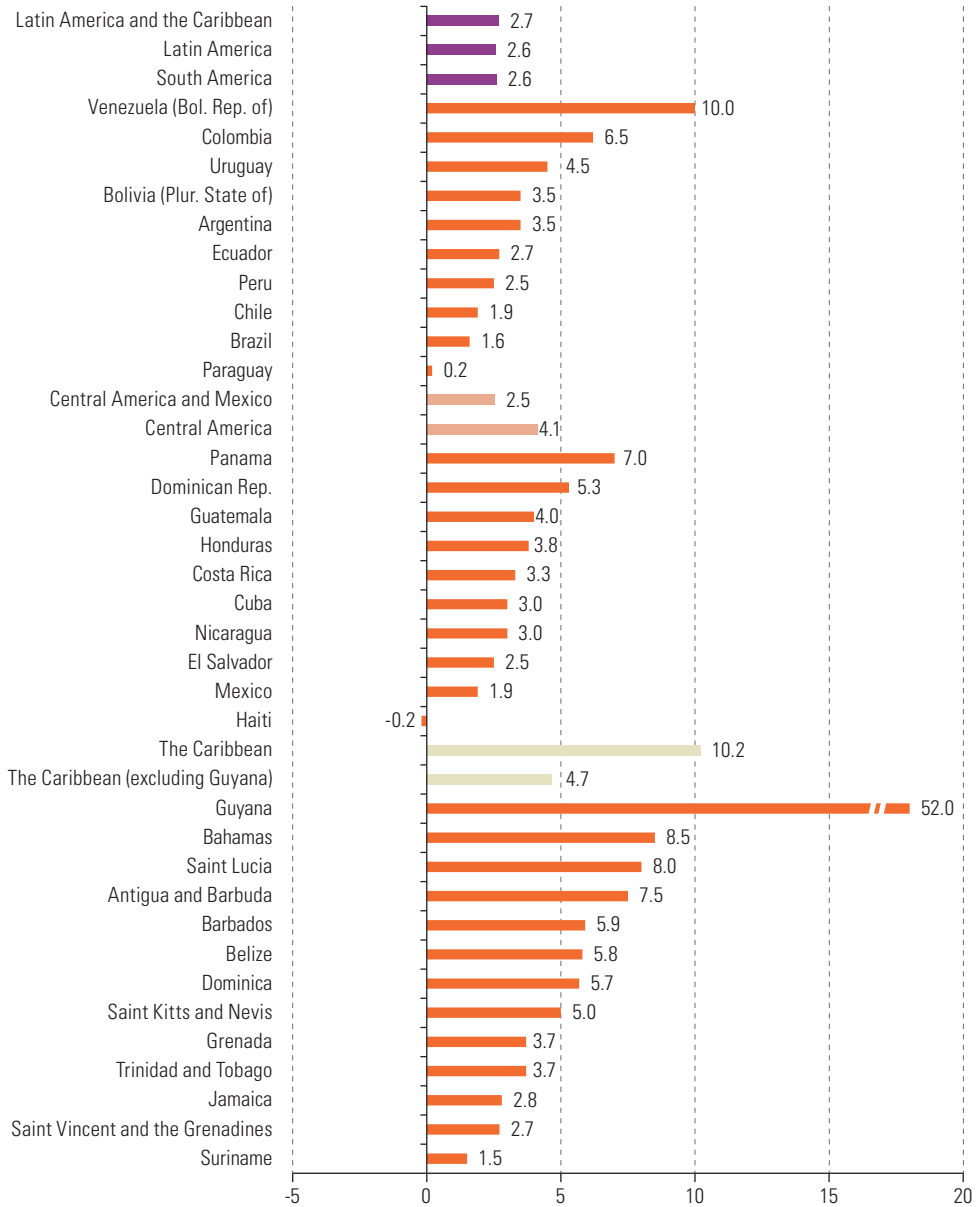


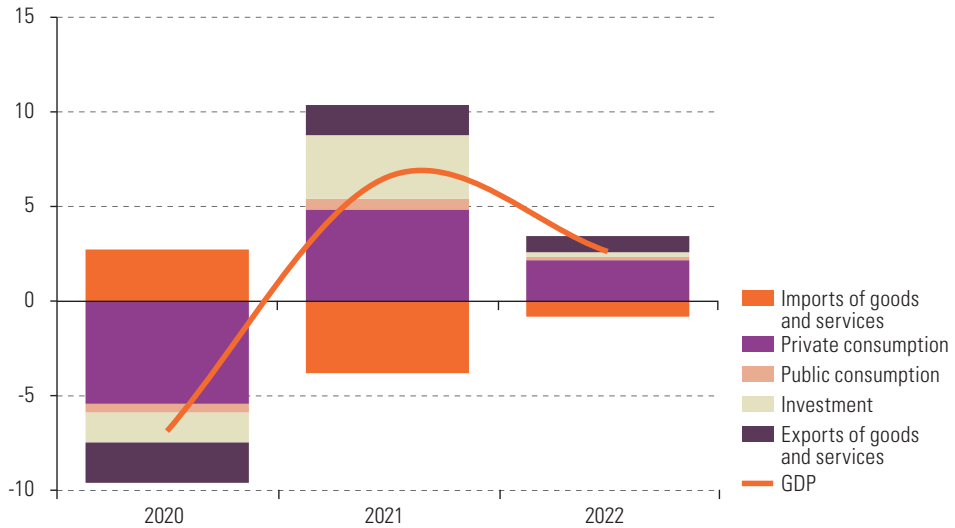
Figure I.71
Latin America and the Caribbean (33 countries): projected GDP growth rates, 2022
(Percentages)

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

2. Private consumption remains the expenditure component that makes the largest contribution to GDP growth, despite a decline in its impact

In terms of expenditure components, the decline in activity projected for 2022 is expected to come in a context of markedly different patterns in private consumption and investment. Private consumption is forecast to remain the component that makes largest contribution to GDP growth, but with half the contribution made in 2021 (see figure I.72). In contrast, investment is forecast to stagnate, meaning that it would make almost no contribution to growth in economic activity, and the same is expected for public consumption.

Figure I.72
Latin America: GDP growth rate and contribution of expenditure components to growth, 2020–2022[a]
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Data for 2022 are projections.

The slowdown in private consumption growth is a result of an increasing impact on household expenses from higher basic food basket prices, aggravated by slow rises in real wages and higher costs of credit, combined with an erosion of consumer confidence owing to a worse-than-expected downturn in domestic and foreign markets.

Slower growth in investment is also expected because of stagnation of investment in construction and in machinery and equipment. Higher financing costs are having a considerable impact on execution of real estate projects, and no change is expected in the depreciation of local currencies, which has made capital goods imports more expensive.

Given that conditions outside the region have worsened, a substantial increase in the volume of exports will be impossible; moreover, lower domestic demand will reduce the negative contribution of imports, allowing only for a very small contribution to GDP from net exports.

In 2021, a total of 13 countries returned to the pre-pandemic levels of activity of 2019, and 4 more are projected to do so in 2022. However, this means that by the end of 2022 —almost three years since the start of the pandemic— 16 of the 33 countries in the region will still have GDPs below pre-pandemic levels.

3. The slowdown in economic activity will result in slower growth in the number of employed

In labour markets, the slowdown in economic growth is expected to lead to less growth in the number of employed in the region, down from a rate of 6.7% in 2021 to 3.2% in 2022. The average unemployment rate for the region is expected to climb marginally from 9.3% in 2021 to 9.4% in 2022. The regional participation rate is projected at 62.6%, up from the rate recorded in 2021, but still below pre-crisis numbers.

Gaps between the unemployment and participation rates for men and women have widened compared to pre-crisis levels. The unemployment rate for women is forecast to rise from 11.3% in 2021 to 11.6% in 2022 and the rate for men from 9.3% to 9.4%. The participation rate for women, meanwhile, is projected to increase from 50.0% in 2021 to 51.1% in 2022, and participation for men from 73.5% to 74.9%.

Bibliography

Aaronson, D., J. Davis and L. Hu (2012), "Explaining the decline in the U.S. labor force participation rate", *Chicago Fed Letter,* vol. 296.

Adler, G. and others (2020), "Foreign exchange intervention: a dataset of public data and proxies", *IMF Working Paper Series*, Washington, D.C., International Monetary Fund (IMF).

Arezki, R. and others (2014), "Understanding international commodity price fluctuations", *Journal of International Money and Finance,* vol. 42.

Arteta, C. and others (2015), "The coming US interest rate tightening cycle: smooth sailing or stormy waters?", *CAMA Working Paper*, Nº 37.

Asgari, N. (2022), "Investors pull $50bn from emerging market bond funds in 2022", *Financial Times*, 10 July [online] https://www.ft.com/content/563d679c-a14a-42d8-bdf0-29cddfd94fc2.

Bank of England (2022), "Statistics" [online] https://www.bankofengland.co.uk/statistics.

BBVA (2022), "China: el nuevo paquete de estímulo no es suficiente para asegurar un objetivo", BBVA Research, 26 May [online] https://www.wto.org/english/news_e/pres22_e/pr902_e.htm.

BIS (Bank for International Settlements) (2022a), "Global liquidity indicators", 13 June [online] https://www.bis.org/statistics/gli.htm.

___(2022b), "Debt Security Statistics", 13 June [online] https://www.bis.org/statistics/secstats.htm.

___(2021), *Capital flows, exchange rates and monetary policy frameworks in Latin American and other economies. A report by a group of central banks including members of the Consultative Council for the Americas and the central banks of South Africa and Turkey,* April [online]. https://www.bis.org/publ/othp37.htm.

___(2019), "Monetary policy frameworks in EMEs: inflation targeting, the exchange rate and financial stability", *BIS Annual Economic Report*, 30 June.

Braun, S. and others (2014), "Understanding the decline in the labour force participation rate in the United States", VOXEU [online] https://voxeu.org/article/decline-labour-force-participation-us.

Bussière, M. and others (2021), "The interaction between macroprudential policy and monetary policy: Overview", *Review of International Economics*, vol. 29, No. 1.

Cecchetti, G. and M. Kohler (2014), "When capital adequacy and interest rate policy are substitutes (and when they are not)", *International Journal of Central Banking*, vol. 10, No. 3.

Central Bank of Brazil (2022), "Estatísticas Fiscais", 31 May [online] https://www.bcb.gov.br/content/estatisticas/hist_estatisticasfiscais/202205_Texto_de_estatisticas_fiscais.pdf.

Ciccarelli, M. and B. Mojon (2010), "Global inflation", *Review of Economics and Statistics,* vol. 92, No. 3.

CONAB (National Supply Company) (2022), "Brasil caminha para colher safra recorde de grãos em 2021/22, superando 271 milhões de toneladas" [online] https://cast.conab.gov.br/post/2022-06-08_9_lev_graos/.

Council of Economic Advisers of the United States (2014), *The Labor Force Participation Rate Since 2007: Causes and Policy Implications,* July.

Congressional Budget Office (2014), *The Slow Recovery of the Labor Market*, February [online] https://www.cbo.gov/publication/45011.

DIGEPRES (Directorate General of the Budget of the Dominican Republic) (2022), "Reporte de Ejecución Presupuestaria del Gobierno Central del mes de abril 2022" [online] https://www.digepres.gob.do/wp-content/uploads/2022/05/Informe-Mensual-de-Ejecuci%C3%B3n-Presupuestaria-de-Abril-2022-VF-3.pdf.

DIPRES (Budget Directorate of Chile) (2022), "Informe de Ejecución Presupuestaria Mensual: abril 2022", mayo [online] https://www.dipres.gob.cl/598/articles-272744_doc_pdf_reporte.pdf.

Duguid, K., C. Smith and W. Stubbington (2022), "Fed begins quantitative tightening on unprecedented scale", *Financial Times,* 15 June [online] https://www.ft.com/content/2496105a-d211-4abe-ab5d-46a91876428f.

ECB (European Central Bank) (2022), "Overview" [online] https://www.ecb.europa.eu/pub/projections/html/ecb.projections202206_eurosystemstaff~2299e41f1e.es.html.

ECLAC (Economic Commission for Latin America and the Caribbean) (2022a), *Preliminary Overview of the Economies of Latin America and the Caribbean,* 2021 (LC/PUB.2022/1-P), Santiago.
___(2022b), *Repercussions in Latin America and the Caribbean of the war in Ukraine: how should the region face this new crisis?*, 6 June.
___(2021a), *Economic Survey of Latin America and the Caribbean, 2021* (LC/PUB.2021/10-P/Rev.1), Santiago.
___(2021b), *Preliminary Overview of the Economies of Latin America and the Caribbean, 2020* (LC/PUB.2020/17-P/Rev.1), Santiago.
___(2020), *Economic Survey of Latin America and the Caribbean, 2020* (LC/PUB/2020/12-P), Santiago.
___(2019), *Economic Survey of Latin America and the Caribbean, 2019* (LC/PUB.2019/12-P), Santiago.
Elsayed, A., H., S. Hammoudeh and R. M. Sousa (2021), "Inflation synchronization among the G7and China: the important role of oil inflation", *Energy Economics*, vol. 100, No. 105332.
Espina, M. (2022), "Cosecha de soja argentina en zona núcleo registra producción más baja en 14 años", Bloomberg, 20 May [online] https://www.bloomberglinea.com/2022/05/20/cosecha-de-soja-argentina-en-zona-nucleo-registra-produccion-mas-baja-en-14-anos/.
European Union (2022), *European Economic Forecast - Summer* 2022, 14 July [online] https://economy-finance.ec.europa.eu/economic-forecast-and-surveys/economic-forecasts/summer-2022-economic-forecast-russias-war-worsens-outlook_en.
FAO (Food and Agriculture Organization of the United Nations) (2022), "The importance of Ukraine and the Russian Federation for global agricultural markets and the risks associated with the current conflict. 25 March 2022 Update", Information Note [online] https://www.fao.org/3/cb9236en/cb9236en.pdf.
Federal Reserve Bank of Chicago (2022), "National Financial Conditions Index (NFCI)" [online] https://www.chicagofed.org/publications/nfci/index#:~:text=The%20Chicago%20Fed's%20National%20Financial,and%20%E2%80%9Cshadow%E2%80%9D%20banking%20systems.
Federal Reserve Bank of San Francisco (2022), "How much do supply and demand drive inflation?", *FRBSF Economic Letter,* No. 2022-15, 21 June.
Federal Reserve Bank of St Louis (2022), Federal Reserve Economic Data (FRED) [online] https://fred.stlouisfed.org/.
Financial Times (2022), "Fed begins quantitative tightening on unprecedented scale", 15 June [online] https://www.ft.com/content/2496105a-d211-4abe-ab5d-46a91876428f.
FOMC (Federal Open Market Committee) (2022), "Summary of Economic Projections" [online] https://www.federalreserve.gov/monetarypolicy/fomcprojtabl20220615.htm.
Föster, M. and P. Tillmann (2014), "Reconsidering the international comovement of inflation", *Open Economies Review,* vol. 25, No. 5.
Gagnon, J. E. (2022), "Why US inflation surged in 2021 and what the Fed should do to control it", Real Time Economic Issues Watch, Washington, D. C., Peterson Institute for International Economics, 11 March.
Gambacorta, L. and A. Murcia (2020), "The impact of macroprudential policies in Latin America: an empirical analysis using credit registry data", *Journal of Financial Intermediation,* vol. 42, No. 100828.
Government of Peru (2022), "Modifican el nuevo apéndice III del texto único ordenado de la Ley del impuesto general a las ventas e impuesto selectivo al consumo. Decreto Supremo núm. 068-2022-EF", 3 April [online] https://www.gob.pe/institucion/mef/normas-legales/2893664-068-2022-ef.
Ha, J. and others (2022), "From low to high inflation: implications for emerging market and developing economies", *CAMA Working Paper,* No. 29/2022, 4 April.
___(2019), "Understanding global inflation synchronization", *Inflation in Emerging and Developing Economies: Evolution, Drivers, and Policies*, J. Ha, M.A. Kose and F. Ohnsorge (eds.), World Bank Publications.
Hall, R. E. (2014), "Quantifying the lasting harm to the U.S. economy from the financial crisis", *NBER Working Paper,* No. 20183.
Harrison, E. (2022), "The coming credit crunch", Bloomberg, 12 July [online] https://www.bloomberg.com/news/newsletters/2022-07-12/the-coming-credit-crunch.

IMF (Internacional Monetary Fund) (2022a), "IMF managing Director Kristalina Georgieva's remarks. Tackling food insecurity: the challenges and call to action", *Press Release*, No. 22/122 [online] https://www.imf.org/en/News/Articles/2022/04/19/imf-md-kristalina-georgieva-remarks-tackling-food-insecurity-the-challenges-and-call-to-action.

___(2022b), *Global Financial Stability Report: Shockwaves from the War in Ukraine Test the Financial System's Resilience*, April.

___(2021), "Special Drawing Right (SDR)" [online] https://www.imf.org/es/About/Factsheets/Sheets/2016/08/01/14/51/Special-Drawing-Right-SDR.

___(2020), *Annual Report on Exchange Arrangements and Exchange Restrictions 2020*.

Kim, S. and A. Mehrotra (2019), "Examining macroprudential policy and its macroeconomic effects–some new evidence", *BIS Working Papers,* vol. 825, December.

Maki, J. (2022), "Historic cascade of defaults is coming for emerging markets", Bloomberg, 12 July [online] https://www.bloomberg.com/news/articles/2022-07-07/why-developing-countries-are-facing-a-debt-default-crisis.

Martin, K. and C. Smith (2022), "The mystery of how quantitative tightening will affect markets", *Financial Times,* 12 July [online] https://www.ft.com/content/435a5e35-bf30-4518-a4fc-a6d5c2d66076.

MEF (Ministry of Economy and Finance of Peru) (2022), "Informe de actualización de proyecciones macroeconómicas 2022-2025", April [online] https://www.gob.pe/institucion/mef/informes-publicaciones/2942577-informe-de-actualizacion-de-proyecciones-macroeconomicas-2022-2025.

Ministry of Economy and Finance of Panama (2022), "Balance fiscal del gobierno central y del sector público no financiero: a marzo de 2022", May [online] https://www.mef.gob.pa/wp-content/uploads/2022/05/Balance-Fiscal-Preliminar-Marzo-2022.pdf.

Ministry of Finance of Colombia (2022), "Resultados Balance Fiscal GNC – febrero 2022" [online] https://www.minhacienda.gov.co/webcenter/ShowProperty?nodeId=%2FConexionContent%2FWCC_CLUSTER-191850%2F%2FidcPrimaryFile&revision=latestreleased.

Minsky, H. (1986), *Stabilizing an Unstable Economy,* New Haven, Yale University.

Nalban, V. and A. Smadu (2022), "Uncertainty shocks and the monetary-macroprudential policy mix", *SUERF Policy Brief,* No. 324.

National Treasure of Brazil (2022), "Resultado do Tesouro Nacional: abril 2022", June [online] https://sisweb.tesouro.gov.br/apex/f?p=2501:9::::9:P9_ID_PUBLICACAO_ANEXO:16509.

Neely, C. J. and D. E. Rapach (2011), "International comovements in inflation rates and country characteristics", *Journal of International Money and Finance,* vol. 30, No. 7.

OPC (Argentine Congressional Budget Office) (2022), "Análisis de la ejecución presupuestaria de la administración nacional: mayo de 2022", June [online] https://www.opc.gob.ar/download/21434/.

Pérez Caldentey, E., L. Nalín and L. Rojas (2022), "A baseline stock-flow model for the analysis of macroprudential regulation for Latin America and the Caribbean", *Working Papers* (PKWP2217), Post Keynesian Economics Society (PKES).

Reifschneider, D. and D. Wilcox (2022), "The case for a cautiously optimistic outlook for US inflation", *PIIE Policy Brief* 22-3, Washington, D.C., Peterson Institute for International Economics.

RFB (Secretariat of Federal Revenue of Brazil) (2022), "Análise de arrecadação das receitas federais: maio/2022" [online] https://www.gov.br/receitafederal/pt-br/centrais-de-conteudo/publicacoes/relatorios/arrecadacao/2022/analise-mensal-mai-2022/view.

Ryssdal, K. and Marketplace Staff (2022), "Fed Chair Jerome Powell: ´Whether we can execute a soft landing or not, it may actually depend on factors that we don't control" 12 May [online] https://www.marketplace.org/2022/05/12/fed-chair-jerome-powell-controlling-inflation-will-include-some-pain/´.

Schwab Asset Management (2022), "2022 Mid-Year Outlook: Fixed Income" [online] https://www.schwabassetmanagement.com/content/2022-mid-year-outlook-fixed-income.

Szafranek, K. (2021), "Evidence on time-varying inflation synchronization", *Economic modelling,* vol. 94.

Teixeira, A. and Z. Venter (2022), "Macroprudential policy and aggregate demand", *International Journal of Central Banking*, 28 February.

Tiwari, A. K. and others (2021), "Inflation co-movement dynamics: a cross-country investigation using a continuous wavelet approach", *Journal of Risk and Financial Management,* vol. 14, No. 12.
UNCTAD (United Nations Conference on Trade and Development) (2022), *The Impact on Trade and Development of the War in Ukraine. UNCTAD Rapid Assesment*, 16 March.
UNWTO (World Tourism Organization) (2022), *World Tourism Barometer*, vol. 20, No. 3, May.
World Bank (2022a), *Commodity Markets Outlook: The Impact of the War in Ukraine on Commodity Markets*, Washington, D.C., April.
___(2022b), "COVID-19 Business Pulse Survey Dashboard" [online] https://www.worldbank.org/en/data/interactive/2021/01/19/covid-19-business-pulse-survey-dashboard.
WTO (World Trade Organization) (2022), "Russia-Ukraine conflict puts fragile global trade recovery at risk", *Press Release*, Press/902, 12 April [online] https://www.wto.org/english/news_e/pres22_e/pr902_e.htm.
Yeyati, E. L. (2021), "Dolarización y desdolarización financiera en el nuevo milenio", *Document of Work,* Latin American Reserve Fund (FLAR), January.

PART

II

Trends and challenges of investing for a sustainable and inclusive recovery

II

Introduction

This second part of the *Economic Survey*, 2022 outlines some of the key investment challenges that the region must face to drive sustainable and inclusive economic growth. Chapter II looks at trends in total investment over the past 70 years. It focuses on the profound change in the pattern of investment in the region after the 1980s debt crisis, with a slowdown in investment from the 1990s onward. The chapter also examines how investment as a proportion of GDP was systematically lower from the 1980s onward, after reaching 22% in the 1970s. It also shows that investment has become more volatile since the 1990s, with more frequent, more intense and longer cycles of contraction. To set a course of sustainable and inclusive development that will reduce poverty and inequality and to make the changes required to reduce carbon dioxide (CO_2) emissions, the economies of the region need to greatly increase investment. This would create a virtuous circle that would help lessen the coordination problems that hamper adoption of new and better technology and thus hinder productivity growth in the region's economies. The greatest investment should be in human, physical, social and natural capital. International cooperation must go hand in hand with domestic resource mobilization efforts, meaning that official development assistance and financing from global financial institutions and development banks must be significantly increased.

Chapter III reveals that public investment levels are low in Latin America and the Caribbean, in relative and absolute terms. On average, general government gross fixed capital formation in the region has been significantly lower than that recorded in emerging and developing Asian economies in recent decades, a period over which Asian countries have built dynamic and diversified economies. The limited flow of investment has resulted in a stock of public capital that is insufficient to provide the economic and social services needed to boost growth and lay the foundations for sustainable and inclusive development in the region. Regrettably, public investment has been the main variable for fiscal adjustment over the past decade, weakening potential economic growth. A key task in the transition to more resilient and productive economies in the medium and long term is designing comprehensive investment policies that promote sustainable and inclusive development, strengthening the institutional framework for public investment and incentivizing private sector participation in activities that contribute to achieving the Sustainable Development Goals. It is particularly important for the region to align the various investment programmes with national development policy; to set out robust legal frameworks that establish institutional responsibilities and inter-agency coordination mechanisms; to develop performance indicators to monitor ongoing projects and measure their outcomes; to identify the initiatives that produce the greatest dividends from a social, economic and environmental point of view through cost-benefit analysis; to make progress with evaluation of the direct and indirect outcomes of completed projects; and, lastly, to improve the transparency of investment project implementation through new mechanisms for accountability.

Lastly, chapter IV discusses investment opportunities and challenges in the region's copper, iron and lithium industries, in the context of the energy transition, focusing on the role of green factors. Changes in the world economy under the new technical and economic paradigm are creating opportunities for countries that produce these minerals, since new technologies make intensive use of them, so demand will increase significantly. To take advantage of the window of opportunity opened by growth in demand for minerals and to ensure that this sector plays a leading role in the development strategy, mineral producers must make major investment efforts to enhance the capacity of companies to produce in a clean energy context. The efforts required are substantial and are made even greater by the changes and restrictions that the energy transformation entails.

Governments have opportunities to contribute to driving the energy transition of industries through regulations; however, regulations must be accompanied by policies that foster a technological change towards decarbonization, boosting investment in research and development, and preservation of the region's environmental and cultural heritage. In that regard, public policies must contribute to transforming the sector, prioritizing the management of the impact of the activity on society and the environment, as well as economic considerations.

CHAPTER II

Greater investment needed to drive sustainable and inclusive development in the Latin American and Caribbean economies

Introduction

On various occasions, the Economic Commission for Latin America and the Caribbean (ECLAC) has highlighted the role of investment as one of the pillars of a strategy to break the perverse cycle of inequality, poverty and lacklustre growth. This document extends the discussions contained in the 2017, 2018 and 2020 editions of the *Economic Survey of Latin America and the Caribbean*, in terms of characterizing investment trends in the region since 1950, providing a broader historical view of that dynamic. This chapter emphasizes the essential role played by investment as the pillar of a development strategy that makes it possible to improve the productivity of the region's economies, while adopting technologies that respect the environment and make it possible to cut CO_2 emissions in line with international agreements, with a view to achieving the target of zero emissions by 2050.

Following Bhattacharya and others (2022) and Buera and others (2021), this chapter argues that, beyond the positive effect on aggregate demand, reactivating investment would ease the coordination problems that hinder the adoption of new and better technologies and would, therefore, help boost technological changes to enhance productivity and reduce carbon emissions.

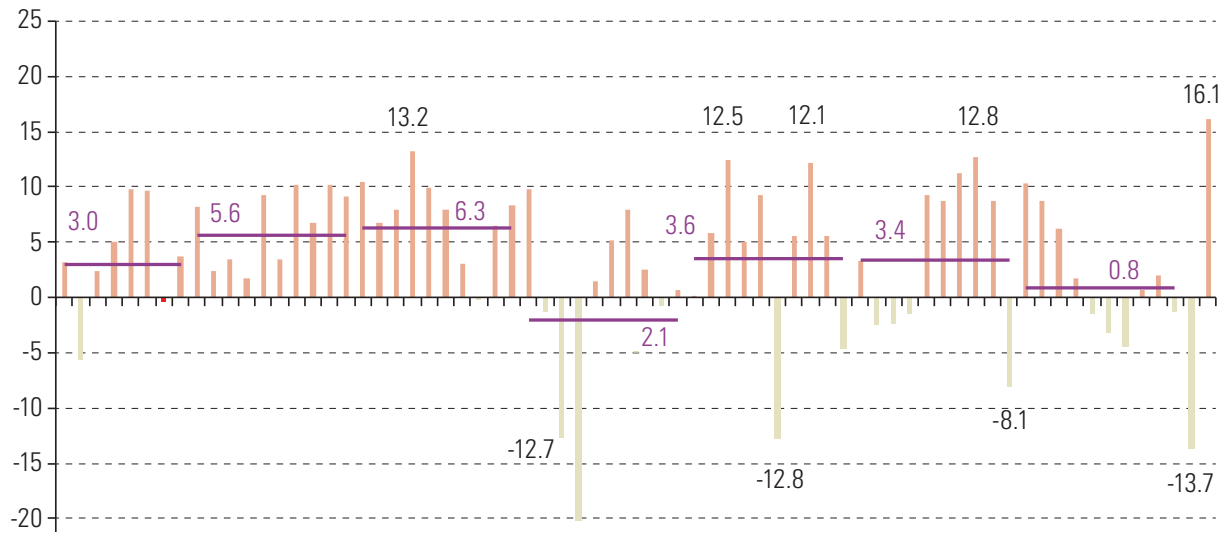
The rest of this chapter is organized as follows. Section A describes the dynamics of investment in the region's economies over the last 70 years. It highlights the very marked differences between before and after the "lost decade" of the 1980s. Since the 1990s, investment has generally grown more slowly, with shorter episodes of expansion, greater volatility, and more frequent, longer-lasting and more pronounced episodes of contraction. The analysis also shows that the investment-to-GDP ratio has been lower since the 1990s than in earlier decades. One feature that has been noted on several occasions is that investment rates in the region are lower than in other emerging economies. However, this was not the case in the 1970s. In that period, the region's investment-to-GDP ratio was similar to that of other emerging economies; but differences started to appear as time passed. Section B identifies some of the investment challenges facing the region and discusses the need to increase capital formation in various areas to enable the region's economies to attain a sustainable and inclusive development path that reduces poverty and inequality and facilitates the energy transition to reduce carbon emissions. As noted above, a sustained increase in investment, allowing for capital accumulation in of all its forms (human, physical, social and natural), would make it possible to reduce the coordination problems that hinder the adoption of new and better technologies, and thus increase the productivity of the region's economies. Section B also identifies finance as one of the main challenges in increasing investment in the region's economies. The current situation is very complex, with low economic growth rates, inflationary pressures on the rise, volatile financial markets and limited room for expansionary policies. For that reason, international cooperation must play a key role during this process —not only to provide financing, but above all to facilitate the process of coordinating endeavours between public and private entities, and between national actors and the rest of the world. Public sector investment must be increased considerably and made more efficient. Governments also need to create the conditions for retargeting private investment in order to close deficits in terms of public goods; and they must do so by encouraging the development of "clean" activities, consistent with the energy transition. In other words, both public and private investment need to be increased to generate a positive shock in total investment, and to be able to "build back better" in the region's economies. International financial institutions and regional development banks should act as catalysts for this investment recovery, not only through direct financing, but also by working to attract international private investors. Lastly, section C provides a synthesis and offers some final thoughts.

A. Investment trends 1950–2021

1. Investment growth has slowed sharply since the 1990s

Since the external debt crisis of the 1980s, investment trends in the economies of Latin America and the Caribbean have changed significantly. As shown in figure II.1, the average growth rate of investment has been slower since the lost decade of the 1980s. Between 1952 and 1979, investment grew by an average of 5.9% per year, peaking at an average rate of 6.3% in the 1970s. In contrast, between 1990 and 2021, investment grew by an average of 2.9% per year, with average rates not exceeding 3.6% in the 1990s, the 2000s and the 2010s. Since 2014, investment has contracted by an average of 0.9% per year despite a recovery in 2021. It should be noted that despite the significant increase in 2021, the level of investment in that year was similar to that of 2011.

Figure II.1
Latin America and the Caribbean: real rate of growth of investment, 1952–2021
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official data.

Another salient factor is that, since the 2000s, investment growth has been closely linked to the behaviour of commodity prices. During the commodity super cycle, investment experienced a sustained expansion lasting four years, with growth rates of over 9%. However, the global financial crisis put an end to this growth streak, and investment contracted by 8.1% in 2009. Its recovery after the global financial crisis was slow; and the decade of 2010 was one of stagnation, with investment posting its lowest average rate in the period studied, apart from the lost decade. In effect, the COVID-19 pandemic deepened a crisis that had been brewing since a decade earlier.

2. Since the 1990s, investment has become more volatile, with more frequent, longer-lasting and more pronounced contractionary cycles

Figure II.1 also shows how both the intensity and the duration of expansionary investment phases in the region decreased after the 1980s, and periods of declining investment growth became more frequent, as noted in ECLAC (2017 and 2018).

Prior to 1981, the longest expansionary phase lasted 18 years, from 1958 to 1976, generating a cumulative increase of 240% and an average annual growth rate of 7.9%. Since the debt crisis of the 1980s, the longest investment expansion lasted six years between 1988 and 1994 —with a cumulative increase of 37.8% and an average annual growth rate of 5.4%. Two other expansionary episodes , 2003–2008, and 2009–2013, lasted five and four years respectively, growing by average rates of 10.1% and 6.7%.

Between 1950 and 1980, the region experienced just three contractionary phases, in 1953, 1958 and 1977, none of which lasted longer than one year. Moreover, only the 1953 contraction was deeper than 0.5%. Since 1981, however, investment has contracted 15 times, with downturns lasting two or more consecutive years in the periods 1981–1983, 2001–2003, 2014–2016, and 2019–2020. On five of these occasions the reduction was 5%, and in four cases greater than 10%.

Regional investment has been highly susceptible to systemic crises; and, although both the Asian crisis and the global financial crisis caused sharp contractions in investment, the steepest falls occurred in the context of the external debt crisis and the recent one caused by the COVID-19 pandemic.

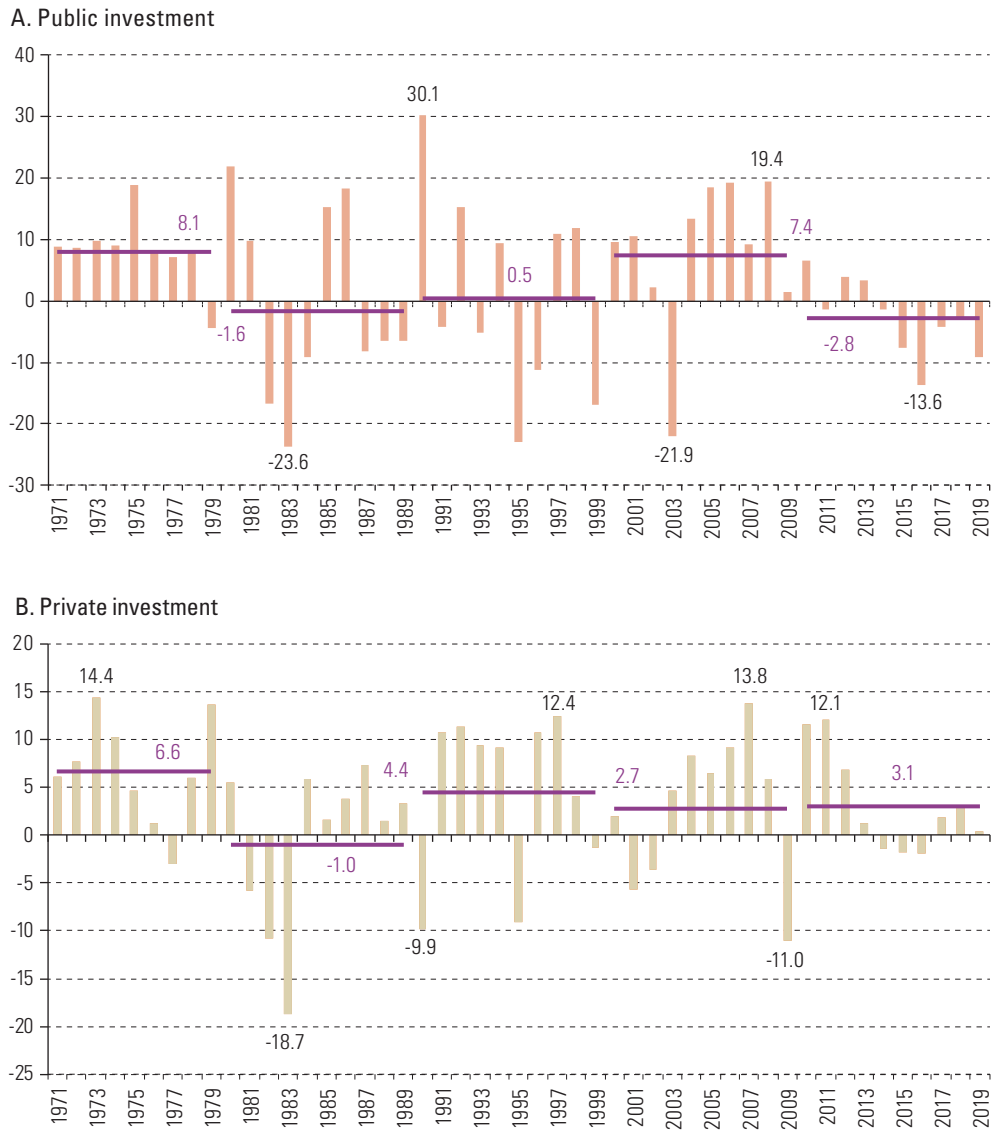
3. Weaker investment growth since the 1990s affected both the private and public sector, albeit more pronounced in the latter

Figure II.2 illustrates the growth of public and private investment since 1971. It shows that, as in the case of total investment, the performance of these two components of total investment changed from the 1990s onwards, with weaker average growth and greater volatility.

In the 1980s, both private and public investment experienced consecutive downswings lasting more than three years, with double-digit reductions. In the case of public investment, the average contraction in this period was 1.6% per year, while that of private investment was slightly smaller averaging 1.0% annually. In the following decade, public investment essentially flatlined, growing by an average of just 0.5% per year in the 1990s. This was a particularly volatile period for public investment, where years of robust expansions alternated with periods of deep contraction. Private investment recovered in this decade, growing at an annual average rate of 4.4%, with an expansionary phase spanning four years, and growth in seven of the ten years of the decade.

Public investment recovered in the 2000 decade. Despite not regaining the growth rates achieved before the foreign debt crisis, it expanded by an average of 7.4% per year. In total, public investment grew in nine of the ten years of the decade, although in 2003 it contracted by nearly 22%. In this period, private investment grew by an average of 2.7%, 1.7 percentage points less than in the previous decade. This is explained by the sharp contraction (11.0%) experienced in the wake of the global financial crisis.

Figure II.2
Latin America: real growth of public and private investment, 1971–2019
(Percentages)

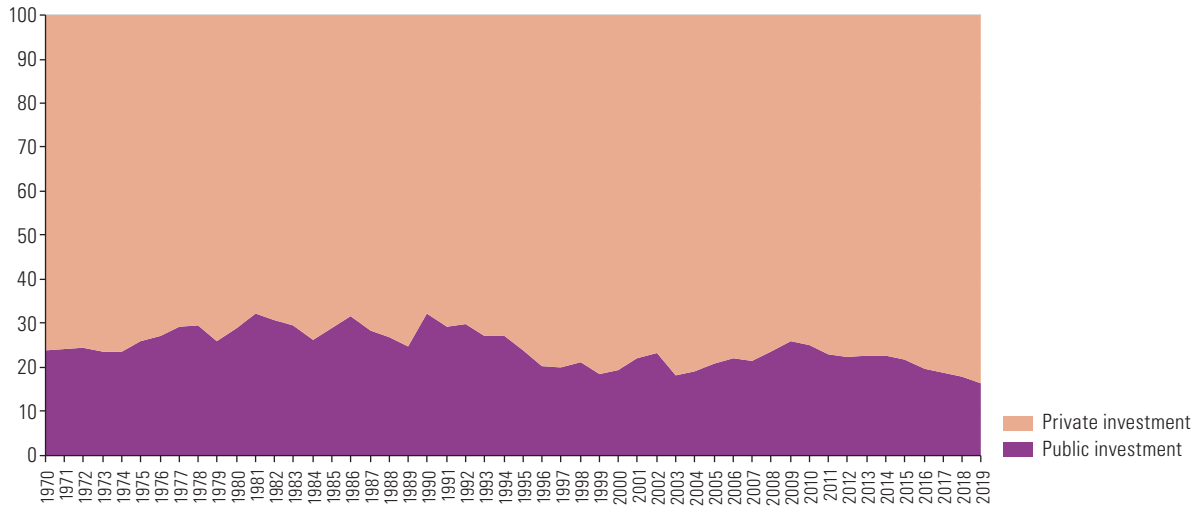


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures and International Monetary Fund (IMF), "Investment and Capital Stock Dataset (ICSD)" 2021 [online] https://data.imf.org/?sk=1CE8A55F-CFA7-4BC0-BCE2-256EE65AC0E4.

The 2020s, the last decade shown in figure II.2, reveals very heterogeneous behaviour between these components of investment, with public investment contracting at rates exceeding of the external debt crisis (2.8%), with reductions in 7 of the 10 years between 2010 and 2019. In contrast, private investment grew by an average of 3.1% in this period, expanding by more than 6% in 2010, 2011 and 2012.

The behaviour of these two components of investment has caused a reduction in the public share of the total, which from 26% between 1970 and 1980, slipped to 22.5% for the period 1990–2019. In the last decade covered by this analysis, public investment accounted for 20.1% of total investment (see figure II.3).

Figure II.3
Latin America: public and private shares of total investment, 1970–2019
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures and International Monetary Fund (IMF), "Investment and Capital Stock Dataset (ICSD)" 2021 [online] https://data.imf.org/?sk=1CE8A55F-CFA7-4BC0-BCE2-256EE65AC0E4.

4. Investment growth since the 1990s has recovered in both construction goods and machinery and equipment

Figure II.4 shows the trend of investment disaggregated into construction goods and machinery and equipment. Both panels show an increase in investment since the 1990s, although investment in machinery and equipment is outpacing investment in construction. Between 1990 and 2020, investment in machinery and equipment grew by an average of 4.4% per year, compared to 2.8% in the case of construction.

A. Investment in construction

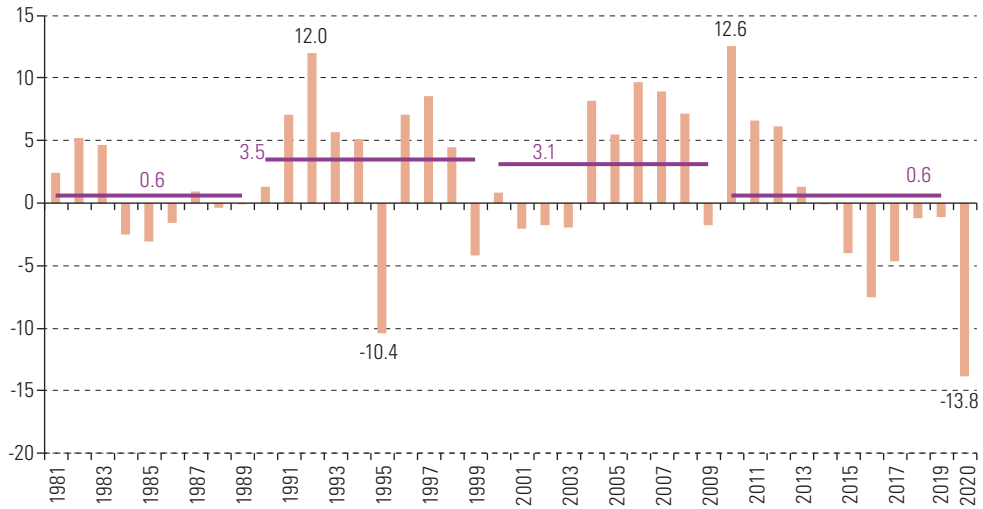
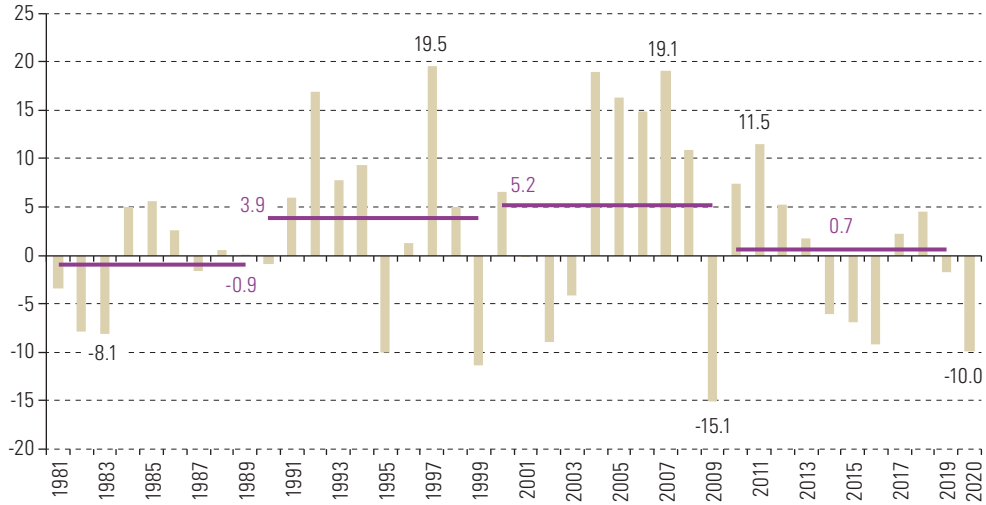


Figure II.4
Latin America: investment in construction and in machinery and equipment, 1981–2020
(Percentages)

Figure II.4 (concluded)

B. Investment in machinery and equipment



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official data.

During the 1990s, construction grew more robustly, at 3.5% per year, while investment in machinery and equipment peaked in the 2000 decade, in the context of the commodity price super-cycle (Erten and Ocampo, 2013). In 2014–2020, investment in construction fell more steeply than machinery and equipment (- 5.5% and -3.7%, respectively).

5. Sectors such as transportation, commerce and mining have increased their shares of total investment

Table II.1 shows how investment is distributed among the different production activities. Since 1990, the sectors that have absorbed most investment have been manufacturing (22.7%), general services (21.1%), commerce (13.7%) and mining (12.4%). The table also shows how this distribution across different activities has changed over time, with average investment growth rates in activities such as agriculture; manufacturing; electricity, gas and water; and general services declining between the 1990s and the 2010 decade. In contrast, activities such as transportation, commerce and mining received the largest amounts of investment in that period.

Table II.1
Latin America (9 countries):[a] distribution of investment among different production activities, 1990–2018
(Percentages)

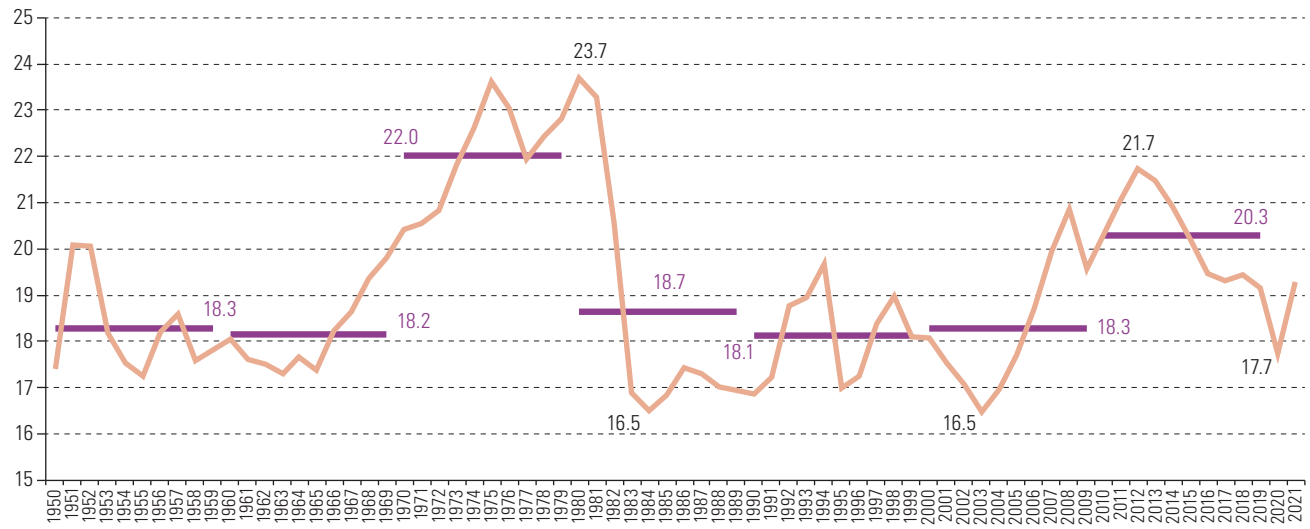
	1990–2018	1990–1999	2000–2009	2010–2018
Agriculture	**9.4**	11.1	8.7	9.0
Extractive industries (mining)	**12.4**	10.5	13.7	12.4
Manufacturing	**22.7**	24.1	22.9	21.7
Electricity, gas and water	**7.2**	7.9	6.8	7.1
Construction	**2.6**	2.6	2.5	2.7
Commerce	**13.7**	11.6	15.7	13.4
Transportation	**10.9**	9.7	10.1	12.2
General services	**21.1**	22.5	19.6	21.5

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official data and LA-KLEMS project.
Note: These figures were constructed from a database that makes it possible to disaggregate gross fixed capital formation across production activities, data that are collected in the LA-KLEMS project. Lack of information restricts the countries included in the sample to nine.
[a] Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Honduras, Mexico and Peru.

6. Consistent with the trends described above, investment has accounted for a systematically smaller share of GDP since the 1980s

Figure II.5 shows that the investment-to-GDP ratio in Latin America and the Caribbean has fallen over the last 30 years. On average between 1950 and 2021, investment represented 19.1% of GDP; in other words, the region has devoted less than one-fifth of its GDP to investment in the last 70 years.

Figure II.5
Latin America: gross fixed capital formation 1950–2021
(Percentages of GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official data.

In the 1950s and 1960s, investment in the region's economies averaged 18.3% and 18.2% of GDP, respectively. In this period, the investment share peaked in 1951 at 20% of GDP, while the lowest share (17.3%) was recorded in 1963. The 1970s was the decade in which the economies of the region posted the highest average share, when investment averaged 22% of GDP, with a maximum of 23.6% of GDP in 1975 and a minimum of 20.4% in 1970.

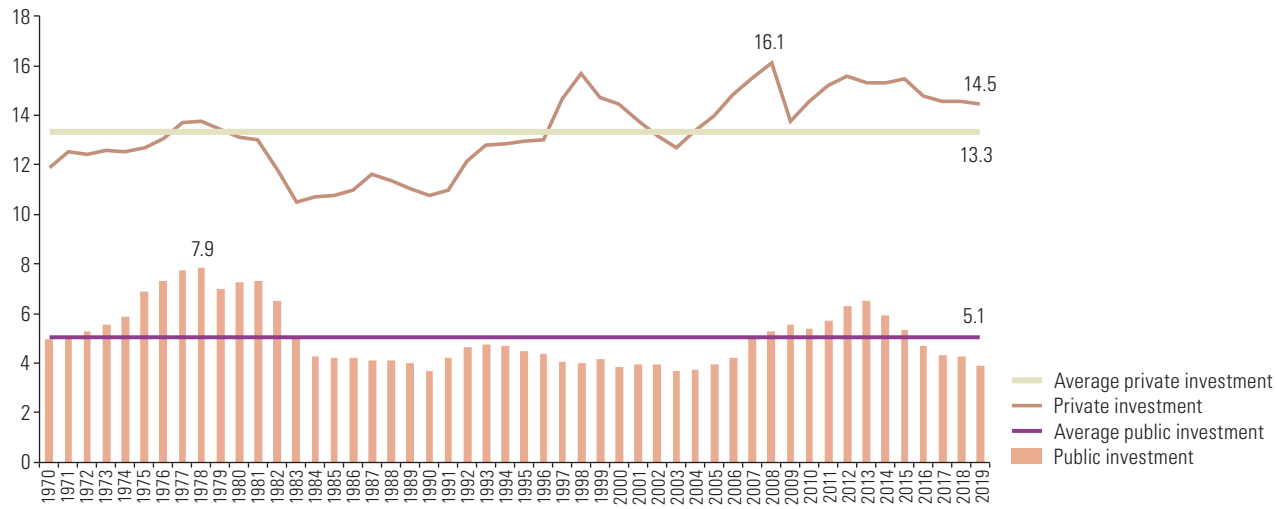
In 1980, gross fixed capital formation peaked at 23.7% of GDP, since when it has not regained similar levels. In the 1980s thereafter, investment averaged 18.7% of GDP, with a minimum of 16.5% in 1984. In the 1990s, the average fell again, by 0.6 percentage points of GDP, to post the lowest decade average rate of 18.1%. In this decade, the maximum was 19.7% of GDP in 1994, and the minimum was 16.9% in 1990.

In the 2000s, the average investment-to-GDP ratio rose by 0.2 percentage points of GDP relative to the previous decade, to 18.3%. The highest investment ratio was 20.9% of GDP recorded in 2008, while the lowest was 16.5% in 2003. In the 2010 decade, the most recent under review, the investment-to-GDP ratio rose again to 20.3%, with a maximum of 21.7% in 2012, and a minimum of 19.1% in 2019. In this last phase, the investment-to-GDP ratio increased because GDP (denominator) decreased by more than investment (numerator).

Disaggregating investment between the public and the private sectors shows private investment averaging 13.3% of GDP, compared to the public sector's 5.2% (see figure II.6). A second key feature is the change in behaviour after the 1990s. While public investment fell from 6.4% of GDP in the 1970s to 4.6% between 1990 and 2019, the private share increased by 1.2 points, from 12.9% of GDP in the 1970s to 14.1% in 1990–2019.

Both indicators improved after 2003, on the back of the commodity price super-cycle. Private investment peaked at 16.1% of GDP in 2008, and has remained above its 2003 level of 12.7% since then. Public investment has remained above 3.7% of GDP since 2003, with a peak of 6.5% in 2012.

Figure II.6
Latin America: public and private gross capital formation relative to GDP, 1970–2019
(Percentages)



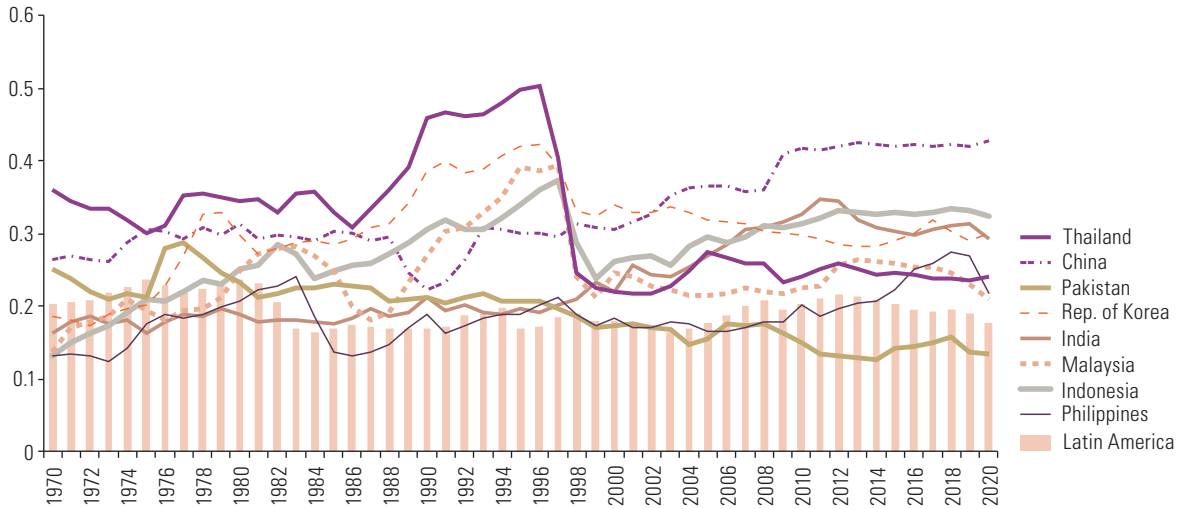
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures and International Monetary Fund (IMF), "Investment and Capital Stock Dataset (ICSD)" 2021 [online] https://data.imf.org/?sk=1CE8A55F-CFA7-4BC0-BCE2-256EE65AC0E4.

7. The region's investment-to-GDP ratio is well below those of other emerging economies

On various occasions, ECLAC (2021, 2020, 2018 and 2017) has noted that the investment rate in the Latin American and Caribbean economies had historically been lower than that of other emerging regions, particularly in the case of developing Asian countries. This is seen as one of the structural obstacles to the region's sustained and inclusive growth.

Figure II.7 displays the investment-to-GDP ratio for several emerging economies, including those of the region. It shows that countries such as India, Indonesia and Malaysia, the Philippines and the Republic of Korea started with rates similar to those of Latin America and the Caribbean in the 1970s; but since the 1980s they have left the region behind. Since 2000 the gap has narrowed relative to many of the countries shown in the figure, but this is more the result of the pace of investment slackening in the economies in question than of increased investment in the region.

Figure II.7
Latin America and selected countries of emerging Asia: gross fixed capital formation as a proportion of GDP, 1970–2020
(Percentages)



Source:Economic Commission for Latin America and the Caribbean and authors' calculations on the basis of official data.

B. Latin America and the Caribbean faces major investment challenges, and neither the starting point nor the context are propitious

Latin America and the Caribbean is a region with very high levels of poverty and inequality, and major deficits in education, health, transportation, infrastructure, drinking water, solid waste treatment, and energy generation and distribution.[1] The social pressures that have built up throughout the region in recent years reflect the population's dissatisfaction with inadequate provision of basic public goods. Although this situation worsened after the pandemic, it was already worrying before then. Moreover, changes are needed in the region's energy matrix to make it possible to reduce emissions.

The aforementioned challenges are compounded by the fact that weak economic growth has not stimulated a process of quality job creation, and labour markets continue to exhibit deep scars generated by the mobility restrictions and other physical distancing measures adopted to prevent the spread of COVID-19.[2] Nonetheless, these labour market problems also predate the pandemic, and are associated with structural factors that result in lower-productivity sectors, such as commerce, occupying most of the labour force, while higher-productivity sectors, such as the extractive industries, create relatively few jobs. The crisis generated by the pandemic also exacerbated the profound gender inequalities in the region's labour markets and the need to strengthen the care economy and rebalance the relationship between the state, families and the market.

The region's economies are also facing major challenges linked to the need to adapt existing urban and industrial centres to reduce levels of environmental pollution, cutting CO_2 emissions, but also enhancing efficiency in the processing of solid waste and wastewater.

1 Fay and others (2017) make a comparative analysis of service failure problems reported by companies in various emerging regions, and the indicators suggest that the problems are significantly worse in Latin America and the Caribbean than in other emerging regions.

2 See chapter I of this volume.

The region must move towards the generation of clean and renewable energies, which will reduce reliance on CO_2 generating sources. To this end, it is essential to modernize public transportation, advancing towards more efficient systems both in transporting passengers and in terms of reducing emissions. The process of modernizing the vehicle fleet must be accelerated, replacing conventional cars with electric vehicles, and discouraging the use of private vehicles in favour of public and collective alternatives.

The region's industries must adopt technological changes to satisfy new standards aimed at fostering environmental sustainability. This would enable countries to comply with the international emissions programmes established in international agreements, while not losing competitiveness on international markets. To achieve carbon neutrality by 2050, the region must also adapt its agriculture, promoting agroforestry practices, silvo-pastoral systems and a reduction in fertilizer use.

As will be seen in chapter IV of this document, the energy transition also opens up opportunities for production sectors such as mining, which will experience a significant increase in the demand for metals owing to the change in the energy mix. Nonetheless, mining countries themselves need to choose clean technologies to be able to respond to the increased demand, and to internalize the environmental impact of their operations.

The governments of Latin America and the Caribbean must design and implement strategies to achieve the goal of carbon neutrality and increase the climate resilience of the region's economies. These strategies require participation by all sectors of society, identifying the transformations needed in each sector over time, promoting investments in clean technologies, supporting sectors that will find it harder to change, and starting immediately. It is important to adapt regulatory standards to achieve the objectives, but at the same time support all sectors to ensure a fair, orderly and inclusive transition.

The region's economies will have to respond to these challenges in a very complex context. Even before the pandemic, economic growth was slowing, job creation had stalled, and investment was contracting. This generated a picture of flatlining productivity and rising inequality. The pandemic and the policies adopted to deal with it have exacerbated vulnerabilities and imposed enormous human and economic costs worldwide, but especially in Latin America and the Caribbean.

Various authors, such as Bhattacharya and others (2022) and Buera and others (2021), note that a significant increase in investment stimulates the adoption of the technical changes needed to increase productivity, by reducing inter-firm coordination problems that inhibit the incorporation of new technologies. However, measures to increase investment need to be carefully timed and executed, and appropriately financed, to enable the implementing economies to attain a sustainable, inclusive development path that reduces poverty and inequality and meets the 2050 zero emissions target.

Bhattacharya and others (2022) argue that capital investment needs to be increased in all of its forms (human, physical, social and natural), and that the current juncture should be used as an opportunity to "build back better", replacing and upgrading an aging and polluting capital stock to allow for sustainable, inclusive and resilient development.

1. The challenges are immense

Various studies have projected the levels of infrastructure investment that the region's economies will need in the coming years. The estimation methods and criteria for targeting this investment effort vary widely. Table II.2 summarizes estimates of the additional infrastructure investment that the region's economies will need to make in the coming decades.

Table II.2
Latin America and the Caribbean: additional annual investment requirements
(Percentage points of GDP)

Studies[a]	Additional increase in infrastructure investment
Fay and Morrison (2007)	2.2
Perrotti and Sánchez (2011)	2.4
Kohli and Basil (2011)	1.2
Ruiz-Núñez and Wei (2015)	3.3
CAF (2011)	2.7
Galindo, Hoffman and Vogt-Schilb (2022)	2.2
Average	**2.3**

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of A. Fay and others, *Rethinking Infrastructure in Latin America and the Caribbean. Spending Better to Achieve More,* World Bank, 2017 and L. Galindo, B. Hoffman and A. Vogt-Schilb, "How much will it cost to achieve the climate goals in Latin America and the Caribbean?", *IDB Working Paper Series*, vol. 1310, 2022.

[a] Each study was developed using different objectives and time horizons.

Despite differences between the studies, there is a consensus in the literature that the region needs to increase investment considerably, to expand coverage and improve the quality of existing services, and to increase the general productivity of the economy by reducing transportation costs and guaranteeing stable electricity and water supplies. More recent estimations, such as Galindo, Hoffman and Vogt-Schilb (2022) also include the steps that the region's economies will need to take to meet the challenges imposed by the energy transition. Figure II.8 shows that investment in infrastructure by the Latin American and Caribbean economies is well below that of other emerging economies, specifically 45% less than the rest of the emerging economies analysed.

Figure II.8
Emerging economies: infrastructure investment
(Percentages of GDP)

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of A. Fay and others, *Rethinking Infrastructure in Latin America and the Caribbean. Spending Better to Achieve More*, World Bank, 2017.
Note: The information corresponds to the latest data available when this document went to press.

The investment challenge is not a question of infrastructure alone. In a recent study Bhattacharya and others (2022) show that emerging economies, except for China, must increase average annual investment by 6.8 percentage points, in less than a decade, to address needs linked to human capital (health and social security), infrastructure and land use, and for adaptation and resilience strategies (see table II.3).[3]

[3] Galindo and others (2022) estimate that the region would need to spend between 5% and 11% of GDP to address the various social challenges it faces.

Table II.3
Emerging economies: additional investment requirements relative to the 2019 level
(Percentage points of GDP)

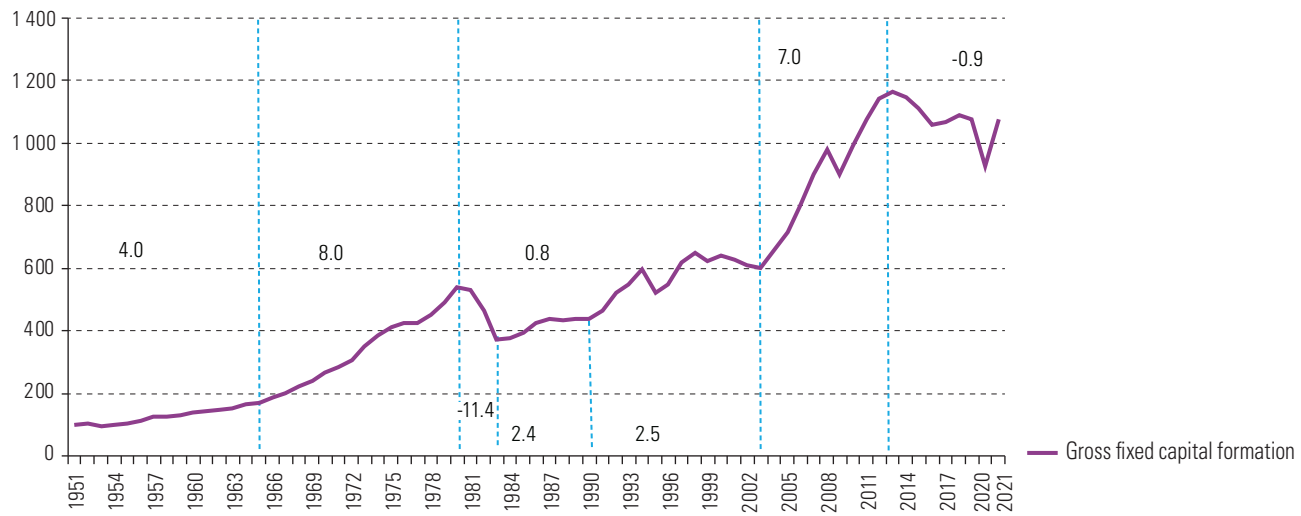
	Additional investment needed to achieve the target scenario by 2025	Additional investment needed to achieve the target scenario by 2030
Human capital	1.2	2.5
Sustainable infrastructure	1.3	2.2
Land use, agriculture, nature	0.7	1.3
Adaptation and resilience	0.5	0.8
Total	**3.7**	**6.8**

Source: A. Bhattacharya and others, *Financing a big investment push in emerging markets and developing countries for sustainable, resilient and inclusive recovery and growth*, London, Grantham Research Institute on Climate Change and the Environment/ London School of Economics and Political Science, 2022.
Note: Additional variations are estimated relative to the baseline, which for this study is the 2019 expenditure or investment level.

Given that the region starts from lower levels of investment than other emerging economies, and that inequality and poverty rates are very high, the challenge facing the economies of Latin America and the Caribbean is actually greater than that suggested by Bhattacharya and others (2022).

The recent trend of investment makes the challenge for the region look even more complicated. Figure II.9 shows the trend of investment over the last seven decades, and it is clear that investment in the region has tended to contract since the commodity super-cycle ended. In fact, investment levels in 2021 are similar to those recorded ten years earlier in 2011. In other words, in the last decade the region has not managed to increase investment. Moreover, since 2013 investment in the region has been in a downswing phase, with a cumulative contraction of 7.5% between 2013 and 2021.

Figure II.9
Latin America and the Caribbean: real investment trends, 1951–2021
(Index: 1950=100, and percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official data.

The prospects for investment in the near future is not very promising. The region's economies are on a low-growth path, with weak capacity to generate quality jobs, high levels of informality, a prolonged stagnation of productivity and a significant increase in inequality. Over the past year, inflationary pressures have built up, and international financial volatility has increased —factors that have worsened since the outbreak of the war in Ukraine. The space available for investment stimulus policies has narrowed

significantly. Debt levels have risen since the pandemic, as has the need to support the most vulnerable sectors, thereby reducing the space for fiscal policy still further. On the monetary side, increased inflationary pressures have been met by contractionary policies, especially interest rate hikes, which will doubtless end up discouraging credit and investment.

2. Collective effort needed to increase investment

Meeting the challenges described above will require an increase in both public and private investment, significant mobilization of international private capital, support from global and regional multilateral organizations, and robust assistance from international cooperation.

Bhattacharya and others (2022) propose that about half of the required financing should come from domestic resource mobilization, but international cooperation should accompany this process, so official development assistance (ODA) and concessional climate financing both need to increase substantially.

It is estimated that, in emerging economies generally, the public sector would need to increase investment by 2.7% of GDP; so the effort required of the region's economies would be even greater, given the low starting point. Moreover, the regions governments also face the challenge of improving the efficiency of the additional expenditure. According to Cavallo, Powell and Serebrisky (2020), a prerequisite for any increase in public investment must be choosing suitable projects and developing the necessary capabilities, so that assets can be constructed and managed efficiently. According to these authors, public infrastructure in the region could increase by 35% as a result of improvements in production efficiency alone.[4]

Another challenge for governments in the region is to generate suitable conditions to attract additional private investment, to enable the private sector to deliver better quality and more efficient services. Policies must be adopted to redirect existing private investment towards clean activities, consistent with the energy transition, but also to increase private investment significantly in order to generate this investment drive and "build back better". Regulations on the use of existing power plants and grids need to be reformed. Appropriate fiscal arrangements are also needed to develop electromobility, to encourage the purchase of electric vehicles and to promote the transformation of public transportation services.

For this investment drive to be able to attain a sustainable and inclusive growth path, changes in the orientation and dynamics of foreign direct investment (FDI) are also required. While in 2019 about 15.5% (US$ 21 billion) of FDI was channelled towards power generation from renewable energy sources, an even larger amount (US$ 38.212 billion) went to activities linked to oil refining and coal products. To channel FDI appropriately, it is necessary to implement an appropriate scheme of regulations and economic incentives to discourage investment in carbon-intensive activities and at the same time promote new investment in activities that are compatible with the 2050 zero emissions target.

Official Development Assistance is the key to "leaving no one behind" in the effort to achieve the Sustainable Development Goals and to support investments in health and education in low- and lower middle-income countries. ODA would contribute to increasing the availability of global public goods, such as climate and nature, and investments in adaptation and resilience, specifically in poor and vulnerable countries.

[4] This view is also shared by Fay and others who argue that Latin America could reduce its deficit in infrastructure services drastically by spending efficiently on appropriate projects.

International cooperation should also contribute to reducing the cost of the energy transition, driving the "build back better" plans, collaborating in the identification of sustainable infrastructure projects and helping to create the governance needed for this task.

Multilateral agencies and regional development banks should also act as catalysts for this major investment drive —firstly by financing investment projects in line with this strategy, but also in projects to attract private investors. To facilitate these processes, both development banks and international financial institutions should be capitalized to enhance their investment portfolios and act as multipliers of the countries' endeavours.

C. Conclusions

Latin America and the Caribbean is a region with very high levels of poverty and inequality. Significant deficits in education, health, transportation and infrastructure, compounded by precarious labour markets and weak economic growth have spurred increasing social mobilization throughout the region, in recent years. Although this situation worsened after the pandemic, it was already very worrying long before.

Investment is undoubtedly a key variable for understanding the trends observed in the countries' economic activity; but it is even more important for identifying future developments. This chapter has shown how investment has behaved in the region's economies since 1950. This section thus complements other analyses of investment included in the 2017 and 2018 editions of *Economic Survey of Latin America and the Caribbean*.

A first element highlighted in this chapter is that the trend of investment in the region changed drastically after the debt crisis, and from the 1990s onwards investment has grown more slowly. Between 1951 and 1979 investment grew by an annual average of 5.9%, while in 1990–2021 the average growth rate was 2.9%. The data also clearly identify 2013–2021 as the period in which investment has performed worst since the crisis of the 1980s.

Consistent with the trends described above, investment as a proportion of GDP has been systematically lower since the 1980s, after attaining a maximum per-decade average of 22% in the 1970s. In other words, the region has never allocated more than 25% of GDP to investment. This situation means that the economies of Latin America and the Caribbean have a lower investment-to-GDP ratio than other emerging economies.

This chapter also highlights the fact that since the 1990s investment has become more volatile, with more frequent, longer and deeper contractionary cycles. In the first three decades analysed in this study, there were only three episodes of investment contraction, 1953, 1958 and 1977; none lasted longer than one year, and only the 1953 contraction exceeded 0.5%. During this period, investment expansion was the norm, with the upswing phase lasting 18 years, generating a cumulative increase of 240%. Since 1981, investment has contracted 15 times, in episodes lasting for two or more years from 1981 to 1983, 2001 to 2003, 2014 to 2016, and 2019 to 2020. In terms of magnitude, on five occasions the contractions exceeded 5%, and in four cases they were greater than 10%. In the case of the expansionary phases in this period, the longest was between 1988 and 1994, generating a cumulative increase in investment of 37.8% with an average annual growth rate of 5.4%. Two other expansionary episodes occurred in 2003–2008 and 2009–2013, lasting five and four years, with average growth rates of 10.1% and 6.7%, respectively.

Since the 1990s, the performance of investment has been lacklustre generally, affecting both the private and the public sectors, although more intensely in the latter. The relatively weaker performance of the public sector has led to a significant reduction in its share, which dropped from an average of 26% in the 1970s to 20.1% in the decade of 2010.

This chapter has also shown that investment in construction and in machinery and equipment have both recovered since the 1990s, but the latter grew faster. Between 1990 and 2020, investment in machinery and equipment grew by 4.4% per year, compared to an average of 2.8%, in the case of construction.

Investment in transportation and communications, commerce and mining have been the most buoyant since 1990, and have therefore seen their share of total investment expand; however, manufacturing (22.7%) and general services (21.1%) account for the largest shares of investment in the region.

Latin America and the Caribbean faces a major investment challenge. The region needs to increase investment considerably to enable its economies to attain a sustainable, inclusive development path that will reduce poverty and inequality and make the changes needed to reduce CO_2 emissions.

This increase in investment would reduce the coordination problems that inhibit the adoption of new and better technology and obstruct productivity growth. The increased investment should encompass all forms of human, physical, social and natural capital. The current juncture should be used as an opportunity to harness increased investment to "build back better", by replacing aging and polluting machinery and equipment to allow for sustainable, inclusive and resilient development. However, as noted above, this would mean almost doubling investment in the coming decades.

These efforts by the region's economies will have to unfold in a very complex context, with a growing risk of a global recession, ever greater international macrofinancial volatility, weak economic growth in the region, stalled job creation, and investment in a downswing phase. Compounding this further are growing inflationary pressures and heightened exchange rate volatility, both of which have worsened since the outbreak of the war in Ukraine. In addition, policy space has narrowed significantly, with debt levels restricting room for fiscal manoeuvre, while the central banks have reacted to more intensive inflationary pressures by implementing contractionary policies.

The literature notes that a significant part of the financing to increase investment must be raised domestically; but international cooperation also needs to support this process, so official development assistance and financing from global financial institutions and development banks must be increased significantly.[5]

Investment by the public sector needs to be increased considerably and made more efficient. Governments must also create conditions to redirect existing private investment towards "clean" and higher productivity activities consistent with the energy transition; and steps must also be taken to significantly increase investment in this process in order to "build back better".

Changes in the orientation and dynamics of FDI are thus required to discourage investment in activities that pollute, and to boost investment in activities that use clean energy and facilitate an energy transition. ODA must play a key role in ensuring that no one is left behind in achieving the Sustainable Development Goals. International financial institutions and regional development banks should also act as catalysts for this major investment drive, not only by providing support through direct financing, but also helping to attract private investors.

[5] From this perspective, the channelling of official development assistance commitments towards environmental protection can be seen to have a significant and positive impact on the long-term per capita income level of the region's recipient countries in the period 1995–2019 (Titelman and Carton, 2022).

Bibliography

Bhattacharya, A. and others (2022), *Financing a big investment push in emerging markets and developing countries for sustainable, resilient and inclusive recovery and growth*, London, Grantham Research Institute on Climate Change and the Environment/London School of Economics and Political Science.

Buera, F. and others (2021), "Big push in distorted economies", *NBER Working Paper*, No. 28561, March.

Cavallo, E., A. Powell and T. Serebrisky (2020), *From Structures to Services The Path to Better Infrastructure in Latin America and the Caribbean*, Inter-American Development Bank (IDB).

ECLAC (Economic Commission for Latin America and the Caribbean) (2021), *Economic Survey of Latin America and the Caribbean, 2021* (LC/PUB.2021/10-P/Rev.1), Santiago.

___(2020), *Economic Survey of Latin America and the Caribbean, 2020* (LC/PUB/2020/12-P), Santiago.

___(2018), *Economic Survey of Latin America and the Caribbean, 2018* (LC/PUB.2018/17-P), Santiago.

___(2017), *Economic Survey of Latin America and the Caribbean, 2017* ((LC/PUB.2017/17-P), Santiago.

Erten, B. and J. Ocampo (2013), "Super cycles of commodity prices since the mid-nineteenth century", *World Development,* vol. 44, April.

Fay, A. and others (2017), *Rethinking Infrastructure in Latin America and the Caribbean. Spending Better to Achieve More*, World Bank.

Galindo, L., B. Hoffman and A. Vogt-Schilb (2022), "How much will it cost to achieve the climate goals in Latin America and the Caribbean?", *IDB Working Paper Series*, vol. 1310.

IMF (International Monetary Fund) (2021), "Investment and Capital Stock Dataset (ICSD)" [online] https://data.imf.org/?sk=1CE8A55F-CFA7-4BC0-BCE2-256EE65AC0E4.

Titelman D. and Carton C. (2022). "Long-term effect of Official Development Assistance (ODA) on per capita income: empirical evidence for Latin American and Caribbean countries". Forthcoming.

CHAPTER III

Public investment to boost growth

Introduction

One of the main challenges facing Latin America and the Caribbean in achieving the Sustainable Development Goals (SDGs) is to increase the level of public investment. Gross fixed capital formation by the public sector is well below the levels recorded in other regions. In recent decades, the average level of investment in the region's countries has been lower than that of the emerging and developing economies of Asia, except during the commodity boom of the 2000 decade, when the rise in international commodity prices generated abundant resources to finance investment. There is a clear gap between the region and the emerging and developing economies of Asia, not only in the level of investment, but also in the persistence of the investment effort over time.

The sluggish performance of public investment in the region imposes economic and social costs that make it harder to achieve sustainable development. The fact that the region's countries invest at levels equivalent to, or below, those of the main advanced economies prevents the convergence of public capital stock levels between the two groups of countries. Expanding the public capital stock is a key way to boost potential economic growth and improve public service delivery. At the same time, public investment has been used as the main fiscal adjustment variable during the last decade in the region. This situation has affected not only economic infrastructure projects, but also the acquisition of fixed assets for social services —including health and education— leaving the region more exposed, both to the impact of the coronavirus disease (COVID-19) pandemic and to lags in human capital formation.

The region faces significant investment needs to close structural development gaps, at a complex time when fiscal accounts are weakened after the efforts made in 2020 to respond to the COVID-19 pandemic. As reported in chapter I, the countries have implemented fiscal consolidation policies to reduce fiscal deficits; and the tight fiscal space reduces the possibility of pursuing active fiscal policies. At the same time, the fiscal situation is impacted by the current global macrofinancial environment, characterized by a widespread growth slowdown, rising inflation and higher interest rates, lower trade volumes and volatile commodity and financial markets.

Nonetheless, it is crucial to stimulate public investment in order to boost economic growth and create the capital stock needed to achieve the Sustainable Development Goals. In a context of scarce resources, it is essential to give strategic direction to public spending, to prioritize capital formation and strengthen the institutional framework for public investment and thus improve its efficiency and effectiveness. At the same time, given the magnitude of the investment required to close existing development gaps and respond to the challenges posed by climate change, it is important to review fiscal incentives for investment and retarget them towards meeting the needs of sustainable development.

This chapter is structured as follows. Section A presents a series of stylized facts about public investment in Latin America and the Caribbean. It analyses trends at the regional level and highlights the heterogeneity of public investment situations in the different countries, in terms of both volume and sectoral composition. It also considers the role played by public enterprises as investors. Lastly, it analyses the retreat of public investment in the last decade in a context of fiscal consolidation. Against this backdrop, section B puts forward a set of policies to exploit the catalytic role of public investment and channel private investment towards the Sustainable Development Goals.

A. Stylized facts of public investment in Latin America and the Caribbean

As shown in Chapter II, total investment in the region is significantly below the levels prevailing in other parts of the world. It has also been declining steadily, particularly during the last decade. This pattern is replicated in the public sector, where the level of investment has declined, such that the region now lags behind other regions. Against this backdrop, this section analyses a number of stylized facts of public investment in the region.

It is important to note at the outset that the measurement of public investment has its particularities, which reflect the different sources of data available and the way in which the statistics are constructed. National accounts provide the key source for analysing gross fixed capital formation (GFCF) in the economy (European Commission and others, 2016). The national accounts by institutional sectors report GFCF at the general government level, which is interpreted as public investment. In this structure, public enterprises form part of the non-financial business sector, which includes both public and private enterprises, and therefore are not included as part of general government. Although the system of national accounts establishes this framework, not all countries publish integrated economic accounts —or specific series— giving details of public investment. For countries that do not publish this breakdown, estimates of general government GFCF are made by various organizations, such as the International Monetary Fund (IMF) in its "Investment and Capital Stock Dataset" database (IMF, 2021).

Another important source of public investment statistics is provided by the government finance statistics that countries report for their government operations (IMF, 2014b). In this case, government capital expenditures are used as a proxy for public investment. However, this expenditure concept —as defined in the IMF's *Government Finance Statistics Manual*, particularly in the editions prior to 2001— includes outlays that are not considered GFCF in national accounts. In particular, outlays for capital transfers and financial investment are significant in some countries. Nonetheless, in most cases, expenditures associated with the acquisition of non-financial fixed assets, the concept closest to GFCF, can be identified within the capital expenditure aggregate.

This section uses both of these data sources to analyse trends in public investment and its composition. As far as possible, the figures used correspond to those of the national accounts, to maintain consistency with the analysis of total and private investment trends presented in chapter II. At the same time, figures from general government operations —or, alternatively, those of central government—are used to analyse the composition of outlays to purchase fixed assets. Lastly, investment by public enterprises is analysed through statistics on this institutional sector published by the countries, in accordance with the 2001 and 2014 editions of *Government Finance Statistics Manual* (IMF, 2001 and 2014b).

A final point worth mentioning is the measurement of investment flows compared to the capital stock. This section is based on an analysis of annual GFCF from the national accounts and government statistics, in other words the measurement of investment flows over time. These flows can be contextualized by the performance of other fiscal aggregates (such as fiscal balances, among others). Another relevant indicator is the size of the public capital stock. The volume of public investment —the stock of public capital— is associated with the provision of infrastructure and social services (the number of schools or hospitals, for example). It should also be borne in mind that, in a context of continuous depreciation of the current capital stock, investment flows might be associated more with maintaining this stock than increasing it, which would have implications for economic growth.

1. The level of public investment in Latin America and the Caribbean is lower than in other regions of the world in both absolute and relative terms

In 2019, general government GFCF in Latin America and the Caribbean represented 2.8% of GDP, on a weighted average basis, which contrasts sharply with the levels prevailing in the advanced economies and also in the emerging and developing Asian economies (see figure III.1). The region's performance largely reflects limited levels of general government GFCF in the largest economies, led by Brazil and Mexico with 2.2% of GDP in each case. In comparison, in the advanced economies, public investment relative to GDP was greater, both in terms of the average and in the largest economy, the United States, at 3.5% of GDP in both cases. The region's low level of public investment can be seen clearly when compared to those in the emerging and developing economies of Asia (weighted average of 11.7% of GDP), driven by the momentum of China, which allocated 17.3% of its GDP to public investment in 2019.

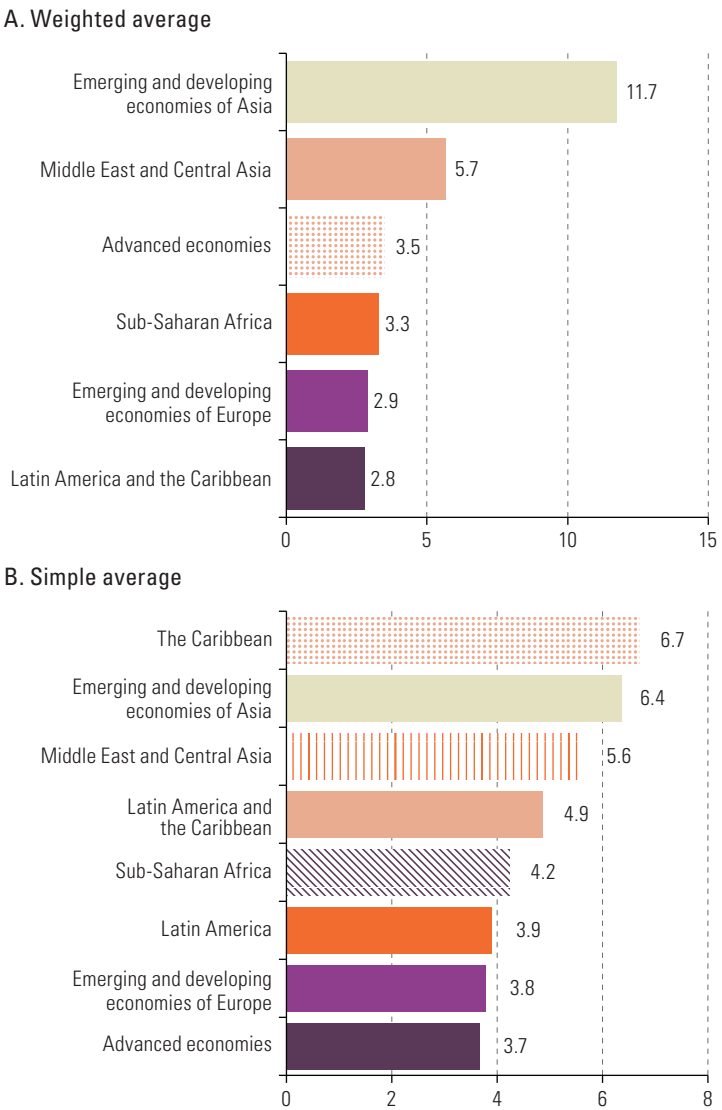


Figure III.1
Selected groupings and regions: general government gross fixed capital formation, 2019
(Percentages of GDP at constant prices)

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of International Monetary Fund (IMF) "Investment and Capital Stock Dataset" [online] https://data.imf.org/?sk=1CE8A55F-CFA7-4BC0-BCE2-256EE65AC0E4.
Note: Weighted averages are calculated on the basis of purchasing power parity GDP in international dollars at current prices.

The region's performance is better when measured in terms of simple averages, although public investment levels are still limited (see figure III.1B). Nonetheless, in this case the regional performance is explained largely by higher levels of public investment in the Caribbean (6.7% of GDP). Public investment in Latin America (3.9% of GDP) is slightly above the average in the advanced economies but well below that of the emerging and developing economies of Asia. Consequently, the low average level of public investment in the countries of the region reduces the chances of converging with the advanced economies in terms of public capital stock and closing the prevailing structural development gaps (see box III.1). On this point, the contrast with the emerging and developing economies of Asia, where the high level of public investment has helped to close infrastructure deficits, is instructive.

Box III.1
Investment requirements in Latin America and the Caribbean to close structural development gaps

Public investment in the region has historically been insufficient to meet infrastructure needs, resulting in an accumulation of structural gaps in multiple areas that are critical for sustainable development. A recent literature review estimates the region's investment requirements for the provision of infrastructure services as equivalent to between 2% and 8% of GDP per year; and that the annual spending needed to address a variety of social challenges is 5% to 11% of GDP. This would mean channelling a total of between 7% and 19% of annual GDP to additional expenditure, while also retargeting existing expenditures between now and 2030 (Galindo, Hoffman and Vogt-Schilb, 2022). Another study estimated that the additional resources needed to achieve the Sustainable Development Goals by 2030 as equivalent to 4% of GDP in emerging economies and 15% of GDP in the low-income countries (Gaspar and others, 2019).

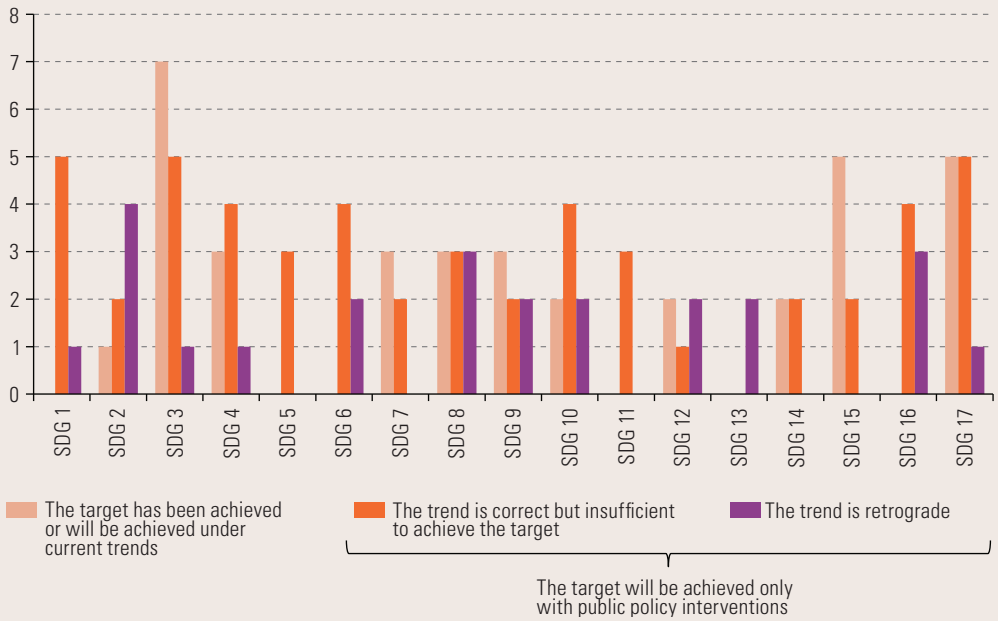
Promoting investment in the region involves not only mobilizing additional resources to close structural gaps, but also identifying the areas in which investment could have a greater impact on the provision of goods and services to the population and production sectors. To this end, the 2030 Agenda for Sustainable Development is a useful reference for decision-makers, since it provides a roadmap for economies to transition towards more sustainable patterns of production and consumption. This involves expanding the coverage of essential services for the population and strengthening assistance to the most vulnerable to ensure no one is left behind. Targeting both public and private investment decisions towards SDGs is a key task for the region in overcoming the vulnerabilities with which it had to confront the health crisis. These include high levels of poverty, limited capacity to create quality jobs, low productivity and technological intensity of production, and an unsustainable production and consumption model (ECLAC, 2022).

At the fifth meeting of the Forum of the Countries of Latin America and the Caribbean on Sustainable Development, held in March 2022, significant progress was made in the region in terms of health and well-being (SDG 3); affordable, reliable, sustainable and modern energy (SDG 7); the life of terrestrial ecosystems (SDG 15) and partnerships to achieve the Goals (SDG 17), among others. However, of a total of 111 targets assessed, 75 will need public policy intervention if they are to be achieved by 2030. This is either because they have been moving in the right direction but too slowly (51 targets), or else because they are moving backwards (24 targets) (see figure).

The Sustainable Development Goals for which greater public intervention is required relate to ending poverty (SDG 1), gender equality (SDG 5), clean water and sanitation (SDG 6), sustainable cities and communities (SDG 11), climate action (SDG 13) and ensuring peace and justice (SDG 16). Consideration should also be given to other SDGs whose targets, while not as critical as those of the aforementioned Goals, require significant effort, because half of them are not certain to be achieved by 2030. These are: decent work and economic growth (SDG 8), industry, innovation and infrastructure (SDG 9), reduction of inequalities (SDG 10), and responsible production and consumption (SDG 12). Boosting public investment would thus contribute to closing the gaps in the SDG targets related to the provision of clean water and sanitation, sustainable cities and communities, climate action, industry, innovation and infrastructure, and responsible production and consumption.

Box III.1 (concluded)

Latin America and the Caribbean: number of Sustainable Development Goal targets, by likelihood of achievement by 2030
(Number of targets)



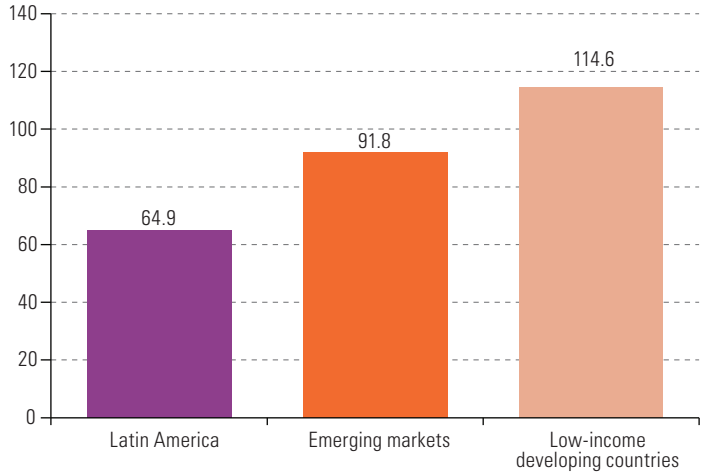
Source: Economic Commission for Latin America and the Caribbean (ECLAC), *A decade of action for a change of era* (LC/FDS.5/3), Santiago, 2022.

Source:Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of L. Galindo, B. Hoffman and A. Vogt-Schilb, "How much will it cost to achieve the climate goals in Latin America and the Caribbean?", *IDB Working Paper Series*, vol. 1310, 2022; ECLAC, *A decade of action for a change of era* (LC/FDS.5/3), Santiago, 2022 and V. Gaspar and others, "Fiscal policy and development: human, social, and physical investments for the SDGs", *IMF Staff Discussion Notes*, No. 2019/003, International Monetary Fund (FMI), 2019.

The low level of GFCF, understood as a flow over time, has thus left the region with a capital stock (cumulative investment flows with depreciation) that is insufficient to foster more vigorous economic growth. It is the volume and quality of the public capital stock that generates the economic (infrastructure) and social services (such as schools and hospitals, among others) that affect potential growth and social well-being. As shown in figure III.2, the public capital stock in Latin America is significantly smaller than that attained in the emerging economies. The large capital stock in latter has laid the foundations for their economic growth and the development of their production structure.

As in the case of total investment, public investment trends in Latin America have been linked to the commodity price super-cycle and flows of fiscal revenue from non-renewable natural resources. Between 1990 and 2004, public GFCF in Latin American countries was 1.5 percentage points of GDP less than in the emerging and developing economies of Asia, at 4.3% and 5.8% of GDP, respectively (see figure III.3). The gap subsequently narrowed significantly between 2005 and 2014, thanks to an increase in fiscal revenues from non-renewable natural resources. During that period, public investment in Latin America averaged 5.5% of GDP, compared to 6.1% in the case of emerging and developing Asian economies. However, public investment in Latin America then fell back sharply from 2014 onwards, in a period characterized by a steady fall in international metal and mineral prices and the collapse of crude oil prices. In the absence of fiscal revenues from non-renewable natural resources, public investment in Latin America returned to the minimum levels recorded before the supercycle. In contrast, public GFCF in the emerging and developing economies of Asia has remained buoyant throughout the recent period.

Figure III.2
Selected country groups: general government capital stock, 2015[a]
(Percentages of GDP)

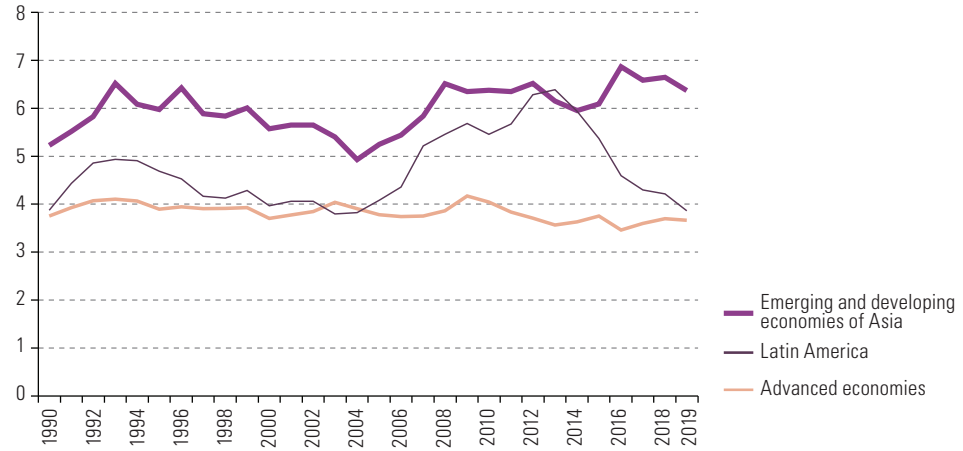


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of International Monetary Fund (IMF) "Investment and Capital Stock Dataset" [online] https://data.imf.org/?sk=1CE8A55F-CFA7-4BC0-BCE2-256EE65AC0E4.

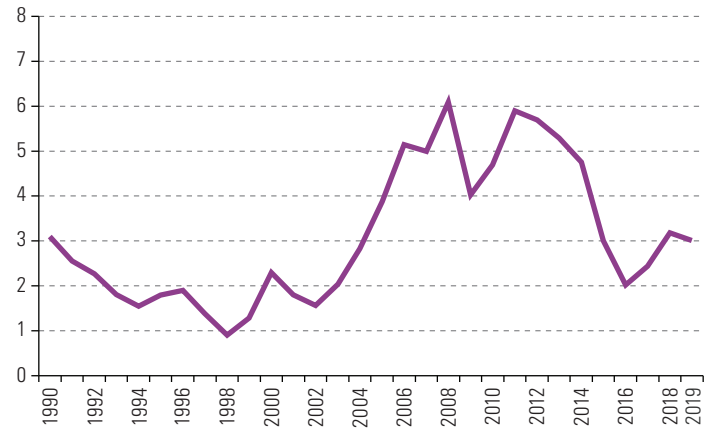
[a] The figures for Latin America encompass the following countries: Argentina, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, the Plurinational State of Bolivia and Uruguay.

Figure III.3
Selected country groupings and regions: general government gross fixed capital formation and fiscal revenues from non-renewable natural resources, 1990–2019

A. General government GFCF[a]
(percentages of GDP at constant prices)



B. Latin America (8 countries):[b] general government fiscal revenues from non-renewable natural resources
(percentages of GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of International Monetary Fund (IMF) "Investment and Capital Stock Dataset" [online] https://data.imf.org/?sk=1CE8A55F-CFA7-4BC0-BCE2-256EE65AC0E4 and ECLAC, "Ingresos públicos provenientes de recursos naturales no renovables en porcentajes del PIBhttps://statistics.cepal.org/portal/databank/index.html?lang=es&indicator_id=3352.

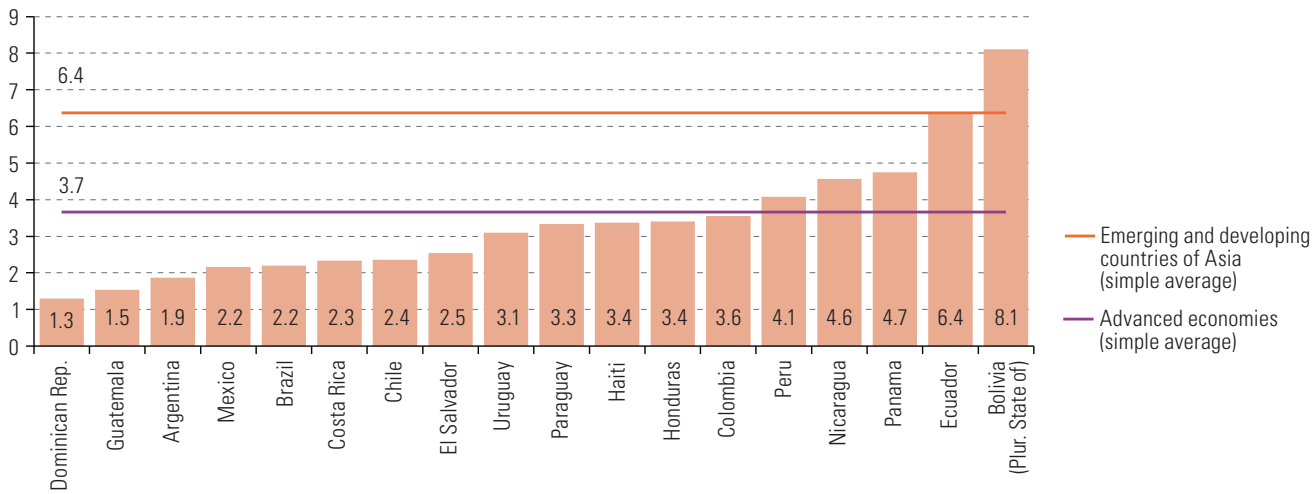
[a] Simple averages.

[b] Simple average of revenues obtained from the exploration and extraction of hydrocarbons and minerals in Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru and the Plurinational State of Bolivia.

2. Public investment varies significantly among the countries of the region, in both level and sector composition

Public investment relative to GDP varies greatly among Latin American countries, with low levels coexisting with substantial outlays. Argentina, Brazil and Mexico —the region's largest economies— report public investment rates of between 1.9% and 2.2% of GDP in 2019 (see figure III.4). In most of the countries the volume of public GFCF is below the average of the advanced economies, let alone the emerging and developing economies of Asia. Nonetheless, in some countries, public investment is close to or exceeds these averages. In Ecuador and the Plurinational State of Bolivia, public investment is above 6% of GDP and has been a major driver of economic growth in both countries. Gross fixed capital formation has also been significant in countries such as Panama and Peru, particularly in respect of infrastructure investments.

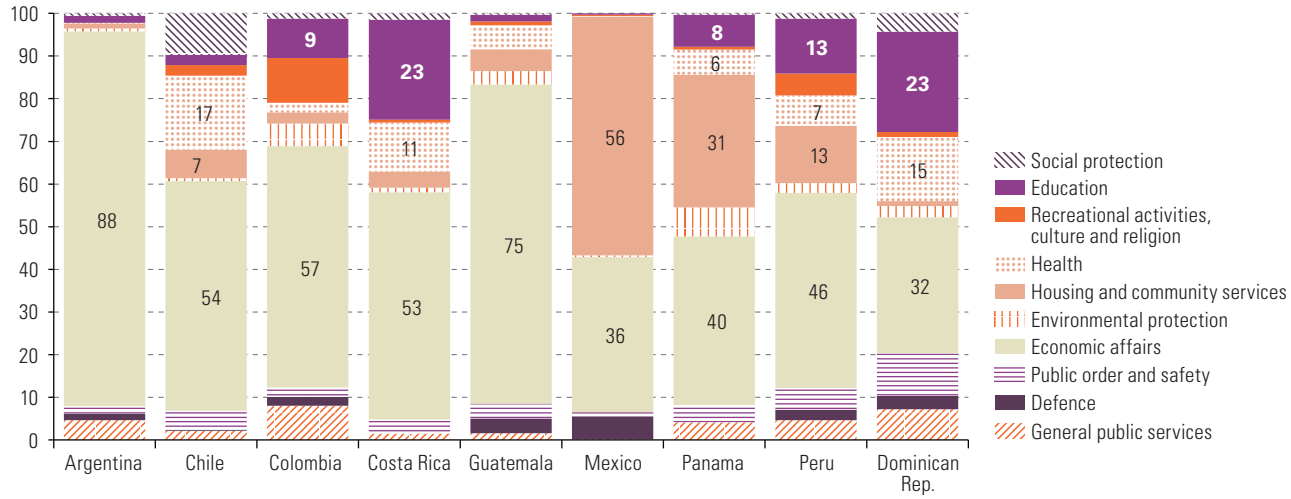
Figure III.4
Latin America (18 countries) and selected regions: general government gross fixed capital formation, 2019
(Percentages of GDP at constant prices)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of International Monetary Fund (IMF) "Investment and Capital Stock Dataset" [online] https://data.imf.org/?sk=1CE8A55F-CFA7-4BC0-BCE2-256EE65AC0E4.

Countries use public investment to pursue a variety of economic and social objectives, as shown by analysing public GFCF classified by function (see figure III.5). Investment in economic affairs functions, traditionally associated with infrastructure, accounts for a third or more of the total. However, other functions related to social objectives are also important in several countries. Expenditures on housing and community services, which encompass a range of different activities, represent a significant proportion of public investment in Mexico, Panama and Peru. Expenditures on water supply are the leading category in Peru, while investments in regional development stand out in Mexico. Investments in health and education are important in the project portfolios of most of the countries. In the health sphere, Chile has invested heavily in hospital services; and in the education sector, Costa Rica has focused on tertiary education, and the Dominican Republic on basic education.

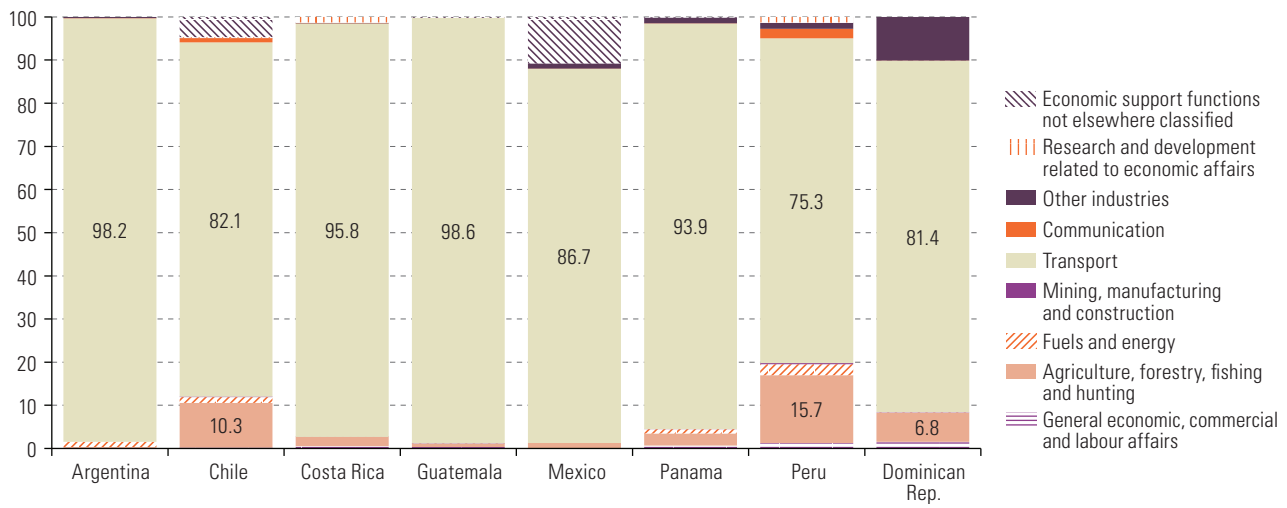
Figure III.5
Latin America (9 countries): general government public investment by function, 2019
(Percentage of total)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: The figures for Chile, Colombia and Costa Rica correspond to capital formation as reported in in the national accounts. The figures for Argentina, Mexico, Panama and the Dominican Republic refer to central government investment in fixed assets. In the case of Peru, the figures represent general government investment in fixed assets.

It is important to analyse public investment in economic affairs, given their role in promoting economic growth. In the countries of the region, investment in transportation —roads, railways, airports and ports, among others— is the main component of GFCF in this function (see figure III.6). A review of the information from countries that have disaggregated data confirms that the vast majority of these investments are in road construction. In Mexico, however, railroad expenditures account for one-fifth of the total. Among the other economic support functions, those related to agriculture, forestry, fishing and hunting are also significant. At a more granular level, the majority of this investment targets agriculture, as reflected by the large outlays in Peru on irrigation infrastructure.

Figure III.6
Latin America (8 countries): general government public investment in economic affairs, by sub-function, 2019
(Percentages of the total)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: The figures for Chile and Costa Rica correspond to capital formation in national accounts. The figures for Argentina, Mexico, Panama and the Dominican Republic correspond to central government investment in fixed assets. In the case of Peru, the figures represent general government investment in fixed assets.

3. State-owned enterprises are major investors in several countries

The public corporate sector also plays an important role in fixed capital formation in Latin America (see figure III.7). Nonetheless, this varies from one country to another, depending on factors such as the role played by the government in the provision of basic services and the existence of state enterprises associated with the production sector. In several countries, public enterprises play a key role in electricity production and telecommunications. In the Dominican Republic, investment by the Dominican State Electricity Corporation (CDEEE) accounted for about 80% of the GFCF of the corporate public sector in 2019. In the case of Uruguay, the National Electric Power Generation and Transmission Administration (UTE) and the National Telecommunications Administration (ANTEL) made 84% of all investments by public companies in the same year. In Panama, investments are dominated by the Panama Canal Authority's annual investment plan.

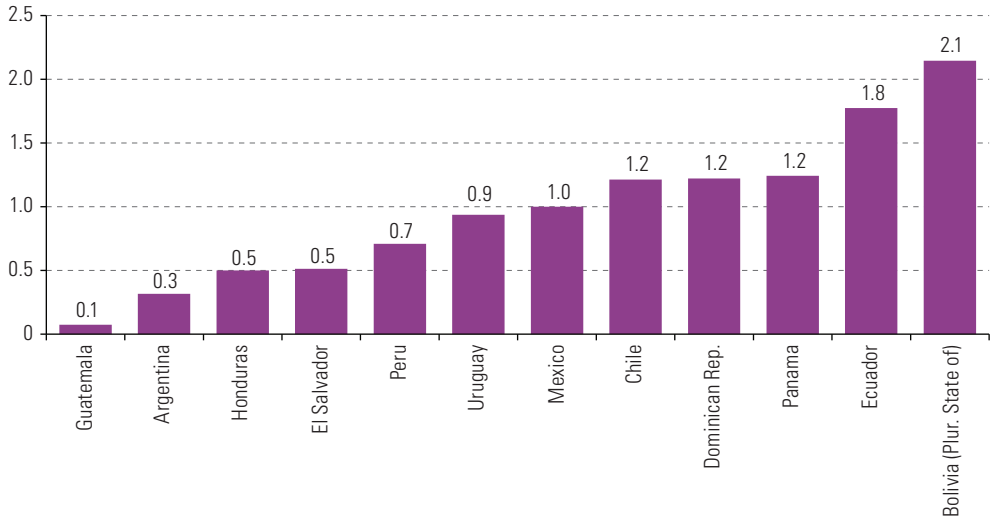
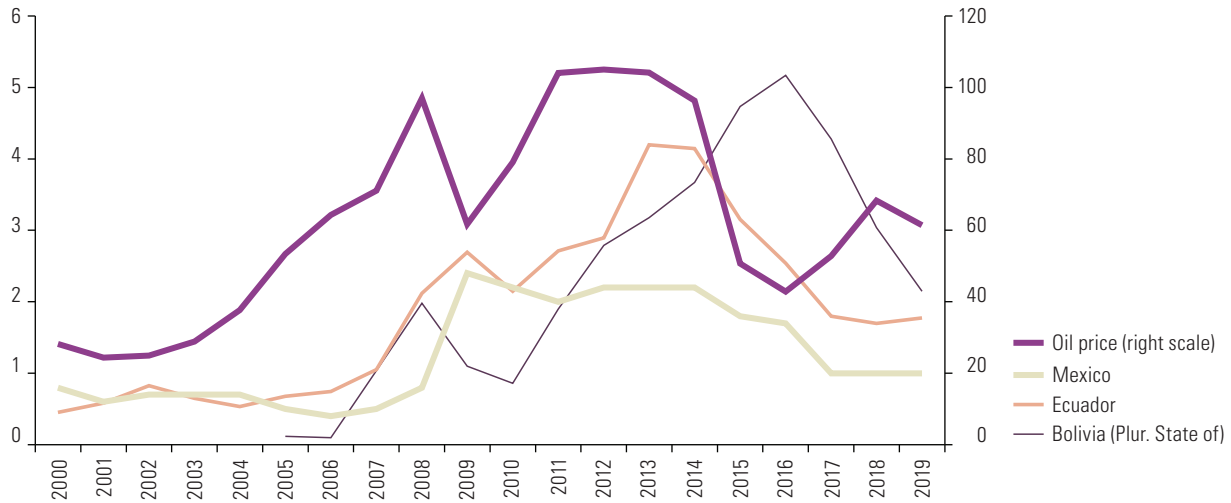


Figure III.7
Latin America (12 countries): public investment by non-financial public enterprises, 2019
(Percentages of GDP)

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: The figures are taken from fiscal accounts and exclude capital transfers and financial investment. In the case of Panama, the figures represent the consolidation of national non-financial public enterprises plus the disbursements made under the Panama Canal Authority's annual investment plan. As established in the Constitution of the Republic of Panama, the budget of the Panama Canal Authority is not included in the general state budget. In the case of Mexico, the figures represent investment in fixed assets by Petróleos Mexicanos (PEMEX) and the Federal Electricity Commission (CFE).

Although less common, there are cases in which public enterprises operating in the production sector are major investors, with national oil companies or state-owned mining companies playing a leading role in several countries. Examples include the Plurinational State of Bolivia (through Yacimientos Petrolíferos Fiscales Bolivianos (YPFB)), Chile (Corporación Nacional del Cobre de Chile (CODELCO) and Empresa Nacional del Petróleo (ENAP)), Ecuador (Empresa Pública de Hidrocarburos del Ecuador (EP PETROECUADOR)) and Peru (Petróleos del Perú (PETROPERÚ)). Investments by these companies are linked closely to the price cycle of non-renewable natural resources. As shown in figure III.8, GFCF by public enterprises in the Plurinational State of Bolivia and Ecuador attained very high levels, tracking the movement of oil prices with a lag that represents the time between the planning of a new investment and its realization. The increase in investment by public enterprises in the Plurinational State of Bolivia was also due to the national development plan, which includes the strengthening or creation of public enterprises to promote the country's industrialization.

Figure III.8
Latin America (selected countries): public investment by non-financial public enterprises and crude oil price trends, 2000–2019
(Percentages of GDP and dollars per barrel)



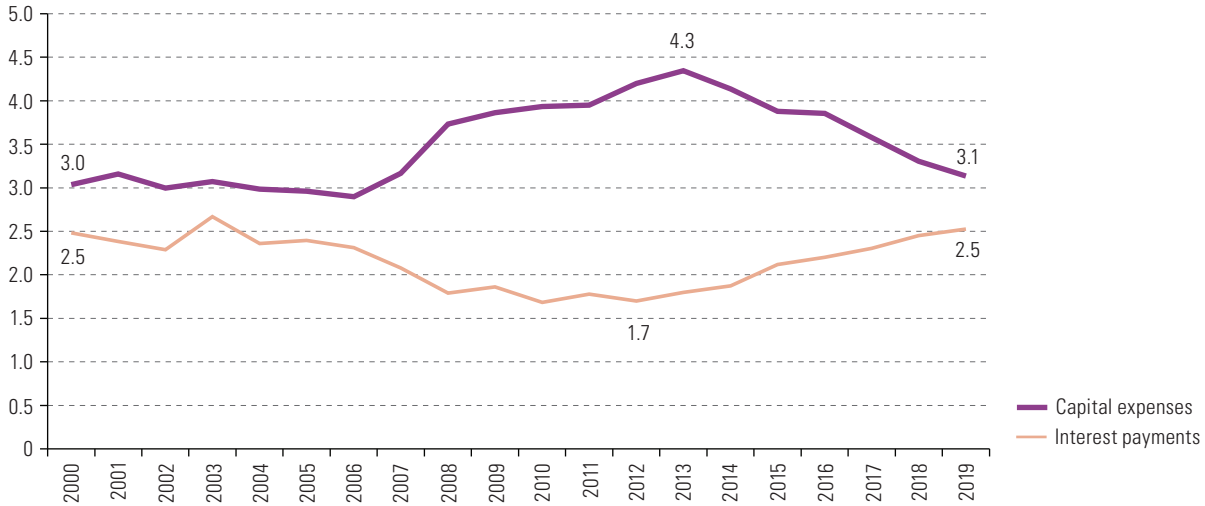
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures, and World Bank for price data.
Note: The figures were obtained from fiscal accounts and exclude capital transfers and financial investment. In the case of Mexico, the figures represent investment in fixed assets by Petróleos Mexicanos (PEMEX) and the Federal Electricity Commission (CFE).

4. Central governments have used public investment as the main fiscal adjustment variable since the middle of the 2010s

Since the global economic and financial crisis of 2008–2009, the fiscal accounts in Latin America have recorded persistent global deficits. Although there was a slight improvement in global balances between 2010 and 2012, the public accounts turned negative as from 2013. At the same time, widening fiscal deficits led to a progressive increase in central government debt levels in Latin America, which rose from a minimum of 29.4% of GDP in 2008 to 45.4% in 2019, before the onset of the COVID-19 pandemic in 2020 (see the section on fiscal policy in chapter I). Against this backdrop, and amidst concerns about the sustainability of the public debt, from 2014 onwards countries started to adopt measures to reduce primary deficits and thus curb the rise in debt levels. The contraction in primary spending required to achieve this objective was borne primarily by capital expenditures. As shown in figure III.9, the countries contained the growth of total spending, relative to GDP, by offsetting higher interest payments with cuts in capital expenditure.

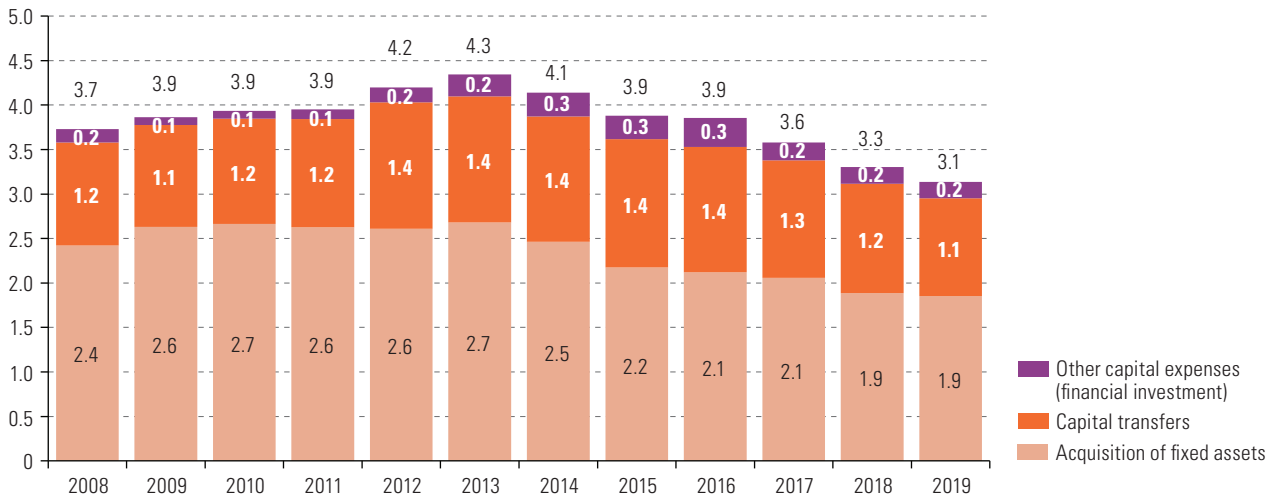
Among capital expenditures, the component hit hardest was the acquisition of fixed assets (the concept that approximates most closely to GFCF and, therefore, to public investment). Between 2013 and 2019, this component decreased by 0.8 percentage points of GDP, equivalent to the increase in interest payments during the same period. The adjustment in capital expenditures —and particularly in the acquisition of fixed assets— enabled countries to cut spending quickly, leaving construction projects at a standstill or reducing machinery purchases. Capital transfers were also reduced, although by a lesser amount (see figure III.10). It is worth noting that this component of capital expenditure can represent a form of indirect public investment, if the resources in question are used to finance investment projects executed by the private sector or, in the case of transfers from the central government, by other public-sector entities.

Figure III.9
Latin America (16 countries):[a] central government interest payments and capital expenditures, 2000–2019[b]
(Percentages of GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] The countries included are: Argentina, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru and Uruguay.
[b] Simple averages. In the cases of Argentina, Mexico and Peru, the figures correspond to national public administration, the federal public sector and general government, respectively.

Figure III.10
Latin America (16 countries):[a] central government capital expenditures, by component, 2008–2019[b]
(Percentages of GDP)

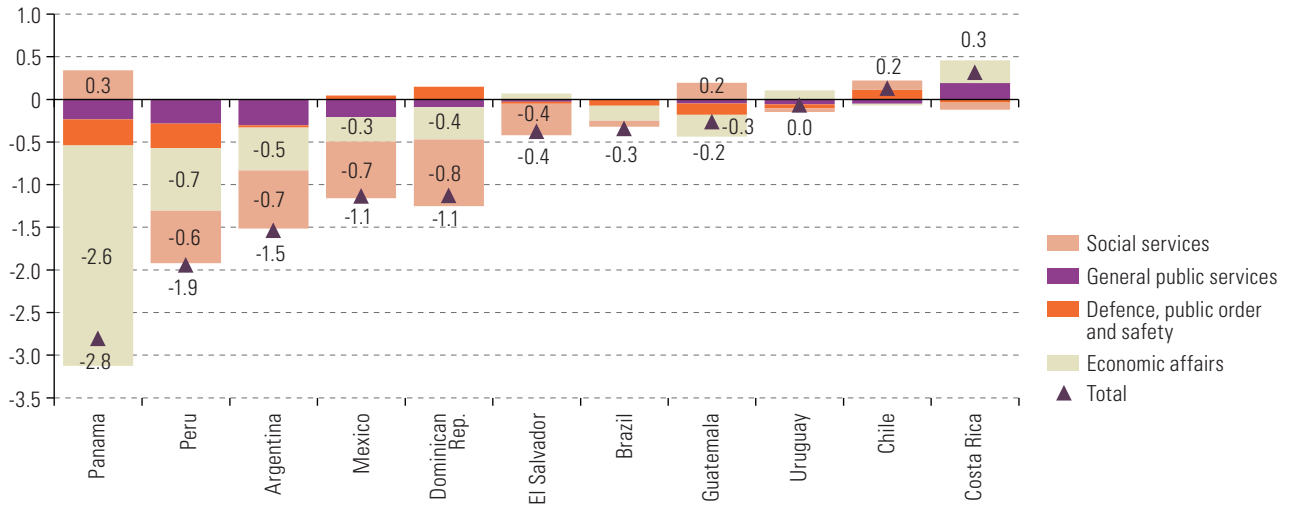


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] The countries included are: Argentina, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru and Uruguay.
[b] Simple averages. In the cases of Argentina, Mexico and Peru, the figures correspond to national public administration, the federal public sector and general government, respectively

The reduction of central government capital expenditures had an impact on all public expenditure functions. In Latin America, there was a significant reduction in capital outlays related to economic affairs functions (see figure III.11). In several countries, however, capital spending on social services was also cut sharply. In some cases, capital expenditure on social functions such as housing, health and education, among others, was pared back more sharply than spending on economic affairs functions. This point is important, because there is a tendency to equate central government

public investment with the construction of economic infrastructure, such as roads and airports; but, in reality, capital expenditures encompass a wide range of projects that are linked to many of the Sustainable Development Goals. Thus, a reduction in capital expenditures targeting social areas could make it harder to achieve the goals of the 2030 Agenda for Sustainable Development in the region.

Figure III.11
Latin America (11 countries): variation in central government capital expenditures by function, 2013–2019
(Percentage points of GDP)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
Note: In some cases, the public expenditure figures by function are not the same as the amounts reported in the economic classification, owing to differences in sources and accounting treatments (cash vs. accrual basis), among others.

B. Proposals for a public investment policy that fosters sustainable and inclusive development

Governments have various instruments at their disposal to support a strategic approach to public investment that contributes towards the Sustainable Development Goals and environmental sustainability. This section examines two of these, which, jointly, could drive a transformative recovery with sustainability and inclusiveness in the region: (i) national public investment systems; and (ii) investment promotion strategies, particularly investment tax incentives.

National public investment systems consist of the set of plans and strategies that involve public expenditures used by the public sector to acquire tangible or intangible assets. They include the portfolio of public investment projects, whether under implementation or closure, or in the design stage. The project portfolio is usually submitted to the national parliament along with the annual budget. Investment tax incentives consist of preferential tax treatments aimed at influencing investment decisions through reduced rates, investment deductions and credits, and accelerated depreciation.

Given their characteristics and objectives, national public investment systems and investment tax incentives are instruments that could be used as part of a national investment promotion strategy. Both instruments seek to increase capital accumulation to sustain economic activity and employment. In some cases, their design includes targeting criteria that allow investment projects to be targeted on specific sectors (education, health, non-conventional renewable energies, sustainable mobility and urban space, and the circular economy, among others). Others are cross-cutting, such as programmes to mitigate and adapt to climate change or promote productivity.

In the case of both public investment and tax incentives, the use of public resources is justified through arguments that include the following: complementarity with private investment and the possibility of attracting it (crowding-in); the possible existence of market failures (externalities, information asymmetries, imperfect competition and economies of scale, among others); a heterogeneous production structure that results in capital accumulation at different rates depending on the activity or region; environmental constraints in terms of infrastructure or institutions; or the existence of low investment ratios. In the specific case of public investment, the multiplier effect can be positive for growth in the short term, through its effect on demand, and also in the long term, through its effect on supply (see box III.2). In developing economies, such as those of Latin America and the Caribbean, public investment and public capital accumulation have the potential to overcome bottlenecks that constrict private sector investment.

Box III.2
Public investment fiscal multipliers

Following the various recessions that have occurred in the developed economies since the 1980s, and especially after the economic and financial crisis of 2008–2009, there has been growing interest in measuring the impact and effectiveness of changes in fiscal policy (that is, public expenditure and taxes) in facilitating economic recovery and boosting growth. Efforts to gain a better understanding of the effect of changes in fiscal policy have elicited a variety of studies on the fiscal multipliers in both developed and developing countries (Ramey, 2011; IMF, 2014a). The role of public investment, and the associated fiscal multipliers, has become even more important in a context of low potential growth rates and the investment needed to achieve the Sustainable Development Goals.

Recent studies have found that the fiscal multipliers of public investment are higher in countries with a low capital stock, such as those in Latin America, than in those with a high capital stock (Izquierdo, Pessino and Vuletin, 2018). The same authors note that public investment is more likely to crowd-in private investment than primary expenditure, given the positive side effects that the former has on the marginal productivity of private capital. In addition, the International Monetary Fund (IMF, 2020) estimates that public investment also has a major impact on employment, particularly in periods of uncertainty, with a multiplier of between 0.9 and 1.5. It is also important to note that the magnitude of the multipliers is sensitive to the business cycle. Several studies have found that fiscal multipliers are greater during a recession than in periods of expansion (Auerbach and Gorodnichenko, 2012; Riera-Crichton, Vegh and Vuletin, 2014). There is also a growing literature arguing that the institutional framework for public investment plays a key role in achieving a multiplier effect; whereas projects that have been poorly designed, evaluated or implemented have a negative impact (Leeper, Walker and Yang, 2010; Cavallo and Daude, 2011; Leduc and Wilson, 2012; Furceri and Li, 2017; Izquierdo, Pessino and Vuletin, 2018).

Consistent with these findings, studies on the region's countries show that public investment can be a powerful tool for boosting economic activity. These estimates confirm that public investment multipliers tend to be higher —in some cases much higher— than those of primary or consumption expenditure (David, 2017; Ministry of Economy and Finance of Peru, 2015; Puig, 2014; Central Reserve Bank of Peru, 2014). In particular, Puig (2014) argues that public investment has a much more expansionary effect because of the synergies it generates with private investment. The Central Reserve Bank of Peru (2014) estimates the long-run capital expenditure multiplier at 1.42 in the low-growth phase of the business cycle and 0.73 in the expansionary phase. In addition to exhibiting different magnitudes depending on the phase of the cycle, public investment —in contrast to consumption expenditure— significantly raises the chances of moving from a low- to a high-growth state (Ministry of Economy and Finance of Peru, 2015).

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of V. Ramey, "Identifying government spending shocks: It's all in the timing", *Quarterly Journal of Economics*, vol. 126, No. 1, 2011; International Monetary Fund (FMI), *World Economic Outlook: Legacies, Clouds, Uncertainties*, Washington, D.C., October 2014; *Fiscal Monitor: Policies for the Recovery*, Washington D.C., October 2020; A. Izquierdo, C. Pessino and G. Vuletin, *Mejor gasto para mejores vidas: cómo América Latina y el Caribe puede hacer más con menos*, Inter-American Development Bank (IDB), 2018; A. Auerbach and Y. Gorodnichenko, "Measuring the output responses to fiscal policy", *American Economic Journal: Economic Policy*, vol. 4, No. 2, 2012; D. Riera-Crichton, C.A. Vegh and G. Vuletin, "Fiscal multipliers in recessions and expansions: does It matter whether government spending is increasing or decreasing?", *World Bank Policy Research Working Paper*, No. 6993, Washington, D.C., 2014; E. Leeper, T. Walker and S-C. Yang, "Government investment and fiscal stimulus", *Journal of Monetary Economics*, vol. 57, No. 8, 2010; E. Cavallo and Ch. Daude, "Public investment in developing countries: a blessing or a curse?", *Journal of Comparative Economics*, vol. 39, No. 1, 2011; S. Leduc and D. Wilson, "Roads to prosperity or bridges to nowhere? Theory and evidence on the impact of public infrastructure investment", *NBER Macroeconomics Annual*, vol. 27, No. 1, University of Chicago Press, 2012; D. Furceri and G. B. Li, "The macroeconomic (and distributional) effects of public investment in developing economies", *IMF Working Papers* 2017/217, IMF, 2017; A. David, "Fiscal policy effectiveness in a small open economy: estimates of tax and spending multipliers in Paraguay", *IMF Working Paper*, No. 17/63, 2017; Ministry of the Economy and Finance of Peru, *Marco Macroeconómico Multianual 2016–2018*, Lima, 2015; J. Puig, "Multiplicador del gasto público en Argentina", *Económica*, vol. 60, 2014 and Central Reserve Bank of Peru, *Reporte de Inflación: panorama actual y proyecciones macroeconómicas 2014–2016*, Lima, October, 2014.

Another characteristic of public investments is the time frame in which they are set. This is relatively long, generally medium- and long-term, in keeping with the useful life of the accumulated capital or, at least, with that of the investment project cycle. The time frames considered pose a series of challenges with respect to their design, implementation and execution control.

This makes it advisable to design investment policy and tax incentives that maximize the potential synergies, so as to reduce the costs associated with each instrument. It is possible to maximize synergies between public investments and tax incentives, firstly by setting shared objectives and targets, so that they are aligned; and, secondly, by weighing their comparative advantages in order to achieve the targets set.

Both public investments and tax incentives have potential benefits and associated costs. This makes it necessary to carefully analyse their optimal combination, given the policy objective and the national fiscal, economic and political context, as well as the capacities of the authorities to implement them efficiently. This can be done by applying a cost-benefit analysis to each instrument, including the associated costs (financial, administrative and technical) and the likely benefits for the economy, society at large and the environment.

In terms of identifying common objectives and targets, a good practice is to rely on the national development plans, because it defines a medium- and long-term strategy for the public sector as a whole. It establishes a vision of what the country wants to achieve and the policies needed to achieve it, defining indicators to measure progress within certain agreed-upon time frames. The advantage of incorporating the design of public investment and tax incentives into the national development plan is that it strengthens the strategic orientation of the investment promotion policy towards national development objectives. It could therefore expedite the approval of investment initiatives, since it is based on a pre-established policy framework, the formulation of which, moreover, usually includes a citizen consultation process.[1]

A certain degree of flexibility needs to be maintained in aligning investment policy and investment tax incentives with the national development strategy. One reason for this is that events may occur that have a major effect on the implementation of public initiatives in the short term, whether due to a change of government, budget constraints, external or domestic macroeconomic shocks, or restrictions on people's movement, as occurred during the COVID-19 pandemic. Nonetheless, investment promotion policy should be able to adapt to these changing scenarios, with a view to achieving long-term development goals. For example, during the COVID-19 pandemic the Economic Commission for Latin America and the Caribbean (ECLAC) proposed targeting investments in strategic sectors which, in addition to having positive externalities for sustaining economic activity in the short term, were consistent with the Sustainable Development Goals (ECLAC, 2020).

As shown in diagram III.1, there is a series of cross-cutting actions that should be undertaken to ensure proper coordination between an annual programme of the national public investment system and the investment tax incentives, and also to resolve some of the design and implementation shortcomings of both instruments.

First, it is necessary to adopt a solid legal framework that defines clear institutional responsibilities among the different public and private agencies involved. As noted below, both investment promotion instruments consider a multi-stakeholder architecture that includes different sectoral ministries, the legislature, civil society or other auditing bodies, which tend to have different interests and degrees of competence. In order to limit areas of discretion in decision-making, it is necessary to establish the role to be played by each party and its responsibilities in terms of providing information, publishing reports and monitoring and controlling progress within its jurisdiction.

[1] For a review of the region's development strategies and their characteristics, see [online] https://observatorioplanificacion.cepal.org/es/planning-development.

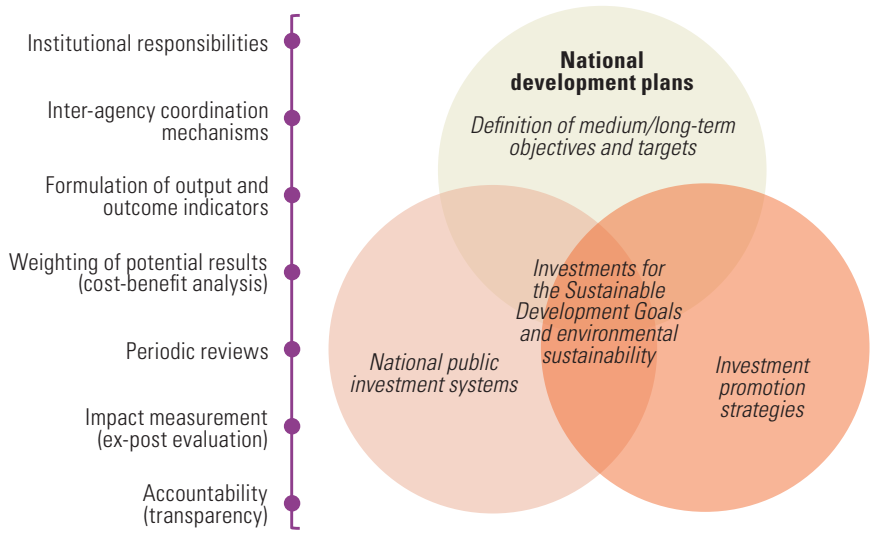


Diagram III.1
Proposed strategic orientation of an investment policy

Source: Economic Commission for Latin America and the Caribbean (ECLAC).

A second, closely related, task is to define inter-agency coordination mechanisms in the same legal framework. These may take the form of collegiate bodies that meet periodically to discuss the investment projects in the portfolio, the availability of funding, the difficulties faced and the possible solutions to be implemented, among other issues. Coordination mechanisms of this type are relevant for ensuring that each party fulfils the responsibilities established in the legislation. They also help ensure that all participants have a minimum level of technical information on the investment projects that are under way.

In the design stage of investment promotion instruments, it is also important to formulate output and outcome indicators that are consistent with the defined objectives. These indicators form the basis on which the progress of investment projects will be measured, relative to the targets and deadlines set. Formulating these indicators at the initial design stage makes it possible to put adequate systems in place for collecting the information that will be needed to construct the indicators adopted.

Once the key investment initiatives for achieving the policy objectives have been identified, the likely results of each chosen instrument must be weighted to determine their optimal combination in terms of effectiveness and efficiency. This can be based on a cost-benefit analysis, aimed at establishing whether the expected benefits of a particular instrument outweigh its costs. For example, a country seeking to promote changes in its energy matrix may choose to attract foreign investment through tax incentives. However, if the initial conditions of the country or area do not provide certain guarantees to the investing firms as to the quality of the transportation or communications infrastructure, or security, among other factors, it is unlikely that the firms will want to relocate their activities to the area, even if offered reduced tax obligations.

During the execution phase of investment projects, whether public or private, it is important to undertake periodic reviews to monitor the performance of the projects in accordance with their objectives and to identify, in a timely manner, potential corrective measures to improve the execution process. These periodic reviews focus on pre-established performance indicators and are based on continuous collection of project data. Given the costs involved in such exercises, it is possible to schedule annual reviews, thereby making it possible to incorporate their results into the annual budget approval processes.

At the end of investment projects, their direct and indirect results should be measured against the objectives set at the time of their design. These analyses are essential to provide feedback for the formulation of new projects, by providing information on the relevance of the instruments used to achieve certain objectives, the difficulties encountered during the implementation phase, and the solutions adopted to improve it.

Lastly, it is important to have adequate mechanisms of accountability before the competent bodies, in order to make the use of public resources transparent. Good practices in this domain advise consolidating information on the investment projects financed —whether directly with public funds or through tax benefits— in a single document. This would include the amounts of funding mobilized, the deadlines set, the entities and persons executing the projects and the results achieved (including an estimation of the indirect beneficiaries). This information should be made public, presented in a format that is easy for a non-specialist public to understand, and disseminated in a timely manner, taking into account project deadlines and the need for external reviews.

The next subsection describes national public investment systems and tax incentives for investment in greater detail, with a view to identifying best practices that would strengthen the role of investment policies in contributing to the Sustainable Development Goals and environmental sustainability.

1. National public investment systems

The quality of infrastructure projects depends not only on whether they are well targeted, but also on whether they have a robust implementation and evaluation strategy. Examples abound of poor project identification and selection, lack of transparency in bidding and implementation processes, insufficient funding to complete ongoing projects, or weak impacts on the target public. This situation applies not only to countries with the weakest institutional frameworks; nor is it unique to the region, since it is estimated that one third of the resources allocated to investment projects globally more than one-third of resources are lost as a result of multiple inefficiencies in the public investment management cycle (Schwartz and others, 2020).

To support public investment planning and help improve its quality, in the 1980s the countries of the region started to create "project banks", or information and registration systems (initially manual) for public investment projects, whether at the pre-investment or at the execution stage. Chile, El Salvador, Guatemala and the Plurinational State of Bolivia were pioneers in creating this public management tool. However, it soon became clear that project banks alone could not guarantee the quality of public investment. This led to the emergence of national public investment systems, which are currently operating in most Latin American countries (Candia, Perrotti and Aldunate, 2015).

National public investment systems consist of a set of institutions, norms, instruments and procedures common to the public sector and private sector entities that execute public investment, through which they relate and coordinate with each other, to prepare, evaluate, prioritize, finance, follow up and execute public investment projects, within the framework of development policies, plans and programmes (Perrotti and Vera, 2015; Ortegón and Pacheco, 2014). Their main objective is to ensure the efficient allocation of resources to public investment, pursuant to the guidelines of the country's development policy, by coordinating the stages and actors that make up the national public investment policy cycle.

In general, the national public investment policy cycle consists of at least four stages: (i) planning and formulation of the investment policy; (ii) selection of the most cost-efficient projects and allocation of resources; (iii) implementation and monitoring;

and (iv) evaluation.[2] Each stage comprises strategic tasks to provide the inputs needed for decision making during the ensuing stage. For example, diagnostic activities during the formulation stage make it possible to identify projects that are aligned with national development priorities. They can also distinguish projects that have a sound technical design that enables them to achieve the targets set most efficiently, according to economic, social and environmental criteria. Ex post evaluations of investment projects are performed once the execution phase has concluded (in the case of short-term evaluations), or else afterwards (in the case of medium and long term evaluations), in order to feed back into the decision making cycle These evaluations draw on lessons learned during the execution phase of the project, as well as the products or services generated as planned; and they function as an accountability mechanism. The medium- and long-term evaluations performed after an investment project has concluded make it possible to judge whether or not the social effects originally envisaged were achieved; and in some cases they can also be used to verify whether or not disaster prevention planning responded to reality.

The national investment policy cycle involves multiple actors from public and private sectors and civil society. The legal framework of the national public investment system aims to organize these actors by assigning explicit responsibilities, in order to facilitate their coordination. A governing entity is usually designated to lead the process, issue rules and establish procedures and schedules, among other functions. There are also operational entities, which are tasked with executing public investment projects; associated entities, which include all cross-cutting public agencies, such as those in charge of budgeting, planning, oversight and transparency; and lastly, entities co-opted from the public sector, the private sector and civil society (at the national, regional and local levels) which may submit investment projects and programmes for approval and subsequent execution with public funds.

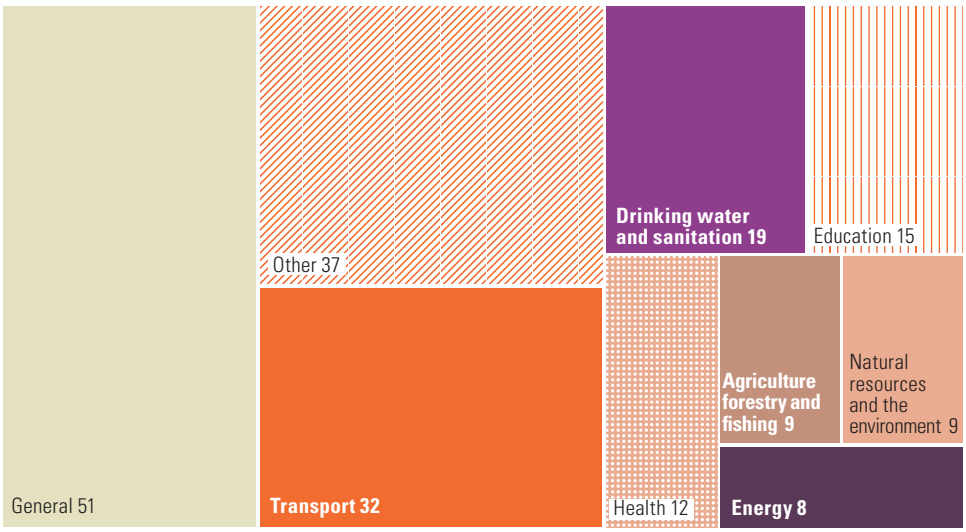
The challenge is to ensure a smooth flow of information between all parties involved, delivered in a timely and transparent manner, and in a format that is easy for entities with different functions to understand. The cornerstone of the proper functioning of the investment cycle is a solid legal framework that defines not only each party's functions, but also their responsibilities, the deadlines for each stage of management, the processes involved and the accountability mechanisms. These aspects are fundamental for limiting discretionary decision making and committing system participants to efficient management that meets its objectives. Another key point in regulating technical and operational processes within the public investment management cycle is the need to harmonize the methodologies used to carry out the technical-financial analysis of projects, their ex-ante and ex post evaluations, the construction of performance indicators associated with each investment project, and the physical-financial follow-up of execution, among other dimensions.

There is great heterogeneity in the region in terms of the number of methodologies used and the issues they address. Ex ante formulation and evaluation methodologies are used frequently in Latin America and are grouped into two categories: (i) general methodologies; and (ii) specific methodologies for investment projects in certain sectors, disaster prevention, climate change adaptation and ex post evaluation. In the case of general methodologies for assessing whether or not to proceed with an investment project, the national public investment systems reviewed mainly use cost-benefit analysis for investments in which the benefits can be quantified; and a cost-efficiency or multi-criteria method when the benefits are hard to evaluate numerically. The indicators used are the net present value (NPV) and the internal rate of return (IRR) to measure the economic profitability of the investment and the equivalent annual cost (EAC).

[2] For further information, see [online] https://observatorioplanificacion.cepal.org/es/marco-conceptual-inversion-publica.

As regards the specific methodologies used in the 16 countries under analysis, 32 methodologies are applied in the transport sector, 19 in drinking water and sanitation and 15 in education (see figure III.12).

Figure III.12
Latin America (16 countries):[a] methodologies used to analyse investment projects by sector, 2020
(Number)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Regional Observatory on Planning for Development in Latin America and the Caribbean [online] https://observatorioplanificacion.cepal.org/en and official websites of the countries.

[a] The countries included are Argentina, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, the Plurinational State of Bolivia and Uruguay.

Consideration of the specific methodologies used when formulating an investment project reveals that disaster risk management and climate change adaptation methodologies are poorly disseminated. Currently, seven finance ministries and other authorities of the national investment systems are working to integrate this methodology in the design of public investment projects.[3] It is essential that the countries of the region make progress in formalizing the principles of climate risk management in the public investment management cycle, given the countries' high levels of exposure to increasingly frequent natural disasters, which entail enormous costs in terms of social vulnerability and the destruction of physical capital.

In the public investment cycle, risk management involves assessing the exposure of specific geographical areas, social groups and economic sectors to probable events. This is evaluated on the basis of the specific characteristics of each area, social group and economic sector, as well as the probability of the occurrence of an extreme event related to climate change. It also involves estimating the costs associated with these probable events, based on past events that involved reconstruction and maintenance, and that caused interruptions in public investment, among other factors (Hallegatte, Rentschler and Rozenberg, 2019). The methodology for risk management in public investment is thus conceived as a set of tools to strengthen the resilience of projects by prioritizing threats, developing mitigation measures, calculating associated costs and designing project alternatives based on the risks identified. Improving the resilience of investment projects has very significant advantages for ensuring the sustainability of infrastructure and for freeing up additional resources. A study by the World Bank notes that, under an average risk scenario, the net benefit of investing in more resilient infrastructure in low- and middle-income countries is US$ 4.2 trillion; that is US$ 4 of benefit for every US$ 1 invested (Hallegatte, Rentschler, and Rozenberg, 2019).

[3] See [online] https://observatorioplanificacion.cepal.org/sites/default/files/document/files/Nota_te%CC%81cnica_sesio%CC%81n_%202309_RedSNIP.pdf.

Lastly, ex post evaluations are provided for in the legal frameworks of most of the region's national public investment systems. However, only Chile and Mexico keep repositories of evaluations conducted on the websites of the national public investment systems or their equivalents. In Costa Rica, Ecuador and Peru, methodologies have been published so that project executing agencies can perform the ex-post evaluations that they consider important. In Honduras, the information platform of the national public investment system has a module in which project executing agencies can obtain information on the targets achieved and lessons learned at project completion. In Argentina, the Dominican Republic and Panama, executing agencies have the power to decide which projects will be evaluated and the methodologies to be used for this purpose. In other national public investment systems, ex post evaluations are not included in the responsibilities of the governing authorities or other participating entities.

As highly institutionalized systems that establish the legal, technical-operational and methodological framework for the public investment management cycle, national public investment systems have great potential to strengthen the design and implementation of public investment initiatives targeting the Sustainable Development Goals in Latin America and the Caribbean. Although most countries in the region have such systems in place, there are many areas in which they could be strengthened —in particular, continuous monitoring of the implementation of investment projects and evaluation of their results at completion. There is also still a long way to go to ensure effective transparency in public investment management and accountability. Addressing these institutional shortcomings would make it possible to enhance the contribution made by public investments to a transformative recovery with sustainability and inclusiveness in the region.

2. Investment promotion strategies

The magnitude of the investment needed to promote sustainable and inclusive development in the region makes private sector participation necessary. Countries have a wide range of instruments at their disposal to achieve this, including public procurement, public-private partnerships and investment tax incentives.[4] The role of tax incentives in aligning business investment with the Sustainable Development Goals is particularly important. Tax incentives for investment encompass all preferential treatments that seek to influence the investment decisions of specific taxpayers through reduced rates, deductions and credits for investment and accelerated depreciation. The Organisation for Economic Co-operation and Development (OECD) recently proposed a practical definition of investment tax incentives, as specific tax provisions that deviate from the standard tax treatment in a country and result in a reduced or deferred tax liability with the aim of promoting investment (Celani, Dressler and Wermelinger, 2022).

In general, these incentives seek to influence two types of investment decision (Kronfol and Steenbergen, 2020). Firstly, they seek to influence firms' location decisions, in other words they aim to attract private investment to a particular country or region, by increasing expected returns. In this case, the preferred tax instruments are those that impact expected returns directly, such as income taxes. Secondly, the adoption of tax incentives may seek to change production decisions, influencing the price of factors of production (such as labour hiring and machinery, among others) or the marketing strategy (exports, for example). This category includes tax benefits that seek to promote a specific sector of activity, such as the production of renewable energies.

[4] The scope of this document makes it impossible to cover all of the instruments; but it is necessary to keep them in mind when analysing and designing a national investment strategy for sustainable and inclusive development.

The tax instruments that are available for these purposes encompass all taxes generally levied on firms, including income taxes, payroll taxes, taxes on goods and services (value added tax – VAT) and other more specific instruments, such as corrective taxes and wealth taxes. There are also measures that seek to reduce the cost of capital, such as investment credits or accelerated depreciation mechanisms. Each instrument has comparative advantages that need to be weighed when designing an investment incentives programme. In principle, preferential treatments that are related to the amounts invested are more effective in promoting productive investments, because they act on the cost of capital directly. Table III.1 summarizes the advantages and disadvantages of the main investment tax incentives.

Table III.1
Investment tax incentives: advantages and disadvantages

Advantages	Disadvantages
Exemptions	
They are easy to administer.	They favour highly profitable projects, which would have been carried out even without the benefit. They provide an incentive to tax avoidance, by diverting profits from affected firms to those that are exempt, through transfer pricing. The period can be extended beyond the legal term through social transformations. As the exemptions are limited to a certain number of years, they attract mainly short-term investments.
Reduced rates	
They are easy to administer. Unlike exemptions, they require a declaration, which allows for greater control. They have a lower tax cost than exemptions.	They favour highly profitable projects, which would have been executed even without the benefit. They provide an incentive to tax avoidance, by diverting profits from affected firms to those that are exempt, through transfer pricing. They are a gift for investments that have already carried out.
Deductions and credits for investment	
They are more closely targeted, as they are granted against a material investment. They make it possible to favour certain types of assets over others.	They stimulate investments in assets with shorter useful lives, since the incentive can be used at each asset renewal. The system can be abused, by selling and purchasing the same assets with the aim of claiming the benefit several times. They have higher administrative costs. If the loss carryforward is limited in time, credit carryforward is not allowed, which may discriminate against investments that have later returns.
Accelerated depreciation	
This is more closely targeted, since it is granted against a material investment. It makes it possible to favour certain types of assets over others. There is no distortion in favour of short-term assets, since, regardless of the duration of the asset, its acquisition cost is always depreciated. It reduces abuse, since the use of mechanisms such as the sale and repurchase of the same asset does not generate additional tax savings. It has a lower tax cost, since it only defers the payment of the tax.	It has higher administrative costs. If the loss carryforward is limited in time, it may discriminate against investments that have later returns.

Source: Economic Commission for Latin America and the Caribbean (ECLAC)/Oxfam International, "Los incentivos fiscales a las empresas en América Latina y el Caribe", *Project Documents* (LC/TS.2019/50), Santiago, September 2019.

The design of tax incentives also needs to consider eligibility criteria. These are essential for ensuring that the benefits are targeted appropriately to taxpayers whose production activities are aligned with the policy objectives being pursued. There are several types of criteria, ranging from sectoral criteria to those linked to specific geographic areas, those based on results (increased energy efficiency or job creation, among others), those that include minimum investment requirements, the articles of association of the company or its owners, among others (Celani, Dressler and Wermelinger, 2022). The most effective eligibility criteria from the investment promotion standpoint are those that include minimum investment requirements and those based on results. The latter

have the advantage of reinforcing the commitment of the beneficiary enterprises to fulfilling the objectives associated with the preferential treatment. However, they are more complex to administer, because they require continuous control and supervision by the tax authorities. In contrast, eligibility criteria based on sector or geographic considerations are easier to design and monitor, but the targeting of benefits is weaker.

The design of tax incentives aimed at promoting investment should also make their duration explicit, with the corresponding review mechanisms, to make it possible to evaluate them. When tax laws grant benefits to certain taxpayers without specifying a termination date, the incentives tend to be renewed almost automatically, regardless of whether the policy objectives pursued have been met. In this context, periodic reviews of investment tax incentives are an important exercise to determine whether maintaining the benefit is justified, considering the results achieved. This involves weighing the costs associated with the application of the incentive against the benefits it confers on society, which depends on the associated objective (such as industrial development, job creation or environmental protection). Cost-benefit analyses are commonly used in this type of exercise (Kronfol and Steenbergen, 2020).

To strengthen transparency in the adoption and implementation of tax incentives, good practices advocate compiling all aspects of their design in a single legal instrument that is discussed in a timely manner in congress (IMF and others, 2015). The minimum aspects that should be included relate to the policy objectives to which the incentives could make a positive contribution, the type of taxes on which the relief is to be applied, the eligibility criteria, the number of potential beneficiaries, and an estimate of the projected fiscal cost. More advanced transparency standards also include a description of the methodologies used for estimating the fiscal cost, the benchmark tax structure, the data sources and the performance indicators associated with the incentive.

Consolidating this information early on in a single legal instrument is crucial for ensuring that legislative and audit bodies are effectively engaged in maintaining the tax incentives, thus strengthening their legitimacy and their acceptance by the public. This makes it possible to limit areas of discretion in decision-making and reduce the risks of corruption in the granting of tax benefits to certain taxpayers.

These measures to make the justification and suitability of investment incentive programmes transparent should be maintained throughout the implementation stage, to make sure that the design fulfilled the proposed objectives. In this regard, the tax authorities should produce reports containing up-to-date lists of the tax incentives in force and their beneficiaries, with information on the associated fiscal cost, as well as on progress towards the targets set in the framework of a cost-benefit analysis. This information is essential for providing the inputs needed for the review and eventual renewal of investment incentive programmes.

These practices have great potential to strengthen the role of tax incentives in an investment policy aimed at sustainable and inclusive development in Latin America and the Caribbean. Investment tax incentives in the region entail very significant foregone revenue, ranging from 0.6% to 2.5% of GDP, depending on the country (ECLAC/OXFAM, 2019). In some cases, this fiscal cost even exceeds the central governments' capital expenditures, and the available information shows that the tax incentives contribute little to achieving the objectives for which they were adopted. Investment tax incentive programmes in Latin America mostly involve exemptions from corporate income taxes, import tariffs, VAT and other indirect taxes. Because they are not linked directly to the amounts invested, they provide weak incentives to investment initiatives, compared to accelerated depreciation mechanisms or the application of tax deductions or credits related to the cost of the investment.

The few studies that have been conducted in the region to weigh the costs and benefits of tax incentive programmes conclude that they are not cost-efficient; in other words, they are not very effective in achieving the objectives for which they were adopted (ECLAC/OXFAM, 2019). The reasons are to be found, firstly, in their design, which suffers from weaknesses in terms of setting durations and in transparency and accountability mechanisms, and the lack exercises to evaluate outcomes. As a result, in practice the benefits tend to be granted to specific taxpayers, at the discretion of the central authorities and with a certain tendency to clientelism.

Secondly, investment incentives in many of the region's countries may not achieve their potential owing to the constraints of the environment in which they are applied. It is widely documented that taxes applied at the national or local levels are just one variable in the investment decisions adopted by economic agents, especially foreign firms. Equally relevant are the quality of the transportation and communications infrastructure; legal, political and macrofinancial stability; exposure to climate risks; and the availability of skilled labour and other resources that are essential for certain industrial activities (minerals and hydrocarbons, for example). Consequently, shortcomings in these areas could compromise corporate investment decisions, with or without preferential tax treatment.

In addition to the pressures that these benefits exert on the fiscal accounts, tax incentives entail other of costs that are harder to estimate, such as the greater complexity of tax systems, loss of efficiency and equity, increased tax administration costs, and harmful inter-jurisdictional tax competition, among others (ECLAC, 2022).

Accordingly, tax incentive programmes should be adopted only after making a preliminary evaluation of their opportunity cost relative to other policy instruments that could also have a positive impact on investment growth. These include public investment as such, along with public procurement, subsidies and government-guaranteed liquidity instruments, among others.

Bibliography

Auerbach, A. and Y. Gorodnichenko (2012), "Measuring the output responses to fiscal policy", *American Economic Journal: Economic Policy,* vol. 4, No. 2.

Central Reserve Bank of Peru (2014), *Reporte de Inflación: panorama actual y proyecciones macroeconómicas 2014-2016,* Lima, October.

___(2012), *Reporte de Inflación: panorama actual y proyecciones macroeconómicas 2012-2014*, Lima, December.

Candia, J., D. Perrotti and E. Aldunate (2015), "Evaluación social de proyectos: un resumen de las principales metodologías oficiales utilizadas en América Latina y el Caribe", *Manuals series* (LC/L.3999), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC).

Cavallo, E. and Ch. Daude (2011), "Public investment in developing countries: a blessing or a curse?", *Journal of Comparative Economics*, vol. 39, No. 1.

Celani, A., L. Dressler and M. Wermelinger (2022), "Building an Investment Tax Incentives database: Methodology and initial findings for 36 developing countries", *OECD Working Papers on International Investment*, No. 2022/01, Paris, Organisation for Economic Co-operation and Development (OECD).

David, A. (2017), "Fiscal policy effectiveness in a small open economy: estimates of tax and spending multipliers in Paraguay", *IMF Working Paper,* No. 17/63.

ECLAC (Economic Commission for Latin America and the Caribbean) (2022), *A decade of action for a change of era* (LC/FDS.5/3), Santiago.

___(2020), *Building a New Future: Transformative Recovery with Equality and Sustainability* (LC/SES.38/3-P/Rev.1), Santiago.

ECLAC/OXFAM (Economic Commission for Latin America and the Caribbean/Oxfam International) (2019), "Los incentivos fiscales a las empresas en América Latina y el Caribe", *Project Documents* (LC/TS.2019/50), Santiago.

European Commission and others (2016), *System of National Accounts 2008* (ST/ESA/STAT/SER.F/2/Rev.5), New York [online] https://unstats.un.org/unsd/nationalaccount/docs/SNA2008Spanish.pdf.
Fornero, J., J. Guerra-Salas and C. Pérez (2019), "Multiplicadores fiscales en Chile", *Economía Chilena,* vol. 22, No.1.
Furceri, D. and G. B. Li (2017), "The macroeconomic (and distributional) effects of public investment in developing economies", *IMF Working Papers* 2017/217, International Monetary Fund (IMF).
Gaspar, V. and others (2019), "Fiscal policy and development: human, social, and physical investments for the SDGs", *IMF Staff Discussion Notes,* No. 2019/003, International Monetary Fund (IMF).
Hallegatte, S., J. Rentschler and J. Rozenberg (2019), *LIFELINES: The Resilient Infrastructure Opportunity,* World Bank.
IMF (International Monetary Fund) (2021), "Investment and Capital Stock Dataset (ICSD)" [online] https://data.imf.org/?sk=1CE8A55F-CFA7-4BC0-BCE2-256EE65AC0E4.
(2020), *Fiscal Monitor: Policies for the Recovery,* Washington D.C., October.
___(2014a), *World Economic Outlook: Legacies, Clouds, Uncertainties,* Washington, D.C., October.
___(2014b), *Government Finance Statistics Manual,* 2014, Washington, D.C.
___(2001), *Government Finance Statistics Manual,* 2001, Washington, D.C.
IMF (International Monetary Fund) and others (2015), "Options for low income countries' effective and efficient use of tax incentives for investment" [online] https://www.imf.org/external/spanish/np/g20/pdf/101515s.pdf.
Izquierdo, A., C. Pessino and G. Vuletin (2018), *Better Spending for Better Lives: How Latin America and the Caribbean Can Do More with Less*, Inter-American Development Bank (IDB).
Kronfol, H. and V. Steenbergen (2020), "Evaluating the costs and benefits of corporate tax incentives", *World Bank Publications – Reports* 33433, World Bank.
Leduc, S. and D. Wilson (2012), "Roads to prosperity or bridges to nowhere? Theory and evidence on the impact of public infrastructure investment", *NBER Macroeconomics Annual,* vol. 27, No. 1, University of Chicago Press.
Leeper, E., T. Walker and S-C. Yang (2010), "Government investment and fiscal stimulus", *Journal of Monetary Economics,* vol. 57, No. 8.
Ministry of the Economy and Finance of Peru (2015), *Marco Macroeconómico Multianual 2016-2018*, Lima.
Ortegón, E. and J. F. Pacheco (2004), "Los sistemas nacionales de inversión pública en Centroamérica: marco teórico y análisis comparativo multivariado", *Manuals series,* No. 34 (LC/IP/L.247), Santiago Economic Commission for Latin America and the Caribbean (ECLAC).
Perrotti, D. and M. Vera (2015), *Avances y retos de los Sistemas Nacionales de Inversión Pública de América Latina: resultados de la encuesta 2014* (LC/L.3988), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC).
Puig, J. (2014), "Multiplicador del gasto público en Argentina", *Económica*, vol. 60.
Ramey, V. (2011), "Identifying government spending shocks: It's all in the timing", *Quarterly Journal of Economics,* vol. 126, No. 1.
Riera-Crichton, D., C.A. Vegh and G. Vuletin (2014), "Fiscal multipliers in recessions and expansions: does It matter whether government spending is increasing or decreasing?", *World Bank Policy Research Working Paper*, No. 6993, Washington, D.C.
Schwartz, G. and others (eds.) (2020), *Well Spent: How Strong Infrastructure Governance can end Waste in Public Investment*, Washington, D.C., International Monetary Fund (IMF).

CHAPTER

IV

Energy transition and investment challenges in the copper, iron and lithium industries in countries of the region

Introduction

Key mitigation measures for moving towards a low-carbon economy worldwide include the widespread adoption of renewable energies, increasing energy efficiency, and promoting electromobility and storage technologies, within the framework of what is referred to as the energy transition (Bridge and others, 2013). This opens a window of opportunity for the region's mining countries, given that the new technologies are associated with more intensive mineral use, giving rise to expectations of higher demand and higher prices in the short and medium terms (Bazilian, 2018).

To take advantage of the potential growth in demand for minerals and a possible leading role for the mining sector in the development strategy, producing countries should make major investment efforts to adapt the capacity of mining companies to operate in a context of clean output and energy. Public policies are needed to transform the sector, prioritizing not only management of the activity's impact on society, but also the environment and economic considerations. Mining producers in the region must therefore adapt to the new market conditions they will face. This is because mining countries must adhere to international agreements that implicitly place a carbon budget on mining and, with it, an active restriction on production. Hence the need to invest in innovation to enable clean forms of mineral production (Watari and others, 2022).

In that context, the future competitiveness of the mining sector in the region's countries will be determined not only by traditional factors such as mineral reserves and laws governing extractive industries, but also by so-called green factors. They include the shadow price of emissions, which is determined by the ambitiousness of national climate change regulations and the intensity of greenhouse gas (GHG) emissions from the production technologies used. Both factors impose significant challenges for future investments. International buyers are also increasingly demanding that exporters meet social and environmental standards.[1]

The investment efforts involved are therefore considerable because, on the one hand, production patterns will have to be adapted to the new reality imposed by the energy transition. On the other, efforts must also be intensified if mineral producers are to benefit from the window of opportunity that opens up with the energy transition.

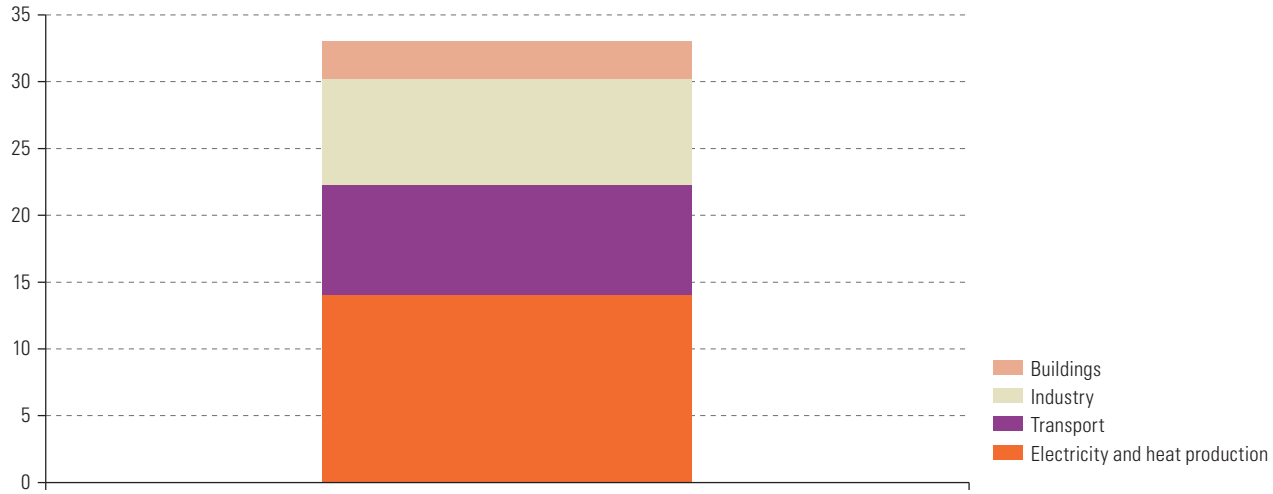
A. Replacing fossil fuels with clean energy means significantly increasing demand for minerals

The energy transition can be defined as a technological paradigm shift towards a low-carbon production matrix, as a result shedding the current fossil fuel-intensive paradigm.

In the current paradigm, the energy sector is the largest contributor of CO_2 emissions, accounting for 73.2% of total global emissions. Of that volume, as shown in figure IV.1, energy use by industries accounts for 24.2 percentage points, residential and commercial energy use for 17.5 percentage points, and transportation for 16.2 percentage points. Consequently, the energy transition is largely about decarbonizing the energy matrix: it is necessary to reduce direct emissions and —especially— the carbon footprint of the various productive sectors. In particular, fossil fuels must be replaced with clean energies in electricity generation and internal combustion engine vehicles swapped for electrically powered ones.

[1] Another very important aspect for mining projects is the growing tendency towards socioenvironmental conflict in mining areas.

Figure IV.1
Distribution of CO_2 equivalent emissions by sector
(Percentages)



Source: International Energy Agency (IEA), "The role of critical minerals in clean energy transition", *World Energy Outlook Special Report*, 2021.

Transitioning in the two areas mentioned above involves replacing fossil fuels with minerals, since new low-CO_2 technologies are considerably more mineral-intensive than current technology (Bridge, and others, 2013). Figure IV.2 illustrates this, as it shows the intensity of mineral use by type of technology in current and new transportation and power-generation technologies. For example, an onshore wind farm requires nine times more minerals than a gas-fired power plant, or an electric car requires six times more minerals than a conventional car (IEA, 2021).

Figure IV.2
Intensity of mineral use by technology

A. Transport
(kilograms per vehicle)

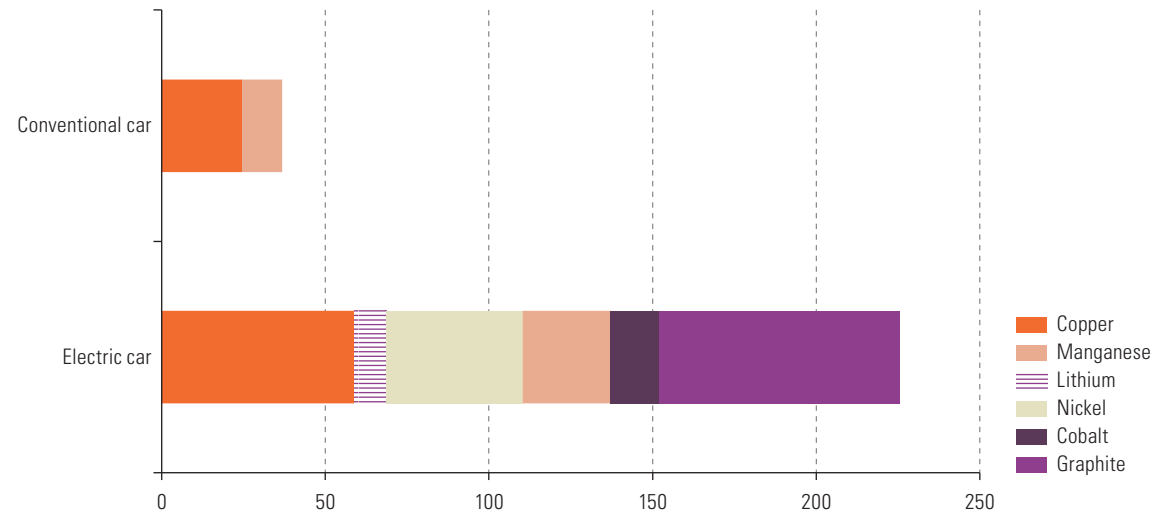
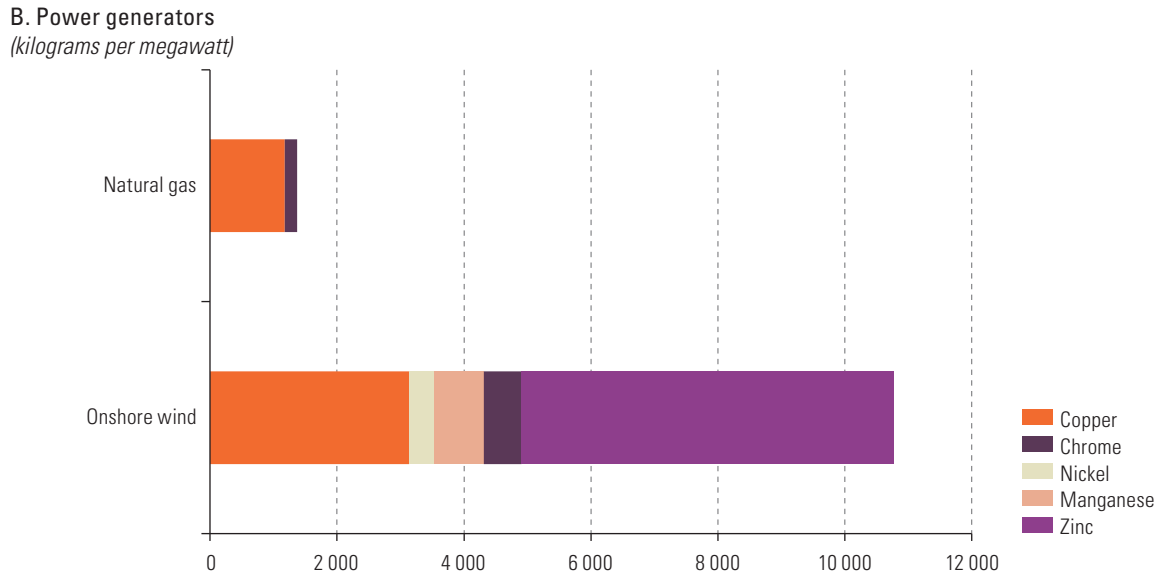


Figure IV.2 (concluded)

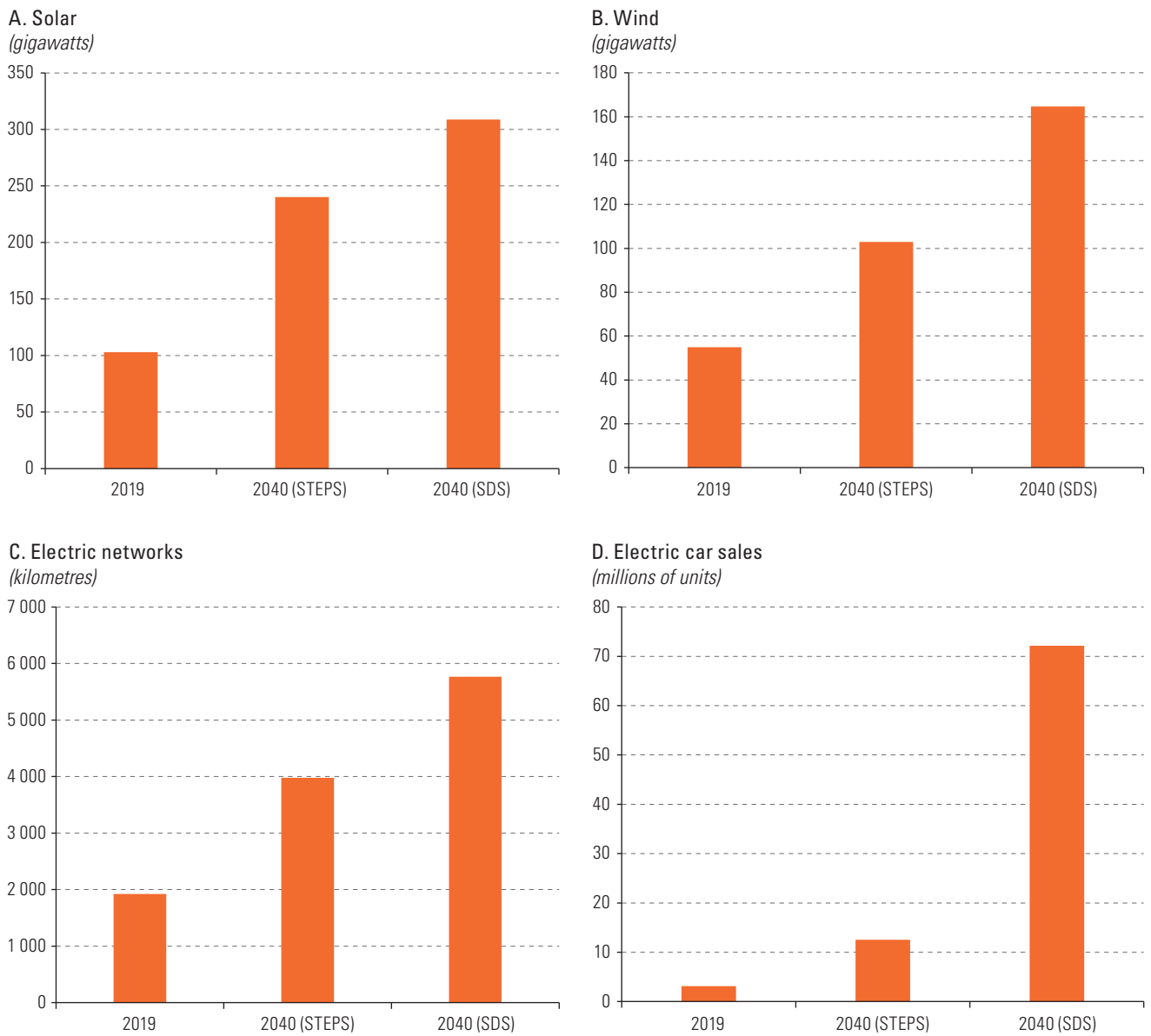


Source: International Energy Agency (IEA), "The role of critical minerals in clean energy transition", *World Energy Outlook Special Report*, 2021.

A recent study by the International Energy Agency (IEA) (2021) sets out two energy transition scenarios. On this basis, the penetration of new technologies and the resulting mineral consumption rates are projected. Scenario 1, the Stated Policies Scenario (STEPS), projects the different variables involved in the energy transition on the basis of a sector-by-sector analysis of current and announced policies. Scenario 2, the Sustainable Development Scenario (SDS), for its part, projects the variables according to the trajectory necessary to meet the objectives of the Paris Agreement. Among the technologies and goods for which a significant consumption increase is expected in both scenarios by 2040 are solar and wind power generation, electricity grids and electric cars.

In terms of electricity generation, the STEPS scenario foresees an increase of around 150% in the case of solar energy, while for wind energy the increase would be approximately 100%. In the SDS scenario, these percentages would reach 200% in both cases. The STEPS scenario indicates that electricity grids would double, while the SDS scenario projects a tripling of power grids. Regarding the penetration of electric cars, the STEPS scenario envisages a 10-fold increase, while the SDS scenario estimates a 25-fold rise over current levels. To visualize and provide the dimensions of these changes, figure IV.3 shows the volumes associated with each case and each scenario (IEA, 2021).

Figure IV.3
Annual growth in clean energy by scenario



Source: International Energy Agency (IEA), "The role of critical minerals in clean energy transition", *World Energy Outlook Special Report*, 2021.

B. World copper, iron and lithium markets: recent trends and the impact of the energy transition

The copper and iron markets are more developed and mature than lithium markets. Copper and iron are used extensively and intensively in key sectors of the economy such as construction, infrastructure, manufacturing and electrical equipment and systems. Until a decade ago, lithium was used mainly in ceramics and glass, conventional batteries, lubricants and greases. However, over the last decade the market has undergone a structural transformation owing to the use of lithium in the manufacture of rechargeable batteries for electric vehicles.

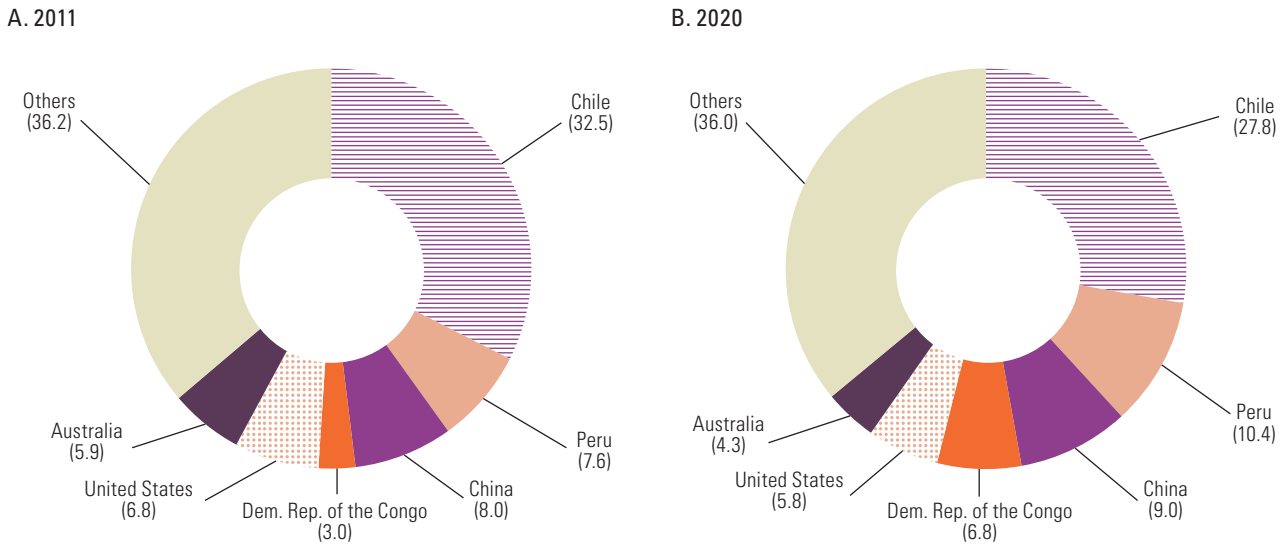
1. The copper market: current trends

The copper market was valued at US$ 230 billion in 2020 (360 Research Reports, 2021). According to figures reported by the Chilean Copper Commission (COCHILCO), world mine copper production reached 20.66 million metric tons that year, down 0.4% from the figure recorded in 2019. Meanwhile, refined copper supply came to 23.9 million metric tons, 2% higher than in 2019. Refined copper demand amounted to 24.8 million metric tons, a 3.4% increase on 2019. Thus, the market suffered from a supply shortfall of nearly 1 million metric tons in 2020 (COCHILCO, 2021e).

The world copper supply is concentrated in six countries: Australia Chile, China, the Democratic Republic of the Congo, Peru and the United States, which have kept the leadership of the industry for the last decade, together accounting for around two thirds of global output.

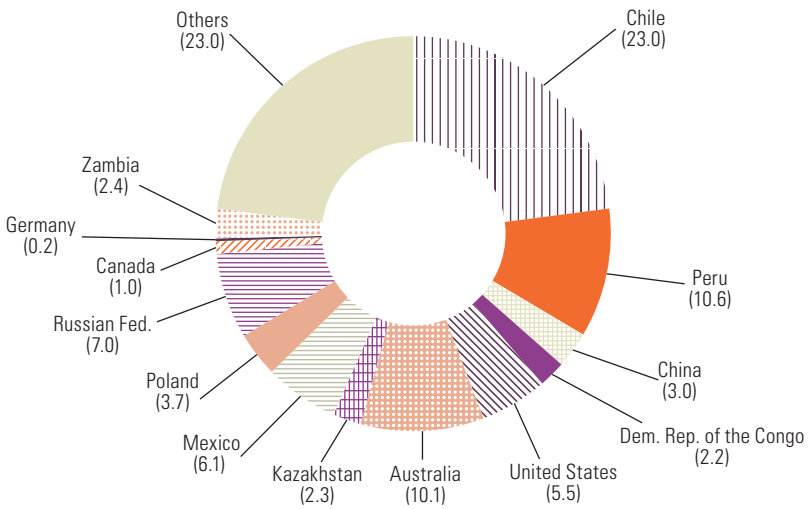
The market share of these countries has been relatively stable. The most significant changes were Chile's loss of almost 5 percentage points of its share, Peru's repositioning as the second largest producer with a double-digit share, and the gain of around 4 percentage points by the Democratic Republic of the Congo. This can be seen more clearly in figure IV.4. Copper reserves in 2020 were estimated at 871 million metric tons globally, with Chile having the largest reserves (200 million metric tons), followed by Peru (92 million metric tons) and Australia (88 million metric tons) (see figure IV.5).

Figure IV.4
Shares in world mine copper production, 2011 and 2020
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from Chilean Copper Commission (COCHILCO).

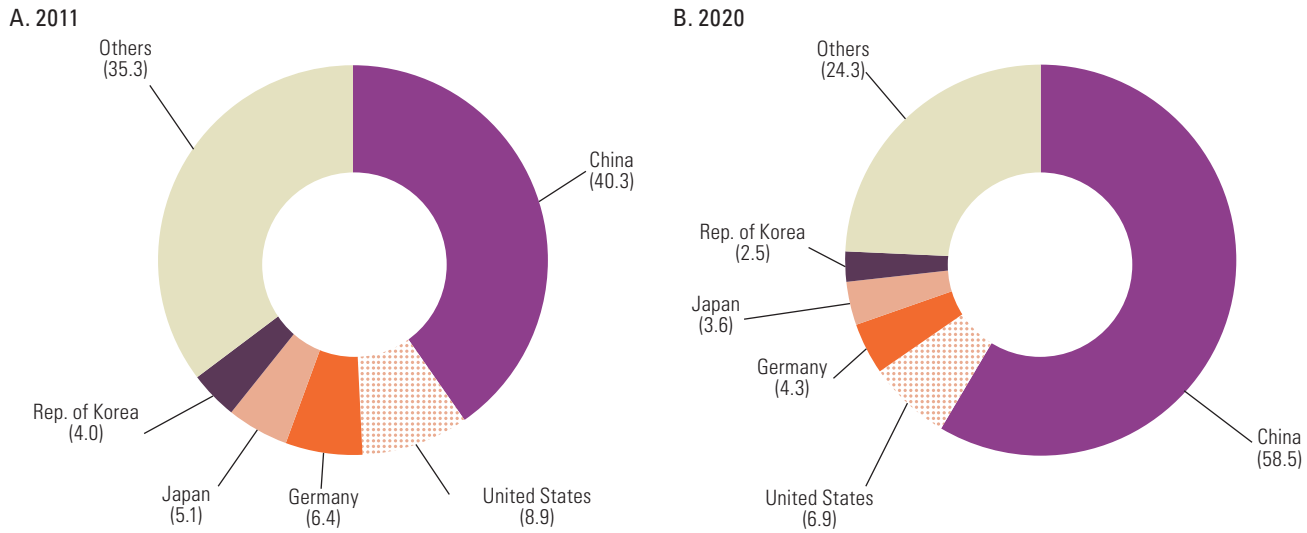
Figure IV.5
Distribution of copper reserves by country, 2020
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from the United States Geological Survey.

Demand is concentrated in five countries, which accounted for 80% of copper consumption in 2020. These demand hubs are China (58.5%), the United States (6.9%), Germany (4.3%), Japan (3.6%) and the Republic of Korea (2.5%). With respect to shifts in the consumption shares of these countries, as figure IV.6 shows, the most significant trend over the last decade has been the strength of demand in China, which has gone from accounting for 40% of total consumption to 58.5%. This is to the detriment of all other consumption locations, which have seen their share decrease.

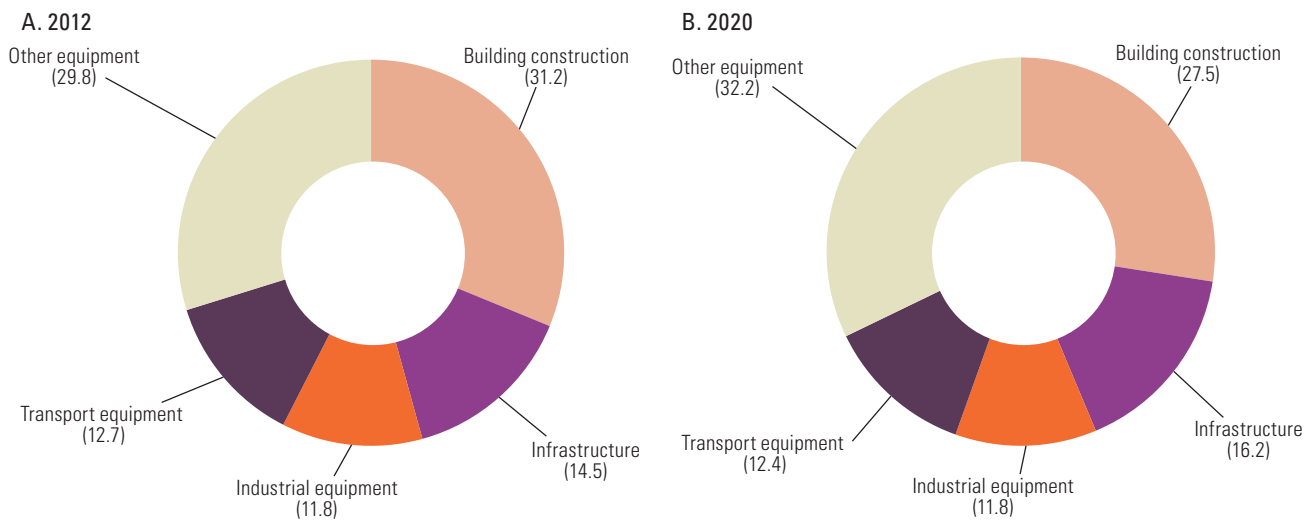
Figure IV.6
Developments in the share of world copper consumption, 2011 and 2020
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from Chilean Copper Commission (COCHILCO).

An analysis of demand for copper by end uses shows a relatively stable breakdown over the last few years, with 60% of consumption concentrated in the "other equipment" and "construction" sectors, which in 2012 accounted for 29.8% and 31.2%, respectively, compared to 32.2% and 27.5% in 2020. They are followed by the infrastructure sector, which increased its share from 14.5% to 16.2% between the two years mentioned. Lastly, the industrial equipment and transportation sectors have maintained a demand share of around 12%. These trends are shown in figure IV.7

Figure IV.7
Evolution of copper consumption by end-use category, 2012 and 2020
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from the International Wrought Copper Council.

2. Effects of the energy transition on copper demand

There is a broad consensus on the strategic role of copper in the energy transition due to its electrical and heat conductivity properties. Those attributes make it a cross-cutting element in most of the technology trajectories envisioned in the areas of power generation and transportation. Under the current techno-economic paradigm, it is already the most highly consumed mineral in vehicles technologies and in gas and coal-fired power generation. However, the transition to a low-CO_2 paradigm would significantly increase its use, as this is more intensive in the new technologies (see figure IV.8).

For example, it is estimated that the unit consumption of copper for electric vehicles (in kilograms/vehicle) is more than double that needed for vehicles driven by internal combustion engines. Similarly, the unit consumption of copper for electricity generation (in kilograms per megawatt) by solar photovoltaic plants is 160% higher than for natural gas and coal-fired plants. In the case of onshore wind energy, the unit copper requirement is 660% higher than that of current technologies (World Bank, 2020; IEA, 2021). In addition to these new technologies, there is the effect that the energy transition would have on copper consumption as a result of countries' electrification, which will increase the demand for highly copper-intensive electricity grids.

Therefore, the increase in copper demand will depend mainly on the speed and depth at which the transition to the aforementioned technologies moves forward, which, in turn, will be a function of the institutional frameworks that countries establish for decarbonizing their economies. Estimates of future copper consumption are thus derived from projected scenarios based on a series of assumptions, such as limiting temperature rise by a certain year and the realization of given levels of economic, social, demographic and technological development. The other key component of demand estimates for copper —and for commodities in general— is the model and methodology used, some of which are econometric regression models or stocks and flows dynamics models.

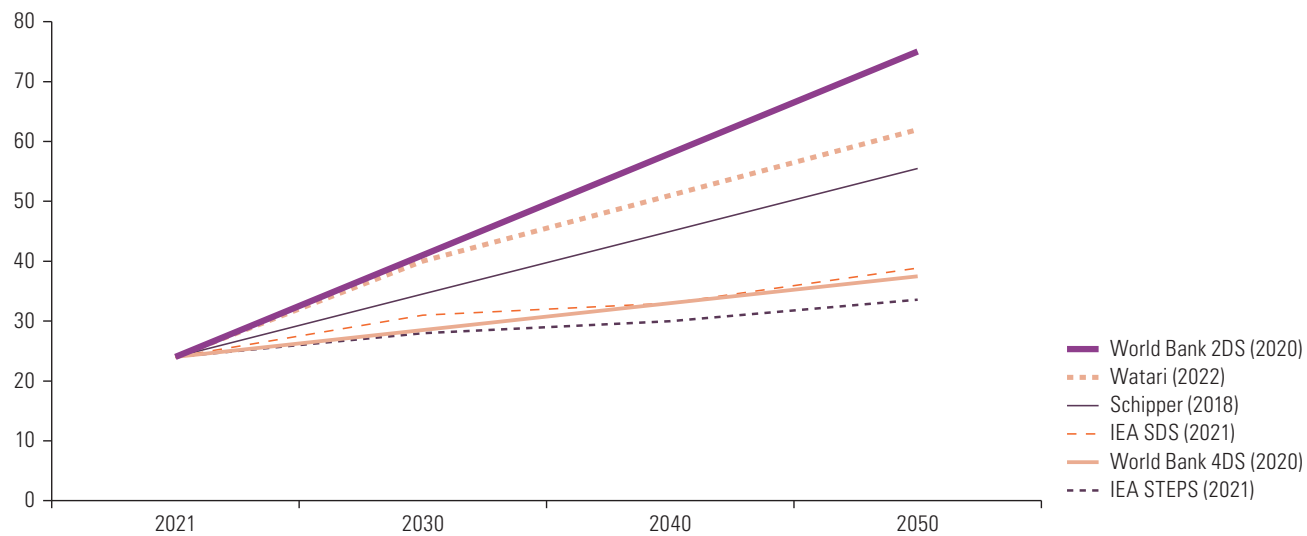
For example, Watari and others (2022) projects copper demand to 2050 under a scenario of a 1.5°C temperature rise, using dynamic material flow analysis and optimization techniques. The results show demand multiplying by between 2.5 and 62 million metric tons between 2015 and 2050. This outcome would be the result of a 33-fold increase in copper demand for clean energy and electric vehicles, but only a twofold rise for other uses. However, the "other uses" category, dominated by the construction sector, would continue to be the largest consumer of copper, with 31% of the total, followed by the consumer and electronics sector with 22%, then by electric vehicles and renewable energy generation plants with 14% and 4%, respectively. The study also compares the copper demand projection obtained with the estimates of 54 other studies, which shows that the projected values deviate very little with respect to the median of the sample. The median for 2030 is equal to 40 million metric tons of refined copper and expected to be around 55 million metric tons by 2050.

Schipper and others (2018) project copper consumption to 2100 based on shared socioeconomic pathway (SSP) scenarios. These are defined on the basis of given levels of economic growth, economic inequality, population growth and technological development. Copper demand is projected for the five SSP scenarios using two different methods: stock dynamics and multiple linear regression. The results obtained from these scenarios and estimation methods have a large variance. For example, the regression method yields an expected rise of between 4 and 30 times in copper consumption with respect to 2012 consumption. The stock dynamics method, however, gives a projected increase in the range of 3.5–5.5 times over the same base year.

The studies presented in the previous subsection regarding technological change projections in power generation and transportation also provide projections of copper demand. Thus, in its base scenario (STEPS), the IEA forecasts demand of around 28 million metric tons in 2030 and 31 million metric tons in 2040. Meanwhile under the scenario that would allow compliance with the Paris Agreement (SDS), demand would reach 30 million metric tons in 2030 and close to 33 million metric tons in 2040. The latter projection would mean that copper demand from clean (low carbon) technologies would increase from 25% in 2020 to almost 50% in 2040 (IEA, 2021). For its part, the World Bank estimates that by 2050 the cumulative copper consumption to supply the demand for clean technologies would be in the range of 15–45 million metric tons depending on the scenario, where solar energy would account for about 50% of the increased demand, and wind energy for 35% in the scenario that would keep the increase in global temperature below 2°C (World Bank, 2020).

By systematizing and temporally homologizing the above projections based on linear trends, the expected trajectories for copper demand can be projected to show the ranges of demand by 2050. Figure IV.8 illustrates the six projections considered. Of these, that of Schipper and others (2018) is a projection to 2100 that was linearly interpolated; Watari and others (2022) and World Bank (2020) are projections to 2050 that were linearly interpolated and, the STEPS (2021) and SDS (2021) projections by IEA are to 2040 and were extrapolated on the basis of the growth rates for the previous decades.

Figure IV.8
Projected copper demand trajectories to 2050
(Metric tons)



Source: Economic Commission for Latin America and the Caribbean (ECLAC).

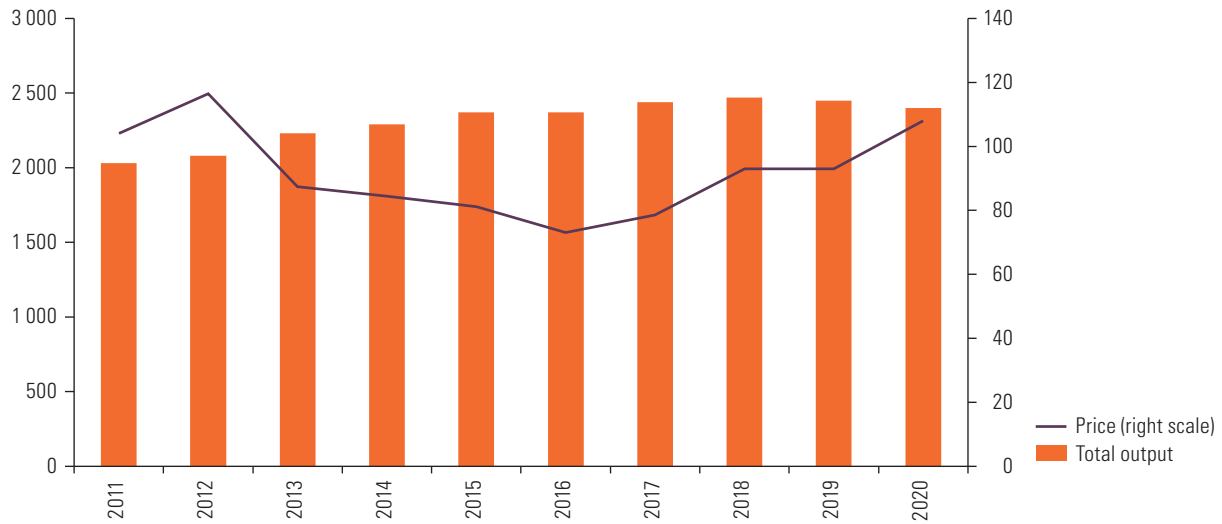
In figure IV.8, the variances between the different projections are expressed by the differences between the slopes of the straight lines, whose divergence becomes more pronounced towards the end of the period. Given that the scenarios under which projections are made become more uncertain the longer the prediction window, it seems appropriate to look at projections for the near future. Thus, the level that copper demand would reach by 2030 is expected to be in a range of 28–41 million metric tons, equivalent to an increase of between 17% and 70% compared to 2021.

3. The iron market: current trends

The iron ore market was valued at US$ 375 billion in 2021.[2] According to the most recent statistics reported by the United States Geological Survey, world iron ore production totalled 2.4 billion metric tons in 2020, 2% lower than in 2019. According to COCHILCO, demand was 2.414 billion metric tons that year, so that the market was fairly balanced (COCHILCO, 2021d).

From a long-term perspective, figure IV.9 shows the behaviour of iron ore supply (left scale) and the nominal price per metric tons of iron ore (right scale) between 2011 and 2020. Here, it can be seen that the supply shows smooth and steady growth throughout the decade, while the price tracked downward until 2016 before reversing direction and eventually reaching values similar to the beginning of the decade in 2020.

Figure IV.9
Iron supply and price, 2011–2020
(Metric tons and dollars)



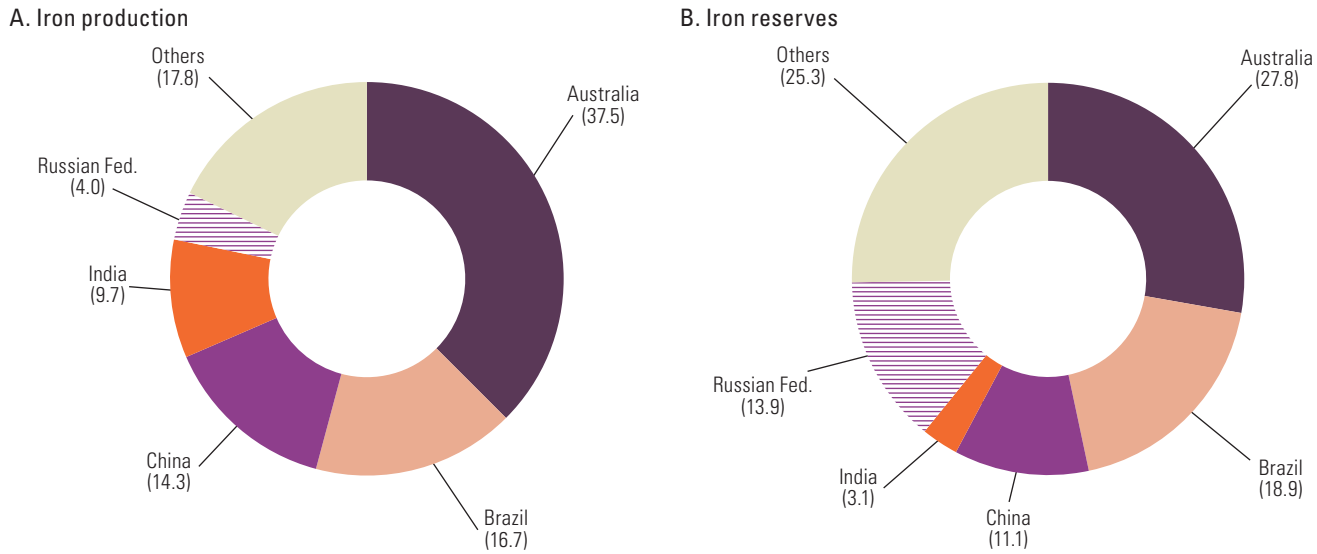
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from the United States Geological Survey.
Note: The left scale shows iron production in metric tons; the right scale shows the dollar price per metric ton.

With respect to the composition of iron supply, over the last decade it has been concentrated in five countries (Australia, Brazil, China, India and the Russian Federation), which together accounted for over 80% of the world supply of the metal in 2020. The industry leader is Australia with 37% of output, followed by Brazil with 17%. Likewise, this group of countries accounted for 75% of the world's reserves in 2020, when Australia and Brazil again dominated with 28% and 19%, respectively, of total reserves. Figure IV.10 shows the composition of production and reserves in 2020.

With regard to changes in the composition of global iron ore supply, figure IV.11 shows its distribution in the years 2011 and 2020. In this regard, Australia gained market share, which increased by 50%, making it the undisputed leader in the industry with close to 40% of output. The other point to note is the decrease in China's share of world supply, from 22% of the market to only 14%. The other countries maintained a relatively similar share over the same period.

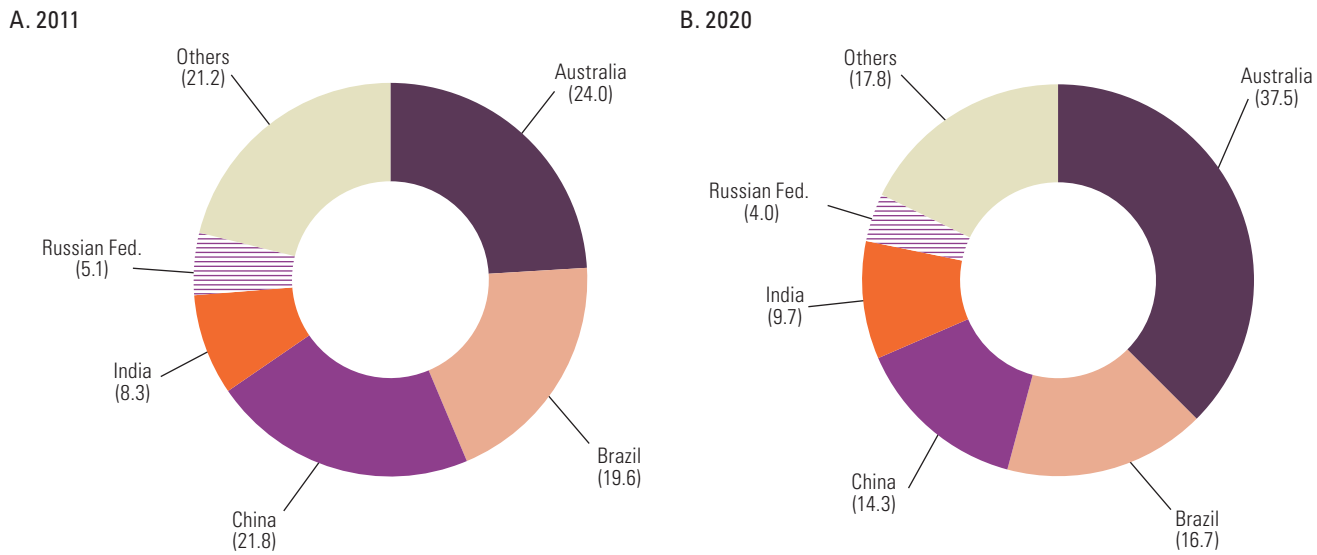
[2] See [online] https://www.statista.com/statistics/1279697/worldwide-iron-ore-mining-market-value/.

Figure IV.10
World iron production and reserves, 2020
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from the United States Geological Survey.

Figure IV.11
Iron production by country, 2011 and 2020
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from the United States Geological Survey.

The dynamics of iron supply correlate directly with the behaviour of the steel market, as the steel industry absorbs the iron supply almost entirely. Accordingly, China dominates demand for iron, with 56% of demand and 57% of supply. Consequently, global iron demand is led by the Chinese steel industry, which accounted for 59% of total iron consumption and 80% of global seaborne iron ore supplies in 2020 (COCHILCO, 2021d).

Therefore, the behaviour of iron demand is a direct function of patterns in steel supply, which mainly depends on China's industrial production, which, in turn, reflects China's structural changes and the global economic cycle. Specifically, the increase in China's steel production in recent decades has been the result of its rural-urban demographic transition, which has been infrastructure- and construction-intensive, as well as the relocation of steel-intensive industries from the West to China, such as automobiles, machinery, containers and shipbuilding, among others, as part of globalization (Yin and Chen, 2013).

4. Effects of the energy transition on iron demand

Unlike the other minerals addressed in this study, there is no consensus on whether iron is a key mineral in the energy transition in progress. On the one hand, some studies suggest that the emerging technologies will not make more intensive use of steel —nor, therefore, of iron—, so the energy transition should not produce a trend shift in demand for it (IEA, 2020).

On the other hand, there are studies that suggest that demand for iron originating from these new technologies is not significant with respect to the size of the industry. However, in terms of volumes, iron is expected to be the mineral for which there is most demand as a result of the change in the techno-economic paradigm. For example, the estimated increase in demand for iron as a result of the energy transition would imply, under the scenario of keeping the temperature increase to within 2°C, a cumulative increase of 200 million tons between now and 2050. Direct-drive wind turbines are the most iron-intensive technology, representing 85% of the total minerals needed for this technology (World Bank, 2020).

Other studies do not refer directly to iron but do assess steel as a critical input in the energy transition. This is due to its importance not only in emerging technologies, such as wind energy, but also in other technologies that will continue to play an important role in power generation, such as nuclear plants and hydroelectric power plants, not to mention the key part that steel will play in a more electrified world, specifically in the construction of electricity transmission and distribution infrastructure (IEA, 2020).

Along these lines, the International Energy Agency's *Iron and Steel Technology Roadmap: towards more sustainable steelmaking* (IEA, 2020) provides two projections for steel demand by 2050 based on the STEPS and SDS scenarios.[3] In the less ambitious scenario in terms of GHG emissions abatement (STEPS), demand for steel would increase by 40% over the 2019 figure, whereas under the more high-reaching one (SDS), demand would only increase by 10% over the same base year. It is important to note that the main drivers of the projected increase in steel demand are not related to the energy transition, but rather to demographic changes and development in emerging countries. At the same time, developed countries are expected to decrease their per capita steel consumption intensity over the coming decades. Specifically, the demographic and macroeconomic assumptions used in the construction of the aforementioned scenarios establish that by 2050 the world population will have grown from 7.7 to 9.7 billion, world GDP will be 2.5 times that of 2019 and per capita steel consumption will have increased from 4.2 to 6.5 tons per year.

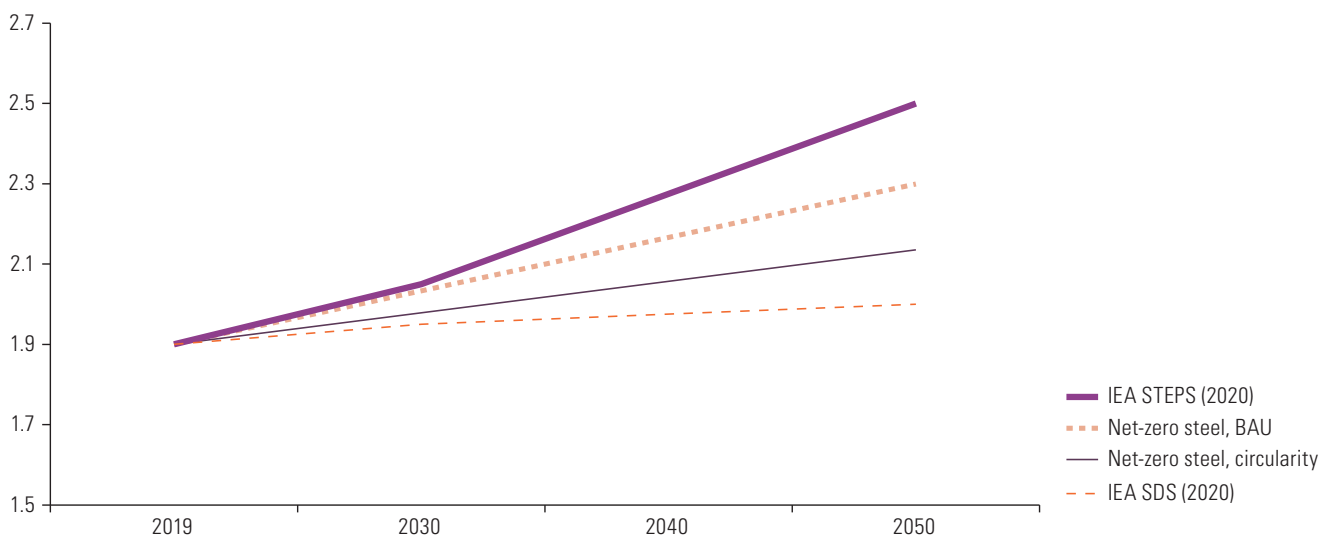
[3] Defined earlier in this section.

Similar to the previous study, Mission Possible Partnership (2021) projects steel demand to 2050 under two different scenarios. In the first, in which current trends remain the same (i.e. the business as usual (BAU) scenario), demand is expected to be 30% higher than in 2021 and the share of secondary production will increase from 30% to 40%. The second scenario —high circularity— forecasts growth in demand of 18% and an increase in the share of secondary steel production to 70%. Despite the differences in demand volumes and supply composition, it would be necessary to increase primary steel production capacity in both scenarios.

Based on steel market projections, it could be argued that iron is also a critical mineral, since it is a key input in primary steel production, which accounts for 70% of total steel output. However, it is precisely the primary steel production processes that are intensive in GHG emissions, so the technological transformation of the industry involves minimizing emissions from this line of production. Alternatively, the composition of production could be changed in favour of secondary production. If the latter were the predominant technological change, demand for iron would grow at a much slower pace and, therefore, the availability of iron might not be a major factor in the supply of steel. However, if in the long term the predominant technology is low-carbon primary production, using green hydrogen for example, the percentages of primary and secondary production could remain relatively constant, in which case iron would be a critical input in steel production. Accordingly, demand for iron would grow in proportion to the rate of change in the demand for steel.

Figure IV.12 summarizes and homologizes the steel projections to 2050 based on the literature reviewed. It transpires that in the most best-case scenario for the steel industry, its demand would increase by around 20%, while in the worst case it would increase by around 5%.

Figure IV.12
Projected steel demand trajectories to 2050
(Gigatons per year)



Source: Economic Commission for Latin America and the Caribbean (ECLAC).

In conclusion, future iron demand will be dictated by what happens in the steel market. On the one hand, it will depend on the intensity of iron demand resulting from the technology that ends up prevailing in the race to decarbonize the steel industry. And, on the other hand, it will be a function of the growth in demand for steel, which

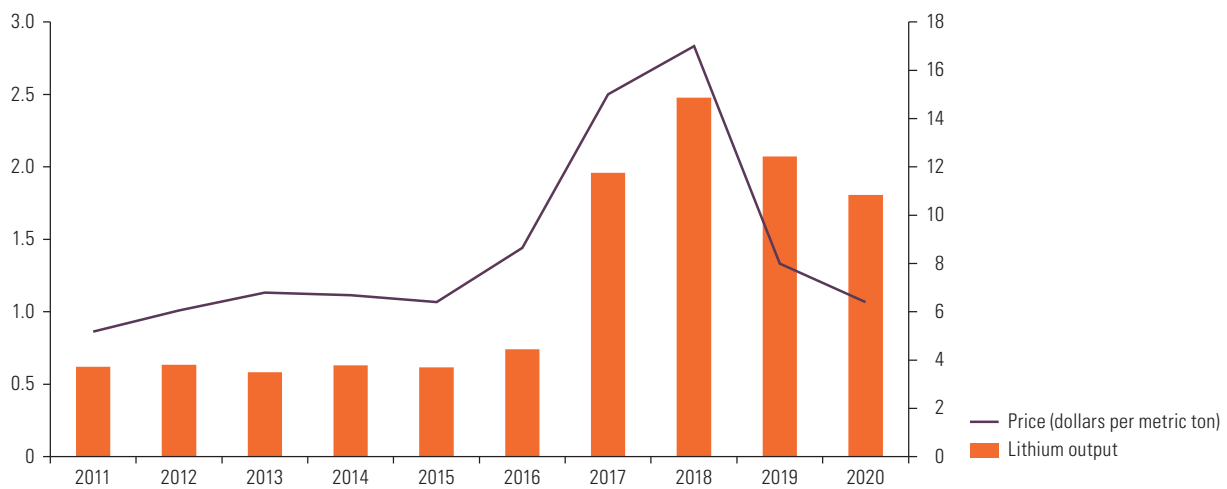
rests only minimally on the ongoing energy transition but primarily on the pattern of economic development and urbanization in emerging countries, such as India. Ultimately, if the rate of complementarity between steel and iron were to remain constant and, therefore, the demand for both stayed the same, the expected demand for iron in 2050 could be between 5% and 20% higher than in 2019.

5. The lithium market: current trends

The lithium market was valued at US$ 2.7 billion in 2020 and is expected to reach US$ 4 billion in 2021, as it returns to its pre-pandemic dimensions (Grand View Research, 2021). According to reports by IFP Energy Nouvelles, the market has been in surplus for the last few years. However, the surplus decreased to 126 kilo tons (kt) of lithium carbonate equivalent (LCE)[4] in 2020 compared to the 188 kt LCE surplus registered in 2019. This drop in the surplus was the result of a decline in production, from 486 to 431 kt LCE, as well as slightly higher demand compared to 2019: up from 298 to 305 kt LCE. It is important to note that this surplus of recent years is a consequence of the large jump in production as a result of new operations coming onstream in Australia.

From a long-term perspective, as shown in figure IV.13, it is interesting to note that until the middle of the decade lithium production remained stable at low levels. A dramatic change occurred in the second half of the decade, prompted by the expected demand from growth in electric vehicles, which led to the price more than tripling. However, towards the end of the decade production fell as a result of the surge in production from Australia. To a lesser extent, the price fall also reflected the tempering of the initial overestimation of the speed at which the paradigm shift from internal combustion engines to electric vehicles would occur.

Figure IV.13
Lithium supply and price, 2011–2020
(Millions of metric tons and thousands of dollars per metric ton)

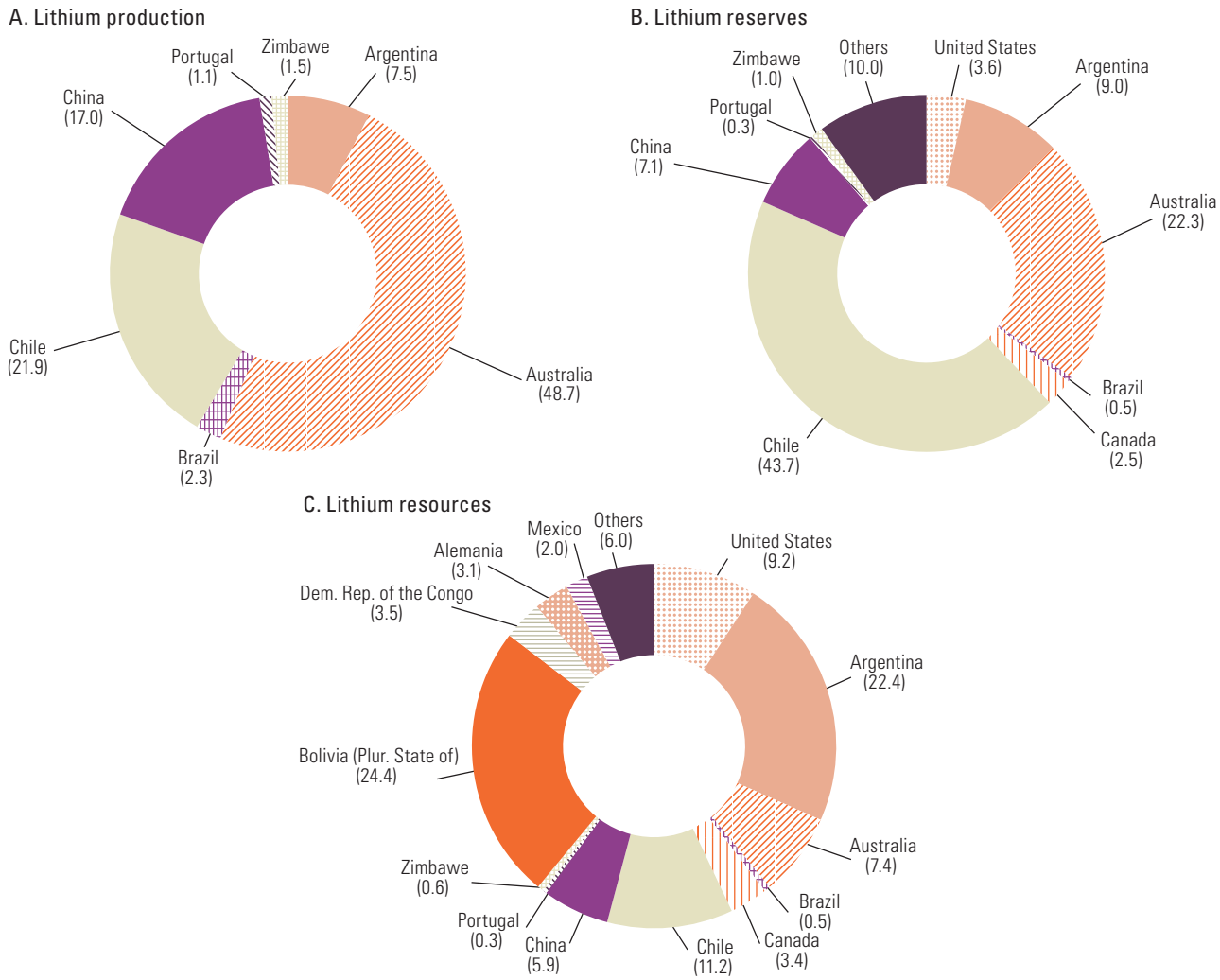


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from the United States Geological Survey.
Note: The left scale shows lithium production in metric tons; the right scale reflects the dollar price per metric ton.

[4] Lithium carbonate equivalent (LCE) is the standard unit of measurement used for lithium products, as it is considered the most widely traded product. The lithium content in other products is expressed in terms of lithium carbonate, which contains approximately 28% elemental lithium.

With respect to the composition of lithium supply, in recent decades it has been concentrated in four countries (Argentina, Australia, Chile and China) that together accounted for only 95% of the world supply of the metal in 2020. These countries accounted for 93% of global reserves but the share of each country in either regard differs considerably. Thus, while Australia leads production with 48.7% of the total, it only has about 22.3% of the reserves. Chile, meanwhile, accounts for 21.9% of world output, but 43.7% of total reserves (see figure IV.14).

Figure IV.14
Global overview of lithium production, reserves and resources, 2020
(Percentages)



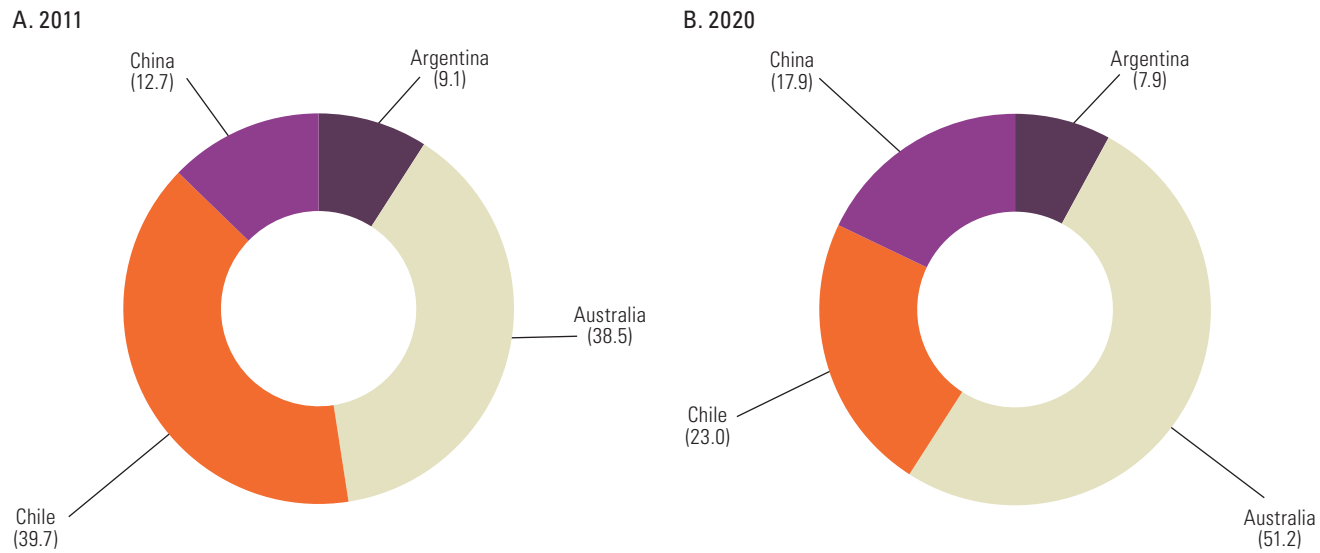
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from the United States Geological Survey.

With regard to the lithium resources identified, figure IV.14C shows that nearly 60% are located in the so-called "lithium triangle" comprising the Plurinational State of Bolivia (24.4%), Argentina (22.4%) and Chile (11.2%). However, resource endowment is not the same as the likely supply from those countries, given the inability they have shown to transform the resources into reserves and then into actual production.[5]

[5] It must also be considered that the step from exploration to production can take several years and depends on the type of source (whether the lithium is contained in rock or salt flats, for example).

It is important to note that the market share of the four main suppliers has changed significantly over recent decades with the emergence of new projects driven by price increases and expectations about future demand. This is clearly reflected in figure IV.15, which compares market shares between the years 2011 and 2020. Here it can be seen that Chile dominated the market at the beginning of the decade, with a 39.7% share, closely followed by Australia with 38.5%. However, towards the end of the decade, Australia took the lead in the industry, accounting for 51.2% of total production, leaving Chile with only 23%. China's share also increased considerably during the decade, while that of Argentina remained more or less constant.

Figure IV.15
Lithium production, 2011 and 2020
(Percentages)

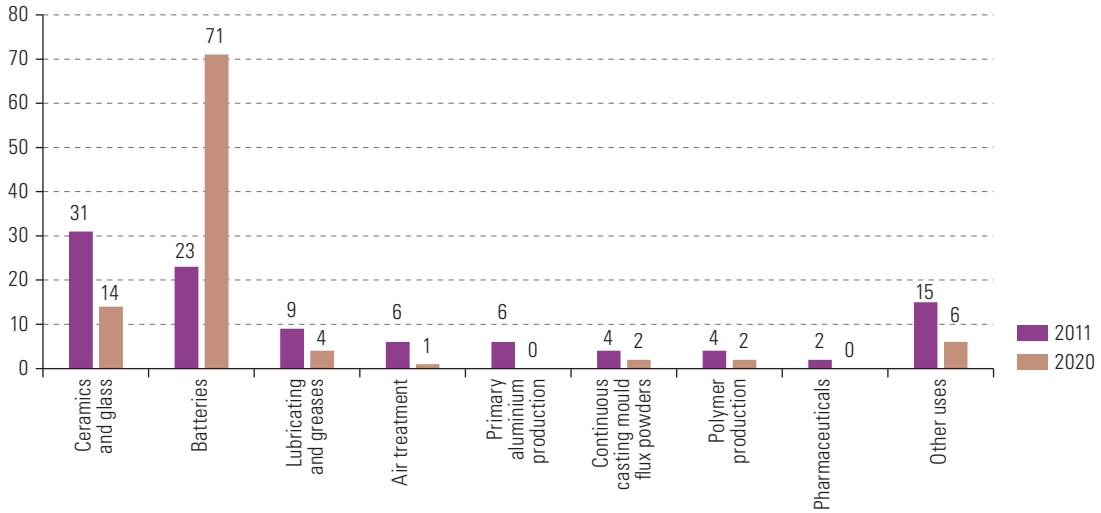


Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from the United States Geological Survey.

It is also worth noting that, despite the changes in market share, all of the above-mentioned countries significantly boosted their output in response to the price signals sent by the demand shock. Therefore, the share changes are a reflection of supply growth rates, i.e. how much of the increased demand each country snared. Proportionally, China was the country that increased its production the most, by 238%, followed by Australia and Argentina with 220% and 110%, respectively, and lastly Chile with 39.5%.

Lithium demand can be divided into battery and traditional uses. The former includes batteries for light and heavy vehicles, electronic items and energy storage. Traditional uses encompass glass and ceramics, plastics, greases and lubricants. The share of traditional and battery uses has varied substantially over the last decade, with the battery category being the industry mover. In fact, as figure IV.16 shows, in 2011 batteries accounted for only 23% of lithium consumption, compared to 71% in 2020.

Figure IV.16
Composition of lithium consumption, comparison between 2011 and 2020
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from the United States Geological Survey.

6. Effects of the energy transition on lithium demand

There is a broad consensus in the literature on the strategic role of lithium in the energy transition under way (Obaya and Céspedes, 2021; Ambrose and Kendall, 2019; Alessia and others, 2021). However, unlike copper, the expected demand for lithium centres almost exclusively on the boom and consolidation of electric vehicles over internal combustion engine vehicles. The decisive factor in that regard is the consolidation of rechargeable lithium-ion batteries as a method of energy storage for such vehicles. Lithium could also play an important energy storage role as a back-up solution for power generation technologies based on intermittent sources, such as solar or wind. However, this use is still in its infancy.

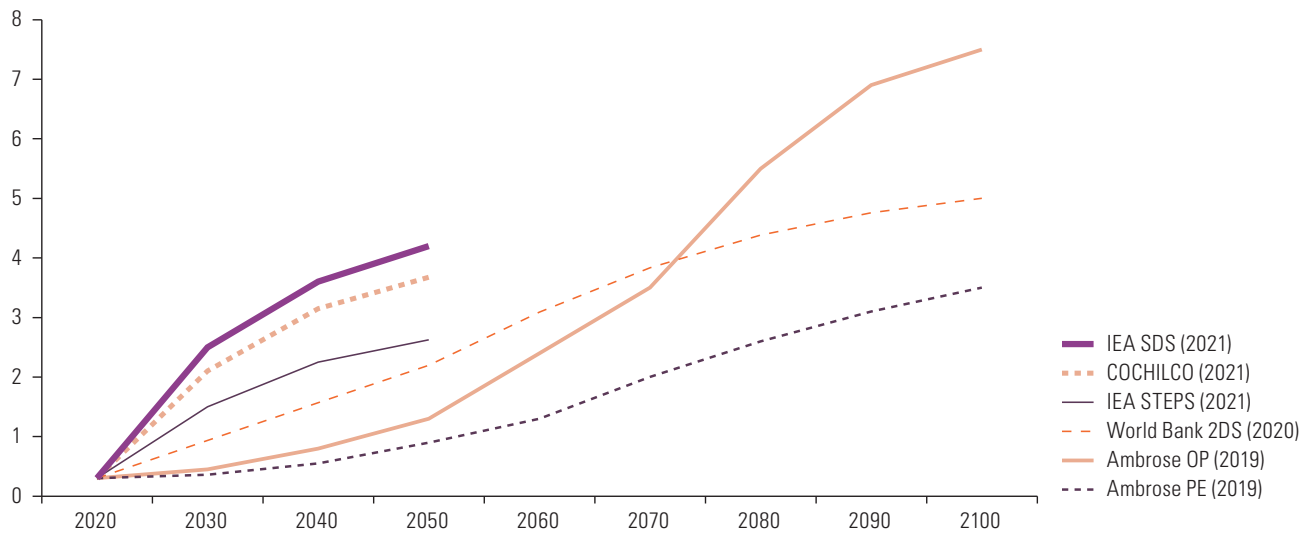
In that regard, Ambrose and Kendall (2019) project two lithium demand and production scenarios based on an integrated lithium resource model, which estimates supply capacity from a logistic growth curve based on available resources and short-term demand implied by the scenario fundamentals. They include, among other considerations, the estimation of lithium-ion battery manufacturing capacity and improvements in their energy density. Under the pessimistic scenario, the authors estimate that demand in 2100 would reach 3.5 Mt LCE, while in the optimistic scenario it would amount to 7.5 Mt LCE, equivalent to a 12- and 25-fold increase, respectively, with respect to 2020.

IEA (2021) estimates future lithium demand in 2030 based on its two key scenarios: STEPS and SDS. Thus, the less ambitious scenario in terms of emissions abatement (STEPS) projects demand of 1.5 million LCE, while the more ambitious one (SDS) estimates lithium consumption at 2.5 million LCE. The difference between the two scenarios lies mainly in the speed at which vehicle fleets change from the internal combustion engine to electric power. In either scenario, estimates suggest that the current market surplus will become a deficit over the next few years, more markedly around 2030.

In addition, the World Bank (2020) projects that annual demand for lithium for use in energy technologies by 2050 will be 488% of 2018 production, which was equivalent to 2 million LCE. Thus, if this use represented approximately 90% of lithium demand by 2050, total demand would be 2.2 million LCE.[6]

In a recent study, COCHILCO (2021c) projects that lithium demand associated with electromobility will increase from 0.13 million LCE in 2020 to 1.5 million LCE by 2030, while demand from other uses will reach 0.56 million LCE. That would bring total lithium demand to 2.1 million LCE by 2030. This projection rests mainly on the projection of new electric vehicle sales to 2030 (see figure IV.17), which is expected to be 34.1 million units. Following the literature review, the six projections presented above were systematized and temporally standardized. The SDS and STEPS by IEA and those of COCHILCO were extrapolated at a decreasing rate to 2050,[7] while the WB 2DS projection to 2050 was extrapolated to 2100 at a constant rate based on the previous growth rates. Thus, three of the projections have a horizon to 2050, while the other three forecast demand up to 2100.

Figure IV.17
Projected lithium demand trajectories to 2100
(Millions of lithium carbonate equivalent)



Source: Economic Commission for Latin America and the Caribbean (ECLAC).

Figure IV.17 shows the large variance between the different estimates, which is a function of the different assumptions introduced in the modelled scenarios. On the one hand, in the nearest projection window (2030), demand in the most conservative scenario would reach 0.36 million LCE, which is 20% higher than in 2020. In the most optimistic scenario, on the other hand, demand would come to 2.5 million LCE, an eightfold increase compared to 2020.

Longer-term projections show demand beginning to grow more rapidly from 2050 onward, which would place stress on the market during the second half of the century and encourage the entry of new projects and players.

6 According to IEA estimates (2021).
7 Constant rates yielded values completely out of the range predicted by the other studies, which is consistent with a slowdown in demand following the technology's initial penetration (Castillo and Eggert 2020).

C. Challenges posed by the energy transition for investment in the region's mining industry

The preceding sections describe the positive impact that the energy transition would have on mineral demand. The first challenge facing the region's mining industry in this scenario of higher demand is to capture or maintain (grow) its share of the new and increased global demand, as well as changing production methods and technologies towards environmentally sustainable processes, which entails significant investment challenges.

The conceptual framework that will be used here to analyse the effect of the energy transition on mineral supply in the region's countries assumes that the techno-economic paradigm shift originates in international commitments aimed at addressing climate change. These commitments translate into regulations at the country level, and therefore constitute an exogenous constraint on firms. Such regulations to mitigate GHG emissions can be broadly understood as a shadow price on emissions, which translates into a change in the relative price of technologies according to their GHG emissions intensity.

As seen in the preceding sections, the higher mineral intensity of the incoming technologies will generate higher future demand for certain minerals. However, the increased production to meet that greater demand will not occur in the current regulatory framework, but in one that will have already internalized the shadow price for emissions. Consequently, producing countries' competitiveness will vary according not only to developments in terms of productivity, mining fundamentals and institutional framework, but also to the intensity of emissions from mineral production.

Within this framework, it could be argued that the current and past competitiveness of the mineral industries has been determined by traditional factors, including: (i) mining fundamentals, such as reserves or ore grades; (ii) production technology and productivity of operations; (iii) governance and institutional framework; and (iv) the investment climate in countries. For its part, future competitiveness will be determined by the aforementioned factors plus two others specific to the energy transition, which can be considered green factors: (i) the shadow price of emissions, which is determined by the ambition of the country's climate change regulations;[8] and (ii) the GHG emissions intensity of the production technologies used.[9] Given that the aim of this study is to define the challenges posed by the energy transition, this section will centre on the green factors that will affect the future competitiveness of mineral producers.

This section also offers a very preliminary estimate of the investment that mining countries would have to make to maintain their share in the new market expected to emerge as a result of the energy transition, as well as to adapt their technical capacity to develop a clean mining industry. In other words, the values shown underestimate the total investment effort required for the mining industry to play the strategic role it can and should play to promote sustainable development in the region. It should be noted that mining investment is rather significant in the region's main mining countries, not only as a proportion of overall investment, but above all, as a driver of the economic cycle (ECLAC, 2017, 2018).

8 As noted earlier, increasing demands on the part of buyers and the emergence of socioenvironmental conflicts have also raised the barriers for obtaining social and environmental licences to operate mining projects, and this also affects project costs.

9 In the figure, other factors may also gain greater significance in this regard, such as green or sustainable certification requirements for mining products and standards on relative emissions intensity and carbon footprints.

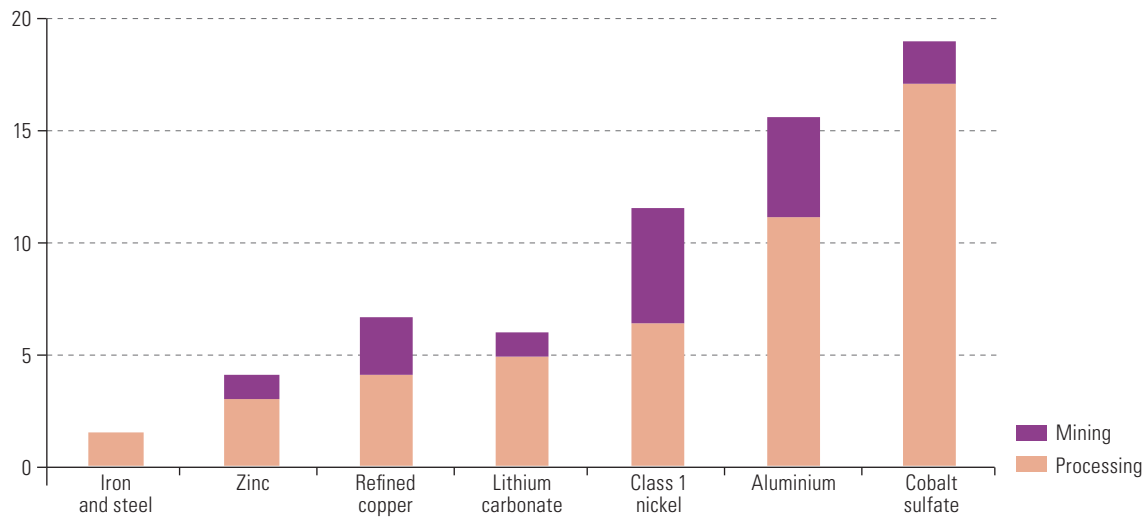
1. Green factor challenges: the copper industry in Chile and Peru

In the new socio-technological-economic paradigm driving the energy transition, CO_2 emissions are an important factor in companies' competitiveness. This is because countries are implicitly (shadow price on emissions) or explicitly (emissions tax) putting a price on CO_2 emissions when designing and implementing regulations as part of the effort to combat climate change. In this way, both the intensity of emissions per unit of firms' output and the ambition of regulations for countering climate change (price of emissions) become significant factors for competitiveness.

Therefore, those countries that are capable of producing copper with a lower CO_2 footprint should see their competitiveness increase compared to those that are not, assuming the CO_2 price is the same. However, as the price of CO_2 is a function of the ambitiousness of each country's regulations, there is room for countries to arbitrage competitiveness through emissions prices.

In terms of the CO_2 emissions intensity of copper mining, or, to put it another way, how green copper mining is, compared to other mineral industries it is relatively low in emissions, with a value of 3 t CO_2e/MT, as figure IV.18 shows.

Figure IV.18
CO_2 equivalent emissions intensity
(Tons of CO_2 equivalent per ton of metal produced)



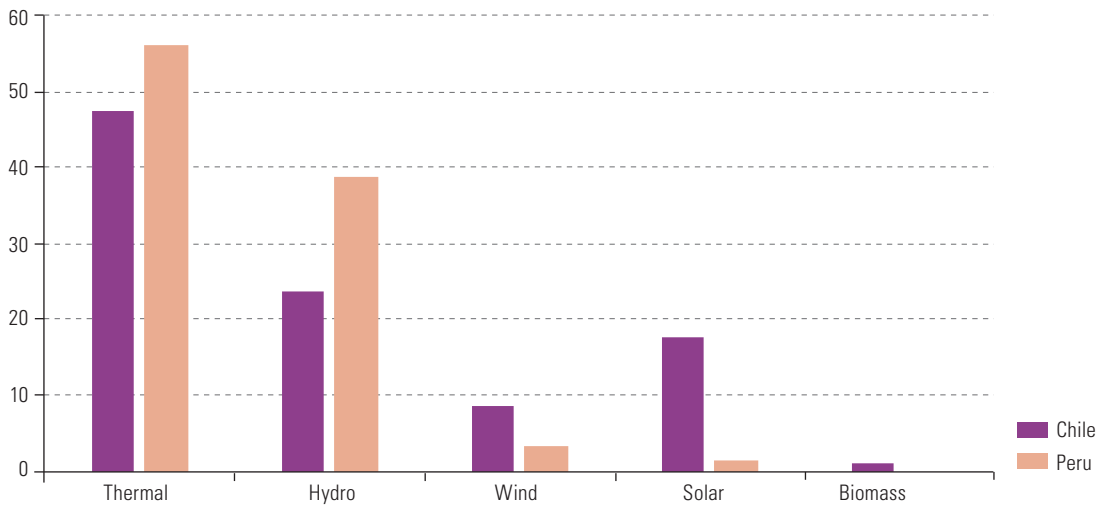
Source: International Energy Agency (IEA), "The role of critical minerals in clean energy transition", *World Energy Outlook Special Report*, 2021.

However, direct emissions from copper (scope 1) represent the smallest percentage of the total (19%), with scope 2 (energy consumption) and scope 3 (value chain) accounting for the largest share of emissions (30% and 51%, respectively) (IDB, 2021). Although these percentages were estimated based on the case of Chile, it is reasonable to think that the orders of magnitude for the case of Peru would be in the same range, given the similarities of the two industries.

The above study shows that the average direct emissions (scope 1) of Chile's copper industry are 1.08 t CO_2e/FMT compared with the industry average of almost 5 t CO_2e/FMT. Given its relative weight, this suggests that Peru and the rest of the competitors have similar values. Scope 2 emissions amount to 1.7 t CO_2e/FMT for Chile and, although

there is no estimate for Peru, it is reasonable to assume that in this case emissions are higher than in Chile, bearing in mind the composition of the energy matrix of the two countries, as shown in figure IV.19. The emission factors should also be taken into account (0.38 t CO_2e/MWh in the case of for Chile and 0.52 t CO_2e/MWh in the case of Peru), as should the widespread renegotiation of electricity supply contracts by the Chilean mining industry in order to transition from fossil fuel to renewable energy sources. It is worth mentioning that, at 0.85 t CO_2e/MWh, the emission factor of the Chinese matrix (IGES, 2021), the world's third largest copper producer, for the same comparison year (2019) proved more polluting than that of Chile and Peru.

Figure IV.19
Chile and Peru: installed power generation capacity by type of source, 2021
(Percentages)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from Coordinador Eléctrico Nacional (Chile) and Comité de Operación Económica del Sistema Interconectado Nacional (COES) of Peru.

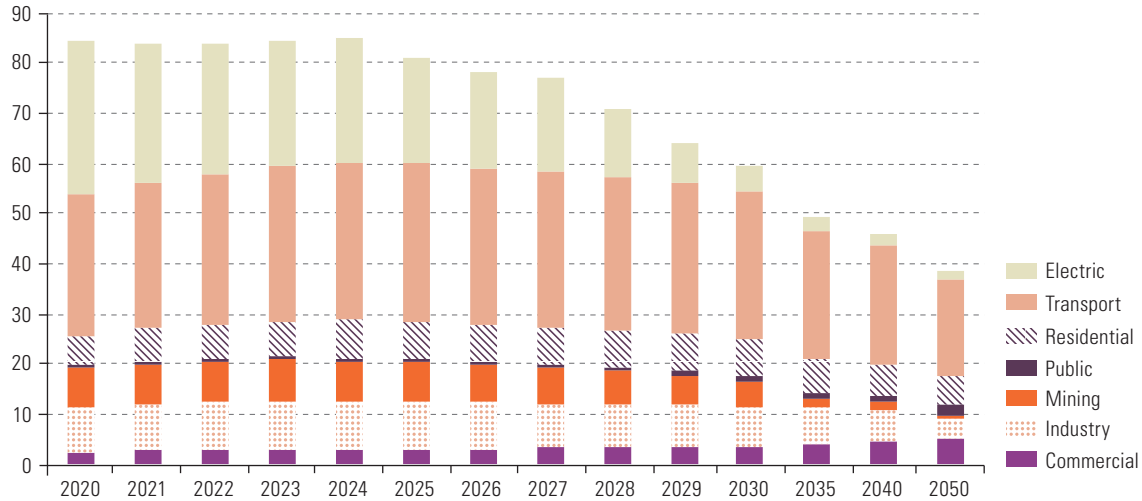
The following describes the implicit price of CO_2 emissions as a consequence of national regulations to address climate change.

In the case of Chile:

- In the update of the Paris Agreement target presented at the end of 2020, Chile proposed an amendment from an emissions intensity target to an absolute emissions target of 95 Mt CO_2 by 2030, with a peak in 2025 and a carbon budget of 1,100 t CO_2 for the current decade. This is based on a long-term climate strategy that sets out the actions needed to achieve these goals (see figure IV.20).
- In the context of COP26, Chile committed to achieving carbon neutrality by 2050.
- A Framework Law on Climate Change establishes the goal of carbon neutrality and the obligation to introduce a regulatory framework to achieve the objectives of the long-term climate strategy.[10] Among the instruments that the law envisages are sectoral carbon budgets that will cap the emissions that each sector can generate. The proposed budget for the entire mining sector for the current decade is approximately 30 Mt of CO_2e per year. According to production data for 2018, the copper industry, excluding metallurgical processes, accounts for 35% of the established annual budget.

[10] See [online] https://www.bcn.cl/leychile/navegar?idNorma=1177286.

Figure IV.20
Chile: long-term climate strategy
(Megatons of CO_2)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from official figures.

- Chilean legislation establishes a tax of US$ 5 per ton of CO_2 on emissions from boilers or turbines at facilities with a thermal capacity equal to or greater than 50 MWt. This tax is mainly levied on the electricity generation sector (90%–95%) and is indirectly passed on to energy-intensive mining production. Few mining operations are directly levied with this tax. Codelco's Chuquicamata division is one case. However, in 2020 an amendment to this tax was approved that will come into force in 2025, broadening the tax base by no longer discriminating by type of technology and making it contingent on emissions (25,000 tons of CO_2 per year), not on installed capacity.

In the case of Peru:

The main regulations to address climate change and, therefore, that determine the shadow price of carbon are:

- An update of the commitment adopted under the Paris Agreement, establishing an emissions ceiling by 2030 of 30% lower than the base year and 40% conditional on international cooperation.
- A climate-change framework law passed in 2018, which establishes multi-sectoral climate measures, as well as considerations relating to emissions accounting.
- There are no green taxes on CO_2 emissions.

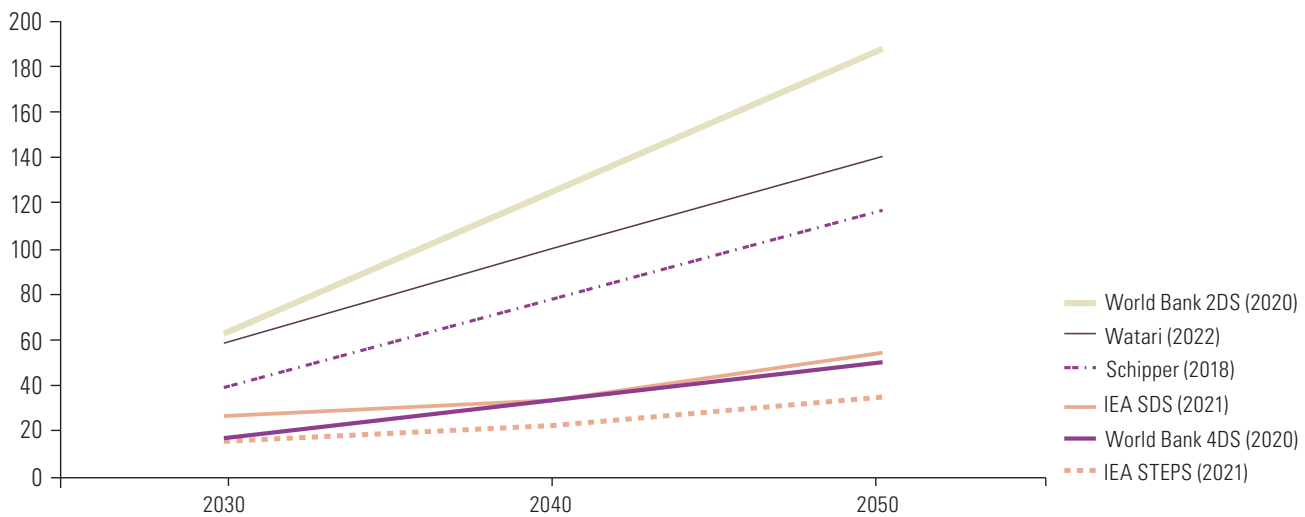
2. Investment efforts to maintain market share in the copper market in the context of the energy shift

(a) Chile

The portfolio of copper projects registered by the Chilean Copper Commission for the 2021–2030 period is valued at US$ 58.176 billion (COCHILCO, 2021f). One particularly significant fact regarding the concrete effects of climate change adaptation is that of the 51 projects registered, 13 will require the construction of desalination plants to supply water to the operation, which translates into higher capital and operational expenditure (as a result of the desalination process and subsequent pumping of water).

As for the investment needed in terms of gross fixed capital formation (GFCF) to maintain market share, under the assumptions of constant market share and GFCF intensity ratio per ton of copper for 2020, the estimates for 2030 of the aforementioned requirements are around US$ 62.8 billion in GFCF in an accelerated energy transition scenario (green line) and US$ 14.8 billion in a pessimistic (BAU) scenario (yellow line), as shown in figure IV.21. The average value of the increase in GFCF for the scenarios examined is US$ 36.3 billion in 2030. The long-term values of increased GFCF by 2050 are expected to range from US$ 35.4 billion to US$ 188.6 billion, depending on the prevailing scenario.

Figure IV.21
Chile: projected gross fixed capital formation for the copper industry to 2030 and trajectory 2030–2050
(Billions of dollars)



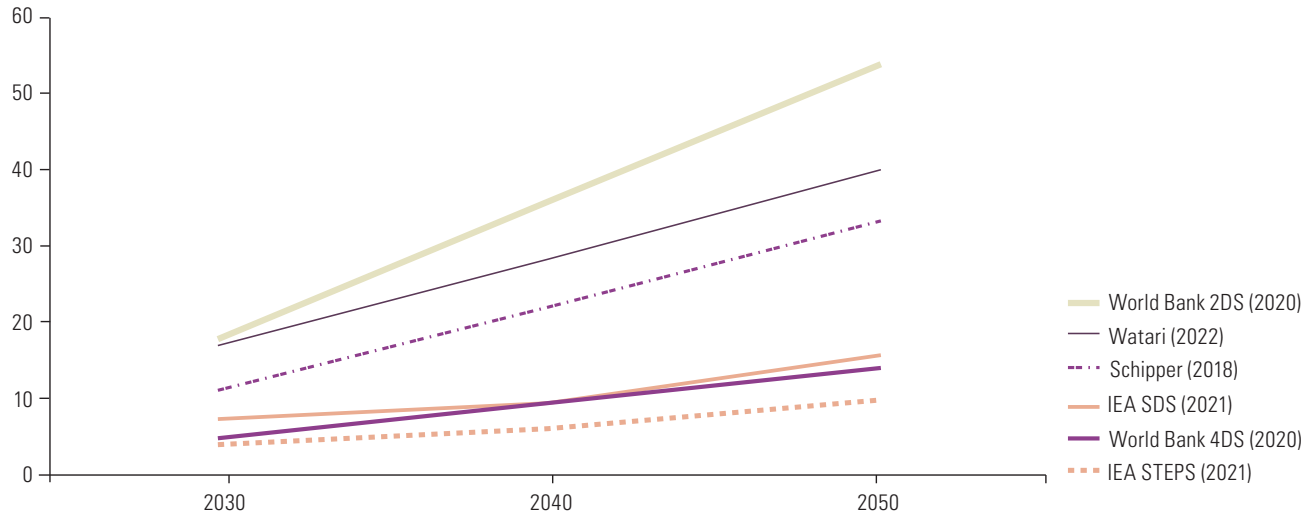
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from the public information of mining companies.

(b) Peru

The portfolio of copper projects registered in Peru by the Ministry of Energy and Mines for the current decade amounts to US$ 36.526 billion. Those projects meet the following three conditions: (i) capital expenditure investment equal to or greater than US$ 70 million; (ii) start of operations within the next 10 years; and (iii) existence of at least pre-feasibility studies (Ministry of Energy and Mines, 2021).

In terms of the investment needed in terms of GFCF, under the assumptions of constant market share and GFCF intensity ratio per ton of copper, it is estimated that by 2030 the increase in GFCF could reach US$ 18 billion in an accelerated energy transition scenario and US$ 4.23 billion in a pessimistic scenario (BAU), as shown in figure IV.22. The average value of the necessary GFCF in the scenarios examined is US$ 10.4 billion by 2030. The long-term values of increased GFCF by 2050 are expected to range from US$ 10.2 billion to US$ 54.0 billion, depending on the prevailing scenario.

Figure IV.22
Peru: projected gross fixed capital formation for the copper industry to 2030 and trajectory 2030–2050
(Billions of dollars)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from the public information of mining companies.

3. Green factor challenges: the iron industry in Brazil

(a) Emissions intensity

As mentioned in the analysis on copper, the energy transition, by directly or indirectly taxing CO_2 emissions, incorporates the energy efficiency of processes and emissions per unit of GDP into the vector of factors that determine the competitiveness of firms and countries. Therefore, low-carbon and low-energy production technologies or technologies powered by energy matrices with a low emission factor should have a competitive advantage in this new techno-economic paradigm.

In that regard, iron production technology varies according to its primary source. Thus, obtaining iron from hematite generally only requires a crushing and screening process, given its high iron grade, so it represents a low-energy intensity process. Obtaining iron from itabirite or magnetite requires fine crushing and grinding to achieve a marketable iron concentrate, since the iron content of these ores is lower, ranging from 16% to 45%. This makes obtaining iron from these ores a much more energy-intensive process compared to hematite and can require as much as 30 kWh/t (Jankovic, 2022).

From that standpoint, Brazil's iron ore industry is at a disadvantage to Australian producers, for example, given that Australia's production technology is less energy-intensive than Brazil's. However, a more comprehensive comparison should contrast not only the energy demand of each technology, but also the emission factor of the countries' energy matrices.

In that connection, Brazil has a cleaner energy matrix than Australia, largely as a result of the proportion of hydroelectric energy in Brazil and Australia's continued dependence on thermoelectric generation. Specifically, Brazil has an emission factor

of 0.3 t CO_2e/MWh for 2019,[11] while Australia's is 0.76 t CO_2e/MWh (IGES, 2021). This difference partly offsets the higher energy intensity of Brazil compared to Australia in iron production.

Australia enjoys a competitive advantage as a result of its geographical proximity to the main demand centre, which also translates into a green competitiveness factor. Since the distance is shorter, fuel consumption is lower and so, therefore, is the scope 3 carbon footprint, i.e. the footprint that considers emissions in the iron value chain. Given the distance differential and the predominant technologies of cargo ships, this effect is not insignificant.

In addition to CO_2 emissions intensity considerations, a key factor in green competitiveness is the environmental impact of operations. In that sense, Brazil appears to be at a disadvantage, given its recent history of disasters, such as those that befell the Samarco mine dam in 2015 and the Bumadinho dam in 2019. Such occurrences adversely affect the social perception of such operations, which complicates the pursuit of new projects and, therefore, dampens the dynamism of the industry.

The second major component to take into consideration with respect to green competitiveness factors depends on what happens with the steel industry. As shown in subsection 6, the future of iron depends to a large extent on developments in future steel production. Although this is expected to continue growing in line with demographic and economic changes in emerging countries, restrictions on the supply of this metal, due to the high percentage of global emissions for which it accounts, make a structural change in demand for iron possible.

The iron and steel industry accounts for 7% of global CO_2 emissions. It is the branch of heavy industry with the highest CO_2 emissions and the second highest energy consumer (IEA, 2020). The industry's emissions largely come from the intensity of its coal use; it is the biggest consumer of coal, which accounts for 75% of the industry's energy demand (IEA, 2020). These factors make it one of the priority industries for emissions reduction, putting regulatory and market pressures on production technologies.

Of total steel output, 71% comes from the blast furnace-basic oxygen furnace process. Here, the pig iron is reduced in the blast furnace and then transferred to the basic oxygen furnace where the steel is produced. The smelting process for obtaining pig iron uses, in addition to iron, high concentrations of coal, making it a highly intensive process in terms of CO_2 emissions (70% of the total). The other 29% of steel output comes via the electric arc furnace route. This technology mainly uses steel scrap (recycled steel), secondary production, as raw material for steel production. This process does not use coal, so it is far less CO_2 intensive. However, it consumes very high amounts of electricity, so the emission factors of the electricity matrices of the producing countries are a key determinant of the carbon footprint of this process (Fan and Friedmann, 2021).

Therefore, reducing CO_2 emissions in the steel industry requires a technological retrofitting of primary production, which uses iron and coal. The other option is to transition towards steel production dominated by secondary production in countries with a decarbonized energy matrix. In both cases the technological solution exists. The question is how to make it cost-effective without significantly increasing steel prices.

It is in the above dilemma where the future competitiveness of iron seems to be at stake. If secondary steel production were to predominate, demand for iron ore would contract sharply. Conversely, if technologies such as primary steel production from a process that combines iron with green hydrogen mature and become economically viable, iron could remain competitive as demand for steel grows.

[11] See IEA, "Emissions Factors 2021" [online] https://www.iea.org/data-and-statistics/data-product/emissions-factors-2021.

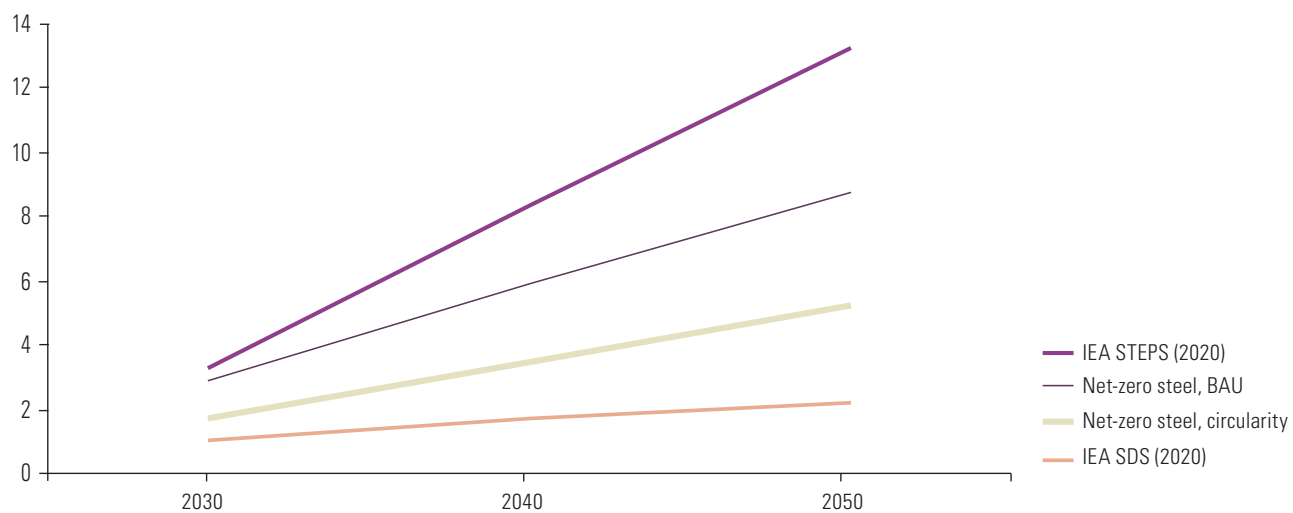
This technological dilemma will be resolved mainly by the commitments adopted by China in terms of emissions reduction and the paths it follows to achieve them, since it produces 57% of the world's steel and, as mentioned, the industry accounts for 7% of total CO_2 emissions. For the time being, according to its update of the Paris Agreement prior to COP26 in 2021, China has committed to reaching peak emissions by 2030 and net-zero by 2060 (Government of China, 2021), which represents a step up in the ambition of its climate goals. It is not yet clear what specific path China will take with respect to the steel industry. However, two variables to consider are its desire to decrease its dependence on Australian iron and the goal of increasing the share of non-fossil fuel energy to 25% of the energy matrix.

4. Investment efforts to maintain market share in the iron market in the context of the energy shift in Brazil

The value of investments in the mining sector in Brazil over the next five years is projected at US$ 40 billion, according to estimates by the Brazilian Mining Institute. Although a breakdown by type of mineral is not provided, given the predominance of iron in the sector (90%), it is reasonable to assume that the investment will be distributed proportionally to the share of each mineral, so around US$ 36 billion would be allocated to the iron industry.

In terms of the investment needed in GFCF, under the assumptions of constant market share and the ratio of GFCF intensity per ton of iron, it is estimated that by 2030 the increase in GFCF with respect to the base year (2020) could reach US$ 3.3 billion in an accelerated energy transition scenario and US$ 1.1 billion in a pessimistic scenario (BAU), as shown in figure IV.23. The average value of the highest GFCF in the scenarios examined is US$ 2.25 billion by 2030. The long-term values of increased GFCF by 2050 are expected to range from US$ 2.2 billion to US$ 13.2 billion, depending on the prevailing scenario.

Figure IV.23
Brazil: projected gross fixed capital formation for the iron industry to 2030 and trajectory 2030–2050
(Billions of dollars)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from the public information of mining companies.

5. Green factor challenges: the lithium industry in Argentina, the Plurinational State of Bolivia and Chile

Regarding the green factors that will affect the competitiveness of the lithium industry in the context of the techno-economic paradigm shift, it is important to note that not only the intensity of CO_2 emissions per unit of GDP is significant, so, too, is the environmental impact on the ecosystems from which lithium is extracted. This is particularly important considering that 60% of lithium resources are found in the Altiplano salt flats, which are complex, fragile ecosystems (Gajardo and Redón, 2019).

Thus, those countries that are able to produce lithium with a lower CO_2 footprint should see their competitiveness increase compared to those that are not, leaving aside the possibility of arbitrage or environmental dumping. On the other hand, lithium production from rock should have a competitive advantage over brine-based production. This is because sustainable lithium production from brine will entail greater investments to mitigate adverse effects on the ecosystem and production restrictions to maintain the equilibrium of salt flats.

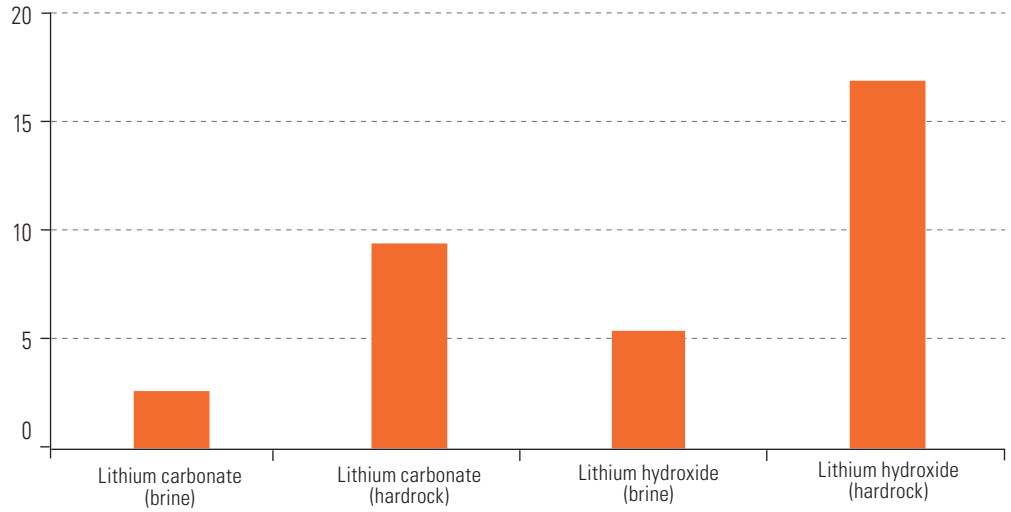
A comparison of the intensity of emissions associated with the different minerals involved in the energy transition reveals that lithium is in the group of minerals with low CO_2 emissions intensity (see figure IV.18). However, its unit value of emissions per ton of ore produced is 5 t CO_2e/MT, higher than other minerals such as iron or copper.

In terms of volume, of course, it is more urgent to lower the emissions associated with iron and copper, given the production volumes of those minerals. However, given that lithium demand is projected to be 30 times higher than current levels, the emissions factor associated with this mineral will be increasingly important. In addition, where lithium is concerned, the bulk of emissions are produced during processing, so technological heterogeneity in that regard —and technology does vary considerably from country to country— would be significant for competitiveness.

An analysis of the composition of lithium emissions by source or production technology, as shown in figure IV.24, reveals great heterogeneity by source and product. Lithium carbonate and lithium hydroxide produced from lithium contained in brines have a carbon footprint of 2.5 t CO_2e/MT and 5.5 t CO_2e/MT, respectively. Lithium carbonate and lithium hydroxide produced from lithium contained in rock, on the other hand, have a carbon footprint of 9.5 t CO_2e/MT and 17 t CO_2e/MT, respectively. These values are consistent with the conclusions of several studies that have applied the product life cycle methodology and evaluated the environmental impact of the various lithium production technologies (primary and secondary). Those studies have found that lithium production from rock has a much higher environmental impact than that obtained from brine (Ambrose and Kendall, 2019; Jiang and others, 2020).

These emissions competitiveness gaps, or green competitiveness gaps, could be significant in a context where the regulations of producer countries directly or indirectly incorporate a CO_2 price. Specifically, if there were a single carbon price for all countries and the price was in line with its social cost, the countries of the lithium triangle would see their cost competitiveness increase.

Figure IV.24
CO_2 emissions intensity of lithium by source-production technology
(Tons of CO_2 per tons of LCE equivalent)



Source: International Energy Agency (IEA), "The role of critical minerals in clean energy transition", *World Energy Outlook Special Report*, 2021.

With regard to the implicit price in CO_2 emissions or regulations that lithium-producing countries are adopting to address climate change, the following are noteworthy:

(a) Argentina

- In the update of the Paris Agreement target presented at the end of 2020, Argentina increased the ambition of its goal by 2 percentage points with respect to its 2016 commitment, resulting in a higher target of 27.7% by 2030.
- In the context of COP26, Argentina committed to achieving carbon neutrality by 2050.
- At the end of 2019, a law was passed on minimum climate change adaptation and mitigation budgets to ensure the adoption of measures to that end. Under this legislation, the national climate change cabinet was established to link and coordinate efforts in that area.

(b) Plurinational State of Bolivia

- In its update of the Paris Agreement commitments, unlike most countries, the Plurinational State of Bolivia did not adopt a traditional vision of targets, i.e. it did not set an emissions reduction target. Instead, it has opted for a climate justice index whereby 89% of the efforts should be made by developed countries. With respect to the country's own contribution, it sets a series of adaptation and mitigation goals that are more local than global in nature, where the variable closest to the traditional goals is the increase in the installed capacity of electricity generation from renewable energies. Here, the goal is to supply 79% of the country's total energy needs from such sources, compared to 39% in 2010.

(c) Chile

- As in the case of copper, the lithium industry will be governed by the Framework Law on Climate Change and by absolute emissions targets, which are 95 Mt CO_2 by 2030, a peak in 2025 and a carbon budget of 1,100 t CO_2 for the current decade.

(i) Additional challenges for the lithium industry

Regarding the sustainability of salt flats as a source of changes in future competitiveness, it is important to highlight that the extraction of water affects the water balance of the ecosystem and the hydrology of the adjacent watersheds. Depending on the amounts involved, this may result in biodiversity loss and reduced water availability

in the surrounding communities, which are already in areas of extreme water scarcity (Gajardo and Redón, 2019; Liu and Agusdinata, 2021). Thus, lithium extraction has a natural active constraint established by the amount of water that can be extracted without significantly altering the ecosystem and the water balance of the watersheds.

Therefore, sustainable lithium production from brine requires minimizing water extraction, which with the current technology also means reducing the amount of ore extracted. However, there are several technological advances that would enable the lithium to be extracted directly from the salt flats without involving the evaporation process, thus avoiding the possibility of water imbalance in the salt flats and watersheds. If such technologies prosper, it is reasonable to think that production costs would increase, given that Schumpeterian rents are involved (IEA, 2021). However, the higher capital expenditures and, probably, operational expenditures could be offset by the shorter production time as a result of the omission of the evaporation process, which represents the main capital expenditure component because of the length of the process (Sterba and others, 2019).

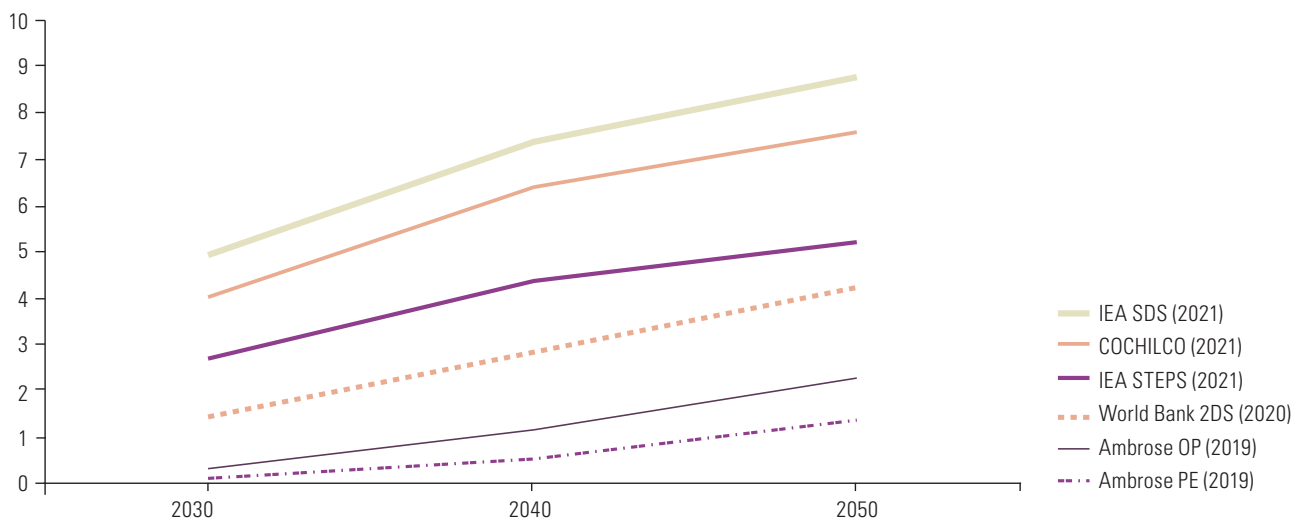
6. Investment efforts to maintain lithium market share in the context of the energy shift

(a) Argentina

Argentina has 19 lithium projects at different stages of development and two operating sites; together they represent an investment potential for lithium exploitation of US$ 6.473 billion. If all the projects in the pipeline come to fruition, production would increase tenfold (Ministry of Productive Development, 2021).

In terms of investment needed in GFCF to maintain market share, under the assumptions of constant market share and GFCF intensity ratio per ton of lithium carbonate equivalent, it is estimated that by 2030 the increase in GFCF with respect to the base year (2020) could reach US$ 5 billion in an accelerated energy transition scenario and US$ 134 million in a pessimistic scenario (BAU), as shown in figure IV.25. The average value of the increased GFCF for the scenarios examined is US$ 2.25 billion by 2030. The long-term values to 2050 are expected to range from US$ 1.0 billion to US$ 9.0 billion, depending on the prevailing scenario.

Figure IV.25
Argentina: projected gross fixed capital formation for the lithium industry to 2030 and trajectory 2030–2050
(Billions of dollars)



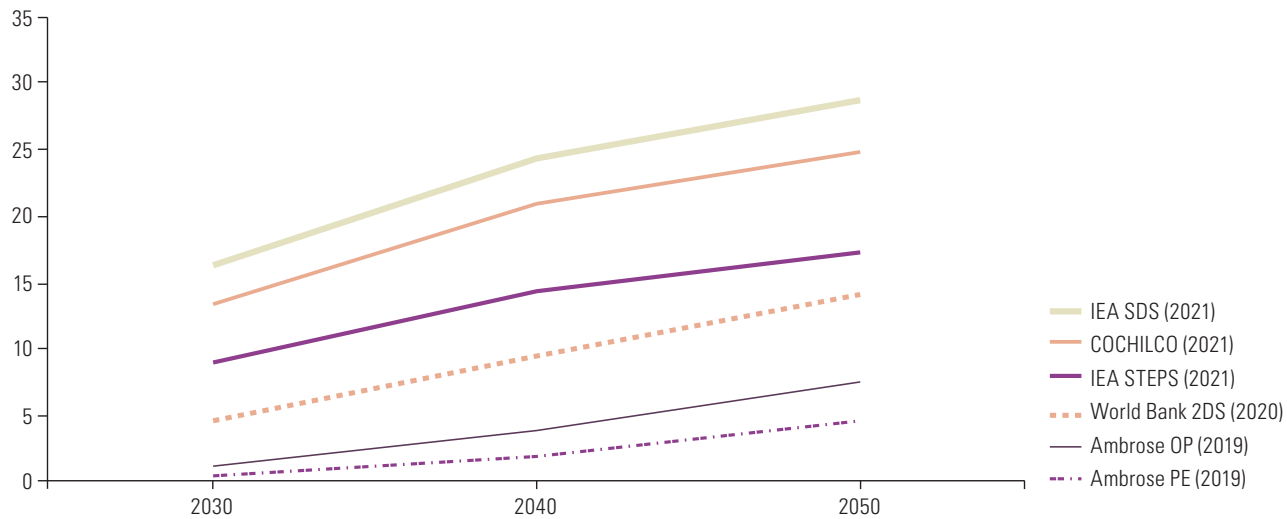
Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from the public information of mining companies.

(b) Chile

The portfolio of lithium projects registered by the Chilean Copper Commission for the period 2021–2030 includes five projects totalling investments of US$ 1.807 billion, which is equivalent to 3% of the total portfolio of the mining sector (COCHILCO, 2021).

In terms of the investment needed investment in GFCF, under the assumptions of constant market share and GFCF intensity ratio per ton of lithium carbonate equivalent, it is estimated that by 2030 the increase in GFCF could reach US$ 16 billion in an accelerated energy transition scenario and US$ 441 million in a pessimistic scenario (BAU), as shown in figure IV.26. The average value of the increase in GFCF for the scenarios examined is US$ 7.4 billion by 2030. Contrasting these figures, it is evident that the investments in the pipeline for the lithium industry are more aligned with low-ambition scenarios, such as those projected in Ambrose and Kendall (2019). The long-term values for the increase in GFCF to 2050 are expected to range from US$ 4.4 billion to US$ 28.6 billion, depending on the prevailing scenario.

Figure IV.26
Chile: projected gross fixed capital formation for the lithium industry to 2030 and trajectory 2030–2050
(Billions of dollars)



Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of data from the public information of mining companies.

D. Final remarks

This chapter of the *Economic Survey of Latin America and the Caribbean, 2022* describes some of the main effects and transmission channels connected with the energy transition in the copper, iron and lithium industries worldwide. In particular, it sets out opportunities that the energy transition could present for the economies that produce those minerals in the region. It also underscores challenges that the energy transition poses for producers of these minerals in the region, as well as highlighting the role of green factors.

As for the expected effects of the energy transition on mineral demand, the new techno-economic paradigm appears to open a window of opportunity for mineral-producing countries, given the intensive use of these raw materials by the new technologies.

Not all the minerals will be driven equally strongly and there are risks associated with the prevailing technologies. Lithium is likely to be the mineral that could show the highest relative growth in percentage terms, considering its comparatively low current production levels and the significant increase expected in demand for lithium-ion

batteries as a result of the high penetration of electric cars. However, lithium also presents many risks, some of which are associated with the potential development of other technologies that could replace it in battery manufacturing.

The prospects for copper, on the other hand, are very promising, considering the volumes and risks, since demand for it could grow by 30% between now and 2030. This is because copper is likely to be used in all the new technologies and there is little likelihood of its substitution. Thus, regardless of which technology ultimately prevails in each category of use, demand for copper will rise.

As for the iron and steel industry, the literature is inconclusive about its role in the energy transition. However, irrespective of the fundamentals driving demand, there is consensus that demand will continue to increase as emerging countries develop and transition demographically from rural to urban areas.

As regards the expected effects of the energy transition on the supply of minerals, specifically on the industries of the countries studied, the analysis is much more complex. Under this new techno-economic paradigm competitiveness will depend on traditional factors, including geological, technological-productive, institutional and investment climate considerations. It will also depend on green factors, such as the intensity of CO_2 emissions per unit of output and the shadow price of emissions determined by the regulatory framework, which will depend on the institutional arrangements and regulations in each country.

The energy transition will push the mining sector to modify its production technologies at a pace determined largely by local environmental regulations, but also by downstream market requirements. However, this transformation will not be possible without the traditional competitiveness factors, in particular, an appropriate governance and investment climate to drive the necessary investments, technological development and capacity-building at the local level.

Estimating the net effect of the energy transition on the different mineral industries is quite complex. The strategy adopted by countries and individual technology decisions made by producing firms, on the one hand, and decisions by the State as to regulatory ambition in decarbonizing the economy, on the other hand, are very important both for the design of policies and for their possible outcomes.

Investment efforts will have to be considerable, first because of the need to adapt production patterns to the new reality imposed by the energy transition. Investments must also be intensified to capitalize on the window of opportunity that the energy transition is opening for mineral producers.

To take advantage of the opportunity offered by the growth in demand for minerals and help the mining sector to play a leading role in the development strategy, producing countries should make major investment efforts in order to adapt the capacity of mining companies to produce in a clean-energy context. This study shows that the required efforts are great and growing in line with the increasing ambition of the changes and restrictions entailed by energy transformation. However, the projections presented here underestimate the overall investment effort required for the mining sector to play a strategic role in the region's development strategy. To these scenarios must be added the fact that international markets are increasingly demanding fulfilment of social and environmental standards in the minerals trade. Furthermore, mining's environmental problems are not confined to greenhouse gas emissions. There is also a major discussion on the use of water and on the socioenvironmental impact involved in greater resource use.

Governments have an opportunity to help catalyse the energy transition of industries through regulation. This must be accompanied by other policies that promote technological change towards decarbonization and stimulate investment in research and development. Public policies will also be needed to transform the sector, prioritizing the management of activity's impact on society and the environment as well as economic considerations.

Bibliography

360 Research Reports (2021), "Global Copper Market Report, History and Forecast 2015-2026, Breakdown Data by Manufacturers, Key Regions, Types and Application" [online] https://www.360researchreports.com/global-copper-market-15956083.

Alessia, A. and others (2021), "Challenges for sustainable lithium supply: a critical review", *Journal of Cleaner Production*, vol. 300, 1 June.

Ambrose, H. and A. Kendall (2019), "Understanding the future of lithium: Part 2, temporally and spatially resolved life-cycle assessment modeling ", *Journal of Industrial Ecology*, vol. 24.

Argentine Ministry of Productive Development (2021), *Litio: informe especial*, Buenos Aires, October.

Bazilian, M. (2018), "The mineral foundation of the energy transition", *The Extractive Industries and Society*, vol. 5, No. 1.

Ben-Salha, O., H. Dachraoui and M. Sebri (2021), "Natural resource rents and economic growth in the top resource-abundant countries: A PMG estimation", *Resources Policy*, vol. 74.

Bridge, G. and others (2013), "Geographies of energy transition: Space, place and the low-carbon economy", *Energy Policy,* vol. 53.

Castillo, E. and C. Roa (2021), "Defining geological maturity: The effect of discoveries on early-stage mineral exploration", *Resources Policy,* vol. 74.

Castillo, E. and C. R. Eggert (2020), "Reconciling diverging views on mineral depletion: a modified cumulative availability curve applied to copper resources", Resources, Conservation and Recycling, vol. 161, October.

Central Bank of Chile (2019), *Cuentas Nacionales de Chile: evolución de la actividad económica primer trimestre de 2019*, Santiago.

COCHILCO (Chilean Copper Commission) (2021a), *Anuario de estadísticas del cobre y otros minerales 2001-2020*, Santiago.

___(2021b), *Catastro de empresas exploradores 2021*, Santiago.

___(2021c), *El mercado de litio: desarrollo reciente y proyecciones al 2030,* Santiago.

___(2021d), *Informe de mercado: hierro y acero - perspectivas 2021-2022*, Santiago.

___(2021e), *Informe de tendencias del mercado del cobre, cuarto trimestre 2020,* Santiago.

___(2021f), *Inversión en la minería chilena: cartera de proyectos 2021 -2030*, Santiago.

___(2020), *Oferta y demanda de litio hacia el 2030*, Santiago.

___(2017), *Tendencias de usos y demanda de productos de cobre,* Santiago.

Dell, M., B. F. Jones and B. A. Olken (2008), *Climate Change and Economic Growth: Evidence from the Last Half Century*, National Bureau of Economic Research (NBER).

Demsetz, H. (1967), "Toward a Theory of Property Rights", *The American Economic Review,* vol. 57.

Department of Industry, Science, and Resources of Australian Government (2020), "Lithium: Resources and Energy Quarterly", December.

ECLAC (Economic Commission for Latin America and the Caribbean) (2018), *Economic Survey of Latin America and the Caribbean, 2018* (LC/PUB.2018/17-P), Santiago.

___(2017), *Economic Survey of Latin America and the Caribbean, 2017* (LC/PUB.2017/17-P), Santiago.

Fan, Z. and J. Friedmann (2021), "Low-carbon production of iron and steel: Technology options, economic assessment, and policy", *Joule*, vol. 5, No. 4.

Frankel, J. (2010), "The natural resource curse: a survey", National Bureau of Economic Research (NBER).

Gajardo, G. and S. Redón (2019), "Andean hypersaline lakes in the Atacama Desert, northern Chile: between lithium exploitation and unique biodiversity conservation", *Conservation Science and Practice*, vol. 1, No. 2.

Gan, Y. and M. Griffin (2018), "Analysis of life-cycle GHG emissions for iron ore mining and processing in China: Uncertainty and Trends", *Resources Policy*, vol. 58.

Government of China (2021), "China's Achievements, New Goals and New Measures for Nationally Determined Contributions", Beijing.

Hancock, L., N. Ralph and Sh. Ali (2018), "Bolivia's lithium frontier: Can public private partnerships deliver a minerals boom for sustainable development?", *Journal of Cleaner Production*, vol. 178.

IEA (International Energy Agency) (2021), "The role of critical minerals in clean energy transition", *World Energy Outlook Special Report*.

___(2020), *Iron and Steel Technology Roadmap: to towards more sustainable steelmaking*.

IDB (Inter-American Development Bank) (2021), "Greener procurement in the mining industry", Washington, D.C.
IGES (Institute for Global Environmental Strategies) (2021), "List of Grid Emission Factors, version 10.10" [online] https://www.iges.or.jp/en/pub/list-grid-emission-factor/en.
IPCC (Intergovernmental Panel on Climate Change) (2021), *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.*
Jankovic, A. (2022), "Comminution and classification technologies of iron ore", *Iron Ore*, Woodhead Publishing Series in Metals and Surface Engineering.
Jara, J. J. (2017), "Determinants of country competitiveness in attracting mining investments: an empirical analysis", *Resources Policy,* vol. 52.
Jiang, S. and others (2020), "Environmental impacts of lithium production showing the importance of primary data of upstream process in life-cycle assessment", *Journal of Environmental Management*, vol. 262, No. 6.
Kingsbury, D. (2022), "Lithium's buzz: extractivism between booms in Bolivia, Argentina, and Chile", Cultural Studies.
Lederman, D. and W. Maloney (2003), "Trade structure and growth", *Policy Research Working Paper,* No. 3025, World Bank.
Liu, W. and D. Agusdinata (2021), "Dynamics of local impacts in low-carbon transition: agent-based modeling of lithium mining-community-aquifer interactions in Salar de Atacama, Chile", *The Extractive Industries and Society*, vol. 8, No. 3.
Minerals Council of Australia (2021), *Best in Class: Australia's Bulk Commodity Giants.*
Ministry of Energy and Mining of Peru (2021), *Cartera de Proyectos Construcción de Mina 2021*, Lima.
Mission Possible Partnership (2021), *Net Zero Steel: Sector Transition Strategy,* October.
Nordhaus, W. (1977), "Economic growth and climate: the carbon dioxide problem", *The American Economic Review,* vol. 67, No. 1.
Nurkse, R. (1953), *Problems of Capital Formation in Underdeveloped Countries,* Oxford, Blackwell.
Obaya, M. and M. Céspedes (2021), "Análisis de las redes globales de producción de baterías de ion de litio: implicaciones para los países del triángulo del litio", *Project Documents* (LC/TS.2021/58), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC).
Obaya, M. and P. Pascuini (2020), "Estudio comparativo de los modos de gobernanza del litio en la Argentina, Chile y el Estado Plurinacional de Bolivia", *Project Documents* (LC/TS.2020/124), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC).
Prebisch, R. (1959), "Commercial policy in the underdeveloped countries", *The American Economic Review,* vol. 49, No. 2, May.
Research and Markets (2021), "Lithium Market Size, Share & Trends Analysis Report by Product (Carbonate, Hydroxide), by Application (Automotive, Consumer Goods, Grid Storage), by Region, and Segment Forecasts, 2021-2028" [online] https://www.researchandmarkets.com/reports/5480671/lithium-market-size-share-and-trends-analysis.
Sachs, J. and A. Warner (1995), "Natural resource abundance and economic growth", Cambridge, *NBER Working Paper,* No. 5398.
Schipper, B. and others (2018), "Estimating global copper demand until 2100 with regression and stock dynamics", *Resources, Conservation & Recycling,* vol. 132.
Sterba, J. and others (2019), "Lithium mining: Accelerating the transition to sustainable energy", *Resource Policy*, vol. 62.
Tørstad, V., H. Sælen and S. Bøyum (2020), "The domestic politics of international climate commitments: which factors explain cross-country variation in NDC ambition?", *Environmental Research Letters*, vol. 15, No. 2.
USGS (United States Geological Survey) (2021), *Mineral Commodity Summaries 2021.*
Vásquez, A. and R. Prialé (2021), "Country competitiveness and investment allocation in the mining industry: A survey of the literature and new empirical evidence", *Resources Policy,* vol. 73.
Watari, T. and others (2022), "Global copper cycles and greenhouse gas emissions in a 1.5 °C world", *Resources, Conservation and Recycling*, vol. 179.
World Bank (2020), *Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition,* Washington, D.C., World Bank Publications.
Yin, X. and W. Chen (2013), "Trends and development of steel demand in China: A bottom–up analysis", *Resources Policy,* vol. 38, No. 4.

Statistical annex

Table A.1
Latin America and the Caribbean: main economic indicators

	2013	2014	2015	2016	2017	2018	2019	2020	2021[a]
	Annual growth rates								
Gross domestic product[b]	2.9	1.3	0.2	-0.8	1.4	1.3	0.2	-6.9	6.5
Gross domestic product per capita[b]	1.8	0.2	-0.8	-1.8	0.4	0.3	-0.7	-7.8	5.6
Consumer prices[c]	3.9	4.2	5.4	3.9	3.4	3.0	2.9	2.9	6.6
	Percentages								
National unemployment	6.3	6.1	6.6	7.8	8.1	7.9	7.9	10.3	9.3
Total gross external debt/GDP[d e]	26.3	29.4	34.7	37.6	35.3	37.6	39.6	48.2	43.7
Total gross external debt/exports of goods and services[d e]	117.6	134.0	154.7	165.7	157.2	151.8	160.3	189.6	158.0
	Millions of dollars								
Balance of payments									
Current account balance	-170 698	-186 017	-170 011	-99 257	-91 950	-139 738	-110 505	-5 731	-75 086
Exports of goods f.o.b.	1 120 555	1 088 359	928 048	896 420	1 005 908	1 091 383	1 063 616	959 693	1 211 842
Imports of goods f.o.b.	1 114 423	1 103 297	979 816	891 830	975 644	1 087 699	1 050 971	889 964	1 199 226
Services trade balance	-84 568	-81 688	-60 241	-48 166	-55 445	-53 993	-46 449	-44 712	-50 243
Income balance	-159 545	-161 669	-130 510	-135 599	-153 668	-183 103	-176 456	-138 513	-170 115
Net current transfers	64 293	68 331	70 171	77 455	84 110	91 760	99 755	107 765	132 656
Capital and financial balance[f]	186 914	224 816	143 064	118 660	109 680	124 574	63 754	15 698	124 243
Net foreign direct investment	151 275	142 781	131 372	127 233	123 206	146 433	110 637	91 414	97 422
Other capital movements	35 639	82 036	11 691	-8 572	-13 526	-21 859	-46 883	-75 715	26 821
Overall balance	16 222	38 799	-26 947	19 403	17 730	-15 164	-46 349	13 936	49 743
Variation in reserve assets[g]	-16 143	-38 431	27 128	-19 423	-17 968	-13 214	30 560	-15 293	-50 014
Other financing	-78	-368	-181	20	238	28 378	15 788	1 357	273
Net transfer of resources	27 291	62 779	12 374	-16 918	-43 750	-30 152	-96 914	-121 458	-45 599
International reserves	829 117	857 148	811 779	831 571	859 610	868 029	852 243	891 528	934 271
	Porcentajes del PIB								
Fiscal sector[h]									
Overall balance	-2.9	-3.2	-3.1	-3.4	-3.2	-2.9	-3.0	-6.9	-4.2
Primary balance	-1.1	-1.3	-1.0	-1.2	-0.9	-0.5	-0.5	-4.2	-1.7
Total revenue	18.6	18.4	18.4	18.2	18.1	18.3	18.4	17.7	19.2
Tax revenue	15.1	15.2	15.3	15.3	15.2	15.3	15.2	14.6	15.8
Total expenditure	21.5	21.5	21.5	21.5	21.3	21.3	21.4	24.6	23.4
Capital expenditure	4.3	4.1	3.9	3.9	3.6	3.3	3.1	3.4	3.5
Central-government public debt[h]	32.6	34.1	36.5	38.2	39.7	43.0	45.4	56.6	53.4
Public debt of the non-financial public-sector[h]	35.1	37.0	39.7	41.6	43.2	46.5	49.3	60.3	57.2

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

[a] Preliminary figures.

[b] Based on official figures expressed in 2010 dollars.

[c] Weighted average. Does not include data on economies with chronic inflation (Argentina, Haiti, Suriname and Venezuela (Bolivarian Republic of)).

[d] Based on figures denominated in dollars at current prices.

[e] Simple averages for 17 countries. Does not include Cuba, Haiti and Venezuela (Bolivarian Republic of).

[f] Includes errors and omissions.

[g] A minus sign (-) indicates an increase in reserve assets.

[h] Coverage corresponds to the central government. Simple averages for 16 countries. Does not include Bolivia (Plurinational State of) , Cuba, Haiti and Venezuela (Bolivarian Republic of).

Table A.2
Latin America and the Caribbean: gross domestic product in millions of dollars
(Current prices)

	2013	2014	2015	2016	2017	2018	2019	2020	2021[a]
Latin America and the Caribbean	**6 212 599**	**6 137 962**	**5 197 657**	**5 076 117**	**5 585 715**	**5 415 371**	**5 293 881**	**4 448 125**	**5 201 229**
Latin America	**6 138 259**	**6 062 508**	**5 123 656**	**5 006 207**	**5 512 763**	**5 339 555**	**5 216 251**	**4 380 628**	**5 129 128**
Argentina	613 316	567 050	644 903	557 532	643 628	524 820	447 755	385 540	487 227
Bolivia (Plurinational State of)	30 659	32 996	33 000	33 941	37 509	40 288	40 895	36 630	40 408
Brazil	2 472 819	2 456 044	1 802 212	1 795 693	2 063 515	1 916 934	1 873 288	1 448 566	1 608 981
Chile	277 239	259 405	242 497	249 299	276 365	295 403	278 585	252 727	317 059
Colombia	382 116	381 112	293 482	282 825	311 884	334 198	323 110	270 300	314 464
Costa Rica	50 950	52 016	56 442	58 847	60 516	62 420	64 418	62 158	64 423
Cuba	77 148	80 656	87 133	91 370	96 851	100 050	103 428	107 352	187 898
Dominican Republic	62 682	67 180	71 165	75 705	79 998	85 555	88 941	78 845	94 243
Ecuador	95 130	101 726	99 290	99 938	104 296	107 562	108 108	99 291	106 166
El Salvador	21 991	22 593	23 438	24 191	24 979	26 021	26 881	24 563	28 737
Guatemala	52 996	57 852	62 186	66 053	71 654	73 328	77 170	77 626	85 986
Haiti	14 787	14 941	14 204	13 333	15 237	15 822	14 007	15 505	19 536
Honduras	18 500	19 757	20 980	21 718	23 136	24 068	25 090	23 828	28 489
Mexico	1 274 444	1 315 356	1 171 870	1 078 493	1 158 912	1 222 406	1 269 010	1 089 827	1 296 024
Nicaragua	10 983	11 880	12 757	13 286	13 786	13 025	12 597	12 587	14 013
Panama	45 600	49 921	54 092	57 908	62 203	64 929	66 984	53 977	63 605
Paraguay	38 651	40 378	36 211	36 090	38 997	40 225	37 925	35 432	39 495
Peru	201 176	200 786	189 803	191 898	211 008	222 597	228 326	201 703	223 252
Uruguay	62 498	62 178	57 874	57 237	64 234	64 515	61 231	53 561	59 318
Venezuela (Bolivarian Republic of)	334 573	268 678	150 117	200 850	154 056	105 388	...	...	...
The Caribbean	**74 340**	**75 455**	**74 001**	**69 910**	**72 952**	**75 816**	**77 631**	**67 497**	**72 101**
Antigua and Barbuda	1 181	1 250	1 337	1 437	1 468	1 606	1 688	1 370	1 471
Bahamas	10 563	11 176	11 862	11 835	12 358	12 756	13 193	9 700	11 209
Barbados	4 677	4 696	4 725	4 833	4 982	5 097	5 304	4 690	4 894
Belize	2 035	2 139	2 199	2 228	2 263	2 273	2 371	2 019	2 084
Dominica	498	520	541	576	522	555	612	504	546
Grenada	843	911	997	1 062	1 126	1 167	1 213	1 043	1 121
Guyana	4 168	4 128	4 280	4 483	4 748	4 788	5 174	5 471	6 817
Jamaica	14 264	13 899	14 189	14 077	14 809	15 731	15 831	13 812	14 742
Saint Kitts and Nevis	875	954	958	1 009	1 061	1 079	1 109	885	869
Saint Lucia	1 666	1 756	1 810	1 866	1 997	2 065	2 119	1 617	1 766
Saint Vincent and the Grenadines	765	771	787	814	848	884	910	872	890
Suriname	5 510	5 612	5 126	3 317	3 592	3 996	4 221	4 120	3 248
Trinidad and Tobago	27 294	27 643	25 192	22 374	23 180	23 821	23 886	21 393	22 478

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Preliminary figures.

Table A.3
Latin America and the Caribbean: annual growth rates in gross domestic product
(Constant prices)

	2013	2014	2015	2016	2017	2018	2019	2020	2021[a]
Latin America and the Caribbean[b]	**2.9**	**1.3**	**0.2**	**-0.8**	**1.4**	**1.3**	**0.2**	**-6.9**	**6.5**
Latin America	**2.9**	**1.3**	**0.2**	**-0.8**	**1.5**	**1.3**	**0.2**	**-6.9**	**6.6**
Argentina	2.4	-2.5	2.7	-2.1	2.8	-2.6	-2.0	-9.9	10.4
Bolivia (Plurinational State of)	6.8	5.5	4.9	4.3	4.2	4.2	2.2	-8.7	6.1
Brazil	3.0	0.5	-3.5	-3.3	1.3	1.8	1.2	-3.9	4.6
Chile	3.3	1.8	2.2	1.8	1.4	4.0	0.8	-6.0	11.7
Colombia	5.1	4.5	3.0	2.1	1.4	2.6	3.2	-7.0	10.7
Costa Rica	2.5	3.5	3.7	4.2	4.2	2.6	2.4	-4.1	7.8
Cuba	2.8	1.0	4.4	0.5	1.8	2.2	-0.2	-10.9	0.1
Dominican Republic	4.9	7.1	6.9	6.7	4.7	7.0	5.1	-6.7	12.3
Ecuador	4.9	3.8	0.1	-1.2	2.4	1.3	0.0	-7.8	4.2
El Salvador	2.2	1.7	2.4	2.5	2.2	2.4	2.4	-8.2	10.3
Guatemala	3.7	4.4	4.1	2.7	3.1	3.4	4.0	-1.8	8.0
Haiti	4.3	1.7	2.6	1.8	2.5	1.7	-1.7	-3.3	-1.8
Honduras	2.8	3.1	3.8	3.9	4.8	3.8	2.7	-9.0	12.5
Mexico	1.4	2.8	3.3	2.6	2.1	2.2	-0.2	-8.1	4.8
Nicaragua	4.9	4.8	4.8	4.6	4.6	-3.4	-3.8	-1.8	10.3
Panama	6.9	5.1	5.7	5.0	5.6	3.7	3.0	-17.9	15.3
Paraguay	8.3	5.3	3.0	4.3	4.8	3.2	-0.4	-0.8	4.1
Peru	5.9	2.4	3.3	4.0	2.5	4.0	2.2	-11.0	13.3
Uruguay	4.6	3.2	0.4	1.7	1.6	0.5	0.4	-6.1	4.4
Venezuela (Bolivarian Republic of)	1.3	-3.9	-6.2	-17.0	-15.7	-19.6	-28.0	-30.0	-3.0
The Caribbean	**0.9**	**0.7**	**1.2**	**-1.7**	**0.3**	**1.3**	**1.2**	**-9.3**	**5.5**
Antigua and Barbuda	-0.6	3.8	3.8	5.5	3.1	6.9	4.9	-20.2	5.3
Bahamas	-2.9	1.8	1.0	-0.9	3.0	1.8	1.9	-23.8	13.7
Barbados	-1.4	-0.1	2.5	2.5	0.5	-1.0	-0.6	-14.0	1.4
Belize	4.8	3.9	2.6	-2.3	-1.0	0.3	4.5	-13.7	16.3
Dominica	-1.0	4.8	-2.7	2.8	-6.6	3.5	5.5	-16.6	6.5
Grenada	2.4	7.3	6.4	3.7	4.4	4.4	0.7	-13.8	5.7
Guyana	3.7	1.7	0.7	3.8	3.7	4.4	5.4	43.5	18.5
Jamaica	0.5	0.7	0.9	1.4	1.0	1.9	0.9	-9.9	4.6
Saint Kitts and Nevis	5.7	7.6	0.7	3.9	0.9	2.7	4.2	-14.2	-3.9
Saint Lucia	-2.0	1.3	0.1	3.4	3.5	2.9	-0.1	-20.4	7.0
Saint Vincent and the Grenadines	2.5	1.1	2.8	4.1	1.7	3.1	0.4	-5.3	0.7
Suriname	2.9	0.3	-3.4	-4.9	1.6	4.9	1.1	-15.9	-2.0
Trinidad and Tobago	2.3	-0.9	1.8	-6.3	-2.7	-0.7	-0.2	-7.4	-0.5

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Preliminary figures.
[b] Based on official figures expressed in 2018 dollars.

Table A.4
Latin America and the Caribbean: per capita gross domestic product
(Annual growth rates)

	2013	2014	2015	2016	2017	2018	2019	2020	2021[a]
Latin America and the Caribbean[b]	**1.8**	**0.2**	**-0.8**	**-1.8**	**0.4**	**0.3**	**-0.7**	**-7.8**	**5.6**
Latin America	**1.8**	**0.2**	**-0.8**	**-1.8**	**0.5**	**0.3**	**-0.7**	**-7.7**	**5.6**
Argentina	1.3	-3.5	1.7	-3.1	1.8	-3.5	-2.9	-10.8	9.4
Bolivia (Plurinational State of)	5.1	3.8	3.3	2.7	2.7	2.8	0.8	-10.0	4.7
Brazil	2.1	-0.4	-4.4	-4.1	0.5	1.0	0.5	-4.6	3.9
Chile	2.3	0.7	1.0	0.4	-0.1	2.6	-0.4	-6.8	11.1
Colombia	4.2	3.4	1.8	0.7	-0.2	1.0	1.8	-8.0	9.9
Costa Rica	1.3	2.4	2.5	3.1	3.1	1.6	1.4	-4.9	6.8
Cuba	2.5	0.8	4.3	0.4	1.8	2.3	-0.1	-10.9	1.3
Dominican Republic	3.7	5.8	5.7	5.5	3.5	5.8	4.0	-7.7	11.2
Ecuador	3.4	2.2	-1.5	-2.9	0.6	-0.5	-1.7	-9.2	2.8
El Salvador	1.8	1.2	1.9	2.0	1.7	1.9	1.9	-8.6	9.7
Guatemala	1.5	2.3	2.0	0.6	1.1	1.4	2.0	-3.6	6.0
Haiti	2.8	0.3	1.2	0.5	1.2	0.4	-2.9	-4.5	-3.0
Honduras	0.9	1.3	2.0	2.1	3.1	2.1	1.0	-10.4	10.8
Mexico	0.0	1.5	2.0	1.4	0.9	1.1	-1.3	-9.0	3.7
Nicaragua	3.5	3.4	3.4	3.2	3.3	-4.6	-5.0	-3.0	9.1
Panama	5.1	3.3	3.9	3.2	3.8	1.9	1.3	-19.2	13.6
Paraguay	6.8	3.9	1.6	2.9	3.4	1.9	-1.7	-2.0	2.8
Peru	4.9	1.3	2.0	2.4	0.8	2.2	0.6	-12.2	12.0
Uruguay	4.3	2.9	0.0	1.3	1.3	0.1	0.0	-6.4	4.0
Venezuela (Bolivarian Republic of)	-0.1	-4.7	-6.3	-16.4	-14.4	-18.2	-27.1	-29.8	-3.9
The Caribbean	**0.1**	**0.0**	**0.5**	**-2.3**	**-0.3**	**0.7**	**0.6**	**-9.8**	**4.8**
Antigua and Barbuda	-1.8	2.6	2.7	4.4	2.2	5.9	4.0	-20.9	4.4
Bahamas	-3.8	0.9	0.0	-1.8	2.0	0.8	0.9	-24.6	12.7
Barbados	-1.7	-0.3	2.3	2.4	0.3	-1.2	-0.7	-14.1	0.6
Belize	2.5	1.7	0.4	-4.3	-2.9	-1.6	2.6	-15.3	14.2
Dominica	-1.1	4.7	-2.9	2.6	-6.8	3.3	5.2	-16.8	6.3
Grenada	1.7	6.6	5.8	3.1	3.9	3.8	0.2	-14.2	5.2
Guyana	3.1	1.1	0.2	3.3	3.2	3.9	4.8	42.8	17.9
Jamaica	-0.1	0.1	0.4	0.8	0.5	1.4	0.4	-10.3	4.2
Saint Kitts and Nevis	4.8	6.6	-0.1	3.1	0.1	1.9	3.4	-14.8	-4.6
Saint Lucia	-2.5	0.9	-0.4	2.9	3.0	2.4	-0.6	-20.7	6.6
Saint Vincent and the Grenadines	2.3	0.9	2.5	3.9	1.3	2.7	0.1	-5.6	0.4
Suriname	1.8	-0.8	-4.4	-5.9	0.6	3.9	0.2	-16.7	-3.6
Trinidad and Tobago	1.6	-1.5	1.2	-6.8	-3.1	-1.1	-0.5	-7.7	-0.8

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Preliminary figures.
[b] Based on official figures expressed in 2018 dollars.

Table A.5
Latin America and the Caribbean: year-on-year growth rates in gross domestic product[a]
(Constant prices)

	2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Argentina	-5.0	-19.1	-10.2	-4.4	3.1	18.1	11.8	8.9	6.0
Bahamas	-8.4	-38.0	-26.6	-21.1	-16.3	33.7	27.2	19.8	...
Belize	5.3	3.4	6.5	3.2	-1.4	-24.6	-15.9	-13.6	-1.7
Bolivia (Plurinational State of)	0.2	-24.7	-10.9	1.0	-0.6	23.1	5.5	0.2	...
Brazil	-0.1	-10.7	-3.7	-0.9	1.3	12.3	4.0	1.6	1.7
Chile	-0.5	-14.7	-9.2	0.4	0.0	18.9	17.2	12.0	7.2
Colombia	0.8	-16.6	-8.8	-3.6	0.9	18.3	13.7	10.8	8.5
Costa Rica	1.5	-8.0	-6.8	-3.1	-0.7	10.4	12.8	9.3	6.0
Dominican Republic	0.0	-16.9	-7.2	-2.9	3.1	25.4	11.4	11.1	6.1
Ecuador	-1.8	-13.9	-9.0	-6.4	-4.1	11.6	5.5	4.9	3.8
El Salvador	-1.0	-20.3	-9.1	-2.2	2.5	26.5	11.6	3.7	2.7
Guatemala	0.8	-8.8	-1.3	2.1	4.5	15.4	8.1	4.7	4.5
Honduras	-1.5	-18.9	-7.9	-7.9	2.1	26.8	12.8	11.3	5.9
Jamaica[b]	-2.4	-18.4	-10.6	-8.3	-6.6	14.2	5.9	6.7	8.0
Mexico	-0.9	-18.6	-8.4	-4.3	-3.8	19.9	4.5	1.1	1.8
Nicaragua	2.2	-6.8	-0.9	-1.8	3.8	18.1	10.1	10.1	5.8
Panama	0.5	-38.5	-23.1	-11.2	-8.4	40.0	25.5	16.3	13.6
Paraguay	4.0	-7.4	-1.3	1.1	0.9	14.1	2.6	0.2	-2.0
Peru	-3.4	-29.6	-8.7	-1.6	4.5	41.8	11.4	3.2	3.8
Uruguay	-2.1	-13.6	-5.8	-2.9	-4.3	10.2	6.2	5.9	8.3

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Based on figures in local currency at constant prices.
[b] Gross domestic product measured in basic prices.

Table A.6
Latin America and the Caribbean: gross fixed capital formation[a]
(Percentages of GDP)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021[b]
Latin America and the Caribbean[c]	**23.3**	**22.7**	**21.9**	**20.7**	**19.2**	**18.6**	**18.6**	**18.3**	**17.4**	**19.0**
Argentina	15.4	15.4	14.7	14.9	14.3	15.8	15.3	13.1	12.6	15.3
Bahamas	29.0	26.8	29.5	23.8	25.3	26.9	25.2	25.3	22.5	24.3
Bolivia (Plurinational State of)	19.5	19.0	19.9	20.7	20.7	20.6	22.1	21.9	20.7	...
Brazil	17.5	18.3	19.1	19.1	19.0	20.4	20.2	19.0	15.5	16.3
Chile	19.1	19.7	18.7	16.7	15.2	14.6	15.1	15.5	16.1	18.0
Colombia	27.1	26.6	25.1	24.6	23.6	22.5	23.0	23.9	23.1	24.3
Costa Rica	20.9	21.6	22.6	22.5	21.4	21.5	21.2	21.0	17.4	17.4
Dominican Republic	23.0	21.4	21.8	24.3	25.5	24.3	25.8	26.5	25.0	27.2
Ecuador	18.3	18.8	18.8	18.8	19.1	18.4	18.2	16.3	16.7	16.9
El Salvador	...	9.6	9.2	10.2	10.9	11.0	11.4	11.4	...	...
Guatemala	27.6	29.0	28.6	26.8	24.7	25.4	25.6	24.7	21.7	21.7
Haiti	20.6	18.4	21.8	16.6	19.1	20.1	18.7	20.5	16.8	...
Honduras	25.1	24.0	23.4	25.3	22.6	24.0	24.7	22.8	19.1	...
Jamaica	21.6	22.7	23.3	21.9	21.7	22.4	23.3	23.5	...	...
Mexico	24.3	23.1	23.1	23.5	23.1	22.3	22.0	21.0	18.8	19.7
Nicaragua	26.5	26.6	26.3	29.3	28.4	27.7	22.4	17.6	19.7	24.0
Panama	34.0	38.5	39.8	40.1	39.0	39.8	38.6	36.5	23.2	...
Paraguay	20.2	20.1	20.5	19.5	19.1	19.3	19.9	18.8	20.0	22.7
Peru	26.7	26.6	25.5	22.9	21.0	20.8	20.9	21.0	19.8	23.4
Uruguay	19.5	19.3	19.2	17.3	16.8	16.6	15.0	15.1	16.3	18.0
Venezuela (Bolivarian Republic of)	74.9	67.3	58.1	49.4	32.6	21.2	16.5	...	...	...

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Based on official figures expressed in 2018 dollars.
[b] Preliminary figures.
[c] The figure for Latin America and the Caribbean refers to the weighted average for the countries for which complete information for each year is available.

Table A.7
Latin America and the Caribbean: balance of payments
(Millions of dollars)

	Exports of goods f.o.b.			Exports of services			Imports of goods f.o.b.			Imports of services		
	2019	2020	2021[a]	2019	2020	2021[a]	2019	2020	2021[a]	2019	2020	2021[a]
Latin America and the Caribbean	**1 063 616**	**959 693**	**1 211 842**	**179 509**	**112 207**	**136 000**	**1 050 971**	**889 964**	**1 199 226**	**225 958**	**156 919**	**186 243**
Latin America	**1 047 659**	**946 290**	**1 210 178**	**163 438**	**105 020**	**131 010**	**1 025 577**	**871 121**	**1 192 956**	**215 017**	**148 388**	**181 994**
Argentina	65 162	54 946	77 987	14 802	9 486	9 428	46 928	40 315	59 291	19 646	12 024	13 071
Bolivia (Plurinational State of)	8 828	6 953	10 966	1 443	430	473	9 086	6 517	8 740	2 871	1 744	2 059
Brazil	225 800	210 707	283 830	34 275	28 576	33 162	199 253	178 337	247 649	69 765	49 517	50 275
Chile	68 792	74 086	94 677	8 462	5 648	5 958	65 776	55 110	84 148	16 547	13 008	17 937
Colombia	40 656	32 309	42 736	10 668	5 915	7 818	50 518	41 179	56 719	14 952	10 134	14 142
Costa Rica	11 831	11 991	14 823	10 906	8 005	8 938	15 700	13 699	17 671	4 614	4 002	4 627
Dominican Republic	11 193	10 302	12 462	9 317	4 588	8 047	20 268	17 105	24 143	4 258	3 197	4 398
Ecuador	22 774	20 591	27 236	3 346	1 809	2 115	21 749	17 092	23 972	4 143	2 785	4 540
El Salvador	4 748	4 143	5 385	3 309	2 153	3 106	10 457	9 289	13 592	2 012	1 475	2 162
Guatemala	9 919	10 127	12 413	3 679	2 558	2 906	17 885	16 441	23 333	3 641	2 828	4 214
Haiti	1 202	885	1 130	531	129	124	4 520	3 764	4 604	641	441	620
Honduras	8 788	7 683	10 216	1 193	705	853	12 149	10 241	15 034	2 406	1 807	2 589
Mexico	460 940	417 323	495 090	31 717	17 037	27 160	455 772	383 172	506 005	39 619	28 332	38 719
Nicaragua	4 341	4 396	5 575	1 373	946	1 043	5 397	5 324	7 451	855	616	855
Panama	13 212	10 223	14 889	14 708	9 388	11 902	22 259	14 435	20 368	5 329	2 982	4 177
Paraguay	12 702	11 494	14 025	923	622	638	12 251	10 035	13 086	1 248	747	877
Peru	47 980	42 905	63 151	6 696	2 718	2 947	41 101	34 709	48 317	10 677	7 384	10 294
Uruguay	11 746	9 924	15 086	5 341	3 672	3 788	8 671	7 848	11 137	4 665	3 365	3 936
The Caribbean	**15 957**	**13 403**	**1 664**	**16 071**	**7 187**	**4 990**	**25 394**	**18 843**	**6 270**	**10 941**	**8 531**	**4 249**
Antigua and Barbuda	55	36	37	1 141	563	713	622	385	532	534	270	337
Bahamas	669	400	...	4 469	1 288	...	3 073	2 224	...	1 838	1 414	...
Barbados	444	345	...	1 471	773	...	1 502	1 422	...	523	70	...
Belize	462	287	...	668	427	...	969	731	...	264	170	...
Dominica	18	15	16	182	85	84	281	188	177	150	86	89
Grenada	46	28	30	580	401	452	413	348	371	303	195	209
Guyana	1 567	2 587	...	225	201	...	4 040	2 073	...	1 111	1 994	...
Jamaica	1 653	1 251	1 441	4 338	2 092	2 945	5 685	4 199	4 266	2 632	1 712	3 147
Saint Kitts and Nevis	29	26	27	612	314	314	358	269	281	260	176	183
Saint Lucia	82	64	67	1 143	397	388	526	459	378	440	207	198
Saint Vincent and the Grenadines	38	54	47	286	114	95	295	267	265	144	87	86
Suriname	2 129	2 344	...	157	103	...	1 598	1 283	...	815	563	...
Trinidad and Tobago	8 764	5 965	...	802	429	...	6 032	4 996	...	1 928	1 586	...

Table A.7 (continued)

	Goods and services balance			Income balance			Current transfers balance			Current account balance		
	2019	2020	2021[a]	2019	2020	2021[a]	2019	2020	2021[a]	2019	2020	2021[a]
Latin America and the Caribbean	**-33 804**	**25 017**	**-37 627**	**-176 456**	**-138 513**	**-170 115**	**99 755**	**107 765**	**132 656**	**-110 505**	**-5 731**	**-75 086**
Latin America	**-29 497**	**31 800**	**-33 761**	**-173 819**	**-137 011**	**-169 557**	**95 764**	**103 320**	**129 062**	**-107 553**	**-1 890**	**-74 256**
Argentina	13 391	12 092	15 053	-17 732	-10 119	-9 825	849	1 147	1 481	-3 492	3 121	6 708
Bolivia (Plurinational State of)	-1 686	-878	639	-836	-417	-1 040	1 156	1 026	1 202	-1 366	-269	802
Brazil	-8 942	11 428	19 067	-57 272	-38 264	-50 471	1 184	2 344	3 294	-65 030	-24 492	-28 110
Chile	-5 069	11 616	-1 451	-10 411	-15 927	-18 423	974	28	-433	-14 505	-4 283	-20 307
Colombia	-14 146	-13 089	-20 308	-9 717	-4 957	-8 358	9 055	8 788	10 775	-14 808	-9 258	-17 892
Costa Rica	2 424	2 294	1 463	-3 832	-3 501	-4 150	582	568	551	-826	-639	-2 136
Dominican Republic	-4 017	-5 413	-8 032	-4 069	-3 825	-4 706	6 898	7 900	10 050	-1 188	-1 337	-2 689
Ecuador	228	2 523	839	-3 028	-2 823	-1 636	2 739	2 993	3 858	-62	2 693	3 060
El Salvador	-4 412	-4 469	-7 263	-1 341	-1 315	-1 624	5 640	5 987	7 431	-113	203	-1 456
Guatemala	-7 929	-6 585	-12 229	-1 404	-1 462	-1 659	11 154	11 879	16 065	1 821	3 832	2 177
Haiti	-3 429	-3 192	-3 970	50	29	23	3 210	3 321	4 044	-169	158	98
Honduras	-4 574	-3 660	-6 554	-1 974	-1 646	-2 289	5 894	5 983	7 621	-654	677	-1 222
Mexico	-2 735	22 855	-22 474	-36 766	-36 622	-33 441	36 197	40 938	50 940	-3 304	27 172	-4 975
Nicaragua	-537	-598	-1 689	-466	-826	-815	1 758	1 920	2 187	754	497	-317
Panama	332	2 195	2 245	-3 630	-1 229	-3 979	-31	132	321	-3 329	1 097	-1 412
Paraguay	126	1 334	700	-1 099	-1 068	-1 085	795	694	696	-178	960	311
Peru	2 898	3 531	7 486	-9 600	-6 131	-18 127	5 021	4 998	5 367	-1 680	2 398	-5 273
Uruguay	3 751	2 383	3 802	-2 959	-2 906	-4 952	189	73	112	980	-449	-1 038
The Caribbean	**-4 307**	**-6 784**	**-3 866**	**-2 637**	**-1 502**	**-558**	**3 992**	**4 445**	**3 594**	**-2 953**	**-3 841**	**-830**
Antigua and Barbuda	40	-56	-119	-106	-25	-48	-46	-28	-53	-112	-109	-221
Bahamas	227	-1 950	...	-547	-489	...	846	373	...	526	-2 065	...
Barbados	-110	-374	...	...	...	...	-46	93	...	-156	-281	...
Belize	-103	-187	...	-158	-59	...	84	118	...	-177	-128	...
Dominica	-231	-174	-166	-10	14	14	18	21	22	-223	-139	-130
Grenada	-91	-114	-99	-120	-81	-78	8	20	22	-202	-175	-155
Guyana	-3 359	-1 278	...	-47	-32	...	581	658	...	-2 824	-652	...
Jamaica	-2 326	-2 568	-3 029	-441	-455	-419	2 416	2 961	3 573	-351	-61	125
Saint Kitts and Nevis	22	-105	-123	-48	-13	-14	-30	-24	-25	-56	-142	-162
Saint Lucia	258	-204	-121	-134	-37	-14	5	22	23	129	-219	-112
Saint Vincent and the Grenadines	-115	-185	-210	-7	2	1	42	41	34	-80	-142	-175
Suriname	-126	601	...	-412	-466	...	90	124	...	-448	259	...
Trinidad and Tobago	1 605	-189	...	-607	137	...	22	65	...	1 020	13	...

Table A.7 (concluded)

	Capital and financial balance [b]			Overall balance			Reserve assets (variation)[c]			Other financing		
	2019	2020	2021[a]	2019	2020	2021[a]	2019	2020	2021[a]	2019	2020	2021[a]
Latin America and the Caribbean	**63 754**	**15 698**	**124 243**	**-46 349**	**13 936**	**49 743**	**30 560**	**-15 293**	**-50 014**	**15 788**	**1 357**	**273**
Latin America	**61 003**	**10 455**	**122 506**	**-46 146**	**12 534**	**48 835**	**30 559**	**-13 793**	**-49 109**	**15 587**	**1 259**	**273**
Argentina	-34 090	-10 848	-6 813	-37 582	-7 727	-106	21 375	7 727	106	16 208	0	0
Bolivia (Plurinational State of)	-1 473	-1 482	-1 156	-2 839	-1 752	-354	2 839	1 752	354	0	0	0
Brazil	38 974	10 260	42 077	-26 055	-14 232	13 967	26 055	14 232	-13 967	0	0	0
Chile	14 353	1 389	32 518	-152	-2 895	12 211	152	2 895	-12 211	0	0	0
Colombia	18 141	13 587	18 546	3 333	4 328	654	-3 333	-4 328	-654	0	0	0
Costa Rica	2 219	-1 116	1 873	1 393	-1 754	-263	-1 393	1 754	263	0	0	0
Dominican Republic	2 313	2 632	5 022	1 125	1 295	2 333	-1 150	-1 963	-2 334	24	668	0
Ecuador	777	1 453	-2 113	715	4 146	948	-715	-4 146	-948	0	0	0
El Salvador	989	-1 590	1 815	876	-1 387	359	-876	1 387	-359	0	0	0
Guatemala	-23	-644	631	1 798	3 189	2 809	-1 798	-3 189	-2 809	0	0	0
Haiti	-35	-22	-330	-204	136	-232	123	-350	-91	81	214	323
Honduras	1 642	1 235	1 681	988	1 911	459	-993	-2 381	-587	5	470	128
Mexico	5 942	-15 182	15 263	2 638	11 990	10 288	-2 638	-11 990	-10 288	0	0	0
Nicaragua	-635	411	1 141	119	907	824	-119	-907	-824	0	0	0
Panama	5 288	4 546	776	1 958	5 643	-637	-1 227	-5 550	1 087	-731	-93	-451
Paraguay	123	846	10	-55	1 805	321	55	-1 805	-593	0	0	272
Peru	8 589	2 903	9 684	6 909	5 301	4 410	-6 909	-5 301	-4 410	0	0	0
Uruguay	-2 091	2 079	1 881	-1 111	1 630	843	1 111	-1 630	-843	0	0	0
The Caribbean	**2 750**	**5 243**	**1 737**	**-203**	**1 402**	**907**	**1**	**-1 500**	**-906**	**201**	**98**	**0**
Antigua and Barbuda	62	52	325	-50	-57	104	50	57	-102	0	0	0
Bahamas	37	2 429	...	563	364	...	-563	-364	...	0	0	0
Barbados	396	871	...	241	590	...	-241	-590	...	...	...	...
Belize	160	197	...	-18	69	...	18	-69	...	0	0	0
Dominica	198	149	151	-25	10	21	25	-10	-21	0	0	0
Grenada	204	232	183	2	57	28	-2	-57	-28	0	0	0
Guyana	2 775	712	...	-49	61	...	-47	-105	...	96	44	...
Jamaica	450	511	627	99	449	752	-99	-449	-752	...	...	...
Saint Kitts and Nevis	47	151	166	-9	9	5	9	-9	-5	0	0	0
Saint Lucia	-154	189	93	-25	-30	-19	25	30	19	0	0	0
Saint Vincent and the Grenadines	104	156	192	24	13	17	-24	-13	-17	0	0	0
Suriname	136	-397	...	-313	-137	...	208	83	...	105	54	...
Trinidad and Tobago	-1 664	-8	...	-644	4	...	644	-4	...	...	...	...

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

[a] Preliminary figures.

[b] Includes errors and omissions.

[c] A minus sign (-) indicates an increase in reserve assets.

Table A.8
Latin America : trade of goods
(Index 2010=100)

	Exports of goods, f.o.b.								
	Value			Volume			Unit value		
	2019	2020	2021[a]	2019	2020	2021[a]	2019	2020	2021[a]
Latin America	**97.6**	**88.2**	**112.7**	**99.7**	**94.2**	**100.0**	**97.9**	**93.6**	**112.8**
Argentina	105.4	88.9	126.2	112.2	97.5	110.0	94.0	91.2	114.8
Bolivia (Plurinational State of)	98.7	77.8	122.7	97.3	77.7	82.8	101.4	100.1	148.2
Brazil	94.3	88.0	118.5	97.9	98.0	101.9	96.2	89.8	116.2
Chile	91.9	99.0	126.5	97.7	100.3	99.4	94.0	98.7	127.3
Colombia	94.6	75.1	99.4	101.3	100.2	95.8	93.4	75.0	103.7
Costa Rica	100.9	102.2	126.4	100.7	101.9	122.2	100.2	100.3	103.4
Dominican Republic	105.2	96.8	117.1	104.9	90.9	105.5	100.3	106.5	111.0
Ecuador	102.8	92.9	122.9	106.1	112.9	116.6	96.9	82.3	105.5
El Salvador	100.3	87.5	113.7	102.0	88.8	107.1	98.3	98.5	106.2
Guatemala	102.8	105.0	128.7	105.2	106.4	121.2	97.7	98.7	106.2
Haiti	111.4	82.1	104.8	110.8	81.1	101.5	100.6	101.2	103.2
Honduras	101.7	88.9	118.2	103.7	86.0	106.0	98.0	103.4	111.5
Mexico	102.2	92.5	109.8	101.2	96.5	101.5	101.0	95.9	108.1
Nicaragua	103.4	104.7	132.8	106.1	101.2	121.3	97.5	103.5	109.5
Panama	98.9	76.6	111.5	105.3	79.1	107.6	94.0	96.8	103.6
Paraguay	92.5	83.7	102.1	90.6	78.5	75.1	102.1	106.7	136.0
Peru	97.8	87.4	128.7	101.2	87.3	98.6	96.6	100.1	130.5
Uruguay	101.2	85.5	129.9	104.5	89.1	121.1	96.8	95.9	107.3
	Imports of goods, f.o.b.								
	Value			Volume			Unit value		
	2019	2020	2021[a]	2019	2020	2021[a]	2019	2020	2021[a]
Latin America	**96.4**	**81.9**	**112.2**	**98.8**	**88.4**	**105.4**	**97.6**	**92.7**	**106.4**
Argentina	75.0	64.5	94.8	79.3	70.6	90.5	94.6	91.3	104.7
Bolivia (Plurinational State of)	97.7	70.1	94.0	95.4	68.9	83.2	102.4	101.7	112.9
Brazil	101.6	90.9	126.3	105.7	102.0	125.2	96.1	89.1	100.8
Chile	93.4	78.2	119.5	97.5	86.7	114.8	95.7	90.2	104.1
Colombia	102.3	83.4	114.8	108.1	92.6	110.0	94.7	90.0	104.4
Costa Rica	96.0	83.8	108.1	95.7	86.4	101.8	100.3	97.0	106.2
Dominican Republic	103.8	103.8	103.8	104.5	92.0	112.5	96.0	92.0	106.2
Ecuador	97.3	76.4	107.2	96.9	77.1	96.7	100.4	99.1	110.9
El Salvador	100.8	89.5	131.0	104.1	95.1	119.8	96.8	94.1	109.3
Guatemala	101.5	93.3	132.4	102.6	100.3	118.6	98.9	93.0	111.6
Haiti	94.0	78.3	95.7	94.4	79.0	86.3	99.5	99.0	110.9
Honduras	97.5	82.2	120.6	97.6	81.2	108.2	99.9	101.2	111.5
Mexico	98.0	82.4	108.9	99.3	86.8	98.7	98.8	95.0	110.3
Nicaragua	103.8	103.8	103.8	98.7	106.4	133.4	94.3	86.2	96.3
Panama	103.8	103.8	103.8	96.7	67.5	85.8	96.0	89.3	99.1
Paraguay	103.8	103.8	103.8	89.7	93.8	112.1	105.7	82.8	90.3
Peru	103.8	103.8	103.8	99.8	88.8	106.0	98.3	93.4	108.9
Uruguay	93.0	84.2	119.5	99.0	97.0	118.8	93.9	86.8	100.6

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Preliminary figures.

Table A.9
Latin America : exports of goods, f.o.b.
(Millions of dollars)

	2020				2021				2022	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2[a]
Latin America	**233 738**	**193 530**	**244 912**	**260 624**	**257 904**	**306 844**	**309 533**	**314 670**	**309 636**	**158 300**
Argentina	13 340	14 213	14 613	12 718	15 407	19 966	22 921	19 641	19 354	16 563
Bolivia (Plurinational State of)	2 049	1 130	1 583	2 192	2 305	2 719	2 903	3 025	3 041	1 199[b]
Brazil	48 099	52 593	55 043	53 446	55 607	80 518	77 101	67 537	72 757	58 627
Chile	17 198	17 845	17 987	20 454	21 897	23 789	23 463	25 280	25 224	17 716
Colombia	8 802	6 375	7 682	8 197	8 934	9 256	10 702	12 499	12 973	...
Costa Rica	3 005	2 625	2 855	3 141	3 345	3 704	3 643	3 697	3 883	2 589
Dominican Republic	2 694	2 055	2 713	2 835	2 897	3 116	3 213	3 228	3 307	...
Ecuador	5 317	4 190	5 150	5 568	5 780	6 725	6 825	7 288	8 085	2 892[b]
El Salvador	1 454	742	1 396	1 452	1 601	1 651	1 675	1 698	1 888	1 272
Guatemala	3 045	2 495	2 807	3 166	3 407	3 274	3 519	3 543	4 063	1 323[b]
Honduras	2 178	1 454	2 110	1 942	2 417	2 630	2 681	2 491	...	...
Mexico	108 325	74 386	111 040	123 248	111 864	124 410	123 179	135 217	132 053	47 479[b]
Nicaragua	787	733	683	649	897	931	845	841	645[c]	...
Panama	2 704	1 801	2 819	2 916	3 394	3 413	3 765	4 317	...	...
Paraguay	2 995	2 412	3 006	3 081	3 092	3 836	3 755	3 352	3 034	2 578
Peru	10 322	6 776	11 592	13 724	13 288	14 565	16 565	18 373	16 950	5 215[b]
Uruguay	1 425	1 704	1 833	1 895	1 772	2 344	2 779	2 642	2 378	848[b]

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Figures as of May.
[b] Figures as of April.
[c] Figures as of February.

Table A.10
Latin America : imports of goods, c.i.f.
(Millions of dollars)

		2020				2021				2022	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2[a]
Latin America		**230 260**	**172 713**	**207 284**	**237 810**	**253 928**	**277 995**	**306 505**	**326 783**	**311 812**	**146 155**
Argentina	CIF	9 880	9 359	11 088	12 027	12 877	15 723	17 355	17 230	17 968	14 753
Bolivia (Plurinational State of)	F.O.B.	1 845	1 122	1 601	2 031	1 818	1 989	2 170	2 808	2 351	902[b]
Brazil	F.O.B.	45 306	33 090	36 540	43 850	47 755	51 605	57 661	62 570	60 496	45 455
Chile	F.O.B.	14 120	11 896	13 867	15 234	17 940	19 124	22 530	24 495	23 117	15 793
Colombia	F.O.B.	11 886	8 873	10 693	12 037	12 661	13 992	15 883	18 565	18 941	...
Costa Rica	CIF	3 854	3 278	3 482	3 879	3 990	4 567	4 514	5 456	5 489	3 193
Dominican Republic	CIF	4 600	3 527	4 074	4 845	5 057	5 983	6 091	7 082	6 422	0
Ecuador	CIF	4 971	3 715	4 256	4 964	5 378	5 904	7 059	7 360	7 853	2 707[b]
El Salvador	CIF	2 737	2 010	2 594	2 984	3 355	3 667	3 818	4 232	4 352	2 990
Guatemala	CIF	4 739	3 953	4 380	5 135	5 614	6 394	6 883	7 716	7 765	2 701
Honduras	F.O.B.	2 811	1 986	2 469	2 976	3 254	3 816	3 809	4 160	...	...
Mexico	F.O.B.	104 773	75 548	94 833	107 832	113 371	121 628	133 245	137 459	136 940	49 364[b]
Nicaragua	F.O.B.	1 108	1 005	1 094	1 204	1 277	1 744	1 753	1 742	1 171[c]	...
Panama	F.O.B.	3 960	3 047	3 500	3 840	4 255	4 673	5 329	6 112	...	...
Paraguay	F.O.B.	2 742	1 975	2 578	2 741	2 702	2 961	3 465	3 958	3 438	2 368
Peru	F.O.B.	9 163	6 786	8 470	10 244	10 700	11 976	12 452	13 009	12 801	5 025[b]
Uruguay	F.O.B.	1 765	1 544	1 763	1 987	1 924	2 251	2 490	2 826	2 707	905[b]

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Figures as of May.
[b] Figures as of April.
[c] Figures as of February.

Table A.11
Latin America : terms of trade for goods f.o.b./f.o.b.
(Index 2010=100)

	2013	2014	2015	2016	2017	2018	2019	2020	2021[a]
Latin America	**106.9**	**104.2**	**94.2**	**94.9**	**99.2**	**100.0**	**100.3**	**100.9**	**106.0**
Argentina	102.9	100.9	96.1	102.1	99.1	100.0	99.3	99.9	109.6
Bolivia (Plurinational State of)	141.5	134.1	100.4	84.8	94.1	100.0	99.1	98.4	131.3
Brazil	109.6	105.9	93.6	95.8	101.3	100.0	100.1	100.7	115.3
Chile	95.0	92.1	89.8	93.2	102.7	100.0	98.2	109.4	122.3
Colombia	115.4	105.0	79.1	78.1	91.4	100.0	98.6	83.3	99.4
Costa Rica	91.9	94.1	101.2	104.6	101.9	100.0	99.9	103.5	97.4
Dominican Republic	97.3	97.0	105.3	110.0	105.0	100.0	104.5	115.8	104.5
Ecuador	124.7	116.8	88.5	84.4	91.7	100.0	96.5	83.0	95.1
El Salvador	100.6	98.7	102.9	104.7	102.6	100.0	101.5	104.7	97.2
Guatemala	96.4	97.0	102.2	110.3	104.5	100.0	98.8	106.2	95.1
Haiti	93.3	96.1	101.2	99.9	101.4	100.0	101.1	102.2	93.1
Honduras	96.9	100.5	106.0	106.3	106.6	100.0	98.1	102.1	100.0
Mexico	101.8	101.0	96.7	97.4	100.4	100.0	102.2	101.0	98.0
Nicaragua	95.6	95.4	112.4	111.4	108.9	100.0	103.4	120.0	113.7
Panama	98.9	100.7	98.2	96.5	98.2	100.0	97.9	108.4	104.5
Paraguay	91.0	101.5	103.2	103.5	102.4	100.0	96.5	128.8	150.5
Peru	106.3	100.5	93.6	93.4	100.4	100.0	98.3	107.2	119.9
Uruguay	97.0	100.7	102.7	105.5	105.1	100.0	103.1	110.5	106.7
Venezuela (Bolivarian Republic of)	148.3	143.4	82.5	71.1	79.1	100.0	85.9	66.4	83.8

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Preliminary figures.

Table A.12
Latin America and the Caribbean (selected countries): remittances from emigrant workers
(Millions of dollars)

	2018	2019	2020	2021				2022	
				Q1	Q2	Q3	Q4	Q1	Q2
Bolivia (Plurinational State of)	1 370	1 318	1 116	337	346	344	371	365	...
Brazil	2 565	2 880	3 312	963	925	955	1 002	702[a]	...
Colombia	6 636	7 087	6 909	1 949	2 167	2 169	2 312	2 046	755[b]
Costa Rica	499	519	495	127	140	149	143	141	...
Dominican Republic	6 494	7 087	8 219	2 549	2 714	2 598	2 541	2 396	810[b]
Ecuador	3 031	3 235	3 338	921	1 088	1 144	1 209	1 104	...
El Salvador	5 395	5 656	5 930	1 702	1 948	1 835	2 032	1 802	642[b]
Guatemala	9 288	10 508	11 340	3 135	3 831	4 042	4 287	3 937	3 109[c]
Honduras	4 884	5 522	5 741	1 587	1 897	1 901	1 986	1 938	690[b]
Jamaica	2 346	2 406	2 905	804	900	901	892	793	289[b]
Mexico	33 677	36 439	40 605	10 615	13 032	13 703	14 236	12 522	4 718[b]
Nicaragua	1 501	1 682	1 851	500	530	527	590	633	...
Paraguay	569	555	486	115	126	112	134	123	34[b]
Peru	3 225	3 326	2 939	852	919	876	945	927	...

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Figures as of February.
[b] Figures as of April.
[c] Figures as of May.

Table A.13
Latin America and the Caribbean: net resource transfer[a]
(Millions of dollars)

	2013	2014	2015	2016	2017	2018	2019	2020	2021[b]
Latin America and the Caribbean	**30 587**	**67 534**	**13 780**	**-13 134**	**-39 781**	**-27 479**	**-96 841**	**-121 746**	**-45 706**
Latin America	**32 856**	**66 847**	**16 883**	**-13 984**	**-40 268**	**-26 122**	**-97 229**	**-125 297**	**-46 778**
Argentina	-11 864	-1 240	611	17 224	29 327	19 710	-35 614	-20 967	-16 638
Bolivia (Plurinational State of)	-1 838	-1 336	-811	-1 760	556	-480	-2 309	-1 899	-2 195
Brazil	36 580	63 085	18 423	-7 830	-16 043	-4 437	-18 297	-28 004	-8 394
Chile	1 239	-1 536	858	1 404	-5 889	2 500	3 942	-14 539	14 095
Colombia	5 310	12 147	13 668	7 439	2 423	3 786	8 424	8 629	10 187
Costa Rica	1 064	226	185	-1 429	-1 391	-1 087	-1 613	-4 617	-2 277
Dominican Republic	735	-882	-1 249	-1 659	-2 930	-1 523	-1 732	-525	316
Ecuador	1 450	-1 286	-961	-1 088	-4 440	-1 349	-2 251	-1 370	-3 749
El Salvador	201	145	-225	-244	-615	-609	-352	-2 905	191
Guatemala	1 741	518	-207	-639	242	-1 164	-1 427	-2 106	-1 027
Haiti	625	718	165	395	585	563	96	220	17
Honduras	894	225	-144	-759	-234	-250	-328	58	-480
Mexico	10 806	9 063	-15 575	-5 326	-14 448	-8 228	-30 824	-51 804	-18 178
Nicaragua	942	788	968	436	575	-931	-1 101	-416	326
Panama	1 571	3 545	1 320	979	-1 039	498	926	3 224	-3 654
Paraguay	-1 127	-279	-1 775	-1 794	-1 545	-1 464	-975	-223	-803
Peru	495	-3 466	1 270	-4 181	-7 524	-12 252	-1 011	-3 227	-8 443
Uruguay	1 932	-528	-3 977	-5 296	-1 116	-3 775	-5 050	-827	-3 071
The Caribbean	**-2 793**	**98**	**-1 954**	**145**	**-229**	**-1 357**	**314**	**3 839**	**1 179**
Antigua and Barbuda	191	30	-55	-88	20	171	-44	27	277
Bahamas	1 096	1 499	829	366	1 722	215	-510	1 941	...
Barbados	-38	188	-13	-154	76	521	396	871	...
Belize	72	78	-24	-20	-46	-12	1	138	...
Dominica	23	26	32	119	38	218	188	163	165
Grenada	223	44	36	30	32	107	85	151	104
Guyana	411	344	146	-30	267	1 355	2 825	725	...
Jamaica	946	1 769	426	-269	473	-601	8	56	208
Saint Kitts and Nevis	50	-40	-23	97	107	10	-1	138	153
Saint Lucia	84	2	-92	-6	-72	-193	-288	152	79
Saint Vincent and the Grenadines	247	183	113	122	78	84	97	158	193
Suriname	-84	196	507	74	-442	-121	-171	-809	...
Trinidad and Tobago	-6 015	-4 222	-3 837	-96	-2 482	-3 111	-2 271	128	...

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

[a] The net resource transfer is calculated as total net capital income minus the income balance (net payments of profits and interest). Total net capital income is the balance on the capital and financial accounts plus errors and omissions, plus loans and the use of IMF credit plus exceptional financing. Negative figures indicate resources transferred outside the country.

[b] Preliminary figures.

Table A.14
Latin America and the Caribbean: net foreign direct investment[a]
(Millions of dollars)

	2013	2014	2015	2016	2017	2018	2019	2020	2021[b]
Latin America and the Caribbean	**151 275**	**142 781**	**131 372**	**127 233**	**123 206**	**146 433**	**110 637**	**91 414**	**97 422**
Latin America	**150 565**	**140 247**	**129 276**	**125 278**	**121 609**	**143 902**	**107 810**	**88 869**	**96 769**
Argentina	8 932	3 145	10 884	1 474	10 361	9 991	5 126	3 430	5 420
Bolivia (Plurinational State of)	1 750	690	556	246	633	387	-265	-1 018	501
Brazil	59 568	67 107	61 604	59 601	47 545	76 138	46 355	41 254	27 285
Chile	11 798	15 448	1 915	3 487	2 702	6 096	3 234	2 500	797
Colombia	8 558	12 270	7 403	9 341	10 011	6 172	10 836	5 773	6 148
Costa Rica	2 401	2 818	2 541	2 127	2 652	2 434	2 695	1 644	3 110
Dominican Republic	1 991	2 209	2 205	2 407	3 571	2 535	3 021	2 560	3 102
Ecuador	727	777	1 331	756	630	1 388	975	1 104	621
El Salvador	179	306	396	348	889	826	636	281	313
Guatemala	1 449	1 388	1 048	965	934	780	796	783	3 311
Haiti	162	99	106	105	375	105	75	25	51
Honduras	992	1 315	952	900	1 035	895	496	373	344
Mexico	32 796	23 015	25 244	31 001	30 048	25 719	23 713	25 352	32 412
Nicaragua	815	983	922	924	971	763	444	707	1 206
Panama	3 236	4 130	3 972	4 557	4 420	4 917	3 726	645	1 635
Paraguay	432	604	378	505	336	156	225	120	122
Peru	9 808	5 100	6 674	8 331	8 835	5 083	4 325	2 363	9 190
Uruguay	3 045	2 247	775	-1 823	-2 037	-708	1 397	974	1 202
Venezuela (Bolivarian Republic of)	1 928	-3 401	370	27	-2 302	225	...	...	...
The Caribbean	**710**	**2 533**	**2 096**	**1 955**	**1 597**	**2 530**	**2 827**	**2 544**	**653**
Antigua and Barbuda	95	40	100	59	144	193	84	13	113
Bahamas	382	251	76	390	305	491	265	359	...
Barbados	-62	...	...	...	...	...	...	...	...
Belize	92	138	59	42	24	121	101	72	...
Dominica	23	14	19	41	23	77	59	25	24
Grenada	113	100	137	93	152	164	196	146	73
Guyana	214	255	122	6	212	1 232	1 695	1 811	...
Jamaica	470	523	891	658	855	762	219	258	264
Saint Kitts and Nevis	136	151	133	124	42	36	66	54	55
Saint Lucia	92	98	129	149	59	67	4	54	33
Saint Vincent and the Grenadines	160	119	116	89	143	34	75	76	91
Suriname	188	164	267	300	98	119	-8	0	...
Trinidad and Tobago	-1 192	679	48	2	-459	-765	70	-323	...

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Corresponds to direct investment in the reporting economy after deduction of outward direct investment by residents of that country. Includes reinvestment of profits.
[b] Preliminary figures.

Table A.15

Latin America and the Caribbean: total gross external debt[a]

(Millions of dollars, end-of-period stocks)

		2014	2015	2016	2017	2018	2019	2020	2021
Latin America and the Caribbean[b]		**1 686 669**	**1 694 957**	**1 767 225**	**1 870 052**	**1 949 881**	**2 018 422**	**2 060 049**	**2 158 275**
Latin America [b]		**1 665 895**	**1 672 402**	**1 742 791**	**1 844 395**	**1 923 753**	**1 992 874**	**2 031 905**	**2 129 281**
Argentina	Total	158 742	167 412	181 432	234 549	277 932	278 489	271 443	266 740
	Public	98 229	101 659	122 022	161 289	197 330	197 401	193 756	190 538
	Private	60 513	65 753	59 410	73 260	80 602	81 088	77 686	76 202
Bolivia (Plurinational State of)	Total	8 543	9 445	10 703	11 702	12 491	13 473	14 273	14 839
	Public	5 736	6 341	7 268	9 428	10 178	11 268	12 172	12 698
	Private	2 807	3 104	3 435	2 274	2 313	2 206	2 102	2 141
Brazil	Total	712 655	665 101	675 841	667 103	665 777	675 789	639 308	670 286
	Public	139 051	130 587	130 274	125 492	129 139	123 810	123 860	131 307
	Private	573 604	534 513	545 567	541 611	536 638	551 979	515 448	538 979
Chile	Total	152 135	160 904	165 217	179 976	184 220	198 396	209 591	239 002
	Public	31 285	31 831	35 697	47 559	51 463	59 826	68 518	81 396
	Private	120 849	129 073	129 519	132 418	132 757	138 570	141 073	157 606
Colombia	Total	101 404	110 502	120 153	124 636	132 016	138 683	154 507	171 476
	Public	59 767	66 158	71 308	71 870	72 999	73 835	89 959	102 395
	Private	41 637	44 344	48 844	52 767	59 017	64 848	64 548	69 081
Costa Rica	Total	21 628	23 576	25 565	26 920	28 968	30 795	31 570	33 015
	Public	8 974	10 363	10 756	11 016	11 808	13 456	14 107	14 344
	Private	12 654	13 213	14 809	15 904	17 160	17 339	17 463	18 670
Dominican Republic	Public	16 074	16 029	17 567	18 821	21 565	23 383	30 703	33 343
Ecuador	Total	24 112	27 933	34 181	40 323	44 239	52 668	56 893	57 744
	Public	17 582	20 226	25 680	31 750	35 730	41 496	45 369	46 534
	Private	6 531	7 707	8 909	8 573	8 508	11 172	11 524	11 210
El Salvador	Total	14 800	15 217	16 376	16 474	16 603	17 350	18 731	20 286
	Public	8 673	8 553	9 169	9 414	9 236	9 941	10 781	11 808
	Private	6 127	6 663	7 207	7 060	7 367	7 469	7 950	8 478
Guatemala	Total	21 577	22 235	23 333	24 982	24 462	24 571	25 207	26 857
	Public	7 617	8 007	8 645	8 912	8 738	9 824	11 756	12 611
	Private	13 960	14 228	14 687	16 071	15 725	14 747	13 450	14 246
Haiti	Total	1 833	1 985	2 013	2 133	2 125	2 104	...	...
	Public	1 830	1 981	2 009	2 129	2 122	2 100	...	...
	Private	4	4	5	4	3	4	...	...
Honduras	Total	7 184	7 456	7 499	8 572	9 112	9 604	10 981	11 363
	Public	5 569	5 927	6 108	7 145	7 375	7 699	9 112	9 250
	Private	1 616	1 530	1 391	1 428	1 736	1 905	1 869	2 114
Mexico	Total	285 493	296 466	314 256	333 454	342 768	356 752	374 046	373 530
	Public	147 666	162 210	180 986	193 981	202 355	204 684	223 649	221 635
	Private	137 828	134 257	133 270	139 473	140 412	152 067	150 397	151 895
Nicaragua	Total	10 925	11 461	12 120	12 646	12 881	13 077	13 488	14 378
	Public	4 796	4 804	5 042	5 546	5 950	6 279	6 907	7 806
	Private	6 129	6 656	7 078	7 100	6 931	6 798	6 581	6 572
Panama	Public	14 352	15 648	16 902	18 390	20 575	24 223	29 817	32 844
Paraguay	Total	5 839	6 197	6 677	7 738	8 591	9 802	13 675	14 503
	Public	3 680	3 993	4 823	5 592	6 403	7 230	10 182	10 806
	Private	2 159	2 203	1 854	2 146	2 188	2 573	3 493	3 697
Peru	Total	69 238	73 071	74 968	76 832	78 713	80 857	90 958	101 996
	Public	23 951	26 710	29 617	32 953	34 912	39 264	49 885	60 538
	Private	45 287	46 361	45 352	43 880	43 801	41 593	41 072	41 458
Uruguay	Total	41 194	43 752	40 002	41 274	42 842	44 962	46 714	47 078
	Public	18 959	18 977	17 170	17 837	18 705	19 796	21 692	22 797
	Private	22 234	24 775	22 832	23 436	24 137	25 166	25 022	24 281
Venezuela (Bolivarian Republic of)	Total	135 767	149 755	149 859	148 328	148 432	147 899	...	...
	Public	117 217	128 283	128 056	128 768	128 543	129 260	...	...
	Private	18 550	21 472	21 803	21 199	19 889	18 639	...	...

Table A.15 (concluded)

		2014	2015	2016	2017	2018	2019	2020	2021
The Caribbean[b]		**20 774**	**22 555**	**24 433**	**25 658**	**26 128**	**25 549**	**28 145**	**28 994**
Antigua and Barbuda	Public	560	573	562	584	614	649	662	720
Bahamas	Public	2 095	2 176	2 373	3 234	3 172	3 123	4 478	4 761
Barbados	Public	1 521	1 460	1 458	1 431	1 712	1 578	1 989	2 239
Belize	Public	1 126	1 179	1 204	1 257	1 285	1 322	1 453	1 339
Dominica	Public	287	285	270	267	253	244	287	323
Grenada	Public	634	613	602	533	562	523	569	608
Guyana	Public	1 216	1 143	1 162	1 248	1 322	1 305	1 321	1 393
Jamaica	Public	8 659	10 314	10 244	10 103	9 937	9 253	9 123	8 999
Saint Kitts and Nevis	Public	284	214	199	156	149	142	136	128
Saint Lucia	Public	526	509	529	598	599	628	718	850
Saint Vincent and the Grenadines	Public	387	399	455	387	391	420	462	565
Suriname	Public	942	1 156	1 872	2 046	2 040	2 150	2 151	2 204
Trinidad and Tobago	Public	2 537	2 534	3 503	3 813	4 094	4 211	4 796	4 869

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Includes debt owed to the International Monetary Fund.
[b] Does not include Haiti and Venezuela (Bolivarian Republic of).

Table A.16
Latin America and the Caribbean: sovereign spreads on EMBI global
(Basis points to end of period)

	2017	2018	2019	2020	2021				2022	
					March	June	September	December	March	April
Latin America	**419**	**568**	**346**	**386**	**390**	**380**	**399**	**399**	**397**	**438**
Argentina	351	817	1 744	1 368	1 589	1 596	1 607	1 688	1 718	1 801
Belize	771	858	869	1 406	1 606	1 543	1 238	...	...	...
Bolivia (Plurinational State of)	203	378	218	461	501	481	472	412	509	487
Brazil	232	273	212	250	272	256	304	306	280	291
Chile	117	166	135	144	122	135	150	153	158	182
Colombia	173	228	161	206	216	247	301	353	338	375
Dominican Republic	275	371	309	340	342	352	358	366	394	417
Ecuador	459	826	826	1 062	1 201	776	835	869	810	816
El Salvador	383	515	394	732	595	721	1 052	1 491	1 774	2 201
Jamaica	304	346	282	317	288	295	293	295	281	263
Mexico	245	357	292	361	351	348	360	347	349	391
Panama	119	171	114	149	155	170	186	187	192	223
Paraguay	200	260	203	213	212	216	230	229	239	278
Peru	136	168	107	132	152	163	180	170	171	218
Uruguay	146	207	148	135	125	129	140	127	127	151
Venezuela (Bolivarian Republic of)	4 854	6 845	14 740	24 099	26 168	31 091	31 941	55 310	37 945	32 691

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from JPMorgan Emerging Markets Bond Index (EMBI).

Table A.17
Latin America and the Caribbean: risk premia on five-year credit default swaps
(Basis points to end of period)

	2017	2018	2019	2020	2021				2022	
					March	June	September	December	March	June
Argentina	232	794	899	545	1 906	1 954	1 101	1 228	1 569	1 539
Brazil	162	208	99	143	225	165	206	205	209	295
Chile	49	63	42	45	59	58	88	71	69	112
Colombia	105	157	72	89	135	136	169	205	190	293
Mexico	106	155	79	81	114	93	102	90	100	175
Panama	67	85	41	48	82	66	89	77	80	133
Peru	72	94	41	56	83	83	106	76	77	123
Venezuela (Bolivarian Republic of)	15 047	8 281	5 381	5 381	5 381	1 697	1 644	942	942	863

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

Table A.18
Latin America and the Caribbean: international bond issues[a]
(Millions of dollars)

	2017	2018	2019	2020	2021				2022	
					Q1	Q2	Q3	Q4	Q1	Q2
Total	**144 702**	**94 058**	**118 576**	**145 286**	**52 027**	**39 361**	**32 578**	**24 732**	**35 397**	**2 550**
Latin America and the Caribbean	**140 355**	**88 282**	**113 937**	**139 833**	**49 029**	**38 328**	**31 928**	**23 162**	**32 779**	**2 550**
Argentina	27 676	13 367	1 720	386	1 100	300	366	126	-	-
Bahamas	750	-	-	825	-	-	-	55	-	-
Barbados	-	-	-	-	-	400	-	150	-	-
Bolivia (Plurinational State of)	1 000	-	-	-	-	-	-	-	850	-
Brazil	32 066	18 979	29 147	26 975	9 644	13 395	6 310	2 166	4 463	1 100
Chile	14 449	8 635	12 629	20 129	7 752	3 357	13 975	6 536	8 404	-
Colombia	7 842	5 786	4 793	12 391	2 840	5 755	300	3 830	259	-
Costa Rica	300	-	1 500	-	-	-	300	-	-	-
Dominican Republic	2 017	3 118	2 500	7 565	2 500	2 353	-	300	3 564	-
Ecuador	5 800	3 000	4 525	327	-	-	-	-	-	-
El Salvador	951	-	1 097	1 000	-	-	-	-	-	-
Guatemala	1 330	-	1 200	1 400	300	700	1 000	-	1 100	-
Honduras	850	-	-	600	-	300	-	-	-	-
Jamaica	869	-	1 415	225	-	-	-	-	-	-
Mexico	29 222	23 879	33 546	41 902	14 047	8 118	5 775	3 750	11 069	-
Nicaragua	-	200	-	-	-	-	-	-	-	-
Panama	3 321	2 636	5 800	8 868	2 450	2 400	1 855	-	2 500	-
Paraguay	500	530	1 532	2 161	826	-	300	-	501	-
Peru	9 062	5 876	10 002	10 800	7 571	-	930	5 657	-	1 100
Suriname	-	-	125	-	-	-	-	-	-	-
Trinidad and Tobago	-	525	500	500	-	-	816	-	70	-
Uruguay	2 350	1 750	1 905	2 655	-	1 250	-	592	-	350
Venezuela (Bolivarian Republic of)	-	-	-	1 125	-	-	-	-	-	-
Supranational issues	**4 347**	**5 776**	**4 639**	**5 453**	**2 998**	**1 034**	**651**	**1 570**	**2 618**	**-**
Central American Bank for Economic Integration (CABEI)	382	772	623	1 281	500	-	217	397	-	-
Foreign Trade Bank of Latin America (BLADEX)	-	-	76	435	59	27	-	9	-	-
Development Bank of Latin America (CAF)	3 465	4 503	3 040	3 236	2 216	632	97	1 000	1 466	-
Inter-American Investment Corporation (IIC)	-	-	-	-	-	-	-	-	-	-
Financial Fund for the Development of the River Plate Basin (FONPLATA)	-	-	150	-	223	-	-	164	-	-
Others	500	500	750	500	-	375	336	-	1 152	-

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures from LatinFinance Bonds Database.
[a] Includes sovereign, bank and corporate bonds.

Table A.19
Latin America and the Caribbean: stock exchange indices
(National indices to end of period, 31 December 2005=100)

	2017	2018	2019	2020	2021				2022	
					March	June	September	December	March	June
Argentina	1 948	1 963	2 700	3 319	3 109	4 041	5 013	5 410	5 894	5 731
Brazil	228	263	346	356	349	379	332	313	359	295
Chile	283	260	238	213	249	220	222	219	251	252
Colombia	121	117	-	-	-	-	-	-	-	-
Costa Rica	116	92	77	61	60	68	94	95	95	95
Ecuador	185	203	195	190	187	177	162	160	164	170
Jamaica	276	363	488	371	390	406	387	384	385	-
Mexico	277	234	245	248	265	282	289	299	318	267
Peru	416	403	427	434	445	393	381	440	519	383
Trinidad and Tobago	119	122	138	124	126	131	134	140	136	129

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

Table A.20
Latin America and the Caribbean: gross international reserves
(Millions of dollars, end-of-period stocks)

	2017	2018	2019	2020	2021				2022	
					March	June	September	December	March	June
Latin America and the Caribbean	**859 610**	**868 029**	**852 243**	**891 528**	**887 528**	**895 975**	**946 625**	**934 271**	**925 711**	**898 378**
Latin America	**842 966**	**852 282**	**836 221**	**873 708**	**869 984**	**877 884**	**926 752**	**914 615**	**906 524**	**880 560**
Argentina	55 055	65 806	44 781	39 387	39 593	42 437	42 911	39 662	43 187	42 787
Bolivia (Plurinational State of)	10 261	8 946	6 468	5 276	4 526	4 624	4 831	4 753	4 599	4 505
Brazil	373 972	374 715	356 884	355 620	347 413	352 486	368 886	362 204	353 169	341 958
Chile	38 983	39 861	40 657	39 200	40 220	44 954	53 309	51 330	48 320	45 813
Colombia	47 637	48 402	53 174	59 039	58 909	58 925	58 730	58 588	58 010	57 164
Costa Rica	7 150	7 501	8 937	7 232	7 174	7 141	7 572	6 921	7 060	6 197
Dominican Republic	6 781	7 628	8 782	10 752	12 174	12 612	12 932	13 034	14 596	14 456
Ecuador[a]	2 451	2 677	3 397	7 196	5 779	6 049	6 295	7 898	9 226	9 126
El Salvador	3 567	3 569	4 446	3 083	2 449	2 664	3 450	3 426	3 867	3 984
Guatemala	11 770	12 756	14 789	18 468	18 700	18 749	19 827	20 940	20 764	19 875
Haiti	1 258	1 309	1 352	1 354	1 243	1 215	1 328	1 264	...	...
Honduras	5 012	5 073	6 029	8 381	8 482	8 877	8 865	8 571	8 543	8 352
Mexico	175 450	176 384	183 028	199 056	199 302	199 458	212 003	207 745	209 567	203 565
Nicaragua	2 593	2 081	2 174	3 003	3 143	3 398	3 842	3 827	4 129	4 278
Panama	3 531	2 932	4 146	9 682	8 894	8 901	7 815	8 099	8 966	8 251[b]
Paraguay	8 146	7 970	7 675	9 490	9 970	10 326	9 753	9 947	9 506	9 422
Peru	63 731	60 288	68 370	74 909	79 942	71 920	76 054	78 539	75 454	73 407
Uruguay	15 959	15 557	14 505	16 217	15 831	16 966	17 137	16 953	16 756	15 821
Venezuela (Bolivarian Republic of)	9 662	8 830	6 630	6 364	6 239	6 181	11 213	10 914	10 806	10 335
The Caribbean	**16 643**	**15 748**	**16 021**	**17 820**	**17 544**	**18 091**	**19 874**	**19 655**	**19 187**	**17 818**
Antigua and Barbuda[a]	314	328	279	222	237	242	300	324	355[c]	...
Bahamas	1 408	1 197	1 758	2 381	2 255	2 576	2 717	2 459	2 982	3 002[b]
Barbados	206	500	739	1 325	1 272	1 366	1 417	1 516	1 496	1 474[b]
Belize	306	287	271	341	343	347	403	415	425	449
Dominica[a]	211	189	166	166	165	182	169	165	164[c]	...
Grenada[a]	195	231	234	291	322	311	345	324	302[c]	...
Guyana	584	528	576	681	627	613	820	811	679	763[b]
Jamaica	3 781	3 532	3 631	4 081	4 244	4 286	4 835	4 833	4 324	4 390
Saint Kitts and Nevis[a]	357	355	346	365	364	371	322	313	285[c]	...
Saint Lucia[a]	307	275	253	224	197	272	304	351	367[c]	...
Saint Vincent and the Grenadines[a]	180	168	192	204	200	238	284	272	258[c]	...
Suriname	424	581	648	585	612	649	885	992	899	983
Trinidad and Tobago	8 370	7 575	6 929	6 954	6 705	6 639	7 073	6 880	6 652	6 757

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Net international reserves.
[b] Figures as of May.
[c] Figures as of February.

Table A.21
Latin America and the Caribbean: participation rate
(Average annual rates)

			2015	2016	2017	2018	2019	2020	2021	2022[a] First quarter
Latin America and the Caribbean[b]										
Argentina[c]	Urban areas	Global	57.7	57.5	57.8	58.5	59.1	54.9	59.1	59.1
		Female	46.4	46.9	47.6	48.7	49.4	45.9	49.5	50.2
		Male	70.1	69.4	69.7	69.6	69.9	64.9	69.4	68.6
Bahamas	Nationwide total	Global	74.3	77.1	80.5	82.8	80.3	...	...	...
		Female	71.7	73.1	75.1	76.7	75.5	...	...	...
		Male	79.5	81.7	83.6	85.5	83.0	...	...	...
Barbados[d]	Nationwide total	Global	65.1	66.5	65.4	64.8	63.7	60.6	61.2	...
		Female	61.7	62.8	61.5	60.6	59.7	56.7	57.6	...
		Male	68.7	70.4	69.7	69.4	68.0	64.8	65.3	...
Belize	Nationwide total	Global	63.2	64.0	64.1	65.5	68.1	55.1	59.7	...
		Female	48.8	50.2	50.2	52.9	55.9	42.4	47.0	...
		Male	77.8	78.0	78.2	78.3	80.5	68.7	72.9	...
Bolivia (Plurinational State of)[e]	Nationwide total	Global	61.0	66.0	67.4	70.9	73.0	65.8	76.7	77.2
		Female	50.4	56.1	58.3	63.0	65.5	57.6	70.3	71.0
		Male	72.1	76.4	76.8	79.1	80.7	74.4	83.4	83.7
Brazil	Nationwide total	Global	62.7	62.8	63.1	63.2	63.6	59.3	61.3	62.1
		Female	52.2	52.4	53.3	53.6	54.3	49.5	51.6	52.6
		Male	74.0	73.8	73.6	73.4	73.5	69.8	71.6	72.3
Chile	Nationwide total	Global	62.0	62.1	62.7	63.0	62.8	56.1	57.2	59.5
		Female	50.3	50.7	51.6	52.3	52.5	45.3	46.3	49.2
		Male	74.4	74.1	74.3	74.2	73.6	67.3	68.5	70.3
Colombia[f]	Nationwide total	Global	64.3	64.1	64.0	63.6	62.9	58.6	60.6	63.4
		Female	54.2	54.0	53.9	53.2	52.5	47.3	48.9	51.4
		Male	74.9	74.6	74.5	74.4	73.7	70.3	73.1	76.5
Costa Rica	Nationwide total	Global	61.2	58.4	58.8	60.7	62.5	60.2	60.3	59.6
		Female	48.1	44.3	44.5	46.9	50.6	48.1	48.7	48.4
		Male	74.3	72.4	73.0	74.3	74.4	72.2	71.8	70.8
Cuba	Nationwide total	Global	67.1	65.2	63.4	63.8	65.2	66.4	...	...
		Female	52.6	50.9	49.4	49.5	53.3	54.9	...	...
		Male	80.4	78.2	76.2	76.9	76.0	76.8	...	...
Dominican Republic[g]	Nationwide total	Global	61.8	62.3	62.2	63.6	65.1	60.2	63.0	63.5
		Female	76.3	76.6	76.1	77.8	78.4	74.0	75.7	76.9
		Male	48.1	48.9	49.0	50.4	52.6	47.6	51.2	51.3
Ecuador[f h]	Nationwide total	Global	65.6	67.7	68.1	66.7	66.2	62.2	65.8	65.9
		Female	52.1	55.6	56.4	54.6	54.5	51.9	54.1	54.7
		Male	80.0	80.5	80.6	79.3	78.3	77.7	78.0	77.7
El Salvador	Nationwide total	Global	62.1	62.2	61.9	61.3	62.2	61.4	...	...
		Female	46.7	47.3	46.3	46.1	46.8	46.6	...	...
		Male	80.2	80.1	80.6	79.5	80.5	79.0	...	...
Guatemala	Nationwide total	Global	60.7	60.8	61.0	60.6	59.2	...	63.0	...
		Female	38.9	40.1	39.2	39.1	37.9	...	43.3	...
		Male	84.7	84.0	85.3	85.0	83.7	...	85.6	...

Table A.21 (concluded)

			2015	2016	2017	2018	2019	2020	2021	2022[a] First quarter
Honduras	Nationwide total	Global	58.1	57.5	59.0	60.4	57.3	59.5	60.7	...
		Female	43.9	43.0	43.8	46.0	41.4	47.8	48.7	...
		Male	74.0	74.0	76.0	76.3	75.1	73.3	74.3	...
Jamaica[f]	Nationwide total	Global	60.4	61.8	62.3	61.5	62.8	60.6	63.2	64.0
		Female	52.8	55.0	55.7	55.0	56.3	54.0	57.0	58.0
		Male	68.2	68.8	69.1	68.5	69.6	67.4	69.7	70.1
Mexico[i]	Nationwide total	Global	59.8	59.7	59.3	59.6	60.1	55.6	58.8	58.7
		Female	43.4	43.4	43.0	43.5	44.7	41.0	43.6	43.7
		Male	78.0	77.7	77.6	77.4	77.2	71.7	75.7	75.8
Nicaragua	Nationwide total	Global	72.4	73.6	73.5	71.6	71.1	69.1	67.4	66.6
		Female	60.9	63.1	63.2	61.6	61.0	58.7	56.4	59.4
		Male	84.6	84.9	84.7	82.6	82.3	80.6	79.7	80.7
Panama[j]	Nationwide total	Global	63.4	63.7	63.1	64.7	65.7	63.0	58.7	...
		Female	50.1	50.4	50.4	52.2	54.2	53.2	46.2	...
		Male	77.4	77.8	76.6	78.0	77.9	74.0	72.2	...
Paraguay[k]	Nationwide total	Global	62.1	62.6	71.0	71.9	72.4	70.2	72.1	71.2
		Female	50.2	50.8	57.8	59.4	60.2	57.4	60.1	60.0
		Male	74.1	74.5	84.4	84.6	84.8	83.5	84.4	82.7
Peru[l]	Nationwide total	Global	71.6	72.2	72.4	72.3	72.7	63.6	70.9	72.9
		Female	62.3	63.3	64.0	64.0	64.5	52.9	62.5	64.9
		Male	81.0	81.2	81.0	80.7	81.1	71.9	79.5	81.1
Trinidad and Tobago[m]	Nationwide total	Global	60.6	59.7	59.2	59.1	57.4	56.6	...	...
		Female	60.6	59.7	59.2	59.1	57.4	56.6	...	...
		Male	71.2	69.5	68.9	68.4	66.1	65.4	...	...
Uruguay	Nationwide total	Global	63.8	63.4	62.9	62.4	62.2	60.5	61.8	62.1
		Female	55.4	55.4	55.0	54.9	54.9	53.8	55.0	55.0
		Male	73.0	72.2	71.6	70.7	70.1	67.9	69.1	69.9
Venezuela (Bolivarian Republic of)	Nationwide total	Global	63.7	63.9	66.2	66.8	65.1	...	...	...
		Female	49.9	50.2	52.7	53.7	50.9	...	...	...
		Male	77.8	77.9	79.9	80.1	79.4	...	...	...

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

[a] Preliminary figures.

[b] The data relating to the different countries are not comparable owing to differences in coverage and in the definition of the working-age population. Are weighted averages of national data (excluding Belize and Nicaragua) and include adjustments for lack of information and changes in methodology.

[c] 31 urban agglomerates. The National Institute of Statistics and Censuses (INDEC) of Argentina does not recognize the data for the period 2007-2015 and has them under review. These data are therefore preliminary and will be replaced when new official data are published.

[d] 2019 data is preliminary and under review.

[e] The data for 2018 corresponds to April. The data for the III quarter of 2019 and 2020 correspond to the September survey and that of 2020 is by telephone survey.

[f] Does not include hidden unemployment.

[g] The average data for the first quarter of 2020 come from the ECH for the months of January and February; the month of March comes from the ECH-Telefónica. The average data for the II quarter 2020 correspond to the months of April, May and June ECH-Telefónica; those of the III quarter correspond to the months of July, August and September ECH-telephone and those of the IV quarter are for October, November and December ECH telephone. The annual average is preliminary.

[h] The average data for the II quarter of 2020 corresponds to the months of May and June; that of the III and IV quarter of 2020 to September and December respectively.

[i] The average data for the 2nd and 3rd quarters of 2019 come from the ENOE, those for the 2nd quarter 2020 come from the ETOE, and those for the 3rd and 4th quarters of 2020 from the ENOE new edition.

[j] It does not include hidden unemployment, except for 2020, so it is not comparable to the rest of the series. The data for the 3rd quarter of 2020 corresponds to a telephone survey carried out between September and October. The data for 2021 corresponds to October.

[k] New measurements have been used since 2017; the data are not comparable with the previous series.

[l] The data for the I, II, III and IV quarters of 2020 are preliminary.

[m] The annual average of 2020 corresponds to the I semester.

Table A.22
Latin America and the Caribbean: national unemployment[a]
(Average annual rates)

			2014	2015	2016	2017	2018	2019	2020	2021[b]	2022[b] First quarter
Latin America and the Caribbean[c]		**Global**	**6.1**	**6.6**	**7.8**	**8.1**	**7.9**	**7.9**	**10.3**	**9.3**	**8.2**
		Female	**7.3**	**7.9**	**9.2**	**9.6**	**9.5**	**9.5**	**12.1**	**11.3**	**10.0**
		Male	**5.3**	**5.7**	**6.8**	**6.9**	**6.8**	**6.8**	**9.1**	**7.7**	**6.9**
Latin America											
Argentina[d]	Urban areas	Global	7.3	6.5	8.5	8.4	9.2	9.8	11.5	8.8	7.0
		Female	8.4	7.6	9.4	9.5	10.5	10.7	12.4	9.9	8.3
		Male	6.5	5.7	7.8	7.5	8.2	9.2	10.8	7.9	5.9
Bolivia (Plurinational State of)[e]	Nationwide total	Global	2.3	3.5	3.5	3.6	3.5	3.7	8.3	5.1	4.5
		Female	3.1	4.2	4.0	4.0	3.6	4.0	8.7	5.6	5.2
		Male	1.7	3.0	3.1	3.3	3.4	3.4	7.9	4.6	3.9
Brazil	Nationwide total	Global	6.9	8.6	11.6	12.8	12.4	12.0	13.8	13.2	11.1
		Female	8.5	10.4	13.7	14.9	14.5	14.4	16.3	16.5	13.7
		Male	5.8	7.3	10.1	11.2	10.8	10.1	11.8	10.7	9.1
Chile[f]	Nationwide total	Global	6.5	6.3	6.7	7.0	7.4	7.2	10.8	8.9	7.8
		Female	7.1	7.0	7.2	7.5	8.3	8.0	11.0	9.2	8.7
		Male	6.1	5.8	6.3	6.5	6.7	6.7	10.6	8.6	7.2
Colombia[g]	Nationwide total	Global	8.5	8.3	8.6	8.8	9.1	9.9	15.1	13.4	13.2
		Female	11.0	10.8	11.1	11.4	11.6	12.6	19.2	17.3	17.1
		Male	6.7	6.4	6.8	6.9	7.1	7.8	12.3	10.6	10.4
Costa Rica	Nationwide total	Global	9.6	9.6	9.5	9.1	10.3	11.8	19.6	16.4	13.6
		Female	11.9	12.2	12.1	11.6	13.2	15.3	25.7	22.0	17.5
		Male	8.1	8.0	8.0	7.5	8.4	9.3	15.6	12.7	10.9
Cuba	Nationwide total	Global	2.7	2.5	2.0	1.7	1.7	1.3	1.4	...	...
		Female	3.1	2.6	2.2	1.6	1.8	1.2	1.6	...	...
		Male	2.4	2.4	1.9	1.7	1.6	1.2	1.3	...	...
Dominican Republic[h]	Nationwide total	Global	6.7	7.3	7.1	5.5	5.7	6.2	5.8	7.4	6.4
		Female	9.7	10.5	10.5	7.8	8.8	9.3	8.6	12.1	9.6
		Male	4.8	5.2	4.8	4.0	3.5	3.9	3.9	3.9	4.1
Ecuador[g i]	Nationwide total	Global	3.4	3.6	4.5	3.8	3.5	3.8	6.2	4.5	4.4
		Female	4.1	4.5	5.8	4.9	4.4	4.6	7.6	5.7	5.1
		Male	3.0	3.0	3.7	3.0	2.9	3.2	5.3	3.6	3.9
El Salvador	Nationwide total	Global	7.0	7.0	7.1	7.0	6.3	6.3	6.9	...	...
		Female	4.7	5.0	5.3	5.2	4.9	5.4	6.6	...	...
		Male	8.6	8.4	8.1	8.3	7.3	7.0	7.1	...	...
Guatemala	Nationwide total	Global	2.9	2.6	2.7	2.5	2.4	2.2	...	2.2	...
		Female	3.5	3.6	3.5	3.5	2.9	3.0	...	2.9	...
		Male	2.6	2.0	2.2	2.0	2.1	1.8	...	1.8	...
Honduras[j]	Nationwide total	Global	5.3	7.3	7.4	6.7	5.7	5.7	10.9	8.6	...
		Female	6.7	11.8	10.7	10.8	7.4	8.1	13.7	10.7	...
		Male	4.5	4.4	5.1	4.0	4.5	4.2	8.7	7.0	...
Mexico[k]	Nationwide total	Global	4.8	4.3	3.9	3.4	3.3	3.5	4.4	4.1	3.5
		Female	4.9	4.5	3.9	3.6	3.4	3.5	4.1	3.6	3.4
		Male	4.8	4.3	3.8	3.3	3.2	3.5	4.7	4.2	3.5
Nicaragua	Nationwide total	Global	6.6	5.9	4.5	3.7	5.5	5.4	5.0	3.8	4.9
		Female	7.0	6.3	4.8	3.8	5.5	5.5	4.7	4.4	4.6
		Male	6.2	5.6	4.2	3.5	5.4	5.4	5.2	4.6	5.2

Table A.22 (concluded)

			2014	2015	2016	2017	2018	2019	2020	2021[b]	2022[b] First quarter
Panama[l]	Nationwide total	Global	3.5	3.9	4.4	4.9	4.9	5.8	18.6	8.8	…
		Female	4.6	5.0	5.4	6.4	6.4	7.3	24.7	9.6	…
		Male	2.7	3.1	3.7	3.8	3.9	4.8	13.6	8.3	…
Paraguay[m]	Nationwide total	Global	6.0	5.4	6.0	6.1	6.2	6.6	7.7	7.5	8.5
		Female	8.1	6.1	7.5	7.6	7.4	8.0	10.2	9.7	9.8
		Male	4.6	4.9	5.0	5.0	5.4	5.5	5.9	5.9	7.5
Peru[n]	Nationwide total	Global	3.7	3.5	4.2	4.1	3.9	3.9	7.7	5.9	6.0
		Female	4.0	3.6	4.6	4.4	4.4	4.5	7.7	6.6	7.2
		Male	3.4	3.4	3.9	3.8	3.5	3.5	7.6	5.2	4.9
Uruguay[o]	Nationwide total	Global	6.6	7.5	7.8	7.9	8.3	8.9	10.1	9.3	7.4
		Female	8.3	8.9	9.4	9.5	10.1	10.7	12.4	11.0	8.8
		Male	5.1	6.4	6.5	6.6	6.9	7.3	8.7	7.9	6.3
Venezuela (Bolivarian Republic of)	Nationwide total	Global	7.2	7.1	7.3	7.3	7.3	6.8	…	…	…
		Female	8.1	7.8	7.7	8.6	8.6	7.5	…	…	…
		Male	6.7	6.7	7.0	6.4	6.4	6.4	…	…	…
The Caribbean											
Bahamas[p]	Nationwide total	Global	14.6	13.4	12.2	10.0	10.3	9.5	…	…	…
		Female	15.8	15.0	14.2	11.0	10.6	9.9	…	…	…
		Male	13.5	11.8	10.3	9.0	10.1	9.2	…	…	…
Barbados[q]	Nationwide total	Global	12.3	11.3	9.7	10.0	10.1	9.6	15.6	14.1	…
		Female	12.8	10.3	10.1	10.1	10.3	8.1	15.7	14.5	…
		Male	11.8	12.3	9.3	9.8	9.9	11.0	15.6	13.7	…
Belize[r]	Nationwide total	Global	11.6	10.1	9.5	9.3	9.4	9.1	13.7	21.1	…
		Female	19.9	15.4	15.6	14.6	14.9	13.5	17.0	21.1	…
		Male	6.3	6.8	5.6	5.9	5.6	5.9	11.6	21.1	…
Jamaica[s]	Nationwide total	Global	9.5	9.8	9.0	7.7	5.6	5.0	6.6	5.2	4.0
		Female	12.4	12.5	12.0	10.2	7.2	6.5	7.6	6.5	5.1
		Male	7.2	7.2	6.6	5.6	4.2	3.8	5.8	4.2	3.2
Trinidad and Tobago[t]	Nationwide total	Global	3.3	3.4	4.0	4.8	3.9	4.3	4.7	…	…
		Female	4.0	4.2	4.0	5.6	5.0	5.1	4.8	…	…
		Male	2.8	2.9	3.9	4.2	3.2	3.7	4.6	…	…

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of household surveys.

[a] Percentage of unemployed population in relation to the total workforce.

[b] Preliminary figures.

[c] Weighted average adjusted for lack of information and differences and changes in methodology. Includes a data adjustment for the exclusion of hidden unemployment in Colombia, Ecuador, Jamaica and Panama.

[d] 31 urban agglomerates. The National Institute of Statistics and Censuses (INDEC) of Argentina does not recognize the data for the period 2007-2015 and has them under review. The annual data for 2016 is the average of the II, III and IV quarters.

[e] New measurement from 2016 through the Continuous Employment Survey (ECE), data not comparable with previous years. The data for 2020 and 2021 are for urban coverage.

[f] Series based on 2017 census projections.

[g] Open unemployment rate includes an adjustment for workforce figures due to exclusion of hidden unemployment.

[h] New measurements have been used since 2015; the data are not comparable with the previous series.

[i] The average data for the II quarter of 2020 corresponds to the months of May and June and that of the III quarter of 2020 to September

[j] The data for 2020 is preliminary and corresponds to a telephone survey conducted in the months of November and December.

[k] The average data for the 2nd and 3rd quarters of 2019 come from the ENOE, those for the 2nd quarter 2020 come from the ETOE, and those for the 3rd and 4th quarters of 2020 from the ENOE new edition.

[l] It does not include hidden unemployment, except for 2020, so it is not comparable to the rest of the series.
The data for the 3rd quarter of 2020 corresponds to a telephone survey carried out between September and October. The data for 2021 corresponds to October.

[m] New measurement from 2017 through the Permanent Household Survey Continuous (EPHC), data not comparable with previous years.

[n] The data for the I, II, III and IV quarters of 2020 are preliminary.

[o] The average data for the first quarter of 2020 come from the ECH for the months of January and February; the month of March comes from the ECH-Telefónica. The average data for the II quarter 2020 correspond to the months of April, May and June ECH-Telefónica; those of the III quarter correspond to the months of July, August and September ECH-telefonica and those of the IV quarter are for October, November and December ECH-telefonica. The annual average is preliminary.

[p] Data for 2019 are preliminary and correspond to May.

[q] The data for 2020 correspond to the average of the III and IV quarters.

[r] The data for 2018 corresponds to April, that for 2019 to the average for April and September, and that for 2020 to September.

[s] Does not include hidden unemployment. The survey was not conducted in the II quarter (April) of 2020, the annual average for 2020 corresponds to data from the I, III and IV quarters.

[t] The data for 2019 corresponds to the average for March, June and December, the data for 2020 corresponds to the average for March and June.

Table A.23
Latin America and the Caribbean: employment rate[a]
(Average annual rates)

		2014	2015	2016	2017	2018	2019	2020	2021	2022[b] First quarter
Latin America and the Caribbean[c]										
Argentina[d]	Urban areas	54.0	53.9	52.6	52.9	53.1	53.3	48.6	53.9	54.9
Bahamas	Nationwide total	62.9	64.4	67.7	72.5	74.2	...	...	...	...
Barbados	Nationwide total	56.0	57.7	60.0	58.9	58.3	57.6	51.1	52.6	...
Belize[e]	Nationwide total	56.3	56.8	57.9	58.1	59.4	62.0	47.6	53.0	...
Bolivia (Plurinational State of)[f]	Nationwide total	64.3	58.9	63.8	64.9	68.4	70.3	61.8	72.8	73.7
Brazil	Nationwide total	58.0	57.3	55.5	55.0	55.3	56.0	51.1	53.2	52.2
Chile	Nationwide total	57.9	58.1	58.0	58.3	58.3	58.3	50.1	52.1	54.9
Colombia	Nationwide total	58.4	59.0	58.5	58.4	57.8	56.6	49.8	52.5	55.0
Costa Rica	Nationwide total	56.5	55.4	52.8	53.5	54.4	55.2	48.5	50.4	51.5
Cuba	Nationwide total	70.0	65.4	63.8	62.4	62.7	64.4	65.4	...	...
Dominican Republic[g]	Nationwide total	55.5	57.3	57.9	58.7	60.0	61.0	56.7	58.3	59.4
Ecuador[h]	Nationwide total	60.4	63.3	64.6	65.5	64.3	63.7	57.6	62.8	62.6
El Salvador	Nationwide total	58.4	57.8	57.9	57.6	57.4	58.2	57.2	...	...
Guatemala	Nationwide total	59.1	59.2	59.2	59.4	59.1	57.9	...	61.6	...
Honduras[i]	Nationwide total	53.1	53.8	53.2	55.1	57.0	54.1	53.0	55.5	...
Jamaica[j]	Nationwide total	54.2	54.6	56.2	57.5	58.2	59.7	56.6	57.9	60.0
Mexico[j]	Nationwide total	56.9	57.2	57.4	57.3	57.6	58.0	53.1	56.4	56.7
Nicaragua	Nationwide total	69.1	68.1	70.2	70.8	67.7	67.2	65.6	64.4	64.1
Panama[k]	Nationwide total	60.9	60.9	60.8	60.1	61.5	61.8	51.3	53.5	...
Paraguay[m]	Nationwide total	58.6	58.7	58.9	66.7	67.4	67.6	64.8	66.7	65.2
Peru[n]	Nationwide total	69.6	69.1	69.2	69.5	69.4	69.8	57.7	66.9	68.6
Trinidad and Tobago [o]	Nationwide total	59.9	58.5	57.4	56.3	56.8	54.9	53.9	...	...
Uruguay[p]	Total nacional	60.4	59.0	58.4	57.9	57.2	56.7	54.3	56.0	57.5
Venezuela (Bolivarian Republic of)	Nationwide total	60.4	59.1	59.2	61.3	61.9	60.6	...	...	...

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.

[a] Employed population as a percentage of the working-age population.

[b] Preliminary figures.

[c] Weighted average adjusted for lack of information and differences and changes in methodology.The data relating to the different countries are not comparable owing to differences in coverage and in the definition of the working-age population.

[d] The National Institute of Statistics and Censuses (INDEC) of Argentina does not recognize the data for the period 2007-2015 and has them under review. These data are therefore preliminary and will be replaced when new official data are published.

[e] The data for 2018 corresponds to April, that for 2019 to the average for April and September, and that for 2020 to September.

[f] New measurement from 2016 through the Continuous Employment Survey (ECE), data not comparable with previous years. The data for 2020 and 2021 are for urban coverage.

[g] New measurements have been used since 2015; the data are not comparable with the previous series.

[h] The survey was not conducted in the first quarter (March) of 2020, the average data for the second quarter of 2020 corresponds to the months of May and June, and the third quarter of 2020 corresponds to September.

[i] The data for 2020 is preliminary and corresponds to a telephone survey conducted in the months of November and December.

[j] The survey was not conducted in the 2nd quarter (April) of 2020, the annual average for 2020 corresponds to data from the 1st, 3rd and 4th quarters.

[k] The average data for the 2nd and 3rd quarters of 2019 come from the ENOE, those for the 2nd quarter 2020 come from the ETOE, and those for the 3rd and 4th quarters of 2020 from the ENOE new edition.

[l] The data for the 3rd quarter of 2020 corresponds to a telephone survey carried out between September and October. The data for 2021 corresponds to October.

[m] New measurement from 2017 through the Permanent Household Survey Continuous (EPHC), data not comparable with previous years.

[n] The data for the I, II, III and IV quarters of 2020 are preliminary.

[o] The annual average for 2020 corresponds to the first semester.

[p] The average data for the first quarter of 2020 come from the ECH for the months of January and February; the month of March comes from the ECH-Telefónica. The average data for the II quarter 2020 correspond to the months of April, May and June ECH-Telefónica; those of the III quarter correspond to the months of July, August and September ECH-telefonica and those of the IV quarter are for October, November and December ECH-telefonica. The annual average is preliminary.

Table A.24
Latin America and the Caribbean: registered employment indicators
(Index 2010=100)

	2013	2014	2015	2016	2017	2018	2019	2020	2021[a]
Argentina[b]	109.6	110.9	114.0	114.3	115.3	115.6	114.4	112.3	115.2
Brazil[c]	114.8	117.2	115.2	110.6	108.7	109.7	111.0	103.2	116.0
Chile[d]	115.8	117.9	120.1	122.2	123.4	127.8	131.5	128.1	136.4
Costa Rica[e]	109.0	110.7	112.6	116.3	119.7	122.1	122.4	119.8	123.2
El Salvador[e]	111.0	113.5	115.1	117.3	118.3	120.3	123.0	119.3	127.2
Guatemala[e]	110.4	111.8	114.2	117.4	118.6	119.6	125.5	119.3	...
Jamaica[f]	100.4	...	...	...	...	...	...	...	...
Mexico[g]	113.0	117.0	122.0	126.7	132.2	137.6	140.7	137.2	139.9
Nicaragua[e]	125.9	132.8	144.6	160.3	170.9	153.0	141.5	133.6	141.6
Panama[h]	122.5	126.1	127.2	125.4	126.8	123.3	123.2	115.8	...
Peru[i]	112.7	114.8	115.8	118.3	120.7	125.4	128.8	124.4	129.3
Uruguay[j]	110.9	111.7	110.1	108.9	109.4	108.9	108.9	102.4	103.9

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Preliminary figures.
[b] Dependent workers paying into pension schemes.
[c] Workers covered by social and labour legislation.
[d] Dependent workers who contribute to the pension system.
[e] Workers with social security coverage.
[f] Workers at firms with 10 or more employees.
[g] Private workers covered by social and labour legislation.
[h] Up to 2012, workers with social security coverage. From 2013, corresponds to workers in small, medium and large enterprises in manufacturing, commerce and services.
i Jobs reported to the National Superintendency of Customs and Tax Administration. Until 2015, workers of companies with 10 or more employees.
j Employment positions generating social security contributions.

Table A.25
Latin America : *visible underemployment by hours*
(Percentages of employed workers)

		2015	2016	2017	2018	2019	2020	2021	2022[a] First quarter
Argentina[b c]	Urban areas	9.0[d]	11.5[e]	11.4	12.3	14.1	14.1	13.3	13.3
Brazil[f]	Nationwide total	5.4	5.3	6.6	7.2	7.5	7.3	8.2	8.4
Chile[g h]	Nationwide total	10.3	10.9|	9.6	9.5	9.5	6.4	5.3	5.6
Colombia[i]	Nationwide total	10.3	9.9	9.5	8.9	9.6	9.8	8.8	8.6
Costa Rica[j]	Nationwide total	12.4	9.0	8.1	8.7	10.2	19.8	14.6	13.4
Ecuador[f]	Nationwide total	11.7	15.7	17.0	15.4	16.6	26.6	23.1	23.2
El Salvador[f]	Total urbano	6.8	7.7	7.6	6.3	6.3	6.1	...	...
Honduras[k]	Nationwide total	14.1	11.5	11.8	14.2	10.6	27.3	31.3	...
Mexico[j]	Nationwide total	8.3	7.6	7.1	6.9	7.5	16.5	12.7	12.9
Panama[f]	Nationwide total	2.5	2.3	2.5	3.7	4.4	...	6.0	...
Paraguay[l]	Asunción y Urban areas del Departamento Central[h]	4.6	4.0|	5.5	5.3	7.0	7.6	6.0	5.4
Peru[b]	Lima metropolitana	10.4	11.3	11.5	13.6	13.2	20.2	13.0	12.5
Uruguay[f]	Nationwide total	7.1	8.3	8.4	8.5	9.6	9.1	...	...

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Preliminary figures.
[b] Employed persons who work less than 35 hours per week and wish to work more hours.
[c] The National Institute of Statistics and Censuses (INDEC) of Argentina does not recognize the data for the period 2007-2015 and has them under review. These data are therefore preliminary and will be replaced when new official data are published.
[d] The figures correspond to the average for the first three quarters.
[e] The figures correspond to the average for the last three quarters.
[f] Employed persons who work less than 40 hours per week and wish to work more hours.
[g] Employed persons who work less than 30 hours per week and wish to work more hours. Since 2017, employed persons who work two thirds of the established full-time work, and wish to work more hours and are available to do so.
[h] Up to 2017, nationwide total.
[i] Employed persons who work less than 48 hours per week and wish to work more hours.
[j] Employed persons wishing to work more than their current job permits.
[k] Employed persons who work less than 36 hours per week and wish to work more hours.
[l] Employed persons who work less than 30 hours per week and wish to work more hours.

Table A.26
Latin America : real average wages[a]
(Index 2010=100)

	2014	2015	2016	2017	2018	2019	2020	2021[b]	2022[b] First quarter
Bolivia (Plurinational State of)[c]	101.8	107.7	109.5	111.5[d]	115.0	114.6	114.2	116.3	...
Brazil[e]	108.4	108.9	107.6	110.2	110.0	110.5	115.5	108.4	103.1
Chile[f]	111.9	113.9	115.4	119.0	121.3	123.8	124.5	125.8	125.4
Colombia[g]	104.5	105.7	103.4	106.6	107.7	108.6	103.3	109.8	111.5
Costa Rica[h]	110.7	115.2	118.2	119.6	121.7	126.3	121.4	129.9	...
El Salvador[h]	98.5	100.9	102.3	103.4	103.4	104.7	104.7	109.4	...
Guatemala[h]	106.8	110.4	108.2	107.2	107.9	...	...	...	...
Mexico[i]	101.7	103.2	104.1	102.9	103.7	106.7	110.8	112.4	116.5
Nicaragua[h]	102.4	105.1	107.5	109.1	114.1	113.5	112.4	111.8	...
Panama[j]	109.5	113.1	117.5	122.1	127.0	130.1	128.3	136.2	135.8
Paraguay[k]	107.0	107.5	108.2	108.5	110.4	112.0	111.1	107.9	...
Peru[l]	117.9	117.5	122.2	121.8	125.8	125.0	118.6	123.6	129.9
Uruguay[m]	115.4	117.3	119.1	122.6	122.8	124.4	122.2	120.4	120.3

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Figures deflated by the official consumer price index of each country.
[b] Preliminary figures.
[c] Private-sector average wage index.
[d] The figures correspond to the average of March and June.
[e] Private-sector workers covered by social and labour legislation. New series from 2013.
[f] General index of hourly remuneration.
[h] Average wage declared by workers registered with and paying into social security.
[i] Average wage declared by private workers covered by social security.
[j] Average wage declared by workers covered by social security. As from 2013, corresponds to workers in small, medium and large businesses, in manufacturing, commerce and services.
[k] Wage and salary index.
[l] Average income in the formal sector. Until 2015, wages of employed workers in Lima metropolitan area.
[m] Average salary index.

Table A.27
Latin America and the Caribbean: monetary indicators
(Average percentage variation with respect to the year-earlier period)

		2017	2018	2019	2020	2021				2022	
						Q1	Q2	Q3	Q4	Q1	Q2
Latin America and the Caribbean											
Argentina	Monetary base	31.0	33.7	23.0	55.4	39.8	19.2	25.4	34.9	44.5	44.3[a]
	Money (M1)	29.4	23.6	16.9	82.0	65.3	42.3	37.7	52.8	54.5	48.7[a]
	M2	28.0	37.8	25.4	71.4	69.9	52.0	46.1	56.0	56.1	56.4[a]
	Foreign-currency deposits	96.1	81.6	55.2	-4.4	26.5	34.0	32.5	32.7	20.5	22.6[a]
Bolivia (Plurinational State of)	Monetary base	0.1	8.7	8.5	15.5	24.6	12.2	8.2	9.7	6.5[b]	...
	Money (M1)	2.0	6.4	0.7	5.1	14.5	0.2	0.2	5.1	3.0[b]	...
	M2	7.7	10.8	3.5	4.9	10.3	3.5	4.8	6.7	6.2[b]	...
	Foreign-currency deposits	-2.7	-4.2	2.1	13.9	10.9	12.4	13.0	10.9	10.4[b]	...
Brazil	Monetary base	6.2	6.3	3.5	32.0	34.7	14.7	0.2	-4.6	-2.9[c]	...
	Money (M1)	4.4	8.3	5.7	36.2	41.7	21.8	12.6	1.9	0.3[c]	...
	M2	12.2	12.5	9.4	32.7	37.3	18.0	11.4	5.6	4.7[c]	...
Chile	Monetary base	7.1	6.0	10.5	54.4	120.0	124.9	19.6	-13.3	-5.7	-32.8
	Money (M1)	8.4	11.0	12.0	41.8	60.4	51.8	39.1	26.4	8.1	-9.4
	M2	4.5	8.9	8.3	7.6	2.6	3.0	8.6	10.0	4.8	3.7
	Foreign-currency deposits	4.7	-4.2	15.0	43.9	4.3	-4.0	11.0	25.0	29.4	24.1
Colombia	Monetary base	1.3	7.3	11.7	18.7	17.7	12.4	14.8	12.4	14.1	13.4[d]
	Money (M1)	1.1	6.7	11.1	24.8	25.0	15.8	17.7	18.4	15.7	10.9[d]
	M2	5.7	5.6	7.5	14.4	11.7	6.2	7.2	9.9	12.1	12.9[d]
Costa Rica	Monetary base	7.5	4.1	-1.3	7.9	14.0	6.7	3.3	1.7	1.8	...
	Money (M1)	1.7	4.4	6.2	33.9	24.6	12.7	9.6	12.0	8.4[c]	...
	M2	0.5	-1.4	1.3	16.7	12.9	5.5	1.9	1.2	-2.0[c]	...
	Foreign-currency deposits	11.6	2.4	4.3	13.1	23.2	23.7	20.7	20.2	23.7[c]	...
Dominican Republic	Monetary base	1.7	-1.4	10.1	13.0	20.8	16.8	17.7	15.0	12.2	10.6[d]
	Money (M1)	6.2	13.6	10.6	26.6	33.3	24.8	21.7	21.0	18.6	14.6[d]
	M2	7.5	8.1	6.9	13.8	18.8	17.4	16.1	15.0	12.5	8.5[d]
	Foreign-currency deposits	9.9	12.8	13.4	32.5	28.3	16.7	8.5	9.5	9.0	11.4[d]
Ecuador	Monetary base	12.9	4.6	3.1	14.9	16.8	7.2	2.4	2.4	2.5	2.3[a]
	Money (M1)	13.1	5.6	3.4	7.9	7.6	4.4	5.4	6.8	6.2	4.8[d]
	M2	13.5	8.3	6.5	9.6	10.0	9.8	10.7	10.4	10.7	10.4[d]
El Salvador	Monetary base	9.3	5.5	10.5	-14.0	-39.1	-20.3	-7.7	6.1	25.4	31.1[d]
	Money (M1)	6.5	5.8	7.3	13.2	16.6	14.1	9.1	6.5	6.0	7.0[d]
	M2	7.3	7.5	7.6	11.8	10.6	8.5	4.8	2.9	3.3	4.6[d]
Guatemala	Monetary base	11.3	8.8	10.8	20.7	22.6	15.0	14.6	12.9	11.8	16.3
	Money (M1)	7.7	8.1	11.6	20.7	25.3	20.5	13.2	11.0	11.9	12.7[d]
	M2	8.4	8.8	10.5	15.1	18.2	16.3	12.0	10.0	10.8	11.2[d]
	Foreign-currency deposits	-1.9	6.8	5.0	12.5	15.3	9.4	8.7	0.4	-3.6	-7.3[d]
Haiti	Monetary base	15.6	14.7	18.5	19.3	7.8	6.6	14.3	44.3[e]	...	...
	Money (M1)	16.6	22.3	11.3	29.6	35.4	26.3	22.4	25.8[e]	...	...
	M2	13.5	18.1	12.1	23.6	26.8	21.7	19.4	24.2[e]	...	...
	Foreign-currency deposits	18.2	5.4	28.1	8.5	-9.4	-7.9	10.7	68.5[e]	...	...
Honduras	Monetary base	18.8	8.2	10.0	49.8	72.5	41.5	12.6	2.2	-6.3	-8.9[a]
	Money (M1)	18.3	7.4	8.2	24.5	38.0	26.6	14.5	12.6	11.6	12.6[a]
	M2	20.0	9.5	10.2	17.6	21.4	19.0	14.3	12.5	12.2	11.6[a]
	Foreign-currency deposits	18.4	4.8	4.0	7.9	7.6	3.5	3.0	2.2	6.2	7.6[a]

Table A.27 (continued)

		2017	2018	2019	2020	2021				2022	
						Q1	Q2	Q3	Q4	Q1	Q2
Mexico	Monetary base	10.9	10.2	4.0	17.4	23.9	17.3	14.4	15.3	16.0	14.6
	Money (M1)	10.0	9.8	5.2	17.4	20.5	12.3	13.2	13.2	12.0	12.0[d]
	M2	9.5	11.2	5.7	14.0	13.8	6.1	7.5	10.3	9.9	11.3[d]
	Foreign-currency deposits	29.6	5.0	-7.2	8.3	13.4	2.6	2.9	5.6	14.8	15.2[d]
Nicaragua	Monetary base	7.4	3.7	-2.5	17.9	23.7	21.2	16.4[f]	21.6	20.9	...
	Money (M1)	8.8	0.1	-4.5	29.5	27.7	26.2	19.8[f]	...	...	...
	M2	8.8	0.1	-4.5	29.5	27.7	26.2	19.8[f]	...	...	...
	Foreign-currency deposits	11.6	-5.5	-13.6	9.2	10.5	13.4	13.2[f]	...	...	...
Panama	Monetary base	3.2	5.2	8.1	4.3	-3.7	15.8	28.0	27.0	33.2	...
	Money (M1)	0.5	1.1	-3.2	4.6	15.2	14.0	12.4	7.5	3.4	0.8
	M2	5.4	3.0	2.4	5.2	8.4	-15.3	-15.4	-16.5	-17.3	5.6
Paraguay	Monetary base	11.1	13.3	3.5	11.2	12.0	2.0	7.5	10.4	6.5	5.7[d]
	Money (M1)	14.2	10.1	4.3	19.0	25.8	14.1	11.9	7.5	3.9	-1.4[d]
	M2	13.2	10.8	6.7	15.1	21.4	12.6	11.2	7.3	3.5	-0.1[d]
	Foreign-currency deposits	1.8	4.0	9.8	17.5	13.7	20.3	13.2	9.8	14.9	1.9[d]
Peru	Monetary base	5.5	8.1	5.7	25.3	40.4	19.8	17.6	15.7	5.0	1.6
	Money (M1)	7.9	13.5	10.0	34.5	47.1	17.2	7.3	2.3	-5.8	-4.9[d]
	M2	11.0	13.2	11.0	26.9	30.7	11.5	4.2	0.8	-3.7	-2.3[d]
	Foreign-currency deposits	-4.7	6.4	5.5	12.1	22.9	22.7	17.4	13.3	8.1	1.9[d]
Uruguay	Monetary base	13.2	0.9	6.0	12.5	7.6	11.4	6.3	2.1	-6.2	-5.6
	Money (M1)	13.1	5.5	7.1	11.7	17.5	15.6	14.4	15.4	10.5	6.0[d]
	M2	15.4	10.7	8.9	11.9	20.0	15.1	14.3	15.1	10.7	8.5[d]
	Foreign-currency deposits	-6.9	6.7	17.3	31.6	22.8	15.9	13.3	15.5	11.2	4.1[d]
Venezuela (Bolivarian Republic of)	Monetary base	873.1	30 129.5	13 737.7	1 256.6	1 060.5	1 019.6	772.0	509.7	449.6	478.3[d]
	Money (M1)	551.7	37 111.7	9 188.3	1 347.4	1 297.1	1 397.4	1 166.1	786.8	525.6	433.2[d]
	M2	544.9	36 973.8	9 187.0	1 345.3	1 296.9	1 397.0	1 165.8	786.7	525.6	433.6[d]
The Caribbean											
Antigua and Barbuda	Monetary base	-17.1	5.3	-7.6	...	...	...	...	...	...	...
	Money (M1)	12.6	8.8	11.8	7.0	...	...	...	...	...	...
	M2	5.1	4.8	2.3	...	...	...	...	...	...	...
	Foreign-currency deposits	18.3	32.9	9.1	-38.3	...	...	...	...	...	...
Bahamas	Monetary base	9.9	7.6	-0.6	33.3	19.3	19.8	26.3	19.6	25.3	...
	Money (M1)	13.6	6.3	8.5	17.3	3.4	3.7	5.3	5.2	11.8	...
	M2	4.9	1.2	2.7	8.0	1.3	1.5	3.0	2.8	6.0	...
	Foreign-currency deposits	32.2	29.7	16.1	14.9	-42.9	-20.6	-14.6	11.4	21.1	...
Barbados	Monetary base	11.7	1.0	12.6	15.1	27.6	26.9	21.9	17.7	13.0	12.5
	Money (M1)	4.1	0.6	2.8	6.7	8.5	7.8	7.5	7.1	7.9	8.3[a]
Belize	Monetary base	-11.9	-9.7	0.6	12.0	26.2	26.9	16.9	11.3	10.0	16.0[a]
	Money (M1)	-4.9	6.5	4.4	9.8	15.2	22.4	16.6	14.3	14.8	12.5[a]
Dominica	Monetary base	25.4	-1.0	-21.2	...	...	...	...	...	...	...
	Money (M1)	13.2	42.9	-14.3	-16.9	...	...	...	...	...	...
	M2	7.5	17.4	-7.2	-15.2	...	...	...	...	...	...
	Foreign-currency deposits	-20.6	-7.7	30.8	20.4	...	...	...	...	...	...
Grenada	Monetary base	1.7	2.1	4.6	...	...	...	...	...	...	...
	Money (M1)	3.0	11.0	9.8	6.8	...	...	...	...	...	...
	M2	0.9	4.2	3.8	4.2	...	...	...	...	...	...
	Foreign-currency deposits	10.2	0.5	16.9	16.3	...	...	...	...	...	...
Guyana	Monetary base	6.2	10.5	10.8	25.4	40.6	29.2	20.8	3.2	-2.5	-39.1[a]
	Money (M1)	9.0	8.9	20.7	41.8	22.7	17.0	16.2	13.7	13.5	15.2[d]

Table A.27 (concluded)

		2017	2018	2019	2020	2021				2022	
						Q1	Q2	Q3	Q4	Q1	Q2
Jamaica	Monetary base	19.1	17.9	22.6	17.6	24.2	28.6	18.7	16.4	3.8	-4.3
	Money (M1)	14.4	21.4	17.1	19.2	19.7	17.6	13.6	17.7	11.3	11.1[d]
	M2	25.7	19.1	15.0	15.7	16.8	17.3	13.7	16.0	11.5	9.9[d]
	Foreign-currency deposits	18.6	9.6	9.6	17.8	14.8	16.1	12.3	15.2	19.8	19.0[d]
Saint Kitts and Nevis	Monetary base	2.3	3.5	-7.1	...	...	...	...	...	...	...
	Money (M1)	-7.9	-1.4	10.7	-1.3	...	...	...	...	...	...
	M2	-4.2	1.3	3.0	2.7	...	...	...	...	...	...
	Foreign-currency deposits	-5.9	-12.9	-4.1	-10.4	...	...	...	...	...	...
Saint Vincent and the Grenadines	Monetary base	2.4	-2.2	9.0	...	...	...	...	...	...	...
	Money (M1)	4.6	0.2	11.1	4.4	...	...	...	...	...	...
	M2	3.6	0.4	6.0	-4.2	...	...	...	...	...	...
	Foreign-currency deposits	-7.4	-7.9	47.1	-16.6	...	...	...	...	...	...
Saint Lucia	Monetary base	-4.9	5.9	-7.4	...	...	...	...	...	...	...
	Money (M1)	8.3	9.0	7.1	-6.0	...	...	...	...	...	...
	M2	1.3	2.0	3.6	-9.6	...	...	...	...	...	...
	Foreign-currency deposits	5.5	-10.5	0.4	22.8	...	...	...	...	...	...
Suriname	Monetary base	23.9	24.4	70.0	47.5	41.0	48.2	58.3	46.4	41.7	44.4[d]
	Money (M1)	14.1	14.8	26.9	42.5	39.9	29.3	22.4	27.5	21.1	26.1[d]
	M2	11.7	15.1	24.5	32.3	32.2	26.6	21.6	24.9	21.0	22.9[d]
	Foreign-currency deposits	20.3	5.8	-3.0	2.1	97.5	139.9	128.8	56.5	55.6	55.7[d]
Trinidad and Tobago	Monetary base	-8.4	-2.6	-0.1	12.7	24.3	1.4	-15.2	-12.5	-12.8	-12.6[a]
	Money (M1)	-1.9	0.1	-0.3	7.8	16.1	10.2	2.4	0.3	-1.8	-0.5[a]
	M2	-1.4	0.1	1.9	6.8	8.5	5.0	1.7	0.7	-0.9	0.0[a]
	Foreign-currency deposits	0.4	-1.3	3.9	-0.3	-0.9	6.6	7.2	7.7	9.1	1.6[a]

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Figures as of April.
[b] Figures as of January.
[c] Figures as of February.
[d] Figures as of May.
[e] Figures as of November.
[f] Figures as of July.

Table A.28
Latin America and the Caribbean: domestic credit
(Percentage variation with respect to the year-earlier period)

	2017	2018	2019	2020	2021				2022	
					Q1	Q2	Q3	Q4	Q1	Q2[a]
Latin America										
Argentina	35.0	41.4	30.2	65.2	70.7	51.6	48.0	59.6	67.9	66.7[b]
Bolivia (Plurinational State of)	16.9	13.7	10.3	11.0	11.2	6.2	...	...	...	...
Brazil	7.9	2.7	9.7	15.5	15.5	12.5	11.0	11.0	9.2[c]	...
Chile	5.5	10.2	8.2	10.2	2.1	0.0	3.4	7.8	6.5	10.1[b]
Colombia	9.8	9.3	10.0	10.7	3.5	-1.2	3.5	8.4	13.2	...
Costa Rica	11.0	5.8	2.3	5.8	10.4	8.9	6.4	8.3	7.0[c]	...
Dominican Republic	8.6	9.4	11.3	9.7	8.6	4.3	5.5	13.2	17.4	15.0
Ecuador	12.0	10.4	10.8	9.6	4.1	7.7	13.2	15.9	18.3	19.2
El Salvador	4.7	8.0	7.5	9.1	9.0	7.9	10.4	12.1	7.9	7.6
Guatemala	2.2	3.2	2.9	5.6	8.6	12.1	10.5	8.0	9.5	12.0
Haiti	12.2	23.0	25.3	27.8	27.9	21.5	22.6	29.2[d]	...	...
Honduras	21.9	13.3	10.6	5.9	8.6	9.7	16.2	22.6	25.6	23.3[b]
Mexico	8.0	10.1	9.4	8.3	3.2	3.3	1.6	7.9	8.7	7.9[b]
Nicaragua	15.7	0.2	-19.6	-11.1	-12.9	-10.6	-11.5	-4.8	1.0	...
Panama	10.3	8.9	0.8	-7.4	-11.0	0.3	7.3	9.4	7.4	...
Paraguay	-1.1	12.2	15.9	6.9	8.9	15.3	13.9	17.6	22.7	20.4
Peru	11.3	37.7	6.5	26.9	27.8	12.7	-0.2	-8.4	0.9	2.4
Uruguay	4.1	-3.7	21.4	11.3	8.1	2.2	12.1	15.1	10.2	15.6
Venezuela (Bolivarian Republic of)[e]	302.9	231 191.5	14 049.8	2 166.7	2 446.8	1 543.7	1 149.7	422.4	142.6	75.3
The Caribbean										
Antigua and Barbuda	5.1	-1.7	4.7	...	...	...	...	...	...	...
Bahamas	1.9	-3.5	0.5	0.5	-1.4	-2.8	-2.4	1.3	1.5	...
Barbados	4.7	-1.6	-13.4	-0.4	0.4	2.2	1.7	2.7	3.2	3.0[b]
Belize	2.5	6.2	6.4	5.2	4.9	5.9	4.6	1.4	-0.2	-1.2[b]
Dominica	-24.6	24.4	39.7	...	...	...	...	...	...	...
Grenada	-6.7	-5.5	-8.2	...	...	...	...	...	...	...
Guyana	9.3	19.0	15.1	15.4	10.4	-10.5	-43.7	-36.8	-28.8	-27.4
Jamaica	18.3	10.5	10.8	15.8	20.2	10.8	7.6	5.6	...	...
Saint Kitts and Nevis	105.8	-0.1	44.0	...	...	...	...	...	...	...
Saint Lucia	-8.0	-6.5	-1.0	...	...	...	...	...	...	...
Saint Vincent and the Grenadines	0.1	3.0	-3.2	...	...	...	...	...	...	...
Suriname	13.3	-3.0	16.1	41.1	70.0	32.9	16.4	6.1	3.4	7.0
Trinidad and Tobago	13.5	12.7	16.6	13.4	18.5	17.2	12.3	10.5	4.9	0.3[b]

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Figures as of May.
[b] Figures as of April.
[c] Figures as of February.
[d] Figures as of November.
[e] Credit granted by the commercial and universal banks.

Table A.29
Latin America and the Caribbean: monetary policy rates
(Average rates)

	2017	2018	2019	2020	2021				2022	
					Q1	Q2	Q3	Q4	Q1	Q2
Latin America										
Argentina	26.42	44.43	65.22	39.66	38.00	38.00	38.00	38.00	42.33	49.33
Bolivia (Plurinational State of)	2.39	2.42	2.58	2.50	3.00	5.67	6.00	6.00	6.00	6.00
Brazil	9.83	6.56	5.96	2.81	2.25	3.50	5.25	8.25	10.58	12.58
Chile	2.69	2.56	2.46	0.75	0.50	0.50	1.00	3.17	6.00	8.08
Colombia	6.04	4.31	4.25	2.83	1.75	1.75	1.75	2.50	4.00	5.67
Costa Rica	3.50	5.02	4.23	1.13	0.75	0.75	0.75	0.92	2.00	4.50
Dominican Republic	5.44	5.38	4.98	3.46	3.00	3.00	3.00	3.67	5.17	6.42
Guatemala	2.96	2.75	2.75	2.00	1.75	1.75	1.75	1.75	1.75	1.92
Haiti	12.00	12.00	16.67	10.83	10.00	10.00	10.00	10.00	10.00	10.00[a]
Honduras	5.50	5.50	5.73	4.21	3.00	3.00	3.00	3.00	3.00	3.00
Mexico	6.75	7.69	8.00	5.31	4.08	4.08	4.42	5.08	6.00	7.08
Paraguay	5.40	5.25	4.50	1.67	0.75	0.75	1.08	4.00	5.83	7.25
Peru	3.83	2.79	2.60	0.67	0.25	0.25	0.58	2.00	3.50	5.00
Uruguay	...	...	...	4.50	4.50	4.50	4.83	5.58	7.00	8.88
The Caribbean										
Antigua and Barbuda	6.50	6.50	6.50	3.13	2.00	2.00	2.00	2.00	2.00	2.00
Bahamas	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00[b]
Barbados	7.00	7.00	7.00	3.25	2.00	2.00	2.00	2.00	2.00	2.00[b]
Belize	11.00	11.00	11.00	11.13	11.00	11.00	11.00	11.00	11.00	11.00[b]
Dominica	6.50	6.50	6.50	3.13	2.00	2.00	2.00	2.00	2.00	2.00
Grenada	6.50	6.50	6.50	3.13	2.00	2.00	2.00	2.00	2.00	2.00
Guyana	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	...
Jamaica	4.17	2.29	0.88	0.50	0.50	0.50	0.50	2.00	3.67	5.00
Saint Kitts and Nevis	6.50	6.50	6.50	3.13	2.00	2.00	2.00	2.00	2.00	2.00
Saint Lucia	6.50	6.50	6.50	3.13	2.00	2.00	2.00	2.00	2.00	2.00
Saint Vincent and the Grenadines	6.50	6.50	6.50	3.13	2.00	2.00	2.00	2.00	2.00	2.00
Trinidad and Tobago	4.75	4.90	5.00	3.75	3.50	3.50	3.50	3.50	3.50	...

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Figures as of May.
[b] Figures as of April.

Table A.30
Latin America and the Caribbean: representative lending rates
(Average rates)

	2017	2018	2019	2020	2021				2022	
					Q1	Q2	Q3	Q4	Q1	Q2[a]
Latin America										
Argentina[b]	26.8	47.7	66.9	36.8	40.0	41.2	40.9	38.9[c]	...	...
Bolivia (Plurinational State of)[d]	6.0	6.4	6.4	6.3	7.7	6.7	6.8	6.5	6.7	5.6[e]
Brazil[f]	49.9	45.2	42.7	33.8	33.4	33.4	32.8	36.4	38.2[g]	...
Chile[h]	11.5	10.6	8.5	8.0	9.2	8.9	9.1	12.6	15.2	16.3
Colombia[i]	13.7	12.1	11.8	9.9	9.1	8.6	9.5	10.2	11.9	13.0[e]
Costa Rica[j]	14.5	14.3	13.0	10.9	9.9	9.4	9.8	8.9	9.5	9.8[e]
Dominican Republic[j]	13.9	12.5	12.5	11.0	9.5	9.8	9.5	9.6	10.0	10.9
Ecuador[k]	7.9	7.7	8.6	8.9	8.4	8.6	7.9	7.5	7.3	6.9
El Salvador[l]	6.3	6.4	6.6	6.6	6.1	6.2	6.3	6.2	6.1	5.9[e]
Guatemala[j]	13.1	12.9	12.7	12.5	12.3	12.3	12.1	12.0	11.9	11.9[e]
Haiti[m]	18.0	17.7	18.7	16.2[n]	...	...	...	...	...	...
Honduras[j]	19.3	17.8	17.3	17.0	16.5	16.2	15.9	15.3	15.0	...
Mexico[o]	27.0	28.3	30.3	30.2	29.6	29.5	29.1	29.2	29.5	29.6[e]
Nicaragua[p]	10.9	10.9	12.5	11.2	10.3	9.4	9.2	9.6	...	...
Panama[q]	6.8	6.9	7.1	7.0	6.9	6.9	7.0	6.9	6.9	6.9[e]
Paraguay[r]	14.3	12.9	12.7	10.7	10.3	9.8	9.1	9.9	11.4	...
Peru[s]	16.8	14.5	14.4	12.9	11.7	10.9	10.6	10.8	11.3	12.0
Uruguay[t]	15.4	14.2	13.3	12.7	9.6	8.4	8.0	8.8	9.7	10.5[e]
Venezuela (Bolivarian Republic of) [u]	21.5	21.9	29.3	33.2	41.1	46.0	41.7	44.9	50.2	47.2[e]
The Caribbean										
Antigua and Barbuda[v]	9.0	8.8	8.6	...	...	...	...	...	...	...
Bahamas[w]	11.8	11.4	11.2	10.3	10.2	9.5	10.1	10.3	10.6	11.2[e]
Barbados[v]	6.6	6.7	6.5	6.1	5.8	5.8	5.7	5.7	5.6	...
Belize[x]	9.5	9.1	9.1	8.7	8.5	8.3	8.4	8.3	8.6[g]	...
Dominica[v]	8.0	7.7	7.5	...	...	...	...	...	...	...
Grenada[v]	8.2	7.7	7.3	...	...	...	...	...	...	...
Guyana[y]	10.6	10.4	8.9	8.5	8.5	8.6	8.6	8.5	8.3	8.3[e]
Jamaica[x]	14.9	14.1	13.0	12.1	11.7	11.5	11.5	11.5	11.6	...
Saint Kitts and Nevis[v]	8.5	8.2	8.0	...	...	...	...	...	...	...
Saint Lucia[v]	8.1	8.0	7.6	...	...	...	...	...	...	...
Saint Vincent and the Grenadines[v]	8.7	8.4	8.3	...	...	...	...	...	...	...
Suriname[z]	14.4	14.3	15.0	14.8	14.9	14.8	14.8	14.7	14.7	...
Trinidad and Tobago[y]	9.1	9.1	9.3	7.9	7.6	7.6	7.6	7.6	7.6	7.6

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Figures as of May.
[b] Local-currency loans to the non-financial private sector, at fixed or renegotiable rates, signature loans of up to 89 days.
[c] Figures as of November.
[d] Nominal local-currency rate for 60-91-day operations.
[e] Figures as of April.
[f] Interest rate on total consumer credit for individuals.
[g] Figures as of February.
[h] Non-adjustable 90-360 day operations.
[i] Weighted average of consumer, prime, ordinary and treasury lending rates for the working days of the month.
[j] Weighted average of the system lending rates in local currency.
[k] Effective benchmark lending rate for the corporate commercial segment.
[l] Basic lending rate for up to one year.
[m] Average of minimum and maximum lending rates.
[n] Figures as of October.
[o] Average interest rate for credit cards from commercial banks and the TAC rate (Total Annual Cost).
[p] Weighted average of short-term lending rates in local currency.
[q] Interest rate on one-year trade credit.
[r] Commercial lending rate, local currency.
[s] Market lending rate, average for transactions conducted in the last 30 business days.
[t] Business credit, 30-367 days.
[u] Average rate for loan operations for the six major commercial banks.
[v] Weighted average of lending rates.
[w] Weighted average of lending and overdraft rates.
[x] Rate for personal and business loans, residential and other construction loans; weighted average.
[y] Basic Prime lending rate.
[z] Average of lending rates.

Table A.31
Latin America and the Caribbean: consumer prices
(12-month percentage variation)

	2017	2018	2019	2020	2021				2022	
					March	June	September	December	March	June
Latin America and the Caribbean[a]	**3.4**	**3.0**	**2.9**	**2.9**	**3.8**	**5.1**	**6.1**	**6.6**	**7.5**	**8.4**
Latin America										
Argentina	25.0	47.1	52.9	34.1	40.4	48.3	51.7	51.4	55.9	65.0
Bolivia (Plurinational State of)	2.7	1.5	1.5	0.7	1.2	0.2	1.0	0.9	0.8	1.8
Brazil	2.9	3.7	4.3	4.5	6.0	8.3	10.2	10.0	11.3	11.9
Chile	2.3	2.6	3.0	3.0	2.9	3.8	5.3	7.2	9.4	12.5
Colombia	4.1	3.1	3.8	1.6	1.5	3.6	4.5	5.6	8.5	9.7
Costa Rica	2.6	2.0	1.5	0.9	0.5	1.9	2.1	3.3	5.8	10.1
Cuba[b]	0.6	2.4	-1.3	18.5	73.1	74.8	72.1	77.3	21.7	28.9
Dominican Republic	4.2	1.2	3.7	5.6	8.3	9.3	7.7	8.5	9.1	9.5
Ecuador	-0.2	0.3	-0.1	-0.9	-0.8	-0.7	1.1	1.9	2.6	4.2
El Salvador	2.0	0.4	0.0	-0.1	1.8	2.6	5.0	6.1	6.7	7.8
Guatemala	5.7	2.3	3.4	4.8	5.8	3.9	3.7	3.1	4.2	7.6
Haiti	13.3	16.5	20.8	19.2	17.2	12.5	12.9	24.6	25.9	29.6
Honduras	4.7	4.2	4.1	4.0	3.9	4.7	4.6	5.3	7.0	10.2
Mexico	6.8	4.8	2.8	3.2	4.7	5.9	6.0	7.4	7.5	8.0
Nicaragua	5.8	3.4	6.5	2.6	4.2	4.1	5.8	7.3	8.7	10.2
Panama	0.5	0.2	-0.1	-1.6	0.3	1.6	2.5	2.6	3.2	5.2
Paraguay	4.5	3.2	2.8	2.2	2.4	4.5	6.4	6.8	10.1	11.5
Peru	1.4	2.2	1.9	2.0	2.6	3.3	5.2	6.4	6.8	8.8
Uruguay	6.6	8.0	8.8	9.4	8.3	7.3	7.4	8.0	9.4	9.3
Venezuela (Bolivarian Republic of)	862.6	130 060.2	9 585.5	2 959.8	3 012.2	2 507.9	1 946.0	686.4	284.4	157.2
The Caribbean										
Antigua and Barbuda	2.4	1.7	0.7	2.8	2.1	0.6	2.1	1.2	6.1	10.5
Bahamas	1.8	2.0	1.4	1.2	1.4	2.7	4.1	4.1	4.7	6.2
Barbados	6.6	0.6	7.2	1.3	1.1	2.9	5.6	5.0	9.3	9.3[c]
Belize	1.0	-0.1	0.2	0.4	1.5	3.0	3.8	4.9	5.7	6.6[c]
Dominica	-1.5	4.0	0.1	-0.7	0.5	0.6	1.8	3.8	5.3	5.3[d]
Grenada	0.5	1.4	0.1	-0.8	0.3	1.5	1.6	1.9	2.9	2.9[d]
Guyana	1.5	1.6	2.1	0.9	2.0	6.5	6.4	5.7	6.8	4.7
Jamaica	5.2	2.4	6.2	4.5	4.5	4.4	8.3	7.3	11.3	10.9
Saint Kitts and Nevis	0.8	-0.8	-0.8	-1.2	0.3	1.4	1.7	1.9	1.2	1.2[d]
Saint Lucia	2.0	1.6	-0.7	-0.4	0.9	2.9	2.1	4.1	6.2	6.2[d]
Saint Vincent and the Grenadines	3.0	1.4	0.5	-1.0	-0.1	1.9	2.7	3.4	3.6	5.2
Suriname	9.3	5.4	4.2	60.7	50.2	54.0	69.5	60.7	62.2	55.1
Trinidad and Tobago	1.3	1.0	0.4	0.8	0.8	1.8	2.4	3.5	4.1	4.9

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Weighted average. Does not include data on economies with chronic inflation (Argentina, Haiti, Suriname and Venezuela (Bolivarian Republic of)).
[b] Refers to national-currency markets.
[c] Figures as of May.
[d] Figures as of March.

Table A.32
Latin America and the Caribbean: central government fiscal balances
(Percentages of GDP)

	Primary balance				Overall balance			
	2018	2019	2020	2021	2018	2019	2020	2021
Latin America and the Caribbean[a]	**0.3**	**-0.2**	**-4.1**	**-1.3**	**-2.3**	**-2.7**	**-6.8**	**-3.9**
Latin America [b]	**-0.5**	**-0.5**	**-4.2**	**-1.7**	**-2.9**	**-3.0**	**-6.9**	**-4.2**
Argentina	-1.8	0.3	-1.4	-2.6	-5.5	-4.0	-3.7	-4.2
Bolivia (Plurinational State of)[c]	-5.2	-6.1	-12.1	…	-6.0	-6.9	-13.1	…
Brazil	-1.7	-1.3	-10.0	-0.4	-7.2	-5.7	-13.8	-4.9
Chile	-0.8	-1.9	-6.3	-6.8	-1.7	-2.9	-7.3	-7.7
Colombia	-0.6	0.1	-5.1	-3.7	-3.1	-2.5	-7.8	-7.1
Costa Rica	-2.2	-2.7	-3.4	-0.3	-5.7	-6.7	-8.0	-5.0
Dominican Republic	0.4	0.6	-4.7	0.2	-2.2	-2.2	-7.9	-2.9
Ecuador	-1.1	-2.0	-4.2	-2.1	-3.8	-5.0	-7.5	-3.9
El Salvador	2.3	1.8	-5.0	-0.6	-1.1	-1.6	-9.2	-4.9
Guatemala	-0.3	-0.6	-3.2	0.6	-1.9	-2.2	-4.9	-1.2
Haiti[d e]	…	…	…	…	…	…	…	…
Honduras	0.9	0.6	-3.5	-1.8	-2.1	-2.5	-7.0	-5.0
Mexico[f]	0.5	1.1	0.0	-0.3	-2.1	-1.6	-2.9	-2.9
Nicaragua	-0.8	1.6	0.2	0.5	-1.9	0.3	-1.1	-0.7
Panama	-1.4	-2.2	-6.4	-3.9	-3.2	-4.1	-9.1	-6.3
Paraguay	-0.6	-2.0	-5.1	-2.6	-1.3	-2.8	-6.1	-3.7
Peru[c]	-0.7	-0.1	-6.8	-1.2	-2.0	-1.4	-8.3	-2.6
Uruguay	0.7	-0.4	-2.4	-1.6	-1.9	-2.8	-5.1	-3.8
The Caribbean[g]	**1.3**	**0.2**	**-4.0**	**-0.7**	**-1.5**	**-2.4**	**-6.8**	**-3.5**
Antigua and Barbuda	-0.7	-1.2	-3.0	-2.1	-3.2	-3.8	-5.5	-4.6
Bahamas[h]	-0.8	0.8	-3.8	-8.7	-3.3	-1.7	-6.6	-12.7
Barbados[i j]	3.5	6.1	-0.8	-0.9	-0.3	3.7	-4.1	-4.6
Belize[i]	2.4	-1.4	-9.2	1.7	-0.9	-4.5	-11.2	-0.7
Dominica	-5.0	-13.0	-1.0	-5.0	-7.1	-15.1	-3.6	-7.2
Grenada	6.9	6.8	-2.6	1.7	4.9	5.0	-4.5	-0.2
Guyana	-1.8	-2.0	-7.3	-6.4	-2.7	-2.8	-7.9	-6.8
Jamaica[i]	7.5	7.1	3.5	7.1	1.2	0.9	-3.1	1.0
Saint Kitts and Nevis[k]	4.3	1.8	-1.1	8.4	3.0	0.6	-2.5	7.2
Saint Lucia	1.0	0.8	-4.8	-4.5	-1.8	-2.2	-8.6	-8.0
Saint Vincent and the Grenadines	0.7	-0.9	-3.9	-3.0	-1.5	-3.2	-6.1	-5.1
Suriname[d]	-6.8	-15.7	-7.5	3.6	-10.1	-18.6	-9.7	1.7
Trinidad and Tobago [e]	-0.6	0.6	-7.8	-5.5	-3.6	-2.6	-11.1	-9.4

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Simple averages. Does not include Bolivia (Plurinational State of), Cuba, Dominica, Haiti or Venezuela (Bolivarian Republic of).
[b] Simple averages for 16 countries. Does not include Bolivia (Plurinational State of), Cuba, Haiti or Venezuela (Bolivarian Republic of).
[c] General government.
[d] Includes statistical discrepancy.
[e] Fiscal years, from 1 October to 30 September.
[f] Federal public sector.
[g] Simple averages for 12 countries. Does not include Dominica.
[h] Fiscal years, from 1 July to 30 June.
[i] Fiscal years, from 1 April to 31 March.
[j] Non-financial public sector.
[k] Federal government.

Table A.33
Latin America and the Caribbean: composition of general government tax revenue
(Percentages of GDP)

	Total tax burden		Social security contributions		Direct taxes		Indirect taxes		Other taxes	
	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021
Latin America and the Caribbean[a]	**23.0**	**22.2**	**3.8**	**3.8**	**7.1**	**6.9**	**11.8**	**11.2**	**0.4**	**0.3**
Latin America [a]	**21.0**	**22.0**	**4.4**	**4.3**	**6.6**	**7.0**	**9.5**	**10.3**	**0.5**	**0.4**
Argentina	30.2	28.8	5.7	5.1	8.7	8.1	15.5	15.4	0.2	0.2
Bolivia (Plurinational State of)	20.3	23.9	6.0	6.3	2.8	3.2	9.6	12.2	1.9	2.2
Brazil	30.0	33.8	6.8	8.0	8.8	10.2	13.8	15.1	0.7	0.5
Chile	19.3	22.4	1.6	1.3	7.4	9.6	10.6	11.8	-0.2	-0.3
Colombia	18.6	18.8	2.2	2.0	8.2	8.9	7.5	7.3	0.7	0.6
Costa Rica	22.2	25.6	7.6	9.0	6.6	7.4	7.6	8.8	0.5	0.4
Dominican Republic	12.5	14.6	0.1	0.1	4.8	5.9	7.6	8.7	0.0	0.0
Cuba	37.5	…	6.0	…	12.1	…	17.4	…	2.0	…
Ecuador	19.6	19.4	5.9	5.0	4.9	4.5	8.8	9.9	0.0	0.0
El Salvador	21.9	23.2	2.8	2.7	7.8	7.9	10.9	12.4	0.4	0.2
Guatemala	13.2	15.0	2.1	2.2	4.0	4.7	7.1	8.1	0.0	0.0
Haiti[b]	…	…	…	…	…	…	…	…	…	…
Honduras	19.1	21.1	4.0	3.5	5.1	5.9	9.5	11.1	0.7	0.6
Mexico	17.8	16.7	2.5	2.3	8.3	7.8	6.7	6.2	0.4	0.3
Nicaragua	25.4	25.6	6.7	6.5	7.6	8.3	9.6	10.8	1.6	0.0
Panama	13.6	12.5	5.8	5.4	4.1	3.7	3.6	3.4	0.2	0.0
Paraguay	10.7	14.1	1.0	3.9	2.6	2.8	7.0	7.3	0.1	0.1
Peru	15.3	17.9	2.1	1.9	6.0	6.8	7.2	8.5	0.1	0.7
Uruguay	30.0	26.2	10.0	6.4	9.2	8.9	10.7	10.8	0.2	0.1
The Caribbean[a]	**23.6**	**24.5**	**3.1**	**3.0**	**7.2**	**7.8**	**13.3**	**13.7**	**0.0**	**0.0**
Antigua and Barbuda	19.8	20.3	3.8	3.5	3.8	4.4	12.2	12.4	0.0	0.0
Bahamas[c]	19.6	19.3	3.1	3.1	1.5	2.1	14.9	14.2	0.0	0.0
Barbados[d]	32.4	33.9	5.8	6.9	13.0	11.4	13.6	15.6	0.0	0.0
Belize[d]	26.7	32.4	3.0	3.1	7.5	8.6	16.1	20.8	0.0	0.0
Dominica	27.0	27.0	4.2	3.9	4.6	4.1	18.3	19.0	0.0	0.0
Grenada	26.0	23.8	3.0	2.8	6.1	4.9	16.9	16.0	0.0	0.0
Guyana	20.1	17.3	2.0	1.7	9.1	8.0	8.9	7.3	0.2	0.3
Jamaica[d]	27.3	29.3	1.2	1.5	10.5	10.3	15.5	17.4	0.1	0.1
Saint Kitts and Nevis	24.0	22.6	4.3	3.8	6.2	6.6	13.5	12.2	0.0	0.0
Saint Lucia	22.6	21.3	2.6	2.4	5.4	5.3	14.6	13.6	0.0	0.0
Saint Vincent and the Grenadines	27.6	27.1	3.1	2.8	8.7	10.2	15.9	14.1	0.0	0.0
Suriname	11.8	20.6	0.3	0.5	6.5	13.9	5.0	6.3	0.0	0.0
Trinidad and Tobago[b]	21.8	24.0	3.2	3.1	10.6	11.7	8.0	9.1	0.0	0.0

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Simple averages. Does not include Haiti and Venezuela (Bolivarian Republic of).
[b] Fiscal years, from 1 October to 30 September.
[c] Fiscal years, from 1 July to 30 June.
[d] Fiscal years, from 1 April to 31 March.

Table A.34
Latin America and the Caribbean: central government public income and expenditure
(Percentages of GDP)

	Total revenue		Total expenditure		Primary current expenditure		Interest payments on public debt		Capital expenditure	
	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021
Latin America and the Caribbean[a]	**20.8**	**22.9**	**27.7**	**26.8**	**20.7**	**19.9**	**2.7**	**2.7**	**4.2**	**4.2**
Latin America[b]	**17.7**	**19.2**	**24.6**	**23.4**	**18.5**	**17.3**	**2.6**	**2.5**	**3.4**	**3.5**
Argentina	21.8	18.8	25.5	23.1	21.9	18.9	2.3	1.7	1.3	2.6
Bolivia (Plurinational State of)[c]	23.6	...	36.7	...	29.9	...	1.0	...	5.9	...
Brazil	19.7	22.3	33.4	27.2	27.9	21.9	3.8	4.5	1.7	0.7
Chile	20.0	23.9	27.3	31.5	23.0	27.4	1.0	0.9	3.4	3.3
Colombia	15.3	16.3	23.1	23.4	18.2	18.0	2.7	3.4	2.2	2.0
Costa Rica	13.1	15.9	21.1	20.9	15.3	14.6	4.6	4.8	1.2	1.5
Dominican Republic	14.2	15.6	22.5	18.6	15.4	12.7	3.2	3.1	3.8	2.8
Ecuador	19.6	23.6	27.1	27.5	18.6	18.7	3.3	1.8	5.1	7.0
El Salvador	19.9	21.0	29.2	25.9	19.8	17.8	4.2	4.3	3.3	3.8
Guatemala	10.7	12.4	15.6	13.5	10.9	9.4	1.7	1.7	3.0	2.4
Haiti[d e]	...	...	...	...	...	...	...	...	...	...
Honduras	16.6	19.1	23.6	24.1	15.9	15.7	3.4	3.1	4.2	5.3
Mexico[f]	22.9	22.7	25.7	25.7	19.3	18.6	2.9	2.6	3.4	4.4
Nicaragua	19.2	21.3	20.2	22.0	14.3	14.8	1.3	1.3	4.6	6.0
Panama	12.5	12.2	21.5	18.6	12.2	11.6	2.6	2.4	6.7	4.5
Paraguay	13.5	14.0	19.7	17.8	14.2	12.7	1.1	1.1	4.4	3.9
Peru[c]	17.9	21.1	26.2	23.7	20.2	17.2	1.5	1.4	4.5	5.0
Uruguay	27.1	26.5	32.2	30.3	28.2	27.0	2.7	2.2	1.3	1.1
The Caribbean[g]	**24.9**	**27.8**	**31.8**	**31.3**	**23.7**	**23.4**	**2.8**	**2.8**	**5.2**	**5.1**
Antigua and Barbuda	21.2	20.5	26.7	25.2	21.3	20.2	2.6	2.5	2.9	2.5
Bahamas[h]	17.0	17.7	23.7	30.4	17.8	22.9	2.8	4.0	3.0	3.5
Barbados[i j]	24.2	26.6	28.2	31.2	22.4	23.5	3.2	3.8	2.6	4.0
Belize[i]	28.9	33.2	40.1	33.9	27.8	24.7	2.1	2.4	10.3	6.8
Dominica	53.3	58.5	56.8	65.7	41.7	34.8	2.6	2.2	12.6	28.7
Grenada	28.1	30.9	32.7	31.1	21.1	20.5	2.0	1.9	9.6	8.7
Guyana	20.6	16.0	28.5	22.9	21.2	16.3	0.7	0.5	6.7	6.2
Jamaica[i]	29.1	32.3	32.2	31.3	23.1	22.9	6.5	6.1	2.5	2.3
Saint Kitts and Nevis[k]	37.4	50.2	39.8	43.0	31.0	31.9	1.3	1.2	7.5	9.9
Saint Lucia	22.1	21.9	30.7	29.9	22.4	21.1	3.7	3.5	4.6	5.3
Saint Vincent and the Grenadines	29.1	31.5	35.2	36.6	25.1	26.4	2.2	2.1	8.0	8.2
Suriname[d]	18.4	27.3	29.6	25.8	23.7	22.0	3.7	2.1	2.2	1.7
Trinidad and Tobago[e]	22.8	25.3	33.9	34.7	27.9	28.7	3.4	3.9	2.6	2.1

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Simple averages. Does not include Bolivia (Plurinational State of), Cuba, Dominica, Haiti or Venezuela (Bolivarian Republic of).
[b] Simple averages for 16 countries. Does not include Bolivia (Plurinational State of), Cuba, Haiti or Venezuela (Bolivarian Republic of).
[c] General government.
[d] Includes statistical discrepancy.
[e] Fiscal years, from 1 October to September 30.
[f] Federal public sector.
[g] Simple averages for 12 countries. Does not include Dominica.
[h] Fiscal years, from 1 July to June 30.
[i] Fiscal years, from 1 April to March 31.
[j] Non-financial public sector.
[k] Federal government.

Table A.35
Latin America and the Caribbean: non-financial public sector gross public debt
(Percentages of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021
Latin America and the Caribbean[a]	**56.3**	**57.1**	**58.7**	**59.1**	**59.2**	**60.7**	**76.8**	**74.4**
Latin America[a]	**37.0**	**39.7**	**41.6**	**43.2**	**46.5**	**49.3**	**60.3**	**57.2**
Argentina[b]	44.7	52.6	53.3	56.5	85.2	89.8	103.8	80.6
Bolivia (Plurinational State of)[c]	30.4	31.2	34.5	37.2	37.5	43.1	58.5	57.8
Brazil[d]	58.9	66.5	70.0	74.0	77.2	74.3	88.6	80.3
Chile	24.0	27.4	30.3	32.1	34.9	38.6	42.7	46.6
Colombia	47.5	54.9	54.9	54.4	57.5	57.3	71.5	72.8
Costa Rica	45.6	47.8	51.3	58.0	61.8	71.9	77.1	75.7
Dominican Republic	36.0	35.1	35.3	36.9	37.6	40.4	56.6	50.5
Ecuador	29.6	33.0	38.2	44.5	45.0	52.3	63.1	61.8
El Salvador	51.8	52.2	52.7	52.2	51.4	52.6	66.6	64.6
Guatemala[e]	24.7	24.8	25.0	24.6	26.0	25.7	31.5	30.8
Haiti[e f]	20.3	23.3	23.3	38.3	39.9	47.0	…	…
Honduras[e]	44.4	44.4	46.0	47.6	48.5	48.7	58.9	55.8
Mexico[g]	40.1	44.2	49.4	46.9	46.9	46.7	53.3	51.5
Nicaragua	30.7	30.4	31.8	34.5	38.1	42.4	48.8	48.1
Panama	36.5	37.4	37.4	37.6	39.6	46.3	68.5	63.7
Paraguay	13.5	15.1	17.3	18.2	19.7	22.7	33.6	33.8
Peru	19.9	20.9	22.7	24.9	25.8	26.8	34.6	35.9
Uruguay	44.6	49.0	49.5	48.4	49.3	52.8	65.4	63.2
Venezuela (Bolivarian Republic of)[e]	28.5	31.7	31.1	34.9	…	…	…	…
The Caribbean[h]	**79.9**	**78.4**	**79.8**	**78.7**	**74.8**	**74.6**	**97.1**	**95.6**
Antigua and Barbuda	100.2	86.9	82.6	83.4	78.5	76.3	98.6	97.4
Bahamas	71.4	69.7	72.0	76.9	78.4	77.0	115.9	107.4
Barbados	137.0	142.4	150.5	148.9	123.6	118.0	136.6	137.2
Belize	77.7	80.9	87.3	95.0	93.6	96.6	130.1	111.1
Dominica	76.9	75.0	67.7	74.4	74.5	83.1	109.1	111.1
Grenada	96.9	88.6	80.0	69.7	62.7	57.7	70.6	69.5
Guyana	38.7	36.0	35.7	35.2	35.8	32.6	47.4	38.6
Jamaica[e]	129.4	112.9	108.4	104.4	97.1	92.4	103.3	100.5
Saint Kitts and Nevis	71.7	63.7	59.0	59.3	57.3	54.3	67.9	68.4
Saint Lucia	61.1	60.4	59.9	59.0	59.9	61.0	90.0	91.5
Saint Vincent and the Grenadines	80.3	79.1	82.1	74.1	69.2	68.0	80.9	88.1
Suriname[e]	31.0	49.9	72.0	67.3	62.7	71.5	122.5	128.9
Trinidad and Tobago	66.5	73.5	80.1	75.8	79.1	81.7	89.6	92.1

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Simple averages. Does not include Bolivia (Plurinational State of), Haiti and Venezuela (Bolivarian Republic of).
[b] Central administration.
[c] Refers to the external debt of the non-financial public sector and central government domestic debt.
[d] General government.
[e] Central government.
[f] Does not include public sector commitments to commercial banks.
[g] Federal public sector.
[h] Simple averages.

Table A.36
Latin America and the Caribbean: central government gross public debt
(Percentages of GDP)

	2014	2015	2016	2017	2018	2019	2020	2021
Latin America and the Caribbean[a]	**50.8**	**51.5**	**53.2**	**53.7**	**54.3**	**55.6**	**71.3**	**69.0**
Latin America[a]	**34.1**	**36.5**	**38.2**	**39.7**	**43.0**	**45.4**	**56.6**	**53.4**
Argentina[b]	44.7	52.6	53.3	56.5	85.2	89.8	103.8	80.6
Bolivia (Plurinational State of)	28.0	29.0	32.0	34.0	35.0	40.2	57.9	63.0
Brazil[c]	58.9	66.5	70.0	74.0	77.2	74.3	88.6	80.3
Chile	15.0	17.3	21.0	23.6	25.6	28.3	32.5	36.3
Colombia	40.2	45.0	46.0	44.9	48.6	48.4	61.4	61.5
Costa Rica	37.5	39.8	43.6	48.4	51.7	56.5	67.6	68.2
Dominican Republic	35.9	34.4	34.5	36.1	36.8	39.6	55.9	50.0
Ecuador	27.5	30.9	35.7	41.3	42.2	48.2	59.0	57.0
El Salvador	49.6	49.7	49.6	48.2	47.6	48.8	63.2	59.9
Guatemala	24.7	24.8	25.0	24.6	26.0	25.7	31.5	30.8
Haiti[d]	20.3	23.3	23.3	38.3	39.9	47.0	...	...
Honduras	44.4	44.4	46.0	47.6	48.5	48.7	58.9	55.8
Mexico	31.7	34.1	37.0	35.2	35.4	36.1	41.5	40.8
Nicaragua	30.2	29.9	31.2	34.0	37.7	42.0	48.4	47.8
Panama	36.2	37.1	37.0	37.3	39.3	46.3	68.4	63.6
Paraguay	12.1	13.3	15.1	15.7	16.9	19.6	29.7	30.1
Peru	18.1	19.7	21.6	23.3	23.8	24.8	32.9	32.7
Uruguay	39.0	44.3	45.5	44.6	45.6	48.8	61.4	59.6
Venezuela (Bolivarian Republic of)	28.5	31.7	31.1	34.9	...	...	...	...
The Caribbean[e]	**71.3**	**70.0**	**71.5**	**71.0**	**68.3**	**68.2**	**89.3**	**88.1**
Antigua and Barbuda	84.1	71.1	67.8	67.2	64.2	64.9	85.2	83.3
Bahamas	57.5	56.6	58.8	63.8	64.7	64.1	101.6	95.6
Barbados	121.9	129.6	137.6	137.4	122.7	117.3	136.1	136.7
Belize	75.3	78.4	84.8	92.4	92.2	92.4	125.1	104.4
Dominica	65.2	64.0	57.4	62.3	64.0	72.0	97.1	100.8
Grenada	89.6	82.7	75.7	65.8	62.7	57.7	70.6	69.5
Guyana[f]	38.7	36.0	35.7	35.2	35.8	32.6	47.4	38.6
Jamaica[f]	129.4	112.9	108.4	104.4	97.1	92.4	103.3	100.5
Saint Kitts and Nevis	59.9	51.3	47.9	47.6	41.5	37.8	46.4	46.6
Saint Lucia	57.6	57.4	57.6	55.2	56.5	57.6	85.1	85.8
Saint Vincent and the Grenadines	68.7	67.6	65.9	67.2	63.7	64.7	77.8	85.3
Suriname	31.0	49.9	72.0	67.3	62.7	71.5	122.5	128.9
Trinidad and Tobago	48.2	52.8	59.8	57.5	60.2	61.7	63.2	68.7

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of official figures.
[a] Simple averages. Does not include Bolivia (Plurinational State of), Haiti or Venezuela (Bolivarian Republic of).
[b] Central administration.
[c] General government.
[d] Does not include public sector commitments to commercial banks.
[e] Simple averages.
[f] Public sector.

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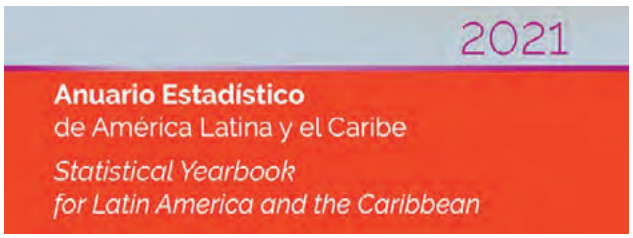

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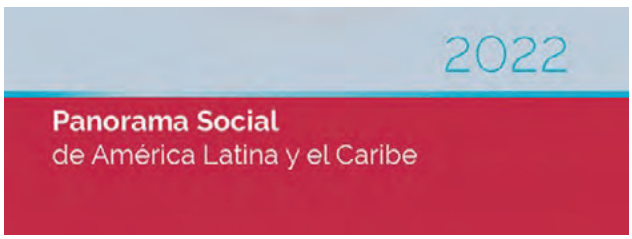

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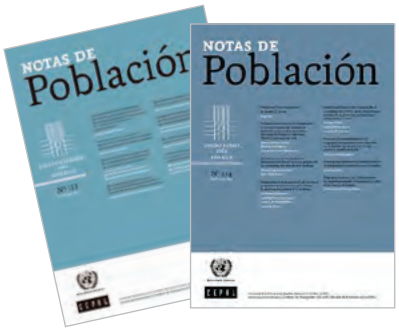

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