

INTERNATIONAL MONETARY FUND

# EXTERNAL SECTOR REPORT

Pandemic, War, and  
Global Imbalances

2022





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## FURTHER INFORMATION

### Corrections and Revisions

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## PREFACE

Produced since 2012, the IMF's annual *External Sector Report* analyzes global external developments and provides multilaterally consistent assessments of external positions, including current accounts, real exchange rates, external balance sheets, capital flows, and international reserves, of the world's largest economies, representing more than 90 percent of global GDP. Together with the *World Economic Outlook* and Article IV consultations, this report is part of a continuous effort to assess and address the possible effects of spillovers from members' policies on global stability and to monitor the stability of members' external positions in a comprehensive manner.

Chapter 1, "External Positions and Policies," discusses the evolution of global external positions in 2021, external developments throughout the lingering COVID-19 pandemic and the war in Ukraine, and policy priorities for reducing excess imbalances over the medium term. Chapter 2, "Climate Policies and External Adjustment," analyzes the economic effects of climate mitigation policies on external positions. It finds that the external sector effects depend crucially on country characteristics, such as initial carbon intensity and net fossil exports, on the degree of international policy coordination, and on credibility. Chapter 3, "2021 Individual Economy Assessments," provides details on various aspects of the overall external assessment and associated policy recommendations for 30 economies. This year's report and associated external assessments are based on the latest version of the IMF's External Balance Assessment (EBA) methodology and on data and IMF staff projections as of June 30, 2022.

This report was prepared under the overall guidance of Pierre-Olivier Gourinchas, IMF Economic Counsellor and Director of Research, and under the direction of the External Sector Coordinating Group, comprising staff from the IMF's area departments (African, Asia and Pacific, European, Middle East and Central Asia, and Western Hemisphere), as well as the Fiscal Affairs Department; the Statistics Department; the Strategy, Policy, and Review Department; the Monetary and Capital Markets Department; and the Research Department—namely, Ali Al-Eyd, Vivek Arora, Serkan Arslanalp, Maria Borga, Nigel Chalk, Ana Lucia Coronel, Borys Cotto, Alfredo Cuevas, Jörg Decressin, Chris Erceg, Raphael Espinoza, Gaston Gelos, Sonali Jain-Chandra, Martin D. Kaufman, Vitaliy Kramarenko, Jaewoo Lee (Chair), Daniel Leigh (former Chair), Amine Mati, Paolo Mauro, Paulo Medas, Lev Ratnovski, Carlos Sánchez-Muñoz, Niamh Sheridan, Piyaporn Sodsriwiboon, Martin Sommer, Antonio Spilimbergo, and Jeromin Zettelmeyer.

Rudolfs Bems and Pau Rabanal led the preparation of the report, which draws on contributions from Zamid Aligishiev, Cian Allen, Mahir Binici, Camila Casas, Julia Estefania-Flores, Giovanni Ganelli, Adam Jakubik, Luciana Juvenal, Siddharth Kothari, Weifeng Liu (external consultant), Warwick McKibbin (external consultant), Racha Moussa, Cyril Rebillard, Cian Ruane, Niamh Sheridan, and João Tovar Jalles (external consultant). Important input was provided by country teams as well as by Russell Green, Yuko Hashimoto, Parisa Kamali, Robin Koepke, Dimitre Milkov, Marco Rodriguez Waldo, Silvia Sgherri, and Hui Tong. Excellent research and editorial assistance were provided by Rachele Blasco, Luisa Calixto, Mariela Caycho Arce, Jane Haizel, Eduard Laurito, Cristina Quintos, Jair Rodriguez, Xiaohan Shao, and Rongjin Zhang.

Cheryl Toksoz and Gemma Rose Diaz from the Communications Department led the editorial team for the report, with production and editorial support from David Einhorn, Sue Kovach, Harold Medina (and team), Lucy Scott Morales, Joe Procopio, and the Grauel Group.

The analysis benefited from comments and suggestions by staff members from other IMF departments, as well as by the IMF's Executive Directors following their discussion of the report on July 22, 2022. However, both projections and policy considerations are those of the IMF staff and should not be attributed to Executive Directors or to their national authorities.

## EXECUTIVE SUMMARY

The *External Sector Report* presents a holistic assessment of external positions in 30 of the world's large economies, carried out by the IMF staff. While the assessment is centered on the comparison of current account balances with their norms (levels implied by fundamentals and desirable policy settings), it also considers other variables such as the exchange rate, reserves, capital flows, and international investment positions. The report also discusses recent trends, outlook, and risks for global current account balances, defined as the sum of the absolute values of current account deficits and surpluses, and policies to promote external rebalancing.

Global current account balances increased in 2020 and 2021 and are projected to widen further in 2022. They had been on a declining trend for several years before widening because of the COVID-19 pandemic in 2020. The widening of balances in 2021 was largely driven by the pandemic's continued impact and the increase in commodity prices that accompanied the economic recovery. In 2022, the war in Ukraine created a humanitarian crisis and is setting back the global recovery while increasing uncertainty and the risk of geoeconomic fragmentation. Fallouts from the war and the still-lingering pandemic are projected to widen global current account balances further in 2022. While the widening in global current account balances is not necessarily a negative development, excessive global imbalances can fuel trade tensions and protectionist measures or increase the risk of disruptive currency and capital flow movements.

The pandemic has continued to affect economies' current account balances through a fall in travel services, an increased demand for medical products, and a shift in household consumption toward goods rather than services. Transportation costs emerged as another important channel in 2021 because of the combination of high demand for tradable goods and supply bottlenecks associated with the pandemic. Energy and commodity prices recovered from the COVID-19 shock and started rising in 2021, a trend that the war is exacerbating in 2022, with opposite effects on the external positions of exporters and importers. Creditor and debtor stock

positions remained elevated at the end of 2021, though having moderated from their 2020 peaks, and the global financial safety net remained close to 20 percent of world GDP.

Currency movements during 2021 were relatively limited, despite considerable depreciation in several emerging market currencies vis-à-vis a broad set of trading partners. Monetary policy tightening is driving currency movements in 2022 as rising inflation is leading many central banks to accelerate the withdrawal of monetary stimulus. The revised expectation on the pace of the US monetary tightening brought about sizable currency realignment in early 2022, contributing to the projected widening of global current account balances.

Over the medium term, global current account balances are expected to resume their pre-pandemic downward trend as the COVID-19 pandemic's economic implications fade away, commodity prices normalize, and current account deficit economies implement fiscal consolidation faster than current account surplus economies. However, this outlook is subject to unusually high uncertainties at this juncture, which could well see global current account balances increasing. Risks to the outlook include a possible pandemic resurgence, slower-than-expected recovery in public savings (especially in current account deficit economies), the war's impact on commodity prices, a possible escalation of geopolitical conflicts and tensions, China's growth slowdown and zero-COVID-19 policy, the global pace of financial tightening, and trade and economic fragmentation.

The IMF's multilateral approach suggests that global excess current account balances—the sum of the absolute values of deviations of economies' current account balances from their norms—narrowed to 0.9 percent of world GDP in 2021 compared with 1.2 percent of world GDP in 2020. The largest contributors to lower-than-warranted current account balances as a share of world GDP were, in a descending order, the United States, Canada, and Belgium. The largest contributors to larger-than-warranted current account balances were, in a descending order, Germany, Australia, Russia, and Sweden.

Multilateral cooperation is key in dealing with the policy challenges generated by the pandemic and the war in Ukraine, including tackling the humanitarian crisis. Coordinated policy efforts will also be needed to counter the risks of global economic fragmentation, including by eschewing new barriers to trade. Maintaining liquidity in the global financial system, including via the global safety net, will help economies manage risks related to the tightening of global financial conditions and financial system fragmentation because of geopolitical tensions. Multilateral cooperation could greatly facilitate the green transition: in Chapter 2, a coordinated implementation of climate mitigation policies has been found to reduce global current account balances and help to bring forward net zero emissions.

Policies to promote external rebalancing differ with positions and needs of individual economies. Where excess current account deficits reflected fiscal deficits above desirable medium-term levels and where such imbalances persist, growth-friendly fiscal consolidation will be critical to support external rebalancing and bring the current account balance closer to its norm. Economies with lingering competitiveness challenges would need to address structural challenges—including through labor, product market, and other reforms—to promote green, digital, and inclusive growth while boosting productivity. In economies where excess current account surpluses persist, intensifying reforms that encourage public and private investment and discourage excessive private saving is warranted, including by expanding social safety nets in some emerging markets.

# IMF EXECUTIVE BOARD DISCUSSION SUMMARY

*The following remarks were made by the Acting Chair at the conclusion of the Executive Board's discussion of the External Sector Report on July 22, 2022.*

Executive Directors generally agreed with the findings of the 2022 *External Sector Report* (ESR) and its policy recommendations. They noted that global current account balances continued to widen in 2021 and are projected to widen further in 2022. Directors expressed concern that, despite having moderated from their recent peaks, stocks of foreign assets and liabilities remain elevated amid persistent excess current account balances.

Directors observed that the pandemic has continued to affect current account balances unequally across countries, through a fall in travel services, an increased demand for medical products, a shift in household consumption from services to goods, and a rise in transportation costs. They noted that in 2021 energy and commodity prices recovered from the pandemic shock and started rising, and that this trend is being exacerbated in 2022 by the war in Ukraine, with opposite effects on the external positions of commodity exporters and importers. Directors observed that, while currency movements were relatively limited during 2021, monetary tightening is driving currency realignments in 2022 and contributing to the projected widening of global balances.

Directors noted the staff's view that global current account balances are expected to narrow over the medium term as the impact of the pandemic fades away and commodity prices normalize. They cautioned that this outlook is subject to unusually high uncertainties at this juncture, which could well see global current account balances increasing. Directors concurred that key risks to the outlook include slower-than-expected recovery in public saving in current account deficit economies, a resurgence of the pandemic, an escalation of geopolitical tensions, a further increase in commodity prices, the pace of global financial tightening, and trade and economic fragmentation.

Directors highlighted that cooperation is key in dealing with the policy challenges generated by the

pandemic and the war in Ukraine, and that coordinated policy efforts will be needed to counter the risks of global economic fragmentation, including by eschewing new barriers to trade. Maintaining liquidity in the global financial system will help economies manage risks related to the tightening of global financial conditions and financial system fragmentation due to geopolitical tensions. In this context, Directors stressed that ensuring an adequate global safety net, with the Fund at its core, remains critical at a time of heightened vulnerabilities in emerging markets with high external liabilities.

Directors welcomed the analysis of the impact of climate policies on current account balances, highlighting the role of heterogeneity in country characteristics for external sector outcomes. They supported the main conclusion that climate policies could lead to large external sector adjustments and stressed that coordinated implementation of climate mitigation policies, with due consideration of the disproportionate economic costs on developing economies, will be critical to address climate change while supporting external rebalancing.

Directors noted that excess current account imbalances remain concentrated in advanced economies. They reiterated that their reduction requires continued joint efforts on the part of both excess surplus and excess deficit economies.

Directors underlined that policies to promote external rebalancing differ with positions and needs of individual economies. They considered that in economies in which excess current account deficits reflect excessive fiscal deficits, fiscal consolidation that preserves space for infrastructure and social spending and prevents long-term scarring from the pandemic will be critical to support external rebalancing. Directors noted that economies with lingering competitiveness challenges will need to address structural challenges to promote green, digital, and inclusive growth while boosting productivity. They also noted that in economies where excess current account surpluses persist, intensifying reforms that

encourage public and private investment and discourage excessive private saving is warranted, including by expanding social safety nets in some emerging markets. Directors welcomed the staff's analysis of historical persistence of current account gaps and looked forward to possible refinements in policy recommendations to better support external rebalancing.

Directors appreciated the consideration of temporary pandemic-induced factors in external sector assessments,

while also calling for further analysis to assess potentially more permanent effects. They welcomed the refinements to the EBA methodologies, and reiterated the need to ensure transparency, consistency, and evenhandedness of external assessments across countries. Directors also stressed the need for continued caution in interpreting and communicating the assessment results. They called for greater analysis of vulnerabilities associated with large external stock positions.

## War and Lingered Pandemic

Global current account balances started widening in 2020 at the pandemic's outset after several years on a narrowing trend. This reflects the asymmetric impact on external positions of the COVID-19 shock and the related policy responses, including through the travel and medical shocks, shifts in consumption, and larger fiscal support in advanced economies. These factors remained at play in 2021, and together with rising transportation costs and commodity prices as the recovery took hold, they have contributed to a further widening in global balances.<sup>1</sup>

The war in Ukraine has created a humanitarian crisis and is setting back the global recovery. It is exacerbating the widening trend in global balances in 2022 as it adds to existing commodity price pressures, with an opposite effect on commodity exporters and importers. The accelerated pace of US monetary tightening in response to rising inflation and the attendant dollar appreciation are also expected to contribute to widening global balances in 2022.

The medium-term outlook is for global balances to return to a narrowing trend as the pandemic's impact and the war shock recede. However, this outlook is subject to unusually large uncertainties at this juncture, which could well see global balances widening. Risks to the outlook include a possible pandemic resurgence, slower-than-expected recovery in public savings (especially in current account deficit economies), a stronger-than-expected impact of the war in Ukraine on commodity prices, further inflation surprises and faster monetary tightening, a possible escalation of geopolitical conflicts and tensions, the impact of China's growth slowdown and zero-COVID-19 policy, and the risk of trade and economic fragmentation.

The authors of this chapter are Giovanni Ganelli and Racha Moussa. Box authors are Zamid Aligishiev, Cian Allen, Julia Estefania-Flores, Luciana Juvenal, Siddharth Kothari, Cyril Rebillard, and Cian Ruane. Mariela Caycho, Jair Rodriguez, Xiaohan Shao, and Rongjin Zhang provided research support and Jane Haizel editorial assistance. The chapter also benefited from discussions and comments by internal reviewers.

<sup>1</sup>Global current account balances are defined as the sum of the absolute values of deficits and surpluses divided by global GDP. Because global current account balances are defined as the sum of absolute values of deficits and surpluses, if an economy increases its deficit by one percent of global GDP and another economy increases its surplus by one percent of global GDP, the combined impact would be an increase in global current account balances by two percent of global GDP.

## Recent Developments in Current Account Balances

External positions have been affected by developments in commodity and energy prices and supply bottlenecks related to the pandemic and the war. Energy and commodity prices recovered from the bottom in the pandemic's early phase and rose in 2021, affecting the external position of exporters and importers asymmetrically. Shipping costs surged in 2021, reflecting pandemic-related supply constraints and capacity constraints on sea routes in the face of a strong rebound in trade, which affected exporters and importers of transportation services asymmetrically. Increased geopolitical tensions and the start of the war have exacerbated those trends in 2022 while bringing about a surge in the price of grains (Figure 1.1).

The sharp increase in oil prices in 2021 has contributed to shifting current account positions. The oil balances and current accounts of oil exporters in 2021 recovered from the pandemic-induced decline of 2020, with the opposite applying to oil importers (Figure 1.2). The war in Ukraine is expected to affect current account positions in 2022 mostly by increasing the current account of oil and other commodity exporters, while the projected impact on advanced economies is smaller (Figure 1.3).<sup>2</sup>

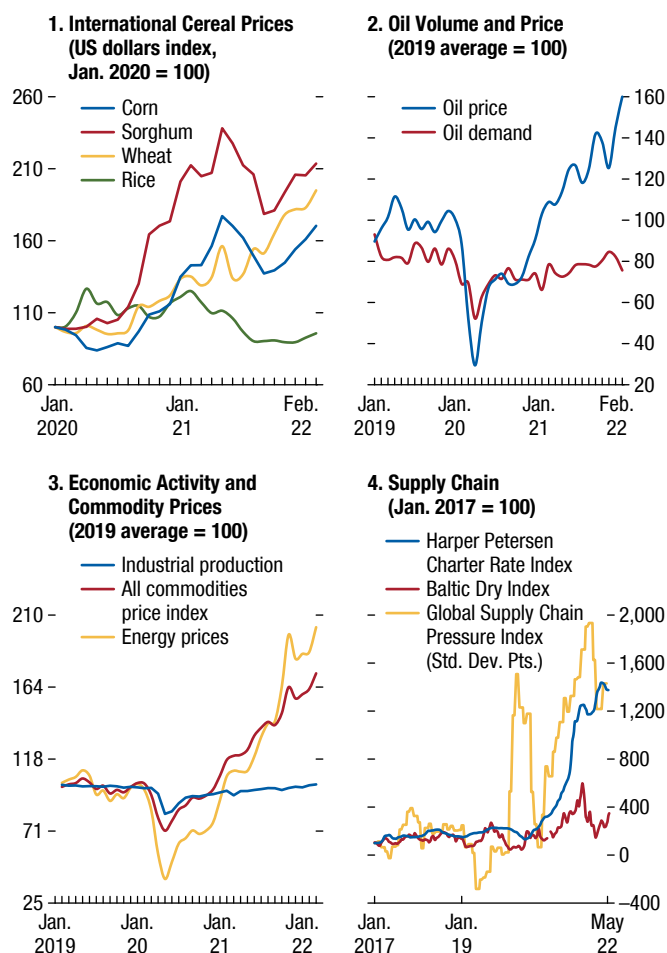
The COVID-19 pandemic has continued to affect countries' current account balances:

- *Travel and medical trade:* The pandemic's adverse impact on travel has continued to lower the travel services and current account balances of many tourism-exporting countries significantly, while the demand for medical products and personal protective equipment has bolstered the current account positions of exporters of those goods.<sup>3</sup>

<sup>2</sup>The change in current account projections for 2022 between the January and the April 2022 WEO vintages, shown in Figure 1.3, reflects the impact of the war in Ukraine, although other factors are also at play.

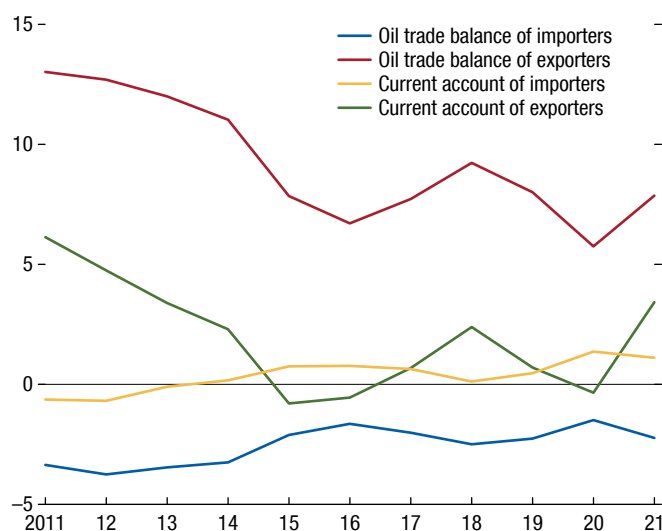
<sup>3</sup>For example, the travel shock is estimated to have lowered Spain's current account by 1.6 percent of GDP and Thailand's by 4.4 percent of GDP in 2021. Trade in medical goods and personal protective equipment is estimated to have increased Malaysia's current account by 1.3 percent of GDP.

Figure 1.1. The COVID-19 Crisis and the War in Ukraine



Sources: CEIC Global Economic Data; Haver Analytics; IMF, Primary Commodity Price System; Joint Organisations Data Initiative.  
Note: Global imports in volumes.

- *Shift in household consumption compositions:* The pandemic has shifted household consumption composition away from services toward goods (for example, equipment to accommodate teleworking and virtual learning). This shift moderated but did not reverse in 2021, with service consumption still below pre-pandemic levels. In advanced economies, household consumption of goods has declined throughout 2021 but was still above pre-pandemic levels at the end of the year, whereas household consumption of services, although recovering, was still below pre-pandemic levels. In emerging markets, consumption of services declined during 2021 after a small recovery in late 2020, and consumption of goods has been on the rise (Figure 1.4).

Figure 1.2. Movements in Oil Trade Balance and Current Account for Oil Exporters and Importers<sup>1</sup>  
(Average of balances in percent of GDP)

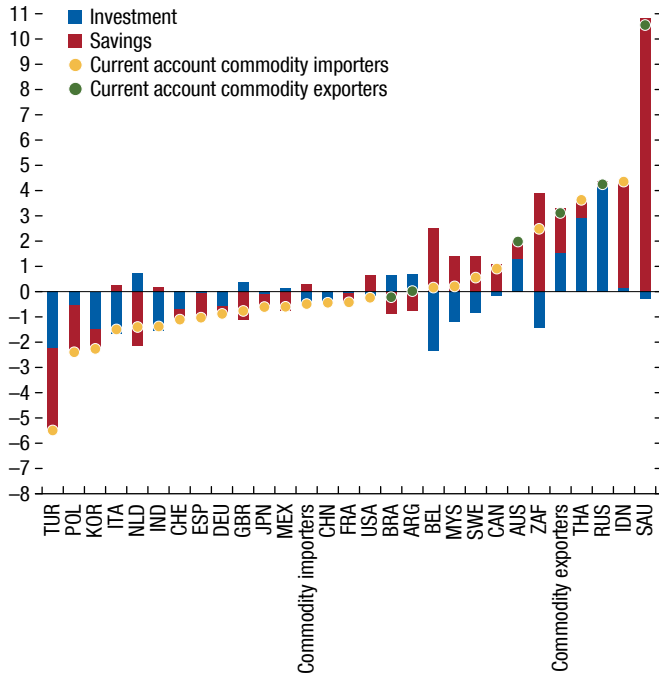
Sources: IMF, *World Economic Outlook*; and IMF staff calculations.  
Note: Data labels use International Organization for Standardization country codes. Importer countries: Argentina, Australia, Austria, Belgium, Chile, China, Costa Rica, Czech Republic, Denmark, Egypt, Finland, France, Germany, Greece, Guatemala, Hong Kong SAR, Hungary, India, Indonesia, Ireland, Israel, Italy, Japan, Korea, Mexico, Morocco, The Netherlands, New Zealand, Pakistan, Peru, Philippines, Poland, Portugal, Singapore, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Thailand, Tunisia, Türkiye, United Kingdom, United States, Uruguay. Exporter countries: Brazil, Canada, Colombia, Malaysia, Norway, Russia, Saudi Arabia.  
<sup>1</sup>Countries are defined as exporters or importers by the oil trade balance in 2021. Includes External Balance Assessment countries, Hong Kong SAR, Saudi Arabia, and Singapore.

- *Transportation balance:* In 2021, the combination of high demand for tradable goods in advanced economies and supply bottlenecks associated with the pandemic increased shipping costs noticeably (Figure 1.1, panel 4). Those pressures have significantly increased the current account balance of some economies (for example, France and Korea) through their impact on sea transport service export prices.

The shift in household consumption brought about a sharp recovery in goods trade, in contrast to much slower recoveries after other global recessions. The recovery in global trade in goods, which surpassed its pre-COVID-19 level and went back to its pre-COVID-19 trend in 2021, has also been faster than anticipated in the early stages of the pandemic. However, trade in services remains below pre-pandemic levels despite a rebound in 2021 and



**Figure 1.3. Current Account Projections for 2022 before and after the War in Ukraine**  
 (Changes between January 2022 and April 2022 WEO vintages and contributions, in percent of GDP)



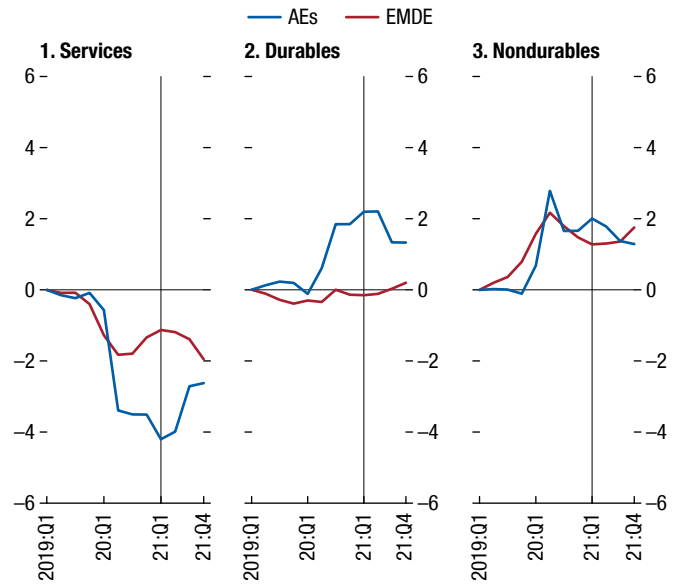
Sources: IMF, *World Economic Outlook*; and IMF staff calculations.  
 Note: Data labels use International Organization for Standardization country codes.

is not projected to approach pre-pandemic levels until 2023, reflecting the emergence of new coronavirus variants and associated travel restrictions (Figure 1.5).<sup>4</sup>

Turning to aggregate saving and investment in advanced economies, public and private saving moved in opposite directions, thereby having limited effects on current account balances. The private sector started to wind down pandemic-related saving as the public sector withdrew fiscal support. Household saving is declining as pandemic-related subsidies and transfers are withdrawn but remains above pre-pandemic levels. Corporate saving remained broadly unchanged during the pandemic, and government saving is moving toward pre-pandemic levels as pandemic-related fiscal support is withdrawn (Figure 1.6). Further unwinding of the stock

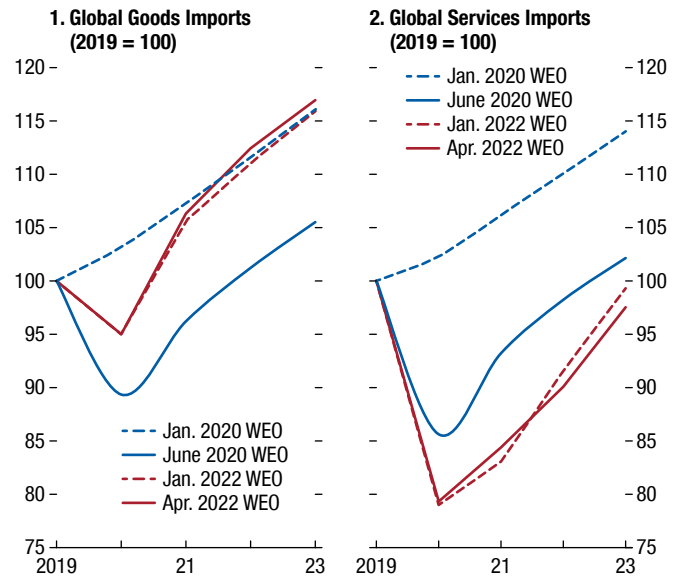
<sup>4</sup>The faster recovery in goods trade compared with services trade could partly reflect the pandemic-induced shift from services to goods consumption, but this shift is expected to wind down in the medium term as the pandemic's impact abates.

**Figure 1.4. Household Consumption Composition Shift, AEs and EMDEs, 2019–21<sup>1</sup>**  
 (Percent of household consumption)



Sources: Haver Analytics; and IMF staff estimates.  
 Note: AE = advanced economy; EMDE = emerging market and developing economy. Data labels use International Organization for Standardization country codes.  
<sup>1</sup>Change in consumption shares from the first quarter of 2019, quarterly data. The panel shows the GDP-weighted average for 14 advanced economies (AUS, CAN, DEU, DNK, ESP, FRA, GBR, ISR, ITA, JPN, KOR, NZL, SWE and USA) and seven emerging market and developing economies (CHN, CHL, IDN, MEX, THA, TUR and ZAF).

**Figure 1.5. Trade in Goods and Services Compared with Pre-pandemic Trends**



Sources: IMF, *World Economic Outlook*; and IMF staff calculations.  
 Note: WEO = *World Economic Outlook*. Global imports in volumes.

of accumulated household savings could affect current account balances, although the impact of this channel is subject to uncertainty associated with the full extent of improvement in household balance sheets and its distribution across income levels (Box 1.1).

### Global Current Account Balances

Global current account balances had been on a declining trend for several years before widening because of the pandemic in 2020, and they have continued to increase in 2021. This dynamic was driven by the pandemic's asymmetric impact on external positions through the travel and medical shock, the consumption shift, and transportation costs. The pandemic-related consumption shift toward goods contributed to widening global balances as current account deficit advanced economies imported more goods from current account surplus emerging markets. In 2021, this shift is estimated to have increased the US current account deficit by 0.4 percent of GDP and China's surplus by 0.3 percent of GDP. Current account surplus economies like China also saw their surplus increase due to higher exports of medical goods, which were imported by current account deficit economies such as the United States. In addition, in 2021, current account surplus economies started withdrawing fiscal support faster than current account deficit economies. All these developments contributed to widening global balances. Global balances are expected to widen further in 2022, reflecting both the increase in commodity prices (including because of the war) and the pandemic's continued asymmetric impact on external positions, before narrowing over the medium term (Figure 1.7 and Table 1.1). The projected widening of global balances in the short term opens scope for current account surplus economies to redirect global savings to help finance low income countries and emerging markets.

COVID-19's impact on global current account balances—through the medical and trade shock, the shift in household consumption, and transportation costs—was larger in 2021 than in 2020, as shown in Figure 1.8.<sup>5</sup> After netting out COVID-19 factors, global balances still increased in 2021 (likely reflecting the increase in

oil prices) and hovered at about their 2019 level. The forecast for global current account balances in the coming years has been revised up for 2022 since the January 2022 *World Economic Outlook Update*. This upward revision incorporates the impact of the war in Ukraine, which is expected to have a widening effect on global current account balances through its impact on commodity prices. Over the medium term, global balances are expected to return to their pre-pandemic downward trend as commodity prices normalize and COVID-19's impact fades away. Another contributing factor is that unlike in 2021, current account deficit economies are expected to implement fiscal policy consolidation faster than current account surplus economies (Figure 1.9).

### Currencies, Financial Flows, and Balance Sheets

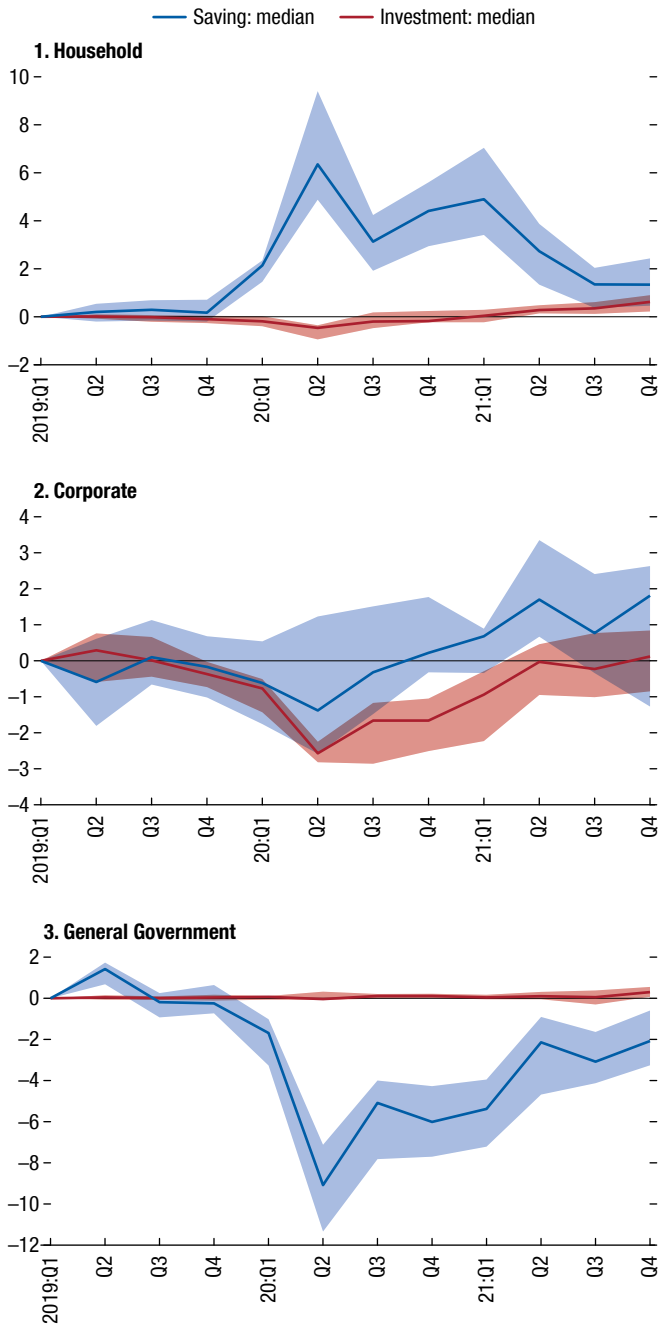
Currency movements were relatively limited in most advanced economies during 2021, while Japan and Korea experienced depreciations and the United States experienced appreciation. Several emerging market currencies depreciated in 2021, driven by a tightening of global financial conditions and still-weak domestic prospects (as in Thailand) or by sharply easing domestic monetary conditions (as in Türkiye; Figure 1.10). China's currency experienced considerable appreciation. Most emerging markets accumulated reserves (Figure 1.11). Capital inflows by nonresidents to emerging markets were stable in 2021 (Figure 1.12). Foreign direct investment flows peaked at the start of 2021 but were on a declining trend for the rest of the year. Portfolio flows ended the year in net outflows.

Monetary policy tightening is driving currency movements in 2022. With inflation rising, many central banks have accelerated the withdrawal of monetary stimulus, while several emerging markets have started a tightening cycle in 2021. Largely in anticipation of Federal Reserve tightening, the US dollar has appreciated by about 5 percent in nominal effective terms in the first half of 2022 (Figure 1.10). Despite Federal Reserve tightening, some emerging economies' currencies appreciated, given their earlier and more aggressive tightening: for example, Brazil and Mexico experienced an appreciation in the first half of 2022 after depreciating in 2021.<sup>6</sup> The dollar

<sup>5</sup>In Figure 1.8, the vertical distance between the April 2022 *World Economic Outlook* vintage and the line that shows the netting out of COVID-19 factors is larger for 2021 than for 2020. See Online Annex 1.2 for more details on the compositions of the COVID-19 factors.

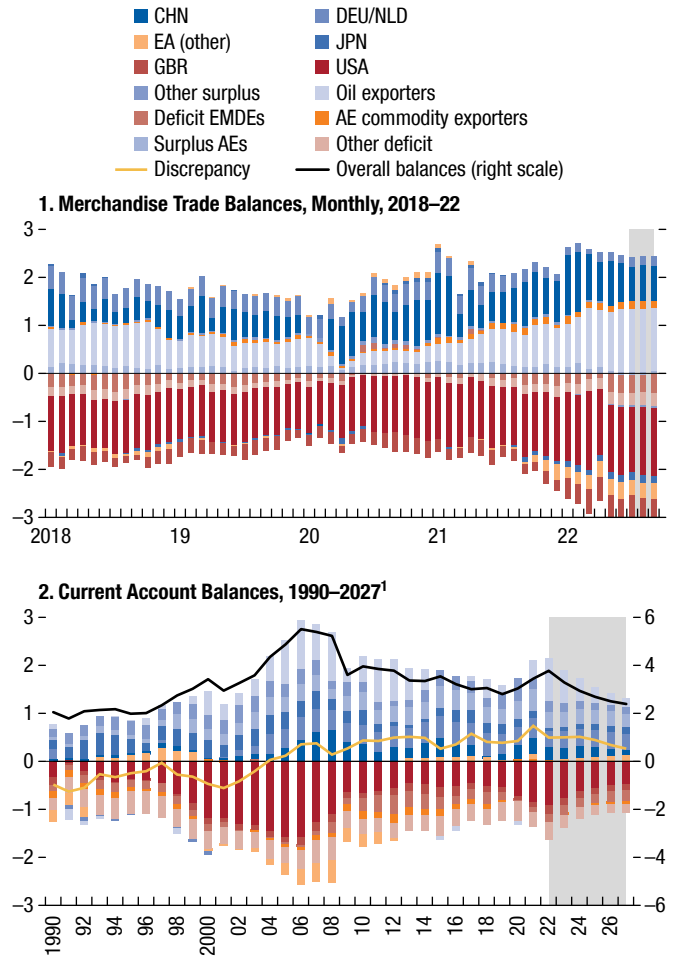
<sup>6</sup>The Russian ruble depreciated sharply at the outbreak of the war and associated sanctions, but has since appreciated to exceed the pre-war level by May, including due to the strong terms of trade and current account surplus.

**Figure 1.6. Private and Public Sector Saving Rates in Advanced Economies**  
(Percent of GDP)



Sources: Eurostat; national authorities; Refinitiv, Datastream; and IMF staff calculations.  
 Note: Countries are Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, The Netherlands, Norway, Poland, Portugal, Romania, Slovenia, Spain, Sweden, the United Kingdom, and the United States. The series are rebased to zero in the first quarter of 2019. The second quarter of 2020 corresponds to the peak of the COVID-19 crisis.

**Figure 1.7. Global Current Account Balances, 1990–2027**  
(Percent of world GDP)



Sources: IMF, *International Financial Statistics*; IMF, *World Economic Outlook*; and IMF staff calculations.  
 Note: AE = advanced economy; EA = euro area; EMDE = emerging market and developing economy. The shaded area indicates forecasts. Data labels use International Organization for Standardization (ISO) country codes.  
<sup>1</sup>Overall balance is the absolute sum of global surpluses and deficits. AE commodity exporters comprise Australia, Canada, and New Zealand; deficit EMDEs comprise Brazil, Chile, India, Indonesia, Mexico, Peru, South Africa, and Türkiye; oil exporters comprise *World Economic Outlook* definition plus Norway; surplus AEs comprise Hong Kong SAR, Korea, Singapore, Sweden, Switzerland, and Taiwan Province of China. Other deficit (surplus) comprise all other economies running current account deficits (surpluses).

**Table 1.1. Selected Economies: Current Account Balance, 2019–22**

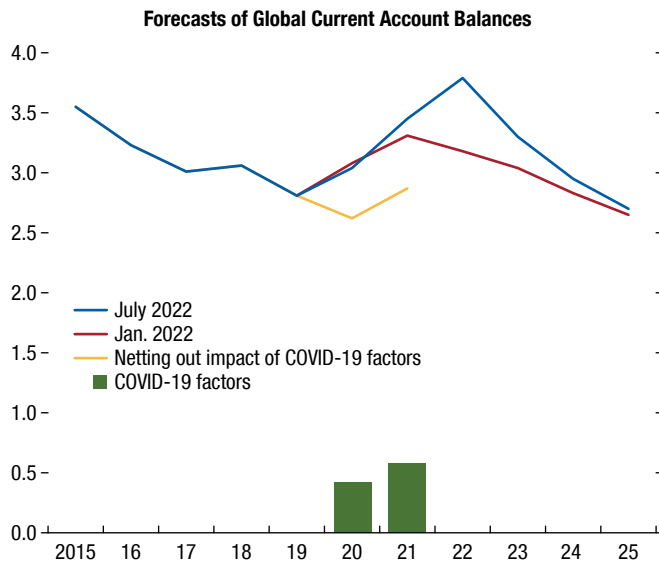
	Billions of US Dollars				Percent of World GDP				Percent of GDP			
	2019	2020	2021	2022 Projection	2019	2020	2021	2022 Projection	2019	2020	2021	2022 Projection
<b>Advanced Economies</b>												
Australia	8	35	57	15	0.01	0.04	0.06	0.01	0.6	2.6	3.5	0.9
Belgium	1	4	-2	-10	0.00	0.01	0.00	-0.01	0.2	0.8	-0.4	-1.7
Canada	-35	-29	1	17	-0.04	-0.03	0.00	0.02	-2.0	-1.8	0.0	0.8
France	-8	-47	11	-38	-0.01	-0.06	0.01	-0.04	-0.3	-1.8	0.4	-1.4
Germany	294	272	314	251	0.34	0.32	0.32	0.24	7.6	7.1	7.4	6.1
Hong Kong SAR	21	24	42	38	0.02	0.03	0.04	0.04	5.9	7.0	11.3	10.3
Italy	65	71	51	11	0.07	0.08	0.05	0.01	3.2	3.7	2.4	0.5
Japan	176	147	142	84	0.20	0.17	0.15	0.08	3.4	2.9	2.9	1.9
Korea	60	76	88	49	0.07	0.09	0.09	0.05	3.6	4.6	4.9	2.8
The Netherlands	85	64	92	88	0.10	0.07	0.10	0.09	9.4	7.0	9.0	8.8
Singapore	54	58	72	56	0.06	0.07	0.07	0.05	14.5	16.8	18.1	13.2
Spain	29	11	13	10	0.03	0.01	0.01	0.01	2.1	0.8	0.9	0.7
Sweden	29	33	35	30	0.03	0.04	0.04	0.03	5.5	6.1	5.5	4.9
Switzerland	40	21	76	55	0.05	0.02	0.08	0.05	5.4	2.8	9.3	6.7
United Kingdom	-77	-69	-82	-174	-0.09	-0.08	-0.09	-0.17	-2.7	-2.5	-2.6	-5.3
United States	-472	-616	-822	-944	-0.54	-0.72	-0.85	-0.91	-2.2	-2.9	-3.6	-3.7
<b>Emerging Market and Developing Economies</b>												
Argentina	-4	3	7	3	0.00	0.00	0.01	0.00	-0.8	0.9	1.4	0.5
Brazil	-65	-24	-28	-26	-0.07	-0.03	-0.03	-0.02	-3.5	-1.7	-1.7	-1.3
China	103	249	317	279	0.12	0.29	0.33	0.27	0.7	1.7	1.8	1.4
India <sup>1</sup>	-25	24	-38	-108	-0.03	0.03	-0.04	-0.10	-0.9	0.9	-1.2	-3.1
Indonesia	-30	-4	3	29	-0.03	-0.01	0.00	0.03	-2.7	-0.4	0.3	2.2
Malaysia	13	14	14	16	0.01	0.02	0.01	0.02	3.5	4.2	3.8	3.7
Mexico	-3	27	-5	-7	0.00	0.03	-0.01	-0.01	-0.3	2.5	-0.4	-0.5
Poland	3	18	-4	-21	0.00	0.02	0.00	-0.02	0.5	2.9	-0.6	-3.0
Russia	66	36	122	265	0.08	0.04	0.13	0.26	3.9	2.4	6.9	11.9
Saudi Arabia	38	-22	44	177	0.04	-0.03	0.05	0.17	4.8	-3.1	5.3	17.2
South Africa	-10	7	15	6	-0.01	0.01	0.02	0.01	-2.6	2.0	3.6	1.5
Thailand	38	21	-11	-4	0.04	0.02	-0.01	0.00	7.0	4.2	-2.2	-0.8
Türkiye	5	-36	-14	-44	0.01	-0.04	-0.01	-0.04	0.7	-4.9	-1.7	-5.5
<b>Memorandum item:<sup>2</sup></b>												
Euro Area	307	250	345	228	0.4	0.3	0.4	0.2	2.3	1.9	2.4	1.6
Global Current Account Balance	2,452	2,592	3,333	3,928	2.8	3.0	3.5	3.8	...	...	...	...
Statistical Discrepancy	322	364	747	581	0.4	0.4	0.8	0.6	...	...	...	...
Overall Surpluses	1,387	1,476	2,030	2,251	1.6	1.7	2.1	2.2	...	...	...	...
Of which: Advanced Economies	1,007	995	1,317	1,038	1.2	1.2	1.4	1.0	...	...	...	...
Overall Deficits	-1,065	-1,112	-1,283	-1,670	-1.2	-1.3	-1.3	-1.6	...	...	...	...
Of which: Advanced Economies	-688	-794	-951	-1,218	-0.8	-0.9	-1.0	-1.2	...	...	...	...

Sources: IMF, *World Economic Outlook*; and IMF staff calculations.

Note: "... " indicates that data are not available or not applicable.

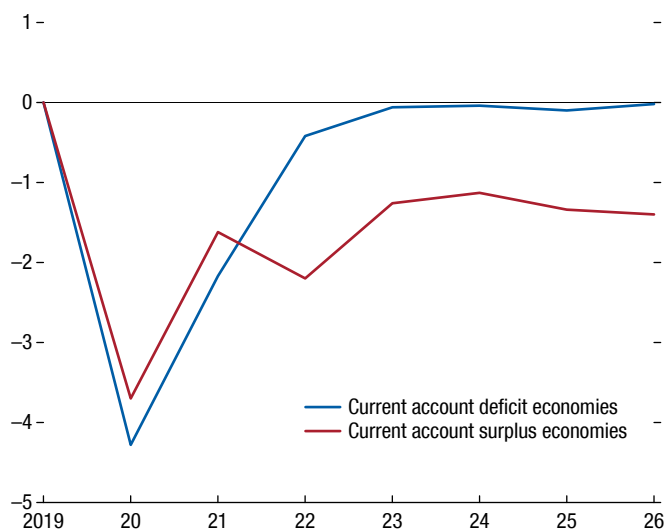
<sup>1</sup>For India, data are presented on a fiscal year basis.<sup>2</sup>The global current account balance is the sum of absolute deficits and surpluses. Overall surpluses and deficits (and the "of which" advanced economies) include non-*External Sector Report* economies.

**Figure 1.8. Global Current Account Balances and COVID-19 Factors**  
(Percent of world GDP)



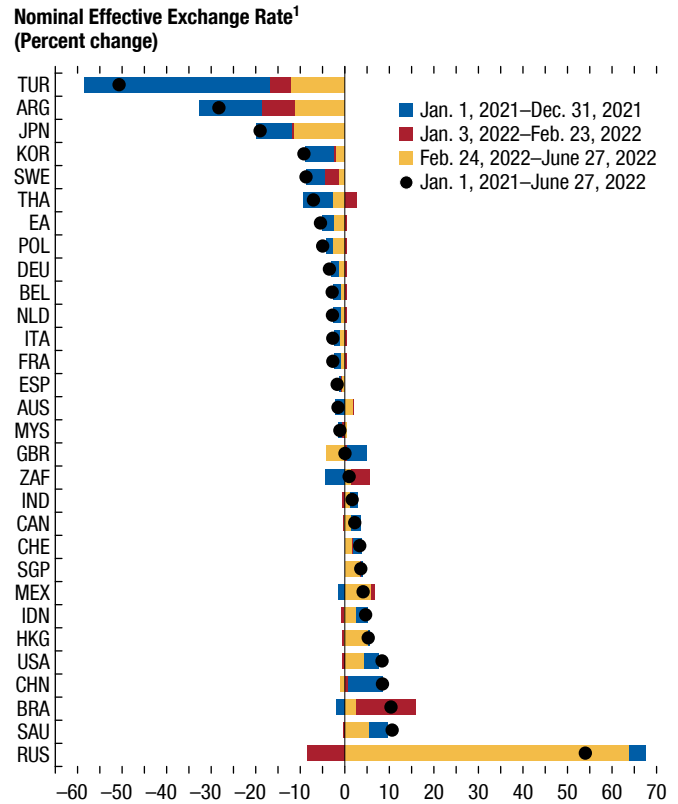
Sources: Census and Economic Information Center; IMF, Information Notice System; IMF, *International Financial Statistics*; IMF, *World Economic Outlook*; and IMF staff calculations.  
Note: See the chapter text for the definition of sectoral shocks associated with the COVID-19 crisis. Data from 2022 onward are projections, based on IMF staff projections by June 30, 2022 (July 2022) and January 2022 IMF *World Economic Outlook* (Jan. 2022).

**Figure 1.9. Fiscal Policy Changes, 2019–26**  
(Cyclically adjusted fiscal balance, percentage points of potential GDP, change since 2019)



Sources: IMF, *World Economic Outlook*; and IMF staff calculations.  
Note: Data from 2022 onward are projections.

**Figure 1.10. Currency Movements**

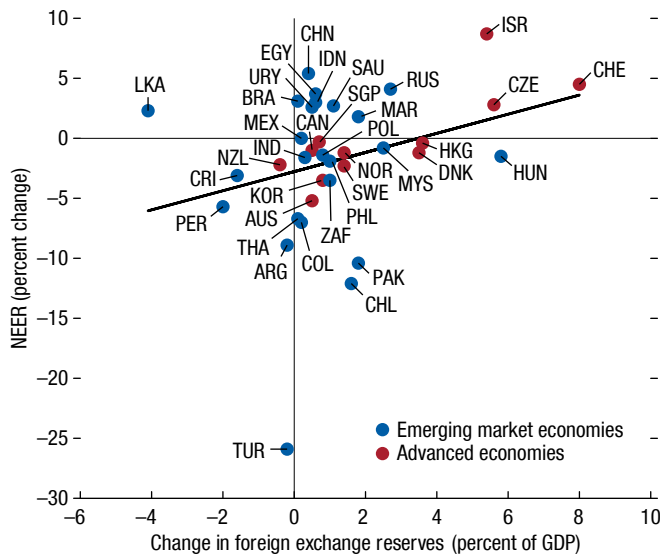


Sources: IMF, Global Data Source; and IMF staff calculations.  
Note: EA = euro area. Data labels use International Organization for Standardization country codes.  
<sup>1</sup>An increase in nominal effective exchange rate corresponds to an appreciation.

strength in the first half of 2022 could deepen the US current account deficit and contribute to widening global current account balances.

Creditor and debtor stock positions remain elevated in 2021, though they have moderated from their 2020 peaks (Figure 1.13). The narrowing of net international investment position dispersion in 2021 reflects valuation changes, which more than offset the concurrent widening of current account balances. Most economies experienced a reversal in valuation effects between 2020 and 2021. Tighter financial conditions in the United States in 2022 could mean lower asset prices, leading to valuation losses for foreign holders of US assets, while further US dollar appreciation could lead to valuation gains in emerging markets, which tend to have long positions in foreign currency (see 2019 *External Sector Report*, Box 1.4). The United States remains the largest

**Figure 1.11. Estimated Change in Foreign Exchange Reserves<sup>1</sup> and Nominal Effective Exchange Rate<sup>2</sup> Change (March 2021–December 2021)**

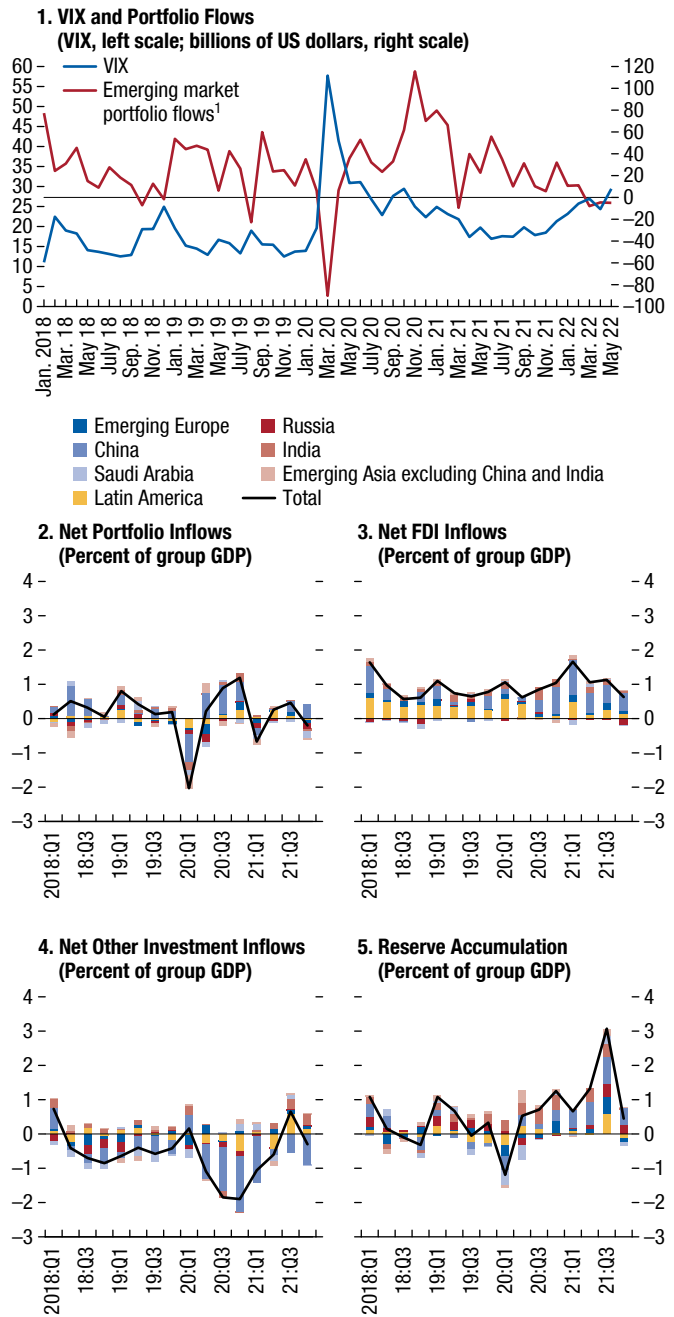


Sources: Adler and others (2021); IMF, *International Financial Statistics*; IMF, Information Notice System; and IMF staff calculations.  
 Note: NEER = nominal effective exchange rate. Data labels use International Organization for Standardization country codes.  
<sup>1</sup>The change in foreign exchange reserves is based on the change in the stock of reserves, adjusted for valuation changes, reserve income flows, and changes in foreign exchange assets and liabilities in relation to residents and nonresidents, and operations with foreign exchange derivatives. It may differ from actual foreign currency market transactions data when available.  
<sup>2</sup>An increase in NEER corresponds to an appreciation.

debtor economy, and its net international investment position declined from -67 percent of GDP in 2020 to -79 percent of GDP in 2021. Other large debtor economies include Australia, Spain, and the United Kingdom. Large creditor economies include China, Germany, Hong Kong Special Administrative Region, Japan, The Netherlands, Singapore, and Switzerland (Table 1.2).

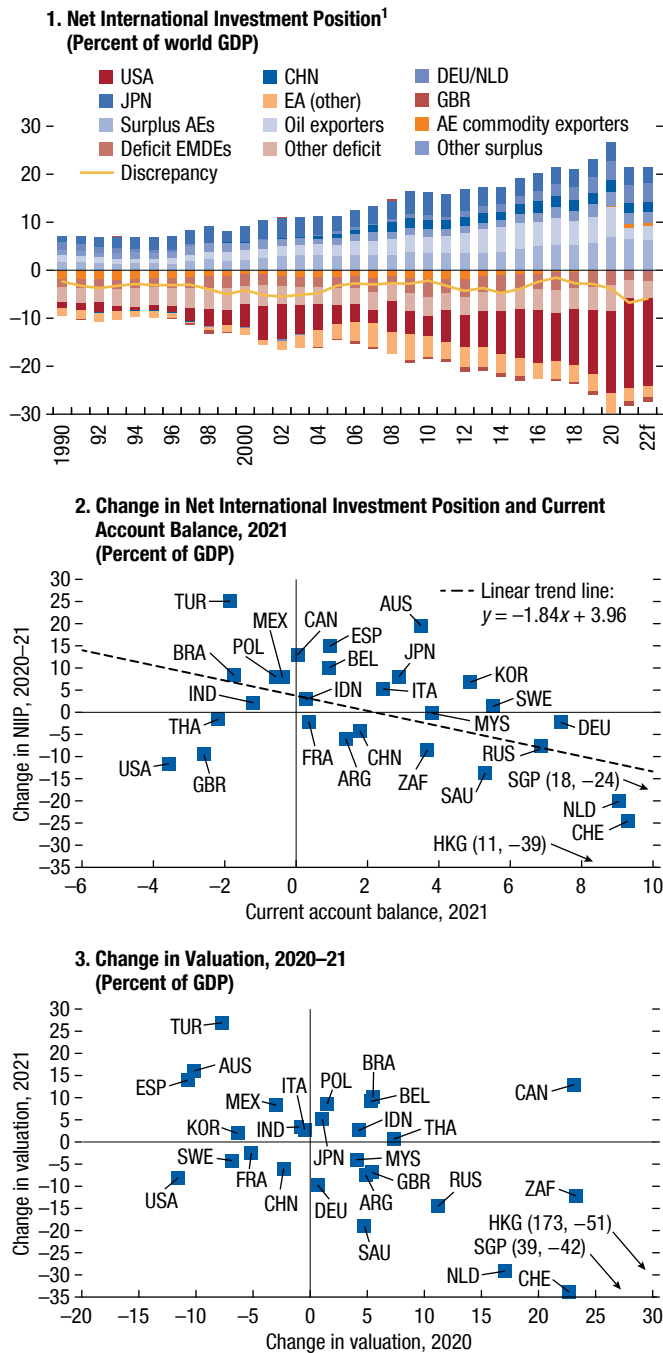
The global financial safety net expanded in 2020 to accommodate the COVID-19 shock, driven largely by the Federal Reserve’s temporary bilateral swap lines, and it narrowed back in 2021 when the Federal Reserve’s temporary bilateral swap lines expired. As of 2021, the global financial safety net stood at 19 percent of global GDP (\$18.4 trillion), down from 22 percent of global GDP in 2020 (\$18.6 trillion; Figure 1.14). The global financial safety net in 2021 comprised \$14.8 trillion in reserves (including the August 2021 SDR allocation of \$650 billion), \$1.4 trillion in bilateral swap lines, \$1.2 trillion in regional financing arrangements, and \$1 trillion in

**Figure 1.12. Capital Flows to Emerging Market and Developing Economies and the VIX**



Sources: IMF, *International Financial Statistics*; Institute of International Finance; and IMF staff calculations.  
 Note: FDI = foreign direct investment; VIX = Chicago Board Options Exchange Volatility Index. Group GDP is the total GDP of all economies considered in the figure, which include Brazil, Chile, China, Colombia, India, Indonesia, Malaysia, Mexico, Peru, Philippines, Poland, Romania, Russia, Saudi Arabia, Thailand, and Türkiye. For panels 2–4, positive numbers represent net inflow of capital.  
<sup>1</sup>Net nonresident purchases of emerging market stocks (portfolio equity flows) and bonds (portfolio debt flows) in billions of US dollars, proxy for portfolio flows as measured in the balance of payments.

**Figure 1.13. Net International Investment Positions, 1990–2022**



Sources: External Wealth of Nations database; IMF, *World Economic Outlook*; and IMF staff calculations.

Note: AE = advanced economy; EA = euro area; EMDE = emerging market and developing economy; “f” = IMF staff forecasts; FX = foreign exchange; NFA = net foreign assets; NIIP = net international investment position. Data labels use International Organization for Standardization country codes.

<sup>1</sup>AE commodity exporters comprise Australia, Canada, and New Zealand; creditor AEs comprise Hong Kong SAR, Korea, Singapore, Sweden, Switzerland, and Taiwan Province of China; deficit EMDEs comprise Brazil, Chile, India, Indonesia, Mexico, Peru, South Africa, and Türkiye; oil exporters comprise *World Economic Outlook* definition plus Norway.

IMF funds. About 40 percent of bilateral swap lines in place in 2021 were permanent swap lines among major advanced economies (Figure 1.15).

**Assessments of External Positions in 2021**

The assessment of external positions requires a multilateral approach that reconciles positive and negative excess external imbalances. The IMF’s external assessment framework combines numerical inputs from models of the refined 2022 External Balance Assessment (EBA) methodology (see Online Annex 1.1 for more details), the estimated effects of the COVID-19 crisis, and analytically grounded judgment and country-specific insights.

The EBA methodology produces multilaterally consistent estimates for current account and real exchange rate norms by applying the estimated coefficients from a cross-country panel regression to country-specific macroeconomic, structural, and desired policy variables (Figure 1.16).<sup>7</sup> The norms are compared with current account and real exchange rate levels (after adjusting for cyclical and other temporary or country-specific factors) to derive gaps. Based on those gaps and considering other external sector indicators (such as the net international investment position, capital flows, and foreign exchange reserves), the IMF staff arrives at a holistic overall external sector assessment for 30 of the world’s largest economies, which represent 87 percent of global GDP.<sup>8</sup> Annex Table 1.1.2 summarizes the IMF staff–assessed current account and real effective exchange rate gaps and the external sector assessments for the 30 economies.

Special adjustments to EBA model estimates have been made to strip out factors associated with the pandemic—the travel and medical trade shocks, the shift in consumption, and transportation costs (see Online Annex 1.2).<sup>9</sup> Adjustments for

<sup>7</sup>See Cubeddu and others (2019) for a detailed description. Advanced economies with higher incomes, older populations, and lower growth prospects have positive current account norms with both the current and refined models, while current account norms are negative for most emerging market and developing economies, as they are expected to import capital to invest and exploit their higher growth potential.

<sup>8</sup>While the *External Sector Report* assesses 30 economies, the IMF staff provides a holistic assessment of the external sector for all member countries in the context of bilateral surveillance.

<sup>9</sup>The oil balance adjustor, which captured the impact of the drop in the volume of oil trade in 2020, was dropped because oil demand and world prices moved closer to pre-pandemic levels.

**Table 1.2. Selected Economies: Net International Investment Position, 2018–21**

	Billions of US Dollars				Percent of World GDP				Percent of GDP			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
<b>Advanced Economies</b>												
Australia	-746	-658	-747	-579	-0.9	-0.8	-0.9	-0.6	-52.6	-47.5	-55.0	-35.4
Belgium	181	219	245	327	0.2	0.3	0.3	0.3	33.2	40.9	44.5	57.1
Canada	473	598	877	1,368	0.6	0.7	1.0	1.4	27.4	34.3	53.3	68.8
France	-518	-686	-846	-1,014	-0.6	-0.8	-1.0	-1.0	-18.6	-25.1	-32.2	-34.3
Germany	2,102	2,327	2,597	2,759	2.4	2.7	3.1	2.9	52.8	59.8	67.6	65.3
Hong Kong SAR	1,283	1,579	2,122	2,134	1.5	1.8	2.5	2.2	354.6	435.0	615.2	578.0
Italy	-100	-22	41	155	-0.1	0.0	0.0	0.2	-4.8	-1.1	2.2	7.4
Japan	3,033	3,271	3,417	3,748	3.5	3.7	4.0	3.9	60.2	63.8	67.8	75.9
Korea	436	518	487	660	0.5	0.6	0.6	0.7	25.3	31.4	29.6	36.4
The Netherlands	666	818	1,040	956	0.8	0.9	1.2	1.0	72.8	89.9	113.9	93.8
Singapore	685	845	969	1,018	0.8	1.0	1.1	1.1	181.6	225.2	280.8	256.4
Spain	-1,097	-1,037	-1,159	-998	-1.3	-1.2	-1.4	-1.0	-80.1	-75.0	-84.9	-70.4
Sweden	44	87	84	105	0.1	0.1	0.1	0.1	7.8	16.2	15.5	16.8
Switzerland	779	651	860	730	0.9	0.7	1.0	0.8	105.9	88.9	114.4	89.8
United Kingdom	-381	-733	-622	-1,020	-0.4	-0.8	-0.7	-1.1	-13.1	-25.5	-22.5	-32.0
United States	-9,685	-11,231	-14,011	-18,101	-11.3	-12.9	-16.5	-18.7	-47.2	-52.6	-67.1	-78.7
<b>Emerging Market and Developing Economies</b>												
Argentina	66	115	122	124	0.1	0.1	0.1	0.1	12.5	25.5	31.2	25.2
Brazil	-595	-786	-552	-479	-0.7	-0.9	-0.6	-0.5	-31.1	-41.9	-38.1	-29.8
China	2,108	2,300	2,287	1,983	2.5	2.6	2.7	2.1	15.2	16.0	15.4	11.2
India	-437	-375	-355	-354	-0.5	-0.4	-0.4	-0.4	-16.2	-13.3	-13.3	-11.1
Indonesia	-317	-338	-280	-279	-0.4	-0.4	-0.3	-0.3	-30.4	-30.2	-26.4	-23.5
Malaysia	-18	-9	19	21	0.0	0.0	0.0	0.0	-4.9	-2.6	5.7	5.5
Mexico	-555	-614	-533	-532	-0.6	-0.7	-0.6	-0.6	-45.4	-48.4	-48.9	-41.0
Poland	-315	-301	-276	-258	-0.4	-0.3	-0.3	-0.3	-53.7	-50.4	-45.9	-37.9
Russia	374	360	517	483	0.4	0.4	0.6	0.5	22.6	21.2	34.8	27.2
Saudi Arabia	658	671	599	613	0.8	0.8	0.7	0.6	80.5	83.5	85.2	73.5
South Africa	45	31	112	104	0.1	0.0	0.1	0.1	11.1	8.0	33.5	25.0
Thailand	-6	0	58	49	0.0	0.0	0.1	0.1	-1.1	0.0	11.5	9.5
Türkiye	-336	-310	-385	-253	-0.4	-0.4	-0.5	-0.3	-43.1	-40.8	-53.4	-31.4
<b>Memorandum item:</b>												
Euro Area	-987	-574	625	-218	-1.1	-0.7	0.7	-0.2	-7.2	-4.3	4.8	-1.5
Statistical Discrepancy	-2,949	-3,281	-3,744	-6,561	-3.4	-3.8	-4.4	-6.8	...	...	...	...
Overall Creditors <sup>1</sup>	15,859	17,616	19,836	21,034	18.5	20.2	23.3	21.8	...	...	...	...
Of which:	12,202	13,778	15,769	17,331	14.2	15.8	18.5	17.9	...	...	...	...
Advanced Economies												
Overall Debtors <sup>1</sup>	-18,808	-20,897	-23,580	-27,595	-21.9	-23.9	-27.7	-28.6	...	...	...	...
Of which:	-14,118	-15,990	-19,085	-23,279	-16.4	-18.3	-22.4	-24.1	...	...	...	...
Advanced Economies												

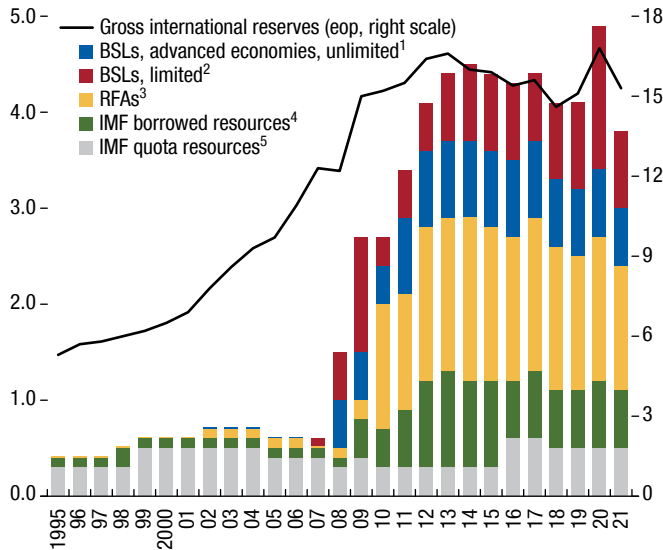
Sources: IMF, *World Economic Outlook*; US Bureau of Economic Analysis; and IMF staff calculations.

Note: "..." indicates that data are not available or not applicable.

<sup>1</sup>Overall creditors and debtors (and the "of which" advanced economies) include non-*External Sector Report* economies.



**Figure 1.14. Evolution of the Global Financial Safety Net, 1995–2021**  
(Percent of world GDP)

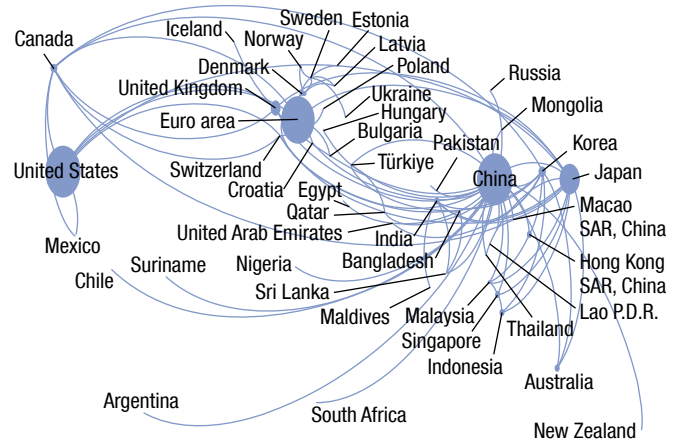


Sources: Perks and others 2021; central bank websites; RFA annual reports; and IMF staff estimates.  
 Note: BSLs = bilateral swap lines; eop = end of period; RFAs = regional financing arrangements; RHS = right-hand scale. Two-way arrangements are counted only once.  
<sup>1</sup>Permanent swap lines among major advanced economy central banks (Federal Reserve, European Central Bank, Bank of England, Bank of Japan, Swiss National Bank, Bank of Canada). The estimated amount is based on known past usage or, if undrawn, on average past maximum drawings of the remaining central bank members in the network, following the methodology in Denbee and others 2016.  
<sup>2</sup>Limited-amount swap lines include all arrangements with an explicit amount limit and exclude all the Chiang Mai Initiative Multilateralization arrangements, which are included under RFAs.  
<sup>3</sup>Based on explicit lending capacity or limit where available, committed resources, or estimated lending capacity based on country access limits and paid-in capital.  
<sup>4</sup>After prudential balances.  
<sup>5</sup>Quota for countries in the financial transaction plan after deducting prudential balance.

country-specific factors, such as measurement issues, severe drought, demographics, and net international investment position considerations, have also been included.<sup>10</sup> The COVID-19-related factors explained a larger share of the movement in current account balances in 2021 compared with 2020, implying (as in 2020) that without their use, the 2021 external sector assessments would be distorted and harder to interpret. Annex Table 1.1.3 reports the

<sup>10</sup>Measurement issues arise primarily because of differences between the statistical definition of income in the balance of payments and the relevant economic concept (for example, in relation to the treatment of retained earnings on portfolio equity).

**Figure 1.15. Evolution of Bilateral Swap Line Networks,<sup>1</sup> 2021**



Sources: Perks and others 2021; central bank websites; and IMF staff estimates.  
<sup>1</sup>The size of each bubble represents the total amount of bilateral swap lines in US dollar terms.

overall set of IMF staff adjustments to reflect both the COVID-19 factors and other country-specific factors.

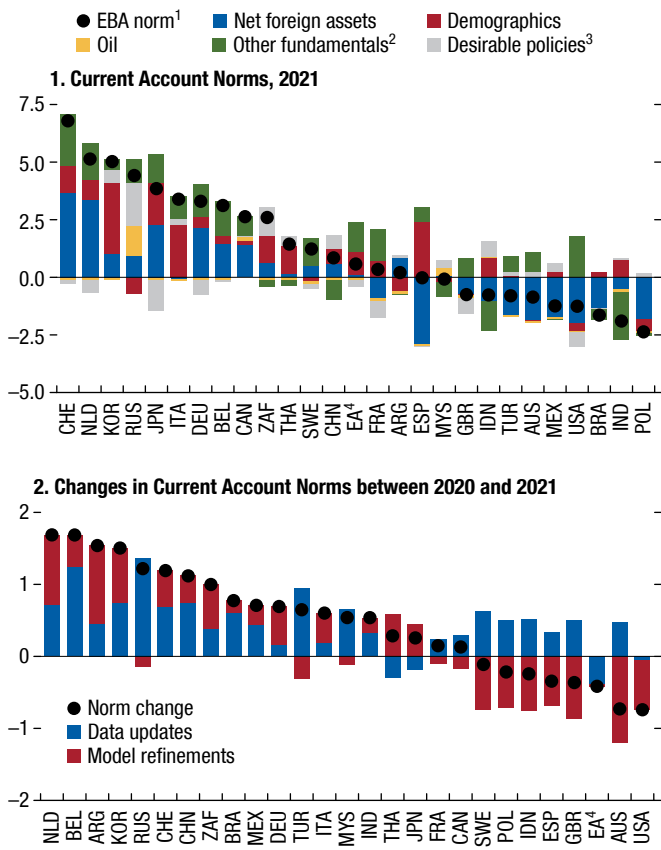
**Changes in External Assessments in 2021**

In 12 of the 30 economies, assessments changed categories in 2021 compared with 2020 (Figure 1.17; Annex Table 1.1.2; Annex Table 1.1.3).<sup>11</sup> External positions compared with the levels consistent with medium-term fundamentals and desirable policies were as follows:

- *Moderately stronger, stronger, or substantially stronger than the level consistent with medium-term fundamentals and desirable policies:* The ten economies with such positions are Germany, Malaysia, The Netherlands, Poland, Russia, Singapore, Sweden, and Thailand, along with Australia and the euro area, which entered the category in 2021.

<sup>11</sup>Assessments of the external position are holistic but generally anchored on the current account assessment. Generally, *broadly in line* is consistent with a current account gap of  $\pm 1$  percent of GDP. *Moderately stronger, stronger, and substantially stronger* are generally consistent with a current account gap of [1 percent to 2 percent], [2 percent to 4 percent], and greater than 4 percent, respectively. *Moderately weaker, weaker, and substantially weaker* are symmetrically defined. Real effective exchange rate gaps are generally assessed in the range that reflects the country-specific exchange rate semielasticity.

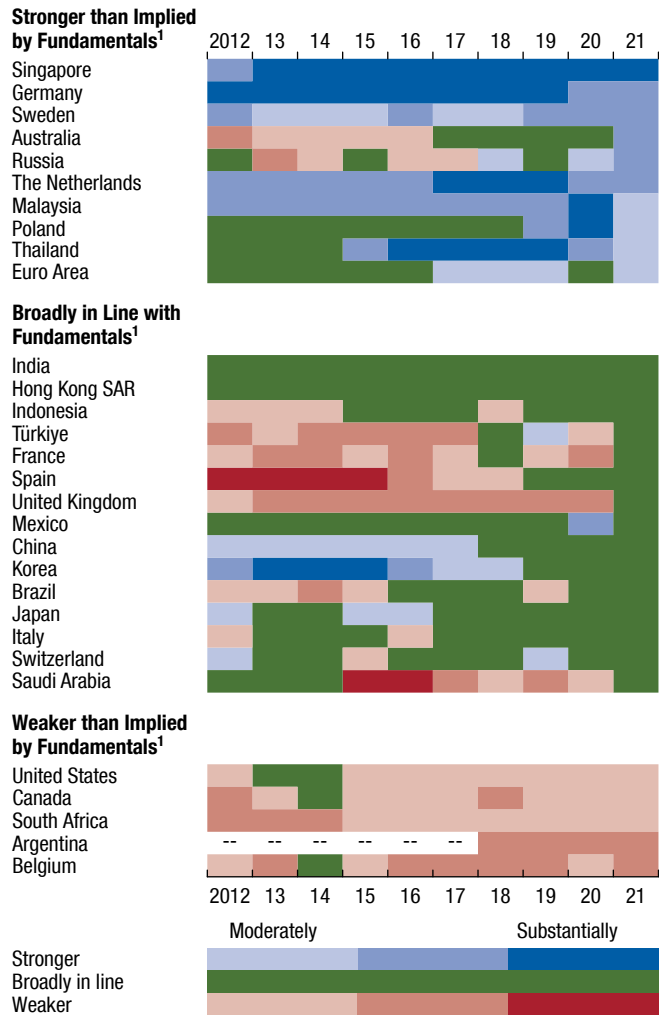
**Figure 1.16. External Balance Assessment Current Account Norms, 2021**  
(Percent of GDP)



Source: IMF, External Balance Assessment estimates.  
 Note: EA = euro area; EBA = External Balance Assessment; ICRG = *International Country Risk Guide*. The figure excludes Hong Kong SAR, Saudi Arabia, and Singapore as they are not included in the EBA regression model. Data labels use International Organization for Standardization country codes.  
<sup>1</sup>The EBA current account norm is multilaterally consistent and cyclically adjusted.  
<sup>2</sup>Other fundamentals include output per worker, expected GDP growth, and ICRG.  
<sup>3</sup>Desirable policies include desirable credit gap, desirable fiscal balance, desirable foreign exchange intervention, desirable health, and constant and multilaterally consistent adjustment.  
<sup>4</sup>The current account norm is corrected for reporting discrepancies in intra-area transactions, since the current account of the entire euro area is about 1.41 percent of GDP less than the sum of the individual 11 countries' balances (for which no such correction is available).

- *Moderately weaker or weaker than the level consistent with medium-term fundamentals and desirable policies:* The five economies with such positions are Argentina, Belgium, Canada, South Africa, and the United States.
- *Broadly in line with the level consistent with medium-term fundamentals and desirable policies:* The 15 economies with such positions are Brazil, China, Hong Kong Special Administrative Region,

**Figure 1.17. The Evolution of External Sector Assessments, 2012–21**

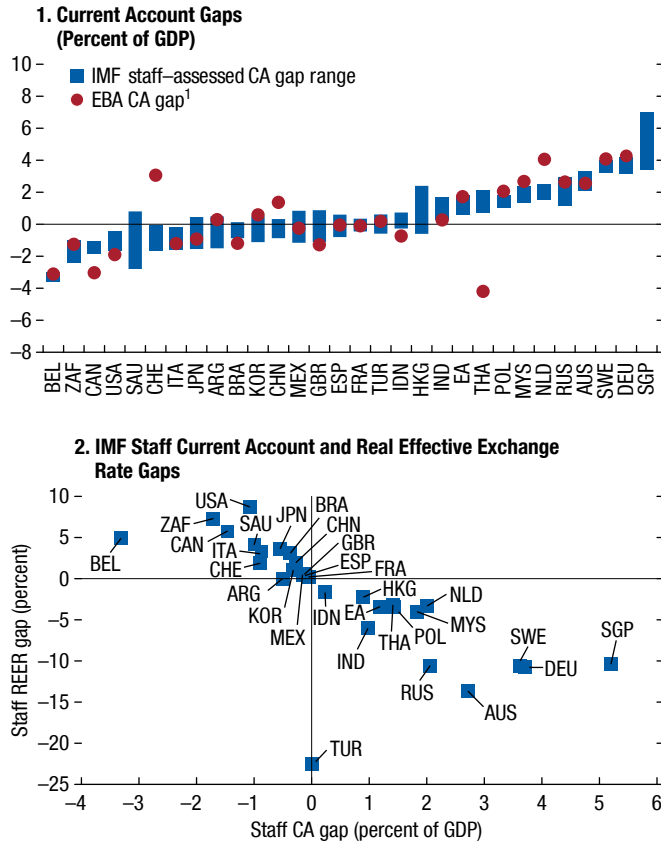


Source: IMF staff assessments.  
<sup>1</sup>Grouping and ordering based on economies' excess imbalance during 2021. Coverage of Argentina in the *External Sector Report* started in the 2018 *External Sector Report*.

India, Indonesia, Italy, Japan, Korea, Spain, and Switzerland, along with France, Mexico, Saudi Arabia, Türkiye, and the United Kingdom, which entered this category in 2021.

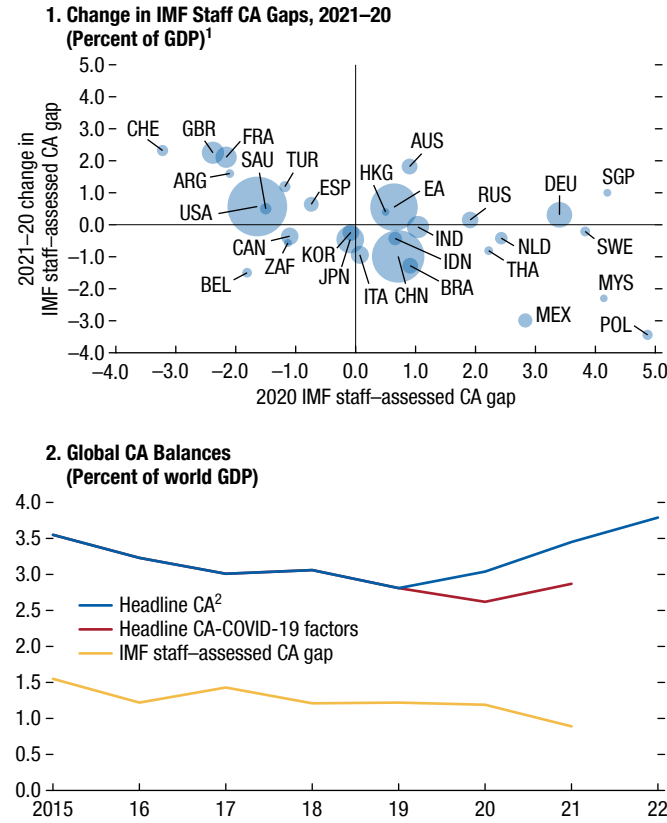
IMF staff–assessed real effective exchange rate gaps were generally consistent with IMF staff–assessed current account gaps. Economies with estimated excess current account surpluses (deficits) generally also had an undervalued (overvalued) real effective exchange rate, according to IMF staff estimates (Figure 1.18, panel 2; Annex Table 1.1.2; and

**Figure 1.18. IMF Staff and External Balance Assessment Current Account and Real Exchange Rate Gaps, 2021**



Source: IMF staff assessments.  
 Note: CA = current account; EBA = External Balance Assessment; REER = real effective exchange rate. REER gap is based on 2021 *External Sector Report*. Data labels use International Organization for Standardization country codes.  
<sup>1</sup>There are no EBA estimates for Hong Kong SAR, Saudi Arabia, and Singapore.

**Figure 1.19. Evolution of Headline Current Account Balances and IMF Staff Gaps**



Source: IMF staff calculations.  
 Note: CA = current account. Data labels use International Organization for Standardization country codes.  
<sup>1</sup>Bubble sizes proportional to 2021 GDP in US dollars.  
<sup>2</sup>The headline CA in 2022 is a projection.

Annex Table 1.1.4).<sup>12</sup> In the case of Türkiye, given the large depreciation of the lira, as the non-energy current account continues to adjust, the IMF staff assessed the real effective exchange rate gap to be more in line with the results from the EBA REER models, which suggest an undervaluation.

Global excess current account balances—the sum of absolute IMF staff-assessed current account gaps—narrowed to 0.9 percent of world GDP in 2021 compared with 1.2 percent of world GDP in 2020,

while global current account balances widened by ½ percentage point of world GDP to 3.5 percent of world GDP (Figure 1.19). The absolute sum of current account norms also widened to reach 1.4 percent of GDP in 2021, from 1.1 percent of GDP in 2020, while on average getting closer to actual current account balances. The narrowing of global excess current account balances is mostly driven by the application of the refined model, as the imbalances would have declined by less, to 1.1 percent of world GDP, under the previous model. The improved cyclical adjustment through the new terms-of-trade gap variable contributed to bringing, on average, the estimated norms closer to the actual current account balances. IMF staff-assessed current account gaps narrowed for several economies, particularly China, Malaysia, Mexico, Poland, the United Kingdom, and the United States (Figure 1.19). To a lesser extent,

<sup>12</sup>Figure 1.18 reports the ranges for IMF staff-assessed current account gaps and the EBA model-based current account gap estimates. As reported in Annex Table 1.1.3, the EBA and IMF staff-assessed current account gaps differ in several cases, reflecting the use of adjusters to account for country-specific cases and the COVID-19 shock. For example, Thailand includes large COVID-19 adjusters to account for the travel shock and transportation costs. Switzerland includes country-specific adjusters to account for measurement biases.

IMF staff–assessed current account gaps widened for some countries, such as Australia, Belgium, and Singapore.

Most of the excess balances in 2021 pertained to advanced economies, higher than the 70 percent in 2020. The largest contributors to lower-than-warranted (at least 1 percent of GDP below their norm) current account balances as a share of world GDP were, in descending order, the United States, Canada, and Belgium. The largest contributors to larger-than-warranted (at least 1 percent of GDP above their norm) current account balances were, in a descending order, Germany, Australia, Russia, and Sweden. Current account gaps tend to narrow over time, though slowly, with adjustments occurring faster in excess deficit economies than in excess surplus economies (Box 1.2).

## Outlook for Current Account Balances and Risks

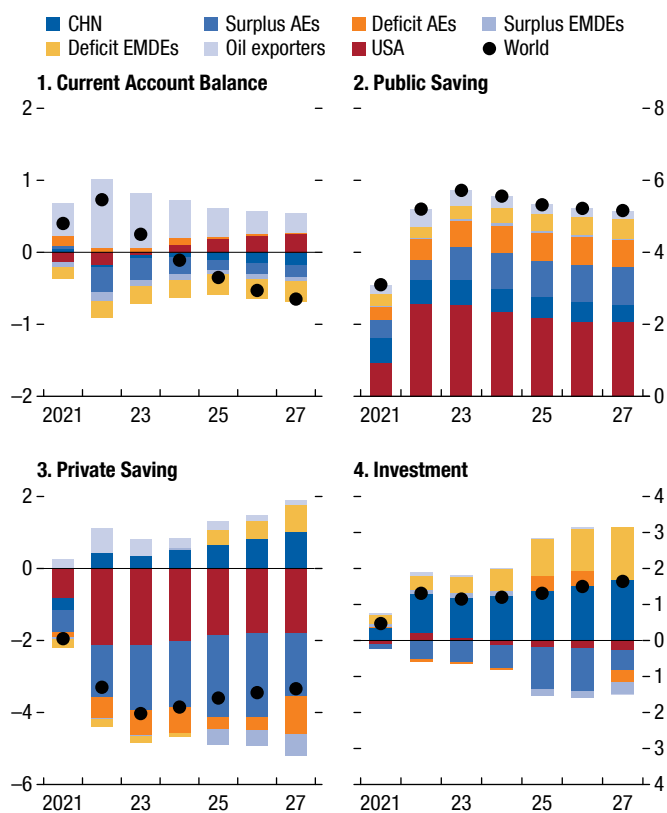
### Medium-Term Current Account Forecasts

Global current account balances are projected to widen further in 2022, driven by an expansion in oil exporters' surplus and the US deficit, as monetary tightening by the Federal Reserve in response to inflation pressures contributes to the dollar's appreciation. Balances will narrow gradually over 2023–27 as these factors moderate (Figure 1.20). As the pandemic support is withdrawn, governments will increase their saving over the medium term, notably in the United States and, to a lesser extent, in some surplus advanced economies. This increase in public saving will offset the projected decline in private saving that peaked during the pandemic. Investment is set to increase globally in the medium term, driven largely by China.

Within these aggregate trends, projected changes in current account balances for major economies vary widely (Table 1.1).

- Advanced economies:** The current account surplus in surplus advanced economies is projected to narrow in percent of GDP in 2022 across the board. In Germany, a projected decline in the surplus by 1.3 percentage points of GDP is driven by an increase in the cost of energy imports and a collapse in exports to Russia stemming from sanctions related to the war in Ukraine. In Japan, the projected narrowing of the current account surplus by 1 percentage point is driven by higher energy costs. However, the current account deficit in the United States is projected to remain elevated at 3.7 percent of GDP, with the

**Figure 1.20. Global Saving–Investment Balances, 2020–27**  
(Change from 2020, percent of World GDP)



Sources: IMF, *World Economic Outlook*; and IMF staff calculations.  
Note: AE = advanced economy; EMDE = emerging market and developing economy. Data from 2022 onward are projections. Data labels use International Organization for Standardization country codes.

decrease in public dissaving countered by a decline in private saving and an increase in investment.

- Emerging market economies:** China's current account surplus is projected to decline by 0.4 percentage point of GDP to 1.4 percent of GDP in 2022, driven by an increase in investment. Commodity prices and the war in Ukraine are expected to drive movements in current account balances in several other emerging markets for 2022. Current account balances in commodity exporters are projected to increase in 2022 (for example, by 12.1 percentage points of GDP in Saudi Arabia and by 1.9 percentage points of GDP in Indonesia). The impact is the opposite for commodity importers, with the current account deficit in India, for example, increasing by 1.9 percentage points of GDP. The current account surplus in Russia is projected to increase by 5 percentage points of GDP, driven by import

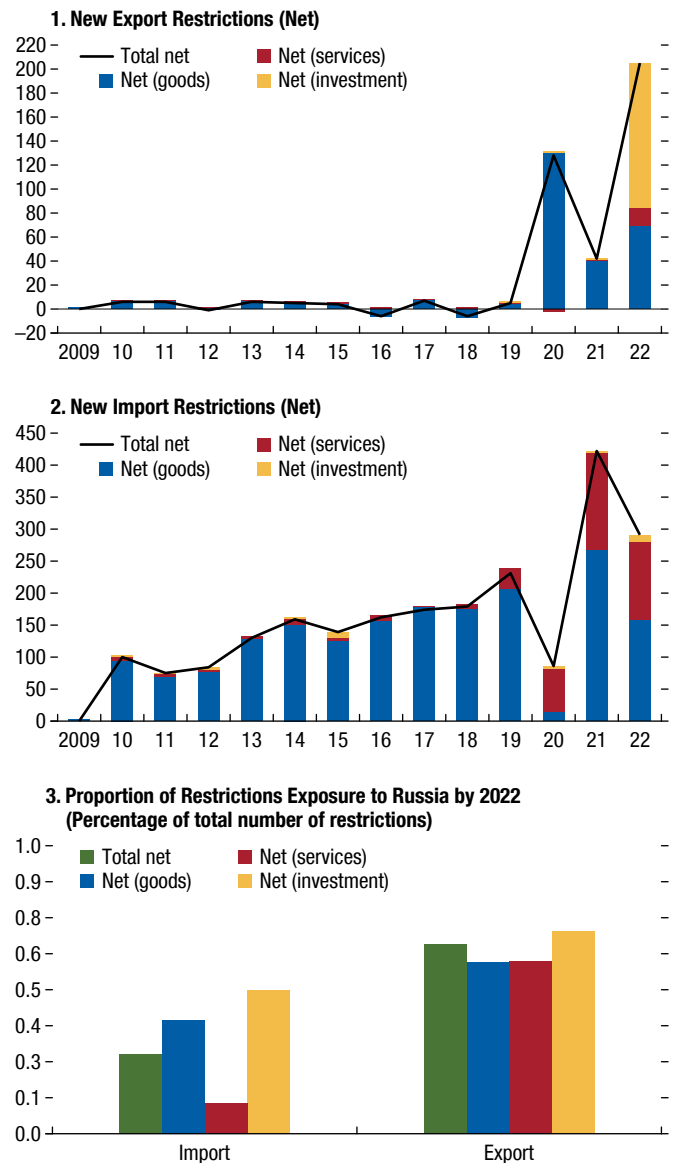
compression, positive terms of trade, and export volumes that have remained relatively resilient so far in the face of sanctions.

### Risks Surrounding the Outlook

In the context of the lingering pandemic and the war in Ukraine, unusually high uncertainty and risks surround the external sector outlook:

- *Commodity prices:* A prolonged war in Ukraine could lead to higher commodity prices for a longer time. Given the opposite impact on commodity exporters and importers and the fact that key commodity exporters are surplus economies, this could widen global current account balances in 2022 beyond the baseline projection and delay the adjustment in subsequent years. Higher oil and gas prices for longer would also increase vulnerabilities in importing countries and could lead to higher capital outflows, larger borrowing costs, and greater fiscal pressures, with potentially disruptive effects on exchange rates. In food-importing countries, higher prices could increase the cost of imports and fiscal pressures. Those risks can be exacerbated by escalating international sanctions on Russia and countersanctions by Russia.
- *Trade tensions and fragmentation:* While the baseline already incorporates the impact of sanctions related to the war in Ukraine, a wider deterioration in the geopolitical environment would further exacerbate trade tensions and supply disruptions globally, in the context of already-rising trade restrictions (Figure 1.21). This could result in trade fragmentation, for example, through the creation of new trade blocs based on “friendshoring,” disruptions to established global value chains, and a reorganization in the international monetary system with implications for reserve asset composition, payments systems, and exchange rates. The need to adjust to new trade blocs would add stress to already-strained supply chains. Although a more fragmented trade system could either increase or decrease global balances, depending on the exact reconfiguration of trade blocs, it would unambiguously erode welfare gains from globalization, reduce technology transfers, and decrease the potential for export-led growth in low-income countries.
- *A worsening slowdown in China:* A prolonged slowdown in China would affect trading partners

Figure 1.21. New Trade Restrictions, 2009–22

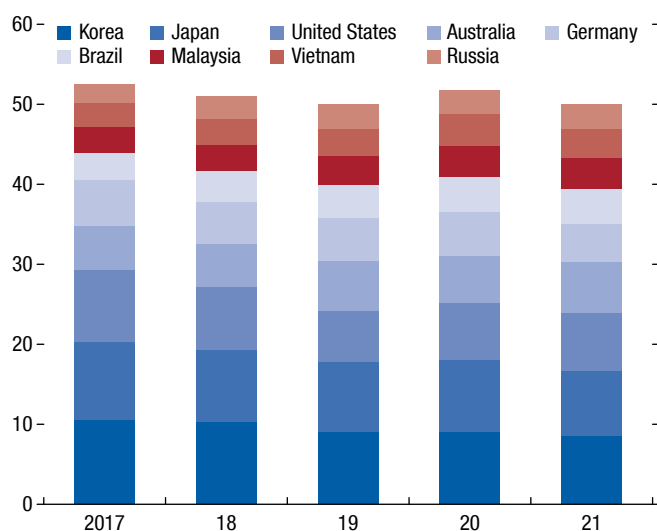


Source: Global Trade Alert.

Note: “Net” is defined as the difference between harmful and liberalizing interventions. Export controls includes export restricting measures, and import reforms includes import liberalizing measures in the medical goods and medicine sectors. See Evenett (2021) for details.

directly, the largest of which are located often in Asia and the Pacific (Figure 1.22). The slowdown would also have global repercussions beyond major trading partners by affecting commodities for which China has a large share of global demand. The impact on global balances from lower demand for commodities will depend on the net effect on current accounts of commodity importers

**Figure 1.22. China: Major Import Sources, 2017–21**  
(Percent of total China imports)



Sources: IMF, *World Economic Outlook*; and IMF staff calculations.

and exporters.<sup>13</sup> Risks to growth are amplified by risks from the reemergence of COVID-19 and zero-COVID-19 policies that could lead to more lockdowns and additional disruptions in global supply chains.

- **Financial tightening:** The prospects for continued tightening of monetary policy in the United States and major economies imply a further tightening of global financial conditions, leaving open risks for disruptive capital outflows from emerging markets, a depreciation of their currencies, and a higher probability of default. Tighter-than-expected monetary policy in the United States could disrupt market conditions, while a larger tightening by the Federal Reserve than by the European Central Bank could contribute to further dollar appreciation and widening in global balances. Negative wealth effects of monetary and financial tightening could impact fiscal balances and saving behavior. The stock of external liabilities at the end of 2021 exceeded reserves for most emerging and developing economies (Figure 1.23). The IMF staff estimates capital flows at risk at the 5 percent level to be 2.3 percent

<sup>13</sup>For example, a lower commodity price would increase the deficit of a commodity exporter that runs a current account deficit, thereby contributing to widening global current account balances. The opposite effect would arise if the commodity exporter ran a current account surplus.

of GDP and the probability of outflows to be about 30 percent in the April 2022 *Global Financial Stability Report*.

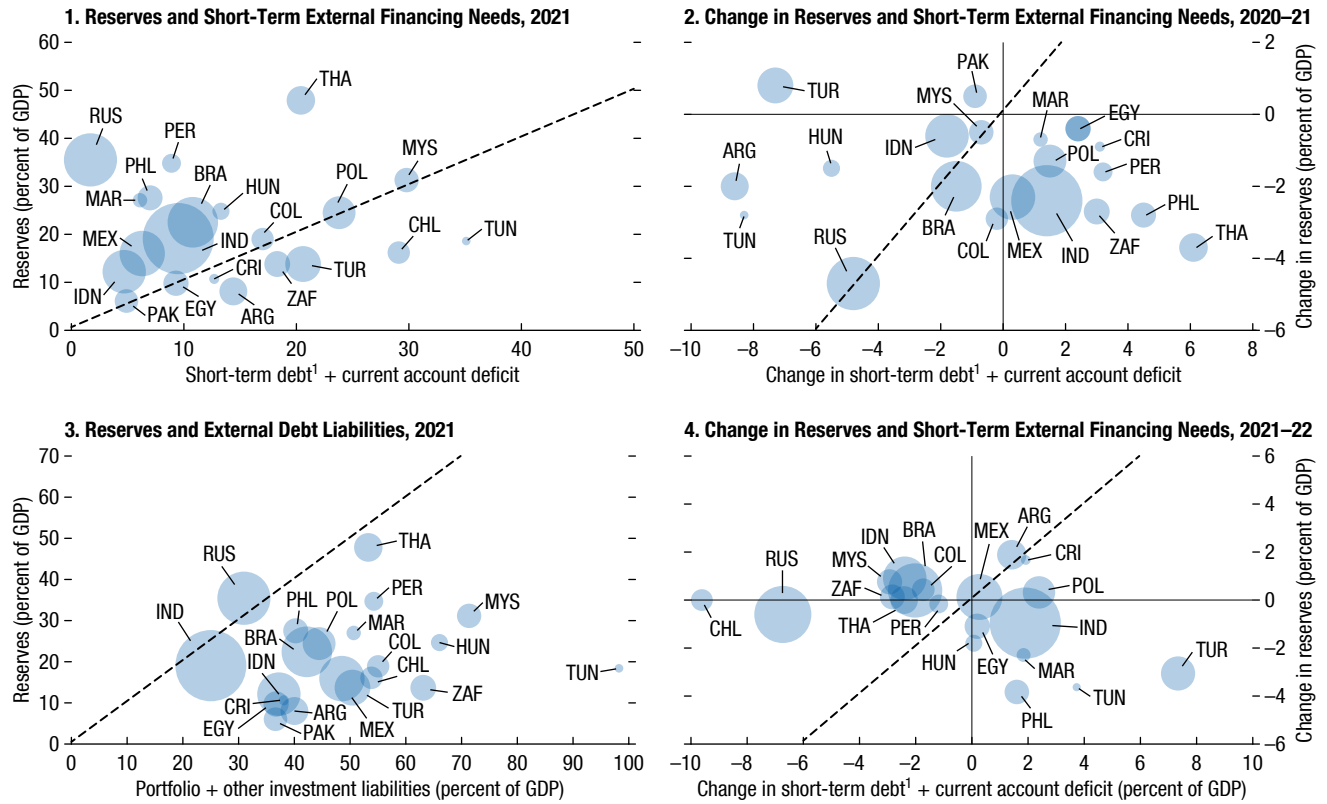
- **Fiscal policy path:** In the baseline, fiscal policy is projected to contribute to a narrowing of global balances because of faster withdrawal of fiscal support by current account deficit economies, but deviations from the projected fiscal path could have significant consequences. As discussed in the 2021 *External Sector Report*, additional fiscal expansions by current account deficit economies could hinder the predicted narrowing in global balances over the coming years. Deviations of fiscal policy from the baseline path could be brought about, for example, by a resurgence of COVID-19 strains that require strict lockdowns and additional fiscal support and by the need for transfers to ease the impact of higher food and fuel prices on vulnerable households. A faster-than-expected pace of fiscal consolidation among current account surplus economies would also expand global balances.
- **Climate change:** Natural disasters can have large effects on current accounts of disaster-prone countries (Box 1.3). Although those countries are small from a systemic point of view, if climate change worsens (for example, because of lack of progress on mitigation policies [see Chapter 2]), those types of events could become more widespread and potentially affect larger countries in the long term, with a possible effect on global balances. Global balances could also widen due to unbalanced implementation of climate mitigation policies (see Chapter 2).

### Policy Priorities for Promoting External Rebalancing

As emphasized in the April 2022 *World Economic Outlook*, the war in Ukraine has exacerbated existing trade-offs for policymakers, including between fighting inflation and safeguarding economic recovery and between providing support to those affected and rebuilding fiscal buffers. Policies to address fallouts from the pandemic and war need to be balanced with the need to fight inflation and rebuild fiscal buffers while prioritizing fiscal spending to protect the most vulnerable. Consistent with such overall needs, policies should also enhance external stability and facilitate external rebalancing.

Multilateral cooperation is key in dealing with the policy challenges generated by the pandemic and the

Figure 1.23. Emerging Market and Developing Economies: External Vulnerabilities



Sources: IMF, *International Financial Statistics*; IMF, *World Economic Outlook*; and IMF staff calculations.  
 Note: Bubble sizes are proportional to US dollar GDP. Data labels use International Organization for Standardization country codes.  
<sup>1</sup>Short-term debt on a residual maturity basis. 2020 portfolio positions are reported when 2021 data are unavailable.

war in Ukraine, including to tackle the humanitarian crisis. Multilateral cooperation could greatly facilitate the green transition: in Chapter 2, a coordinated implementation of climate change policies has been found to reduce global current account balances and help to bring forward net zero emissions. Coordinated policy efforts will also be needed to counter the risks of global economy fragmentation, including by eschewing new barriers to trade, which would reduce growth with no significant effect on external imbalances (see Box 1.4). Addressing global food security challenges would also require coordinated policy efforts, including to support the vulnerable, promote open trade of food and agricultural inputs, and invest in climate-resilient agriculture.

Maintaining liquidity in the global financial system, including via the global financial safety net, will be essential to helping economies manage risks related to tightening of global financial conditions and financial system fragmentation because of geopolitical tensions.

To this end, the IMF’s lending programs also help provide a safety net for countries hit by balance-of-payment shocks.

The review of the IMF’s Institutional View on the liberalization and management of capital flows provides guidance on how to manage capital flow volatility (IMF 2022). While exchange rate flexibility can in general help absorb shocks, in economies with shallow foreign exchange markets, foreign exchange intervention may be needed to address disorderly conditions, and temporary capital flow management measures may be warranted, for example, in imminent crisis circumstances or during capital inflow surges. Additionally, when a large stock of unhedged external debt (particularly if denominated in foreign currency but in some cases also in local currency) generates systemic financial risks, preemptive capital flow management measures that are also macro-prudential measures to restrict inflows can mitigate these risks. However, they should not be used in a manner that leads to excessive

distortions and should not substitute for necessary macroeconomic and structural policies or exchange rate adjustment.

Policies to promote external rebalancing differ based on individual economies' positions and needs, as detailed in the Individual Economy Assessments in Chapter 3 (and summarized in Annex Table 1.1.6).

- *Economies with weaker-than-warranted external positions:* Where excess current account deficits in 2021 partially reflected fiscal deficits above desirable medium-term levels (as in the United States) and where such imbalances persist, fiscal consolidation will be critical to support external rebalancing and bring the current account balance closer to its norm. However, fiscal consolidation should be implemented in a way that prevents long-term scarring from the pandemic, including by protecting spending for infrastructure, health care, and education. Policies should also help the most vulnerable households cope with the impact of rising oil and food prices. In several emerging market economies with weaker-than-warranted external positions in 2021 (such as Argentina and South Africa), gradual but substantial growth-friendly fiscal consolidation while providing space for infrastructure and social spending to help reduce poverty and inequality would help current account rebalancing and help accumulate international reserves to more adequate levels. Countries with lingering competitiveness challenges would also need to address structural challenges, including through labor, product market, and other reforms, to promote green, digital, and inclusive growth while boosting productivity.
- *Economies with stronger-than-warranted external positions:* In economies where excess current account

surpluses persist, intensifying reforms that encourage investment and discourage excessive private saving is warranted. Fiscal policies can help achieve those objectives, especially where there is fiscal space and inflation expectations are well-anchored. For example, in Germany and the Netherlands, additional fiscal spending can help foster investment in physical and human capital and deal with the repercussions from the war in Ukraine, while promoting external rebalancing. Policies to encourage public and corporate investment, including those facilitating a greener structural transformation of the economy (see also Chapter 2), would also help reduce external imbalances (for example, in Poland and Sweden). In some emerging markets, reforms to discourage excessive precautionary saving and support consumption by expanding social safety nets (Malaysia, Thailand) and tackling widespread informality (Thailand) would also help reduce excess current account surpluses.

- *Economies with external positions broadly in line with fundamentals:* In such cases, policies should continue to address domestic imbalances to prevent excessive external imbalances. Relevant policies include accelerating structural reforms—including state-owned enterprise reforms—to boost potential growth and strengthening social protection to reduce high household precautionary savings (as in China). In countries with large external liabilities (such as Spain), keeping the current account balance in line with its norm will require a combination of fiscal consolidation efforts and higher private savings, to be achieved through productivity gains that will require continued wage flexibility, addressing labor market duality, and actions to enhance education outcomes and encourage innovation.



### Box 1.1. Saving and Wealth Dynamics in the Aftermath of COVID-19

After increasing sharply during the COVID-19 crisis, household saving has returned to close to pre-pandemic levels in many countries as pandemic-related fiscal support measures expire.<sup>1</sup> However, large increases in household balance sheets (because of saving and valuation gains) during the pandemic persist and tend to be distributed unequally, which could have important implications for the future path of external balances.

*Decomposition of saving by institutional sector:* The pandemic has led to very large and opposite changes in saving by households, firms, and the public sector, leading to small net changes in national saving and current account balances. The fall in consumption caused by lockdowns explains a significant part of the household saving increase, and public support aimed at maintaining incomes also contributed (Aggarwal and others 2022). In the corporate sector, the fall in production was offset by lower employee compensation and higher public support, leaving corporate saving broadly unchanged. The flip side of these evolutions has been a sharp decrease in public saving, reflecting fiscal support to both firms and households and lower economic activity. As the recovery takes hold, household and public saving have progressively returned to close to their pre-pandemic levels (Figure 1.1.1). However, there has been little drawdown of the stock of excess household savings so far. This reflects the limited role of pent-up demand for consumption of services such as restaurants and travel and the unequal distribution of pandemic excess saving across income levels (see below).

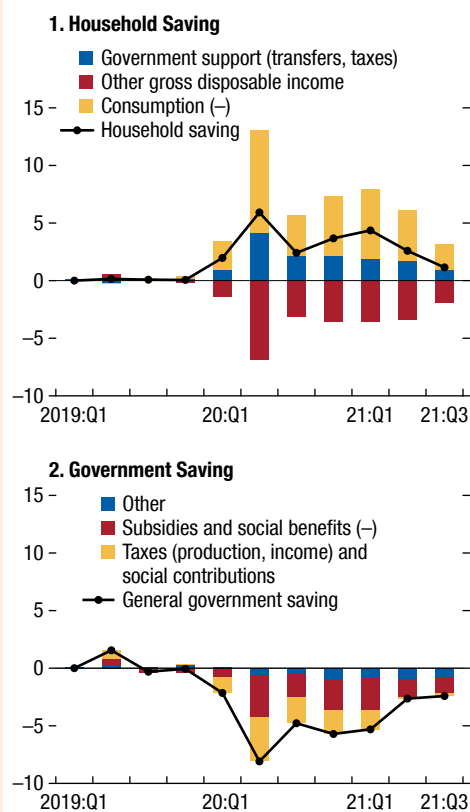
*Excess private saving and public dissaving and the current account in the United States and Europe:* The cumulative change in household saving relative to the first quarter of 2020 (excess saving) is strongly associated with large government dissaving across countries (in line with Aggarwal and others [2022]). To understand its implications for external accounts, the cumulative change in the current account can be decomposed into changes in (excessive) private saving, fiscal saving, and net domestic investment in the United States and in Europe using national accounts' identities.<sup>2</sup>

This box was prepared by Cian Allen and Cyril Rebillard.

<sup>1</sup>See Chapter 1 of the April 2022 *Fiscal Monitor* for an in-depth discussion on the relation between government support and changes in household saving during the pandemic.

<sup>2</sup>The current account balance is equal to saving (both private and public) minus investment.

**Figure 1.1.1. Decomposing Excess Household Saving and Public Dissaving in the European Union**  
(Percent of pre-crisis GDP trend)



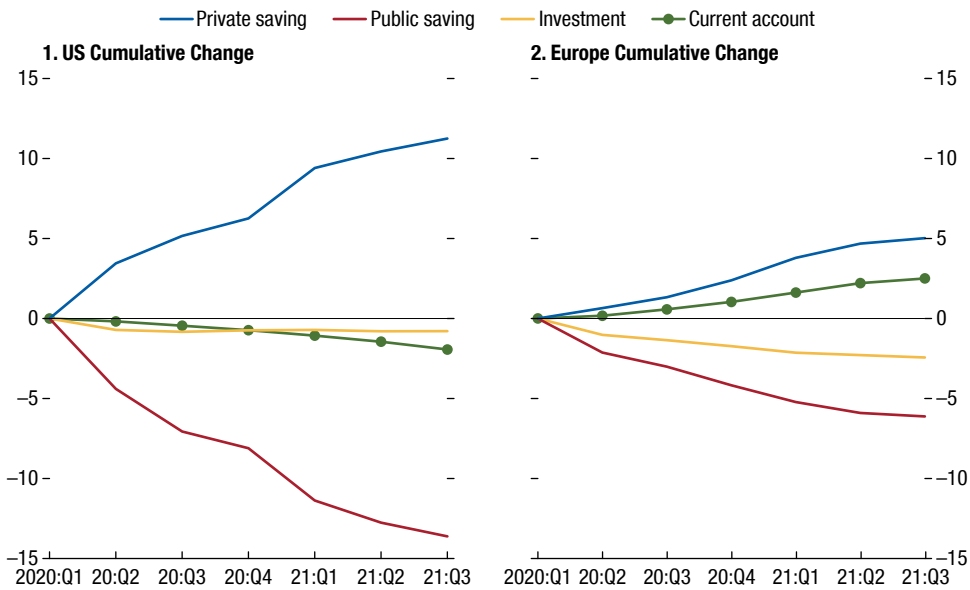
Sources: Eurostat (quarterly sector accounts); IMF, *World Economic Outlook*; and IMF staff calculations.

Note: Household and government saving and their components are shown as cumulated changes from the first quarter of 2019. For households, "government support" includes social benefits, social contributions, taxes on income and wealth, and other transfers. "Other gross disposable income" includes gross operating surplus and mixed income, compensation of employees, and net property income. For the government, "other" includes gross value added, compensation of employees, net property income, public consumption, and other current transfers.

Figure 1.1.2 shows that the magnitude of excessive public and private saving is much larger in the United States in percent of GDP. In addition, the large increase in fiscal deficits more than offsets the increase in private saving in the United States, leading to larger current account deficits. By contrast,

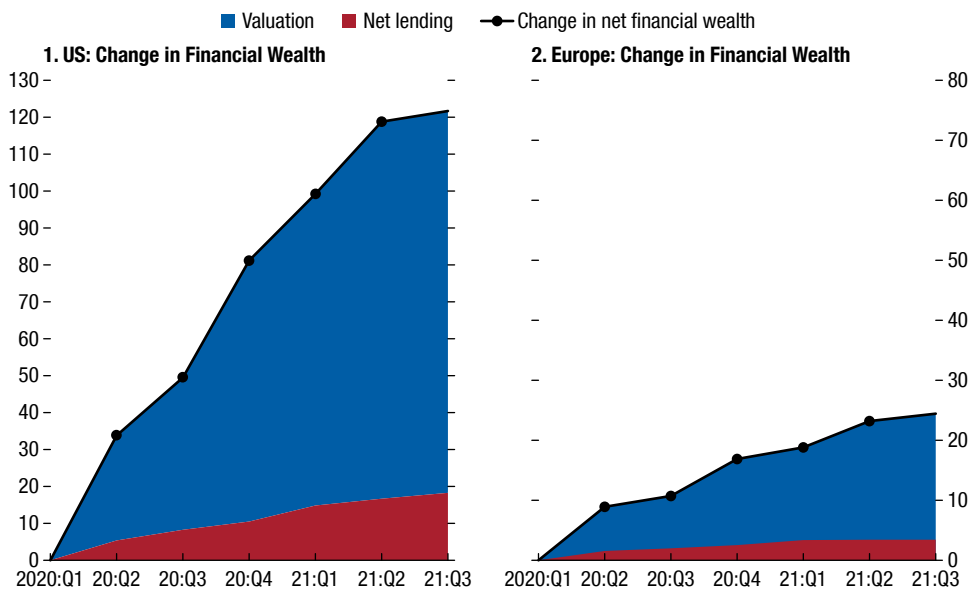
**Box 1.1 (continued)**

**Figure 1.1.2. Cumulative Change in the Current Account**  
(Percent of 2019 GDP)



Sources: Eurostat; Organisation for Economic Co-operation and Development; and IMF staff calculations.  
Note: Weighted average Europe (including UK). Each item is shown as cumulated changes from the first quarter of 2020.

**Figure 1.1.3. Change in Financial Wealth**  
(Percent of 2019 GDP)



Sources: Eurostat; Organisation for Economic Co-operation and Development; and IMF staff calculations.  
Note: Weighted average Europe (including UK). The change in financial wealth is decomposed into valuation changes and the sum of net lending.

**Box 1.1 (continued)**

in Europe, the higher private saving combined with lower investment more than offset fiscal deficits, leading to increases in the cumulative current account balance.

*Bolstered household balance sheets:* Accumulated savings explain only part of the increase in wealth, because surging equity and housing prices also made some households wealthier.<sup>3</sup> Regarding financial wealth, Figure 1.1.3 shows that the increase in the household sector's aggregate net financial wealth was much larger in the United States than in Europe.<sup>4</sup> It also shows that most of the increase in financial wealth in the United States was driven by valuation changes (that is, asset price changes), whereas in Europe, the relative contributions of net (financial) saving and changes in asset prices to wealth were more balanced. In addition, since the beginning of 2021, most of the increases in net wealth are due to changes in valuations in both the United States and Europe, as net financial saving flows have reverted to pre-pandemic levels. This suggests that looking only at the cumulated flow of savings could underestimate the overall improvement in accumulated wealth, which, in turn, could underestimate the magnitude of funds available for future spending. Recent data for the United States show a drawdown in accumulated saving in early 2022, possibly related to the inflation surge and large valuation losses. Further data releases will indicate if this pattern also holds more generally across countries.

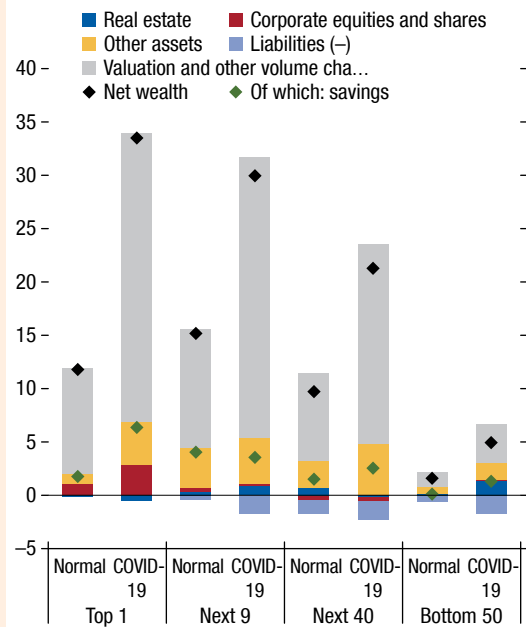
*Unequal distribution of saving:* The implications of the accumulation of wealth on future spending and external balances also depends on the distribution of these gains. Figure 1.1.4, based on data published by the Federal Reserve, plots the changes in household net wealth by percentile (expressed as a ratio of total aggregate personal disposable income) during the pandemic and during a period before the pandemic

<sup>3</sup>In the nonfinancial accounts: change in household wealth is equal to saving plus valuation changes. In the financial accounts: change in household financial wealth is equal to net lending plus valuation change. Net lending is the difference between total income and total spending, or equivalently, between gross saving and total investment.

<sup>4</sup>Recent data for net financial wealth are more readily available than for overall net wealth (including nonfinancial assets). Net financial wealth is equal to financial assets minus liabilities. Non-financial wealth, which consists mainly of real estate, represented about half of the increase in overall wealth between 2019 and 2020 in countries with available data.

**Figure 1.1.4. United States: Change in Household Net Wealth, by Wealth Percentile, COVID-19 versus Normal Times**

(Percent of disposable income)



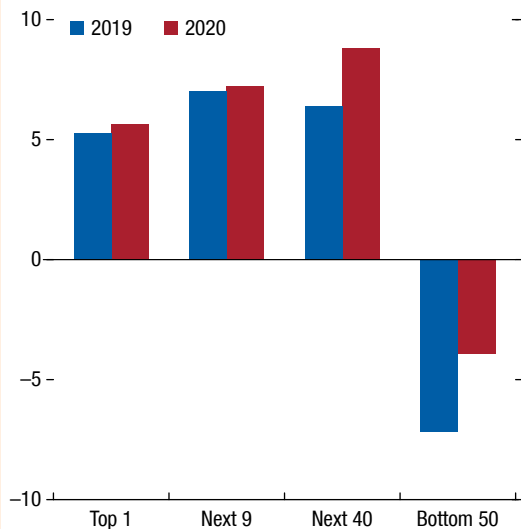
Sources: Federal Reserve, Distributional Financial Accounts; and IMF staff calculations.

Note: The figure reports the change in household wealth between the fourth quarter of 2019 and the fourth quarter of 2021 (COVID-19 period) and between the fourth quarter of 2014 and the fourth quarter of 2019 (normal times). Numbers are normalized using total nationwide personal disposable income during the corresponding period (for example, the first quarter of 2020 to the fourth quarter of 2021 for the COVID-19 period). Abstracting from valuation changes, the change in the top 1 percent's household net wealth during COVID-19 can be interpreted as the top 1 percent's contribution to the average nationwide household saving rate over the period. "Other assets" includes pension entitlement, private businesses, consumer durables, and other assets.

referred to as "normal times." This overall increase in net wealth was also distributed unevenly, with much of it accruing to individuals at the top of the distribution: the equity price boom mostly benefited the rich, while lockdowns more heavily affected spending on dining and travel, which make a larger part of wealthier households' consumption habits. At the same time, the distribution of wealth across groups did not change much, as the increases in net wealth were relatively in line with the pre-pandemic

**Box 1.1 (continued)**

**Figure 1.1.5. Europe: Unequal Distribution of Saving, by Income Percentile**  
(Percent of disposable income)



Sources: Allen, Kolerus, and Xu 2022; and IMF staff calculations. Note: This figure plots an estimation of the distribution of private saving in percent of national income. It uses constant consumption-to-income ratios, following Mian, Straub, and Sufi (2021) and Allen, Kolerus, and Xu (2022). The median values for 24 European countries are reported.

shares in the wealth distribution (Blanchet, Saez, and Zucman 2022).<sup>5</sup> Similar distributional balance sheet data are not available for other countries in a timely manner, but existing estimates of the distribution of saving across the income distribution can be combined with changes in saving and inequality in a sample of European economies between 2019 and 2020.<sup>6</sup> Figure 1.1.5 shows that the increase in saving is relatively broad based in Europe, which can be explained by the relatively muted changes to measured income inequality over that period (Chancel and others, forthcoming).<sup>7</sup>

<sup>5</sup>Blanchet, Saez, and Zucman (2022) show that there was very little change in headline income inequality, with the share of disposable income going to the top 10 percent decreasing in US over the period.

<sup>6</sup>Ideally, the analysis should also focus on the distribution of saving across wealth percentiles in Europe (like in the US). However, such data are not available in a broad sample of countries.

<sup>7</sup>These are back-of-the envelope calculations based on previous estimates of the distribution of saving. Also, these calculations do not include any changes in valuation.

### Box 1.2. Current Account Rebalancing: At What Speed? Assessment of Current Account Gaps Historical Persistence

The External Balance Assessment (EBA) framework produces multilaterally consistent assessments of current account balances and real effective exchange rates. These assessments tend to persist over time, as evidenced by Figure 1.17 (see also 2017 *External Sector Report*). This box evaluates how and how fast excess external imbalances adjust by relating initial EBA assessments and policy gaps to subsequent adjustments.<sup>1</sup> The analysis shows that EBA gaps tend to adjust over time, but the adjustment is slow and asymmetric across countries. Adjustment is mainly driven by changes in actual current account balances, with changes in current account norms (“norm creep”) playing only a modest role. Closing policy gaps contributes to external adjustment only when policy gaps and overall current account gaps are aligned.

The sample consists of 48 economies in the baseline EBA regression (Ireland is excluded because of large current account volatility in recent years). Two sub-periods are studied: (i) 2012–19, where actual assessments are used based on three subsequent vintages of EBA models and available optimal policies P\*; and (ii) 1987–2019, where the refined EBA specification is used (assuming optimal policies P\* are kept constant at their 2019 level).<sup>2</sup> Panel regressions are estimated as follows:

$$X_{i,t} - X_{i,t-1} = \alpha \cdot Gap_{i,t-1} + \varepsilon_{i,t}$$

This box was prepared by Cian Allen and Cyril Rebillard.

<sup>1</sup>Other studies have looked at similar assessment of EBA’s predecessor, called Consultative Group on Exchange Rate assessments (see, for instance, Abiad, Kannan, and Lee [2009] and Yeşin [2016]) or a similar exercise on benchmark current account models (see, for instance, Coutinho, Turrini, and Zeugner [2022]). Moreover, Lane and Milesi-Ferretti (2012) document that the excess imbalances before the global financial crisis have strong predictive power on subsequent adjustments of current account imbalances.

<sup>2</sup>The EBA methodology was introduced in 2012 and was subsequently refined in 2015, 2018, and 2022. Computing EBA norms and gaps requires country teams’ inputs on desirable policies, which are not available before 2012. Restricting the second approach (refined model, constant P\*) over 2012–19 leads to very similar results compared with the first approach using actual models and assessments. This is reassuring and enables the analysis to be focused on results over the longer sample (including crisis episodes).

where  $X$  represents IMF staff current account gaps, EBA current account gaps, current account norms, policy gaps, and EBA residuals in different specifications. When  $X = Gap$  and  $\alpha < 0$ , the gap follows an exponential process converging toward zero. Half-lives  $HL(Gap)$  are then defined as the number of years it takes for the gap to close by half.<sup>3</sup> Unlike previous similar studies, regressions do not include any constant or country fixed effects, as the EBA approach has a strong normative dimension relying on the notion that gaps should close to zero over time.<sup>4</sup>

All gaps adjust, but slowly and with asymmetries across countries. In nearly all cases, regression coefficients  $\alpha$  are found to be negative and statistically significant, indicating convergence to zero over time.<sup>5</sup> However, adjustment is slow: based on 2012–19 and the *External Sector Report* sample, IMF staff current account gaps take 6.9 years to close by half (see Figure 1.2.1). Adjustment is somewhat faster for EBA gaps over the whole period (half-life of 4.7 years) or 2012–19 (5.7 years).<sup>6</sup>

However, there is significant cross-country heterogeneity, with adjustment fastest in deficit emerging economies (1.5 years) and slowest in advanced surplus economies (6.4 years). Adjustment is quicker

<sup>3</sup>The concept of half-life comes from nuclear physics but has been used in previous papers that study real exchange rate adjustment (see, for instance, Rogoff [1996]). Concretely,  $HL(Gap) = -\ln(2)/\ln(1 + \alpha)$ .

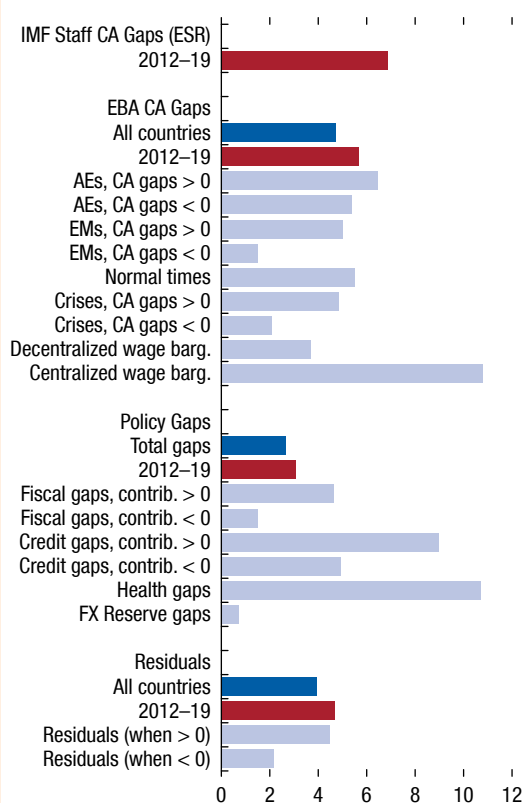
<sup>4</sup>A robustness exercise assessed how results changed when introducing country fixed effects and a constant. In most cases, country-specific levels of convergence of EBA gaps were found to be nonstatistically different from zero. In the remaining cases, EBA gaps not converging toward zero could be related to factors outside EBA (for example, persistent measurement biases or structural factors as laid out in the IMF staff’s complementary tools).

<sup>5</sup>Results do not change much if 2020 and 2021 are included. These years were excluded because of COVID-19’s impact.

<sup>6</sup>Half-lives between 4.7 and 6.7 years correspond to  $\alpha$  coefficients between  $-0.098$  and  $-0.138$  (both significant at the 1 percent level). This is in line with Coutinho, Turrini, and Zeugner (2022), who find a coefficient of  $-0.083$  (also significant at the 1 percent level) with a regression over nonoverlapping five-year periods with time fixed effects.

## Box 1.2 (continued)

**Figure 1.2.1. IMF Staff and EBA CA Gaps Adjustment: Half-Lives (Years)**



Sources: IMF, External Balance Assessment estimates; IMF country classification; Laeven and Valencia 2020; The OECD/AIAS database on Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts; and IMF staff calculations.

Note: AE = advanced economy; CA = current account; EBA = External Balance Assessment; EM = emerging market; ESR = *External Sector Report*; FX = foreign exchange. Red bars are derived from regressions over 2012–2019 (actual P\*s); blue bars are derived from regressions over the whole period (P\*s assumed constant).

during crisis episodes,<sup>7</sup> especially in deficit countries (2.1 years) compared with normal times (5.5 years), in line with Lane and Milesi-Ferretti (2012). Other country-specific features such as labor market institutions may affect adjustment speed, which is faster when wage bargaining is decentralized (3.7 years)

<sup>7</sup>Crisis episodes are defined using the Laeven and Valencia (2020) database, including banking, currency, and debt crises, to which all recession episodes were added (extended to three years to include the immediate crisis aftermath).

versus centralized (10.8 years),<sup>8</sup> in line with Nieminen, Heimonen, and Tohmo (2019).<sup>9</sup>

EBA gaps adjustment (Table 1.2.1, column 1) is mainly driven by changes in actual current account or cyclically adjusted current account balances (columns 2 and 3), with norm creeping playing only a modest role (column 4). Norm creeping is mainly related to the net foreign assets variable (columns 6 and 9), as persistent external imbalances (desirable or excessive) lead to building large external positions over time; however, other fundamentals are also at play for surplus economies (column 7), generating some asymmetry between surplus and deficit countries (columns 5 and 8).<sup>10</sup>

Policy gaps tend to adjust more quickly than the EBA current account gap, but asymmetrically across countries and for domestic instead of external reasons. All policy gaps are found to adjust over time, with varying speed, depending on the type of gap and country characteristics (Figure 1.2.1). Policy gaps tend to adjust faster than overall EBA current account gaps, with respective half-lives of 2.7 and 4.7 years. Adjustment speed is asymmetric for fiscal gaps (slower when fiscal stance is tighter than warranted) and credit gaps (slower after a credit crunch). Health gaps, meant to proxy for the development of social safety nets, adjust very slowly while foreign exchange reserve gaps (characterizing near-crisis situations) adjust extremely rapidly. Residuals adjust relatively slowly, with some asymmetry between surplus and deficit countries (half-lives of 4.5 and 2.2 years, respectively). Quantitatively, policy gaps contribute only modestly to

<sup>8</sup>Wage bargaining frameworks are taken from the Organisation for Economic Co-operation and Development and Amsterdam Institute for Advanced Labour Studies Institutional Characteristics of Trade Unions, Wage Setting, State Intervention, and Social Pacts database. Decentralized (respectively centralized) systems correspond to *coord* = 1,2,3 (respectively *coord* = 4,5).

<sup>9</sup>Additional analysis shows that economies that are more financially closed (based on the Fiscal Analysis of Resource Industries Index) and have less flexible exchange rate regimes (based on the Annual Report on Exchange Arrangements and Exchange Restrictions classification) tend to adjust faster.

<sup>10</sup>As oil and gas producers, which are often surplus countries, deplete their hydrocarbon reserves, the temporariness of these reserves increases, boosting the need to save and the CA norm. In addition, rapid convergence in emerging countries tend to increase their CA norm (due to closing development gap), which will contribute to norm creeping in surplus emerging economies (but would tend to widen the CA gap in deficit emerging economies, all else equal).

## Box 1.2 (continued)

Table 1.2.1. EBA Gaps Adjustment: Changes in CA Balances or Norm Creeping?

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Change in EBA CA Gap	Change in Actual CA	Change in Cycl. Adj. CA	Change in EBA CA Norm	Change in EBA CA Norm	Change in NFA Contrib.	Change in Norm Excl. NFA	Change in EBA CA Norm	Change in NFA contrib.	Change in Norm Excl. NFA
EBA CA Gap (lagged)	<b>-0.1358***</b> (0.000)	-0.1258*** (0.000)	-0.1098*** (0.000)	0.0212*** (0.000)	<b>0.0255***</b> (0.000)	0.0135*** (0.000)	0.0106*** (0.000)	<b>0.0086*</b> (0.093)	0.0128*** (0.000)	-0.0072 (0.115)
Observations	<b>1,331</b>	1,331	1,331	1,331	<b>750</b>	750	750	<b>581</b>	581	581
R-squared	<b>0.070</b>	0.047	0.047	0.042	<b>0.073</b>	0.049	0.019	<b>0.005</b>	0.043	0.004
Number of ifs_code	<b>48</b>	48	48	48	<b>46</b>	46	46	<b>45</b>	45	45
Rho	<b>0.0445</b>	0.0600	0.0269	0.140	<b>0.136</b>	0.502	0.114	<b>0.0737</b>	0.475	0.0288

Sources: IMF, External Balance Assessment estimates; and IMF staff calculations.

Note: CA = current account; Cycl. Adj. = cyclically adjusted; EBA = External Balance Assessment; NFA = net foreign assets. Regressions are based on the whole period (P\*s assumed constant); columns (6) and (9) correspond to the change in EBA norm due to the contribution of the NFA variable, whereas columns (7) and (10) correspond to the change in norm excluding the contribution of the NFA variable; p-values are in parentheses; \*\*\* p < 0.01; \* p < 0.1.

Table 1.2.2. EBA Gaps Adjustment: Contribution of Policy Gaps and Residuals

Variables	(1)	(2)	(3)	(4)	(5)
	Change in EBA CA Gap	Change in EBA Residual	Change in Policy Gaps		
			if Aligned	if Nonaligned	
EBA CA Gap (lagged)	<b>-0.1251***</b> (0.000)	<b>-0.1110***</b> (0.000)	<b>-0.0140</b> (0.110)	-0.0509*** (0.000)	0.1185*** (0.000)
Observations	<b>1,331</b>	<b>1,331</b>	<b>1,331</b>	849	482
R-squared	<b>0.064</b>	<b>0.049</b>	<b>0.002</b>	0.030	0.087

Sources: IMF, External Balance Assessment estimates; and IMF staff calculations.

Note: CA = current account; EBA = External Balance Assessment. Regressions based on the whole period (P\*s assumed constant); p-values are in parentheses; \*\*\* p < 0.01.

overall external adjustment, compared with residuals (Table 1.1.2, columns 1–3). Indeed, policy gaps are aligned with overall external gaps in about two-thirds of cases (columns 4 and 5):<sup>11</sup> consistent with IMF staff

advice, policy gaps should (and do) close for domestic reasons above all, regardless of their impact on external rebalancing (sometimes calling for additional policy measures aimed at external rebalancing).

<sup>11</sup>If policy gaps are closed in 2019, absolute EBA gaps in percent of GDP increase by 0.1 percent of country GDP on average (they are reduced in US dollar terms). Closing each policy gap has varying

impacts on the absolute dollar amount of EBA gaps: closing fiscal gaps reduces the overall EBA gap (by \$150 billion), whereas closing the credit gap increases the overall EBA gap (by \$125 billion).

### Box 1.3. External Sector Impact of Disaster Shocks

Climate change is expected to worsen the reach of natural disasters, by increasing the intensity and frequency of extreme events (IPCC 2014). Empirical estimates suggest that this trend will have important implications for the external sector. Natural disasters tend to widen the current account deficit to finance reconstruction through increased investment. Climate change is expected to amplify this channel, because more intense and frequent disaster events will inflict greater economic losses and damage to physical infrastructure. Simulations from a structural model show that the impact can be softened by investing in ex ante adaptation. The presence of a contingency fund reduces reliance on external debt to finance reconstruction, which can help smooth the recovery.

*Empirical background:* Using data from the Emergency Events Database, Figure 1.3.1 shows the current account impact of a disaster shock using local projections (Jordà 2005). The sample consists of 31 economies classified as disaster-prone countries (defined as the top quartile of the probability of disaster per 1,000 square kilometers, as in Cantelmo, Melina, and Papageorgiou [2019]).<sup>1</sup>

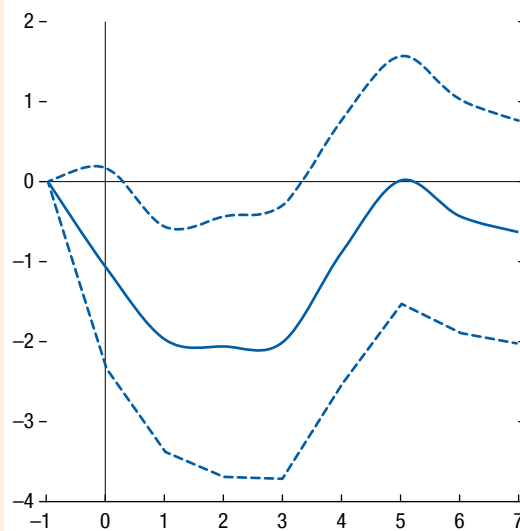
After the initial shock, the current account (as percent of GDP) deteriorates up to 2 percentage points. Disaster shocks trigger an increase in investment, which is needed to rebuild the capital stock and support the recovery. Imports and GDP also increase, as countries need to import intermediates and investment goods for reconstruction.

*Model simulations:* This box also presents the estimated impact of a natural disaster on the external sector of a disaster-prone country for different ex ante policy choices. The framework used is a dynamic general equilibrium model, the Debt, Investment, Growth, and Natural Disasters model (Marto, Papageorgiou, and Klyuev 2018), calibrated to a typical disaster-prone country (Cantelmo, Melina, and Papageorgiou 2019) with the following features: financially constrained households; two sectors of

This box was prepared by Zamid Aligishiev, Luciana Juvenal, and Cian Ruane.

<sup>1</sup>The economies in the sample are Albania, Belize, Burundi, Cabo Verde, Comoros, Costa Rica, Dominica, the Dominican Republic, El Salvador, Eswatini, Fiji, The Gambia, Grenada, Haiti, Jamaica, Kiribati, Lebanon, former Yugoslav Republic of Macedonia, Maldives, Mauritius, Micronesia, Moldova, Montenegro, Rwanda, Samoa, the Solomon Islands, Sri Lanka, St. Lucia, Timor-Leste, Tonga, and Vanuatu. Data cover 1950–2015.

**Figure 1.3.1. Effects of a Disaster Shock on the Current Account**  
(Percent of GDP)



Source: IMF staff estimates.

Note:  $x$ -axis units are years, where  $t = 0$  denotes the year of the disaster. Dashed lines indicate 90 percent confidence intervals.

production (nontraded goods and traded goods); and a government with access to various fiscal instruments, external debt, and a contingency fund.

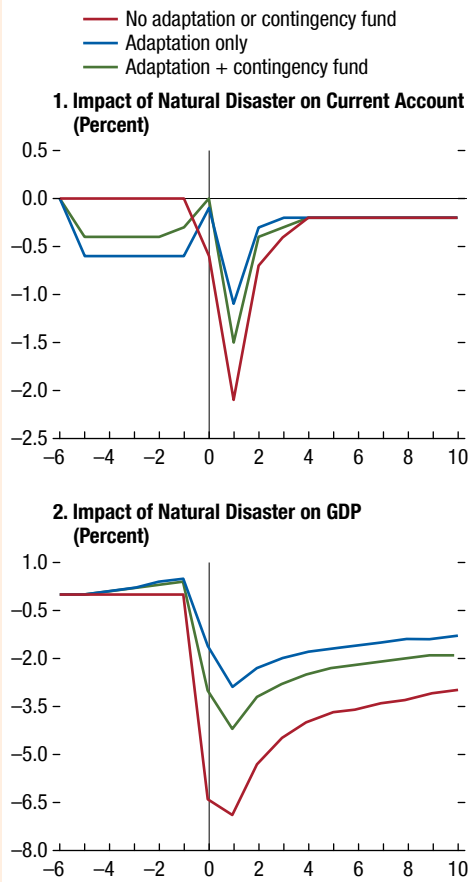
The baseline scenario considers an economy that does not undertake any ex ante policies and is hit by a natural disaster that damages both public and private infrastructure and reduces the level of Total Factor Productivity and reconstruction efficiency because of capacity constraints. The disaster inflicts total economic losses equivalent to 20 percent of GDP (stemming largely from the value of the destroyed capital stock), which in turn reduce GDP by 6.9 percent in the first two years, and then recovers slowly (red line in Figure 1.3.2, panel 2). External debt increases to fund reconstruction, with the capital inflows triggering a real exchange rate appreciation and a 2 percentage point increase in the current account deficit after the disaster, remaining elevated for 10 years after the initial impact, as shown in the red line in panel 1 of Figure 1.3.2.

The second scenario considers ex ante investment in adaptation infrastructure (for example, climate-proofed roads, seawalls, and so on) amounting to 2.5 percent of GDP cumulatively over the five years before the disaster hits, funded by external borrowing.



## Box 1.3 (continued)

**Figure 1.3.2. Impact of Natural Disaster**  
(Deviation from baseline)



Source: IMF staff estimates (DIGNAD model simulations). Note: x-axis units are years, where 0 is the year in which the disaster occurs. The adaptation only scenario entails ex ante investment of 2.5 percent of GDP cumulatively over the five years before the disaster hits. The adaptation + contingency fund considers a mix of ex ante investment in adaptation infrastructure and investment in an external disaster contingency fund, each amounting to 1.25 percent of GDP cumulatively over the five years before the disaster.

As shown in the blue line in panel 1 of Figure 1.3.2, the pre-disaster appreciation of the real exchange rate triggers an increase in the current account deficit of 0.6 percentage point. However, the increased share of adaptation infrastructure dampens the disaster's

impact on GDP, which falls by 2.9 percent within two years of the disaster. The lower reconstruction burden dampens the real exchange rate appreciation and the worsening of the current account deficit, smoothing it more over time.

The final scenario considers a mix of ex ante investment in adaptation infrastructure and investment in an external disaster contingency fund, each amounting to 1.25 percent of GDP cumulatively over the five years before the disaster.<sup>2</sup> After the disaster, the contingency fund is used to finance reconstruction rather than external debt. The green line in panel 1 of Figure 1.3.2 shows that the current account deficit worsens by only 0.4 percentage point before the disaster, given that the domestic adaptation investment is lower than in the adaptation-only scenario. However, the lower level of adaptation infrastructure leads to greater damage from the natural disaster, requiring more funds for reconstruction. The withdrawals from the contingency fund and a larger financing need for post-disaster reconstruction trigger a larger real exchange rate appreciation than under adaptation-only scenario, worsening the current account deficit by 1.1 percentage points after the disaster.

Building resilience through structural and financial protection in disaster-prone countries can address external sector vulnerabilities that will be exacerbated by climate change. The choice of an appropriate ex ante adaptation policy will depend on the country context and should be based on a wider cost-benefit analysis (Bellon and Massetti 2022; Aligishiev, Bellon, and Massetti 2022). Resilient public capital softens the impact of natural disasters on the economy and smoothes resulting current account fluctuations because the need for externally funded post-disaster reconstruction is minimized. Financial protection provides resources for immediate relief and reconstruction after a natural disaster and improves the government's net asset position.

<sup>2</sup>Note that the scenario of adaptation plus contingency fund involves the same investment in relation to GDP as the adaptation-only scenario. However, it is split equally between ex ante investment in adaptation and investment in a contingency fund.

### Box 1.4. The Worst of Both Worlds: Trade Restrictions Hurt Growth with No Benefit for External Positions

A novel and comprehensive index of trade restrictions shows significant scope for reducing nontariff barriers (NTBs) in emerging market and developing economies. Empirical analysis suggests that imposing restrictions has no beneficial effects on external positions but is associated with potentially large macroeconomic losses.

The slowdown in trade seen in recent years has coincided with a period of reduced momentum on trade reforms. With tariffs already at low levels, there is limited scope for further reduction. However, NTBs can also be a significant impediment to trade, but concrete analysis has been challenging because of data limitations (Goldberg and Pavcnik 2016).

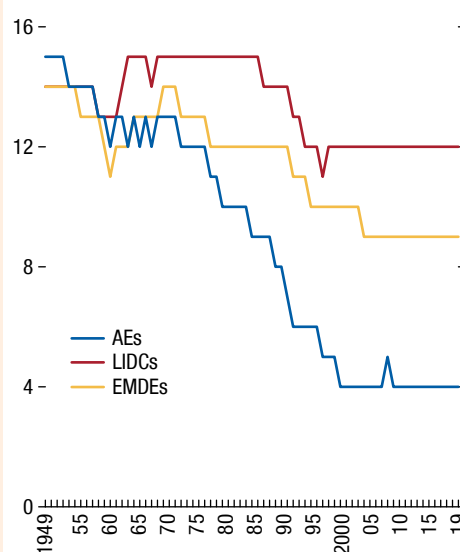
To overcome this data constraint, Estefania-Flores and others (2022) compile a novel measure of trade restrictions covering tariffs and NTBs for 157 countries going as far back as 1949. The index is constructed by using a narrative approach, exploiting detailed information on trade restrictions recorded in the IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions*. Various barriers are captured, including restrictions on exports and imports of goods (for example, licensing requirements), multiple currency practices, and payment restrictions. The NTBs index varies from 0 to 20, with lower levels indicating fewer trade restrictions.<sup>1</sup>

Significant scope remains to reduce NTBs, especially in emerging market and developing economies (Figure 1.4.1). The NTB index was high across income levels in the 1960s but has declined significantly in advanced economies. However, restrictions remain high in emerging markets and low-income countries, especially import and export restrictions, including in many large emerging markets such as India and South Africa.

This box was prepared by Julia Estefania-Flores and Siddharth Kothari.

<sup>1</sup>The full Measure of Aggregate Trade Restrictions index in Estefania-Flores and others (2022) varies from 0 to 22, as it includes two tariff subcomponents: export and import taxes. Because this box focuses on NTBs, the tariff components of the index are excluded. Results are broadly similar when using the full index.

**Figure 1.4.1. Nontariff Barriers Index (Simple average)**



Source: Estefania-Flores and others (2022).

Note: AE = advanced economy; EMDE = emerging market and developing economy; LIDC = low-income developing country.

Econometric analysis suggests that increases in nontariff restrictions affect trade volumes significantly but have little effect on external positions (Figure 1.4.2, panel 1). A two standard deviation increase in the NTB index is associated with an almost 4 percent decline in import volumes after five years, and export volumes fall by about 3 percent.<sup>2</sup> On net, the trade balance and the current account balance are unchanged in the medium term.<sup>3</sup> Results are similar when restricting to import nontariff restrictions only. Furthermore, imposing NTBs also curtails participation in global value chains, as the costs of these

<sup>2</sup>Although the point estimate indicates a larger decline in import volumes compared with export volumes, the confidence intervals for the estimates overlap significantly.

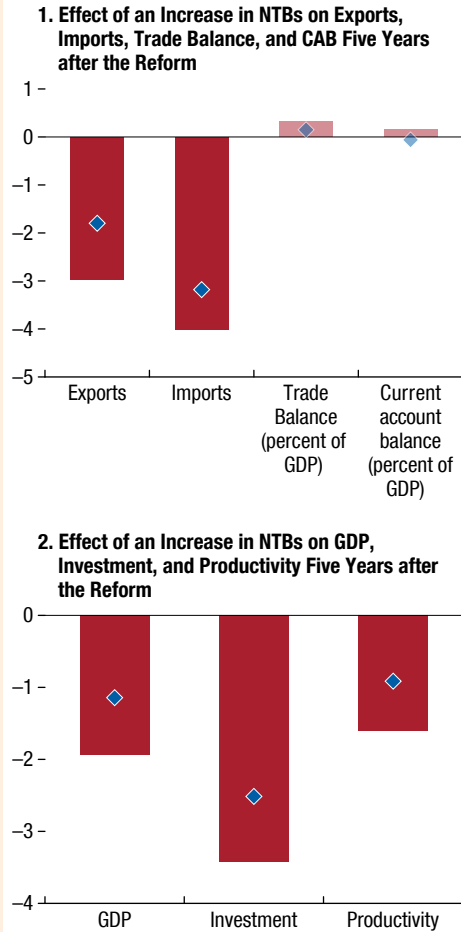
<sup>3</sup>The local projection method is used, estimating the equation  $y_{i,t+k} = \alpha_i^k + \gamma_t^k + \beta^k \Delta R_{i,t} + \sum_{j=0}^2 \theta_j^k \Delta R_{i,t-j} + \sum_{j=0}^2 \theta_j^k y_{i,t-j} + \varepsilon_i^k$ , where  $y_{i,t+k}$  is the macroeconomic variable of interest in country  $i$  at horizon  $k$ ,  $R_{i,t}$  is the NTB index or the imports NTB subcomponent, and  $\alpha_i^k$  and  $\gamma_t^k$  are country and time fixed effects.

**Box 1.4 (continued)**

barriers cascade with each border crossing from upstream to downstream industries (2021 *External Sector Report*).

Trade restrictions do not improve external positions, but they can lead to significant macroeconomic losses. A two standard deviation increase in the NTB index is associated with a reduction in GDP growth of about 1.7 percent five years after the reform (Figure 1.4.2, panel 2). Net exports do not contribute to output losses. Instead, a decrease in investment and productivity drives the losses, suggesting less efficient resource allocation and the reversal of benefits from specialization and technology transfers after an increase in NTBs.

**Figure 1.4.2. Effect of an Increase in NTBs (Percent)**



Source: Estefania-Flores and others (2022).  
 Note: CAB = current account balance; NTB = nontariff trade barrier. Light shaded bars and dots represent nonstatistically significant estimations. The blue dots show the case of import nontariff restrictions only.

Annex Table 1.1.1. Selected Economies: Foreign Reserves, 2018–21<sup>1</sup>

	Gross Official Reserves <sup>2</sup>								IMF Staff–Estimated Change in Official Reserves <sup>3</sup>				Gross Official Reserves in Percent of ARA Metric (2021) <sup>4</sup>	FXI Data Publication
	(Billions of US Dollars)				(Percent of GDP)				(Percent of GDP)					
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021		
<b>Advanced Economies</b>														
Australia	54	58	43	58	3.8	4.2	3.1	3.5	0.1	–0.1	–0.1	1.0	...	Yes, daily
Canada	84	85	90	107	4.9	4.9	5.5	5.4	–0.1	0.0	0.1	1.0	...	Yes, monthly
Euro Area	823	914	1,078	1,196	6.0	6.8	8.3	8.2	0.3	0.1	0.1	1.1	...	Yes, quarterly
Hong Kong SAR	425	441	492	497	117.4	121.6	142.6	134.6	0.6	1.7	10.7	–0.4	...	Yes, daily
Japan	1,270	1,322	1,391	1,406	25.2	25.8	27.6	28.5	0.5	0.5	–0.1	1.8	...	Yes, monthly
Korea	403	409	443	463	23.4	24.8	27.0	25.6	0.1	0.1	0.9	0.5	99	Yes, quarterly
Singapore	288	279	362	418	76.3	74.4	104.9	105.3	5.0	0.7	28.5	6.5	...	Yes, semiannually
Sweden	61	56	58	62	10.9	10.4	10.8	9.9	–0.1	–1.3	0.1	0.9	...	Yes, Weekly
Switzerland	787	855	1,083	1,110	106.9	116.7	144.1	136.5	1.9	2.2	16.5	6.3	...	Yes, quarterly
United Kingdom	173	174	180	194	5.9	6.0	6.5	6.1	0.8	–0.1	–0.1	0.9	...	Yes, monthly
United States	450	517	628	716	2.2	2.4	3.0	3.1	0.1	0.0	–0.1	0.6	...	Yes, quarterly
<b>Emerging Market and Developing Economies</b>														
Argentina	66	45	39	40	12.6	9.9	10.1	8.2	–3.3	–8.3	–3.4	1.0	63	Yes, daily
Brazil	375	357	356	362	19.5	19.1	24.5	22.5	–2.2	0.4	–2.4	–0.5	162	Yes, daily
China	3,168	3,223	3,357	3,428	22.9	22.5	22.6	19.3	0.1	–0.1	0.2	1.1	109	No
India	399	463	590	638	14.8	16.4	22.1	20.1	–1.3	2.5	3.8	0.5	195	Yes, monthly
Indonesia	121	129	136	145	11.6	11.5	12.8	12.2	–1.4	0.7	0.5	–0.6	111	No
Malaysia	101	104	108	117	28.3	28.4	31.9	31.4	–2.5	2.5	0.9	2.3	122	No
Mexico	176	183	199	208	14.4	14.4	18.3	16.0	0.0	0.2	1.1	0.8	131	Yes, monthly
Poland	117	128	154	166	19.9	21.5	25.7	24.4	1.2	1.7	3.1	2.8	141	No
Russia	469	555	597	632	28.4	32.7	40.2	35.5	2.0	3.9	–0.9	3.7	339	Yes, daily
Saudi Arabia	509	515	473	474	62.4	64.1	67.2	56.9	0.1	0.6	–6.4	–1.8	...	No
South Africa	52	55	55	58	12.8	14.2	16.4	13.8	–0.1	0.4	–0.7	1.1	81	No
Thailand	206	224	258	246	40.6	41.2	51.6	47.9	0.8	2.7	1.3	–0.7	249	No
Türkiye	93	106	94	110	11.9	13.9	13.0	13.6	–1.5	–1.2	–10.8	2.3	91	Yes, daily
<b>Memorandum item:</b>														
Aggregate <sup>5</sup>	10,669	11,198	12,265	12,851	12.4	12.8	14.4	13.3	0.1	0.2	0.3	0.9	...	...
AEs	4,816	5,110	5,849	6,227	5.6	5.8	6.9	6.4	0.2	0.1	0.3	0.5	...	...
EMDEs	5,852	6,088	6,416	6,624	6.8	7.0	7.5	6.8	–0.1	0.1	0.0	0.3	...	...

Sources: IMF, Assessing Reserve Adequacy data set; IMF, *International Financial Statistics*; IMF, International Reserves and Foreign Currency Liquidity; IMF, *World Economic Outlook*; and IMF staff calculations.

Note: “...” indicates that data are not available or not applicable. AE = advanced economy; ARA = assessment of reserve adequacy; EMDE = emerging market and developing economy; FX = foreign exchange; FXI = foreign exchange intervention.

<sup>1</sup>Sample includes *External Sector Report* economies excluding individual euro area economies. Euro area is reported as aggregate.

<sup>2</sup>Total reserves from *International Financial Statistics*; includes gold reserves valued at market prices.

<sup>3</sup>This item is not necessarily equal to actual FXI, but it is used as an FXI proxy in External Balance Assessment model estimates. The estimated change in official reserves is equivalent to the change in reserve assets in the financial account series from the *World Economic Outlook* (which excludes valuation effects but includes interest income on official reserves) plus the change in off-balance-sheet holdings (short and long FX derivative positions and other memorandum items) from International Reserves and Foreign Currency Liquidity minus net credit and loans from the IMF.

<sup>4</sup>The ARA metric reflects potential balance of payments FX liquidity needs in adverse circumstances and is used to assess the adequacy of FX reserves against potential FX liquidity drains (see IMF 2015). The ARA metric is estimated only for selected EMDEs and Korea and includes adjustments for capital controls for China. For Argentina, the adjusted measure uses a four-year average to smooth the temporary effect of the sharp reductions in short-term debt and exports and a collapse in the valuation of debt portfolio investments in the wake of the sovereign debt restructuring. Additional adjusted figures are available in the individual country pages in Chapter 3.

<sup>5</sup>The aggregate is calculated as the sum of *External Sector Report* economies only. The percent of GDP is calculated relative to total world GDP.

Annex Table 1.1.2. External Sector Report Economies: Summary of External Assessment Indicators, 2021

Economy	Overall Assessment	Current Account (Percent of GDP)		IMF Staff CA Gap (Percent of GDP)		IMF Staff REER Gap (Percent)		International Investment Position (Percent of GDP)			CA NFA Stabilizing (Percent of GDP)	SE of CA Norm (Percent)
		Actual	Cycl. Adj.	Midpoint	Range	Midpoint	Range	Net	Liabilities	Assets		
Argentina	Weaker	1.4	0.5	-0.5	±1	0.0	±5	25	61	86	1.3	0.5
Australia	Stronger	3.5	1.7	2.7	±0.6	-13.7	±3	-35	184	148	-2.0	0.6
Belgium	Weaker	-0.4	0.0	-3.3	±0.3	4.9	±0.4	57	403	460	1.8	0.3
Brazil	Broadly in line	-1.7	-2.8	-0.4	±0.5	3.1	±4.2	-30	90	60	-1.5	0.5
Canada	Moderately weaker	0.0	-0.4	-1.5	±0.4	5.8	±1.6	69	243	311	3.2	0.4
China	Broadly in line	1.8	2.2	-0.3	±0.6	1.9	±4.2	11	41	53	0.8	0.6
Euro Area <sup>1</sup>	Moderately stronger	2.4	2.3	1.2	±0.6	-3.4	±1.7	-2	276	275	-0.1	0.6
France	Broadly in line	0.4	0.2	-0.1	±0.4	0.2	±1.5	-34	375	341	-1.3	0.4
Germany	Stronger	7.4	7.6	3.7	±0.5	-10.8	±1.5	65	237	302	2.9	0.5
Hong Kong SAR	Broadly in line	11.3	10.7	1.0	±1.5	-2.6	±3.8	578	1169	1747	...	...
India	Broadly in line	-1.2	-1.6	1.0	±0.7	-6.0	±4.3	-11	42	31	-1.0	0.7
Indonesia	Broadly in line	0.3	-1.5	0.2	±0.5	-1.7	±3.6	-24	60	36	-1.9	0.5
Italy	Broadly in line	2.4	2.2	-0.9	±0.7	3.3	±2.7	7	181	188	0.3	0.7
Japan	Broadly in line	2.9	2.9	-0.5	±1	3.6	±6.6	76	155	231	2.7	1.1
Korea	Broadly in line	4.9	5.6	-0.3	±0.8	1.0	±2.6	36	84	120	2.0	0.8
Malaysia	Moderately stronger	3.8	2.6	1.8	±0.5	-4.0	±1.1	6	131	137	0.7	0.5
Mexico	Broadly in line	-0.4	-1.5	-0.2	±1	0.5	±3.1	-41	99	58	-2.2	0.4
The Netherlands	Stronger	9.0	9.2	2.0	±0.5	-3.3	±0.8	94	1026	1120	4.1	0.5
Poland	Moderately stronger	-0.6	-0.3	1.4	±0.4	-3.5	±1	-38	93	56	-2.3	0.4
Russia	Stronger	6.9	7.1	2.1	±0.9	-10.6	±4.6	27	65	93	1.1	0.9
Saudi Arabia	Broadly in line	5.3	5.4	-1.0	±1.8	4.1	±9	74	77	150	...	...
Singapore	Substantially stronger	18.1	18.8	5.2	±1.8	-10.4	±3.6	256	984	1240	...	...
South Africa	Moderately weaker	3.6	1.3	-1.7	±0.7	7.3	±3	25	107	132	1.1	0.7
Spain	Broadly in line	0.9	-0.1	-0.1	±0.7	0.4	±2.6	-70	283	213	-3.4	0.7
Sweden	Stronger	5.5	5.3	3.6	±0.4	-4.4	±5	17	279	296	0.9	0.4
Switzerland	Broadly in line	9.3	9.9	-0.9	±0.8	1.9	±1.7	90	663	753	4.3	0.8
Thailand	Moderately stronger	-2.2	-2.8	1.4	±0.7	-3.2	±1.6	9	111	120	0.6	0.7
Türkiye	Broadly in line	-1.7	-0.6	0.0	±0.6	-22.5	±2.5	-31	67	36	-1.8	0.6
United Kingdom	Broadly in line	-2.6	-2.0	-0.1	±1	0.5	±4.1	-32	565	533	-1.6	0.3
United States	Moderately weaker	-3.6	-3.2	-1.1	±0.6	8.7	±4.9	-79	232	153	-4.0	0.6

Sources: IMF, *International Financial Statistics*; IMF, *World Economic Outlook*; US Bureau of Economic Analysis; and IMF staff assessments.

Note: CA = current account; Cycl. Adj. = cyclically adjusted; NFA = net foreign assets; REER = real effective exchange rate; SE = standard error.

<sup>1</sup>The IMF staff-assessed euro area CA gap is calculated as the GDP-weighted averages of IMF staff-assessed CA gaps for the 11 largest euro area economies.

**Annex Table 1.1.3. External Sector Report Economies: Summary of IMF Staff-Assessed Current Account Gaps and IMF Staff Adjustments, 2021**  
(Percent of GDP)

Economy	Assessment 2021	Actual CA Balance [A]	Cycl. Adj. CA Balance [B]	EBA CA Norm [C]	EBA CA Gap <sup>1</sup> [D-B-C]	IMF Staff-Assessed CA Gap <sup>2</sup> [E-D+F]	IMF Staff Adjustments <sup>3</sup>					Comments on Non-COVID-19-related Adjustments
							Total [F=G+H+I]	Covid-19 [G]	CA [H]	Other		
										Norm [I]	CA	
Argentina	Weaker	1.4	0.5	0.2	0.3	-0.5	-0.8	0.0	0.0	0.8	NIIP/financing risk considerations	
Australia	Stronger	3.5	1.7	-0.9	2.6	2.7	0.2	0.2	0.0	0.0		
Belgium	Weaker	-0.4	0.0	3.1	-3.1	-3.3	-0.2	-0.2	0.0	0.0		
Brazil	Broadly in line	-1.7	-2.8	-1.6	-1.2	-0.4	0.8	-0.2	1.0	0.0	Severe drought + end of Repetro	
Canada	Moderately weaker	0.0	-0.4	2.6	-3.0	-1.5	1.6	0.1	1.5	0.0	Measurement biases	
China	Broadly in line	1.8	2.2	0.8	1.4	-0.3	-1.6	-1.6	0.0	0.0		
Euro Area <sup>4</sup>	Moderately stronger	2.4	2.3	0.6	1.7	1.2	-0.5	0.1	-0.4	0.2	Country-specific adjustments	
France	Broadly in line	0.4	0.2	0.3	-0.1	-0.1	0.0	0.0	0.0	0.0		
Germany	Stronger	7.4	7.6	3.3	4.3	3.7	-0.6	-0.6	0.0	0.0		
India	Broadly in line	-1.2	-1.6	-1.9	0.3	1.0	0.7	0.7	0.0	0.0		
Indonesia	Broadly in line	0.3	-1.5	-0.8	-0.7	0.2	1.0	0.6	0.0	-0.4	Demographics (high mortality risk)	
Italy	Broadly in line	2.4	2.2	3.4	-1.2	-0.9	0.3	0.3	0.0	0.0		
Japan	Broadly in line	2.9	2.9	3.9	-0.9	-0.5	0.4	0.4	0.0	0.0		
Korea	Broadly in line	4.9	5.6	5.0	0.6	-0.3	-0.9	-0.9	0.0	0.0		
Malaysia	Moderately stronger	3.8	2.6	-0.1	2.7	1.8	-0.8	-0.8	0.0	0.0		
Mexico	Broadly in line	-0.4	-1.5	-1.2	-0.2	-0.2	0.1	0.1	0.0	0.0		
The Netherlands	Stronger	9.0	9.2	5.1	4.1	2.0	-2.1	-0.4	-1.7	0.0	Measurement biases	
Poland	Moderately stronger	-0.6	-0.3	-2.4	2.1	1.4	-0.6	-0.6	0.0	0.0		
Russia	Stronger	6.9	7.1	4.4	2.6	2.1	-0.6	-0.6	0.0	0.0		
South Africa	Moderately weaker	3.6	1.3	2.6	-1.3	-1.7	-0.5	-2.7	1.6	-0.6	SACU transfers and measurement biases (CA); demographics (high mortality risk, norm)	
Spain	Broadly in line	0.9	-0.1	0.0	-0.1	-0.1	0.0	1.7	0.0	1.7	NIIP/financing risk considerations	
Sweden	Stronger	5.5	5.3	1.2	4.1	3.6	-0.5	-0.5	0.0	0.0		
Switzerland	Broadly in line	9.3	9.9	6.8	3.1	-0.9	-4.0	-0.6	-3.4	0.0	Measurement biases	
Thailand	Moderately stronger	-2.2	-2.8	1.4	-4.2	1.4	5.6	5.6	0.0	0.0		
Türkiye	Broadly in line	-1.7	-0.6	-0.8	0.2	0.0	-0.2	-0.2	0.0	0.0		

(Continued)

Annex Table 1.1.3 (continued)

Economy	Assessment 2021	Actual CA Balance [A]	Cycl. Adj. CA Balance [B]	EBA Norm [C]	EBA CA Gap <sup>1</sup> [D=B-C]	IMF Staff-Assessed CA Gap <sup>2</sup> [E=D+F]	IMF Staff Adjustments <sup>3</sup>					Comments on non-COVID-19-related adjustments
							Total [F=G+H-I]	Covid-19 [G]	Other		Norm [I]	
									CA [H]	CA [J]		
United Kingdom	Broadly in line	-2.6	-2.0	-0.7	-1.3	-0.1	1.2	0.3	0.9	0.0		Measurement biases, Brexit
United States	Moderately weaker	-3.6	-3.2	-1.3	-1.9	-1.1	0.8	0.8	0.0	0.0		
Hong Kong SAR	Broadly in line	11.3	10.7	...	...	1.0	-0.5	-0.5	0.0	0.0		
Singapore	Substantially stronger	18.1	18.8	...	...	5.2	-1.4	-1.4	0.0	0.0		
Saudi Arabia	Broadly in line	5.3	5.4	...	...	-1.0	1.1	1.1	0.0	0.0		
Absolute sum of excess surpluses and deficits <sup>5</sup>		...	...	...	1.6	0.9	...	...	...	...		
Discrepancy for all EBA/ESR economies <sup>6</sup>		...	...	...	...	-0.04	...	...	...	...		
Of which: ESR economies		...	...	...	...	-0.04	...	...	...	...		
Of which: Non-ESR economies		...	...	...	...	0.00	...	...	...	...		

Source: IMF staff estimates.

Note: CA = current account; Cycl. Adj. = cyclically adjusted; EBA = external balance assessment; ESR = External Sector Report; NIIP = net international investment position; SACU = Southern African Customs Union. "..." indicates that data are not available or not applicable.

<sup>1</sup>Figures may not add up due to rounding effects.

<sup>2</sup>Refers to the midpoint of the IMF staff-assessed CA gap.

<sup>3</sup>Total IMF staff adjustments include rounding in some cases. See Online Annex 1.1 for a description of COVID-19 adjusters. Country specific adjustments to the CA and norm are explained in the last column.

<sup>4</sup>The EBA euro area CA norm is calculated as the GDP-weighted average of norms for the 11 largest euro area economies, adjusted for reporting discrepancies in intra-area transactions. The IMF staff-assessed CA gap is calculated as the GDP-weighted average of IMF staff-assessed gaps for the 11 largest euro area economies.

<sup>5</sup>Sum of absolute value of IMF Staff-Assessed CA gaps in percent of aggregate GDP for economies included in the ESR exercise.

<sup>6</sup>Sum of IMF staff-assessed CA gaps in percent of aggregate GDP for economies included in the EBA and/or ESR exercise.

**Annex Table 1.1.4. External Sector Report Economies: Summary of IMF Staff-Assessed Real Effective Exchange Rate and External Balance Assessment Model Gaps, 2021**

Economy	IMF Staff-Assessed REER Gap <sup>1</sup>	REER Gap Implied from IMF Staff-Assessed CA Gap <sup>2</sup>	EBA REER-Level Gap	EBA REER-Index Gap	CA/REER Elasticity <sup>3</sup>	REER (Percent Change)	
						Average 2021/Average 2020	May 2022/Average 2021
Argentina	0.0	4.0	-8.7	7.6	0.13	4.4	18.3
Australia	-13.7	-13.7	24.6	-2.3	0.20	6.1	0.6
Belgium	4.9	4.9	26.1	12.0	0.68	0.1	-1.8
Brazil	3.1	3.1	-19.6	-36.4	0.12	-3.2	17.8
Canada	5.8	5.8	-7.2	6.7	0.25	4.9	-0.3
China	1.9	1.9	10.5	10.5	0.14	3.0	-1.3
Euro Area	-3.4	-3.4	7.1	6.8	0.35	0.5	-5.4
France	0.2	0.2	8.2	-2.1	0.26	-0.6	-4.7
Germany	-10.8	-10.8	-7.9	7.7	0.34	0.9	-3.0
India	-6.0	-6.0	8.5	10.1	0.16	-0.4	2.4
Indonesia	-1.7	-1.7	-18.1	1.9	0.14	-1.3	2.7
Italy	3.3	3.3	10.8	8.6	0.26	-0.2	-4.1
Japan	3.6	3.6	-18.4	-20.1	0.15	-8.6	-13.4
Korea	1.0	1.0	4.2	-0.8	0.31	0.1	-4.7
Malaysia	-4.0	-4.0	-29.1	-22.4	0.46	-1.3	-2.5
Mexico	0.5	0.5	7.7	-9.1	0.33	5.9	4.0
The Netherlands	-3.3	-3.3	6.0	21.9	0.60	0.2	-1.7
Poland	-3.5	-3.5	-20.2	-1.0	0.41	-0.4	-0.2
Russia	-10.6	-10.6	-33.8	-11.2	0.19	-1.8	38.0
South Africa	7.3	7.3	15.9	1.2	0.23	9.3	-1.5
Spain	0.4	0.4	26.4	8.8	0.26	0.9	-1.5
Sweden	-4.4	-10.7	-14.8	-11.1	0.34	2.8	-6.3
Switzerland	1.9	1.9	16.8	10.5	0.47	-2.6	-2.7
Thailand	-3.2	-3.2	-2.8	6.0	0.44	-5.6	0.6
Türkiye	-22.5	0.0	-50.5	-41.1	0.26	-10.3	-1.4
United Kingdom	0.5	0.5	5.6	-7.5	0.24	3.8	-1.4
United States	8.7	8.7	8.9	1.6	0.12	-2.1	8.6
Hong Kong SAR	-2.6	-2.6	...	...	0.39	-4.6	2.3
Singapore	-10.4	-10.4	...	...	0.50	-0.3	4.1
Saudi Arabia	4.1	4.1	...	...	0.20	-1.8	4.1
Discrepancy <sup>4</sup>	1.6	...	...	...	...	...	...

Sources: IMF, Information Notice System; and IMF staff estimates.

Note: CA = current account; EBA = External Balance Assessment; REER = real effective exchange rate. "..." indicates that data are not available or not applicable.

<sup>1</sup> Refers to the midpoint of the IMF staff-assessed REER gap.

<sup>2</sup> Implied REER gap = -(IMF staff-assessed CA gap/CA-to-REER elasticity).

<sup>3</sup> CA-to-REER semi-elasticity used by IMF country teams.

<sup>4</sup> GDP-weighted average sum of IMF staff-assessed REER gaps.



**Annex Table 1.1.5. Selected External Sector Report Economies: External Balance Assessment Current Account Regression Policy Gap Contributions, 2021**  
(Percent of GDP)

Economy	EBA Gap			Fiscal Gap			Public Health Expenditure Gap			Private Credit Gap			Foreign Exchange Intervention and Capital Controls Gap													
	Total <sup>1</sup>	Identified	Dom <sup>2</sup> Residual	Total <sup>1</sup>	Dom <sup>3</sup> Coeff	P	P*	Total <sup>1</sup>	Dom <sup>3</sup> Coeff	P	P*	Total <sup>1</sup>	Dom <sup>3</sup> Coeff	FXI P	FXI P*	KC P	KC P*									
Argentina	0.3	0.7	-0.3	0.8	-0.5	0.3	-3.1	-1.5	0.0	0.0	-0.3	6.5	6.5	-0.1	0.0	-0.1	-0.4	0.0	0.0	0.2	0.6	0.9	1.0	0.6	0.3	
Australia	2.6	-1.1	-2.0	3.6	-0.9	-2.2	0.3	-7.1	0.0	-0.1	-0.3	7.6	7.2	0.0	0.2	-0.1	-1.7	0.0	-0.1	0.1	0.6	1.0	0.0	0.1	0.1	
Belgium	-3.1	-0.7	-1.7	-2.4	-0.2	-1.5	0.3	-5.3	-0.4	-0.1	-0.3	8.2	7.9	-0.3	-0.2	-0.1	2.2	0.0	-0.1	0.1	0.6	1.4	0.0	0.1	0.1	
Brazil	-1.2	0.3	-0.7	-1.5	1.1	-0.2	0.3	-4.1	-3.5	0.2	0.2	-0.3	3.9	4.4	-0.7	-0.5	-0.1	5.6	0.0	-0.3	-0.1	0.6	-0.5	0.0	0.5	0.3
Canada	-3.0	-1.2	-2.2	-1.8	0.1	-1.1	0.3	-4.4	-0.7	-0.9	-1.0	-0.3	10.2	7.0	-0.2	-0.1	-0.1	1.2	0.0	-0.1	0.1	0.6	1.0	0.0	0.1	0.1
China	1.4	1.3	0.3	0.1	0.2	-1.1	0.3	-5.4	-1.9	0.1	0.1	-0.3	3.7	4.0	0.7	0.8	-0.1	-8.7	0.0	0.3	0.5	0.6	1.1	0.0	0.7	0.3
Euro Area <sup>4</sup>	1.7	-0.1	-1.1	1.8	0.3	-1.0	0.3	-3.9	-0.6	-0.1	-0.1	-0.3	9.0	8.5	-0.1	0.0	-0.1	0.0	-0.3	-0.1	0.1	0.6	1.0	0.0	0.1	0.1
France	-0.1	-0.4	-1.3	0.3	0.0	-1.3	0.3	-5.3	-1.1	-0.2	-0.2	-0.3	9.9	9.3	0.0	0.1	-0.1	-1.1	0.0	-0.2	0.0	0.6	0.9	0.0	0.1	0.1
Germany	4.3	-0.8	-1.8	5.1	0.5	-0.7	0.3	-2.9	-0.5	-0.3	-0.3	-0.3	10.7	9.6	-1.0	-0.9	-0.1	8.9	0.0	-0.1	0.1	0.6	0.9	0.0	0.3	0.3
India	0.3	1.1	0.1	-0.8	0.4	-0.9	0.3	-8.7	-5.8	0.1	0.1	-0.3	1.5	1.8	0.7	0.8	-0.1	-8.7	0.0	-0.1	0.1	0.6	0.2	0.0	0.8	0.3
Indonesia	-0.7	0.7	-0.2	-1.5	0.9	-0.4	0.3	-3.8	-2.5	0.4	0.4	-0.3	1.6	3.0	-0.2	-0.1	-0.1	0.7	0.0	-0.4	-0.2	0.6	-0.6	0.0	0.5	0.3
Italy	-1.2	0.2	-0.8	-1.4	-0.5	-1.8	0.3	-5.3	0.5	0.0	0.0	-0.3	7.6	7.6	0.8	0.9	-0.1	-9.8	0.0	-0.2	0.0	0.6	1.2	0.0	0.0	0.0
Japan	-0.9	-1.8	-2.8	0.9	-0.6	-1.9	0.3	-6.6	-0.5	0.0	0.0	-0.3	9.1	9.1	-1.1	-1.0	-0.1	18.9	9.0	-0.1	0.1	0.6	1.8	0.0	0.1	0.1
Korea	0.6	0.1	-0.9	0.5	1.3	0.1	0.3	0.3	0.0	0.3	0.3	0.3	5.1	6.1	-1.4	-1.3	-0.1	13.5	0.0	-0.2	0.0	0.6	0.5	0.0	0.1	0.1
Malaysia	2.7	1.3	0.3	1.4	0.6	-0.7	0.3	-4.8	-2.5	0.6	0.6	-0.3	2.0	4.1	-0.6	-0.4	-0.1	4.5	0.0	0.6	0.8	0.6	2.3	0.0	0.6	0.3
Mexico	-0.2	1.3	0.3	-1.6	1.2	0.0	0.3	-2.8	-2.8	0.1	0.1	-0.3	3.2	3.6	-0.1	0.0	-0.1	-0.2	0.0	0.0	0.2	0.6	0.8	0.0	0.4	0.3
The Netherlands	4.1	1.9	0.9	2.2	1.0	-0.3	0.3	-1.9	-1.0	-0.1	-0.2	-0.3	9.3	8.8	1.2	1.4	-0.1	-14.1	0.0	-0.2	0.0	0.6	1.1	0.0	0.0	0.0
Poland	2.1	2.7	1.7	-0.6	1.0	-0.2	0.3	-1.7	-1.0	0.3	0.2	-0.3	5.5	6.3	0.8	1.0	-0.1	-10.0	0.0	0.5	0.7	0.6	2.8	0.0	0.4	0.3
Russia	2.6	1.8	0.9	0.8	0.3	-1.0	0.3	0.5	3.8	0.3	0.3	-0.3	4.6	5.5	0.5	0.7	-0.1	-6.9	0.0	0.7	0.9	0.6	3.7	0.0	0.4	0.3
South Africa	-1.3	0.5	-0.5	-1.7	0.5	-0.7	0.3	-3.8	-1.4	-0.1	-0.1	-0.3	4.5	4.1	0.4	0.5	-0.1	-4.9	0.0	-0.3	-0.1	0.6	1.1	3.0	0.6	0.3
Spain	-0.1	0.2	-0.7	-0.3	0.7	-0.5	0.3	-3.8	-2.0	0.0	0.0	-0.3	6.4	6.4	-0.4	-0.3	-0.1	2.0	-1.0	-0.1	0.1	0.6	1.0	0.0	0.2	0.2
Sweden	4.1	0.2	-0.8	3.9	1.0	-0.3	0.3	-0.5	0.3	-0.1	-0.1	-0.3	9.3	9.0	-0.6	-0.5	-0.1	5.3	0.0	-0.1	0.1	0.6	0.9	0.0	0.2	0.2
Switzerland	3.1	0.0	-0.9	3.0	1.4	0.2	0.3	-0.4	-1.0	-0.1	-0.1	-0.3	7.8	7.5	-1.9	-1.8	-0.1	18.3	0.0	0.5	0.7	0.6	6.3	0.0	0.2	0.2
Thailand	-4.2	-1.2	-2.2	-3.0	0.1	-1.2	0.3	-6.1	-2.3	0.1	0.1	-0.3	3.8	4.1	-1.1	-0.9	-0.1	9.8	0.0	-0.4	-0.2	0.6	-0.6	0.0	0.5	0.3
Türkiye	0.2	1.6	0.6	-1.4	1.4	0.1	0.3	-4.0	-4.3	-0.4	-0.4	-0.3	5.0	3.6	0.5	0.6	-0.1	-6.0	0.0	0.1	0.3	0.6	2.3	1.2	0.4	0.3
United Kingdom	-1.3	-0.4	-1.3	-0.9	-0.2	-1.5	0.3	-7.2	-2.4	-0.7	-0.7	-0.3	10.2	7.9	0.7	0.8	-0.1	-8.4	0.0	-0.1	0.1	0.6	0.9	0.0	0.1	0.1
United States	-1.9	-1.1	-2.0	-0.8	-0.7	-2.0	0.3	-8.1	-1.7	0.0	0.0	-0.3	8.4	8.4	-0.3	-0.1	-0.1	1.5	0.0	-0.1	0.1	0.6	0.6	0.0	0.2	0.2

Source: IMF staff estimates.

Note: Coeff = coefficient; Dom = domestic; EBA = External Balance Assessment; FXI = foreign exchange intervention; KC = capital controls.

<sup>1</sup>Total contribution after adjusting for multilateral consistency. Total foreign exchange intervention and capital controls contribution = Coeff \* [(FXI x KC) - (desirable FXI x desirable KC)].

<sup>2</sup>Includes the contribution of domestic policy gaps to the identified gap. The total foreign policy gap contribution is constant and equal to 1.0 percent for all countries. Foreign contributions are estimated as follows:

fiscal = 1.3 percent of GDP; public health = 0.0 percent of GDP; private credit = -0.1 percent of GDP; foreign exchange intervention = -0.2 percent of GDP.

<sup>3</sup>Total domestic contribution is equivalent to coefficient\*(P-P\*).

<sup>4</sup>The euro area EBA CA gap and policy gap contributions are calculated as the GDP-weighted averages of EBA CA gaps and policy gap contributions for the 11 largest euro area economies.

**Annex Table 1.1.6. 2021 Individual Economy Assessments: Summary of Policy Recommendations**

<b>Economy</b>	<b>Overall 2021 Assessment</b>	<b>Policy Recommendations</b>
<b>Argentina</b>	Weaker	Implement growth-friendly fiscal consolidation and prudent monetary policies to maintain strong trade surplus, rebuild international reserves, regain market access, and ensure fiscal sustainability; introduce reforms to boost export capacity and encourage FDI.
<b>Australia</b>	Stronger	Boost investment by executing planned infrastructure spending, streamlining product market regulation, promoting R&D and innovation, and reducing the tax burden on companies.
<b>Belgium</b>	Weaker	Strengthen competitiveness by addressing structural challenges, including labor and product market reforms, to foster green, digital, and inclusive growth. Rebuild fiscal space through expenditure led consolidation.
<b>Brazil</b>	Broadly in line	Implement medium-term fiscal consolidation and structural reforms to raise potential growth and investment. FX intervention, including that using derivatives, may be appropriate to alleviate disorderly market conditions in the FX market.
<b>Canada</b>	Moderately weaker	Develop credible medium-term fiscal consolidation plan; boost nonfuel exports through improved labor productivity, investment in R&D and public infrastructure; implement policies to encourage green transformation and boost FDI.
<b>China</b>	Broadly in line	Accelerate structural reforms (by further opening domestic markets, reforming SOEs, and ensuring competitive neutrality with private firms), reduce high household savings (by strengthening the social safety net), and promote green investment. Further increase exchange rate flexibility to help the economy adjust to the changing external environment.
<b>Euro Area</b>	Moderately stronger	Implement area-wide initiatives (banking and capital markets union and fiscal capacity for macro-stabilization) to reinvigorate investment, thus reducing the aggregate CA surplus; see member country-specific recommendations to reduce internal and external imbalances.
<b>France</b>	Broadly in line	Improve competitiveness by reinvigorating structural reforms and rebuilding fiscal space over the medium term.
<b>Germany</b>	Stronger	Promote investment and diminish excess saving, including through an investment push to achieve climate, digital, and energy security goals. Structural reforms to foster innovation, including development of the venture capital market and reducing the administrative steps needed to start a business, would also stimulate investment.
<b>Hong Kong SAR</b>	Broadly in line	Ensure medium-term fiscal sustainability, given the rapidly aging population, and maintain policies that support wage and price flexibility to preserve competitiveness.
<b>India</b>	Broadly in line	Gradually withdraw fiscal and monetary policy stimulus, negotiate free trade agreements with main trading partners to boost exports, further liberalize the investment regime, and reduce tariffs. Structural reforms could deepen integration in global value chains and attract FDI, hence mitigating external vulnerabilities. Exchange rate flexibility should act as the main shock absorber, with intervention limited to addressing disorderly market conditions
<b>Indonesia</b>	Broadly in line	Pursue planned fiscal consolidation while boosting productivity and allowing for higher infrastructure and social spending to foster human capital development; facilitate sectoral adjustment, ease nontariff trade barriers and FDI restrictions; improve labor market flexibility. Flexibility of the exchange rate should continue to support external stability with the ongoing structural transformation of the Indonesian economy.
<b>Italy</b>	Broadly in line	Raise productivity and improve the business climate through higher investment and structural reforms, including by upskilling the workforce and increasing the quality of infrastructure and the effectiveness of the public administration. Reduce vulnerabilities associated with rollover of public debt by improving budget efficiency and fully implementing the National Recovery and Resilience Plan.
<b>Japan</b>	Broadly in line	Implement gradual fiscal consolidation within a well-specified medium-term fiscal framework, accommodative monetary policy, and structural reforms that support domestic demand. Focus on reforms to increase labor supply, boost productivity and wages, and encourage firms to deploy their accumulated savings.
<b>Korea</b>	Broadly in line	In a context of expected normalization of fiscal and monetary policies, implement structural policies to stimulate investment and facilitate rebalancing of the economy toward services and other new growth drivers, by reducing barriers to entry and deregulating the nonmanufacturing sector and strengthening the social safety net to reduce the need for precautionary saving. ER should remain market determined, with intervention limited to preventing disorderly market conditions.

(Continued)

Annex Table 1.1.6 (continued)

Economy	Overall 2021 Assessment	Policy Recommendations
<b>Malaysia</b>	Moderately stronger	Strengthen the social safety net, encourage private investment, and boost productivity growth. Fiscal policy should target a gradual and growth friendly consolidation.
<b>Mexico</b>	Broadly in line	Implement structural reforms to deliver stronger investment and boost growth and exports, including tackling economic informality and governance gaps. Continue using floating ER as the main shock absorber, with FX interventions used only to prevent disorderly market conditions.
<b>The Netherlands</b>	Stronger	Promote the recovery and support investment in physical and human capital to foster robust potential growth, including through structural investment and reform plans to allay housing market shortages; reinforce the education system and advance the climate transition and digitalization.
<b>Poland</b>	Moderately stronger	Boost public investment by deploying Next Generation EU grants to tackle infrastructure gaps, digitalization, and climate change; use public policies to encourage corporate investment and productivity, including through initiatives to increase the supply of skilled labor.
<b>Russia</b>	Stronger	...
<b>Saudi Arabia</b>	Broadly in line	Continued fiscal consolidation will help align the current account with its norm, including through energy price reform and by delinking spending decisions from international oil price fluctuations, maintaining the VAT rate, and improving public financial management; structural reforms would help diversify the economy and boost the non-oil tradable sector.
<b>Singapore</b>	Substantially stronger	Increase public investment, including spending on health care, green and other physical infrastructures, and human capital, to help reduce external imbalances over the medium term by lowering net public saving.
<b>South Africa</b>	Moderately weaker	Implement structural reforms and pursue gradual but substantial fiscal consolidation to tackle external imbalances, while providing space for infrastructure and social spending; focus on improving governance, efficiency of key product markets (to promote private sector participation), and functioning of labor markets; seize opportunities to build up reserves.
<b>Spain</b>	Broadly in line	Implement a combination of fiscal consolidation efforts and higher private savings. The latter could be achieved through productivity gains, which will require continued wage flexibility, addressing labor market duality, and actions to enhance education outcomes and encourage innovation.
<b>Sweden</b>	Stronger	Support greener and growth-enhancing private and public investments to facilitate structural transformation and support domestic demand; implement structural reforms to raise productive investment and boost potential output and policies to lower household debt.
<b>Switzerland</b>	Broadly in line	Ensure balanced domestic and external contributions to growth and improve the public-private mix in financial outflows, easing pressures on the franc; keep fiscal policy broadly balanced in structural terms; consider targeted FXIs to mitigate disruptive volatility.
<b>Thailand</b>	Moderately stronger	Implement a more gradual consolidation of pandemic era policy stimulus alongside structural reforms to support domestic demand through targeted social transfers and infrastructure investment; continue reforming social safety nets and addressing widespread informality to reduce precautionary saving and support consumption; pursue revenue mobilization to keep the deficit and debt sustainable.
<b>Türkiye</b>	Broadly in line	Implement a tighter monetary policy and a broadly neutral fiscal stance while carefully monitoring credit growth. This overall tightening of the policy stance and the rebuilding of policy credibility would contain demand and reduce imports, thus improving the current account; help sustain capital inflows, support de-dollarization, and allow needed reserve build up over time.
<b>United Kingdom</b>	Broadly in line	Implement gradual fiscal consolidation, while maintaining sufficient targeted fiscal support to lower-income households to cushion the impact of the escalating cost of living. Implement structural reforms to boost productivity and international competitiveness, including via upgrading the labor skill base to support labor reallocation to fast-growing sectors.
<b>United States</b>	Moderately weaker	Implement fiscal consolidation over the medium term. Implement structural policies to increase competitiveness, including upgrading infrastructure; enhancing schooling, training, and mobility of workers; supporting the working poor; and policies to increase growth in the labor force (including skill-based immigration reform). Roll back tariff barriers and resolve trade and investment disagreements, supporting a global trading system.

Source: 2021 Individual External Balance Assessments.

Note: CA = current account; ER = exchange rate; EU = European Union; FDI = foreign direct investment; FX = foreign exchange; FXI = foreign exchange intervention; R&amp;D = research and development; SOE = state-owned enterprise; VAT = value added tax.

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*Understanding the effects of climate mitigation policies not only on the global economy but on different regions and countries is critical to forging a consensus on how to combat global warming and moving that process forward. This chapter contributes to the assessment of the economic effects of climate policies on different regions and countries. Drawing on model-based analysis of a “net-zero emissions by 2050” scenario, the chapter finds that a range of announced climate policies could have substantially different impacts on external balances over the next decade. A credible and globally coordinated carbon tax would decrease current account balances in greener advanced economies and increase current accounts in more fossil-fuel-dependent regions, reflecting a disproportionate decline in investment for the latter group. Green supply-side policies—green subsidy and infrastructure investment—would increase investment and saving but would have a more muted external sector impact, either because of the constrained pace of expansion for renewables or because of the symmetry of the infrastructure boost. Ultimately, country characteristics, such as initial carbon intensity and net fossil fuel exports, determine the current account responses. For the global economy, a coordinated climate change mitigation policy package would shift capital toward advanced economies and reduce global current account balances. The global interest rate, following an initial rise, would fall over time with increases in the carbon tax. These external sector effects, however, depend crucially on the degree of international policy coordination and on credibility. A unilateral carbon tax in Europe would reverse that region’s current account response—negatively impacting competitiveness—and increase global balances. Policies such as burden sharing of carbon emission reductions between advanced and developing economies and accelerating the pace of investment in renewables in developing economies could moderate the external sector impact of the climate change mitigation efforts.*

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## Introduction

As global warming continues, there has been increasing interest in understanding the effects of climate mitigation policies on the macroeconomy. Leveraging the objective to eliminate carbon emissions by 2050, studies have focused on the impact of mitigation policies on economic activity, employment, and international trade as well as their distributional effects (see Chapter 3 of the October 2020 *World Economic Outlook* [WEO]; Chateau, Jaumotte, and Schwerhoff 2022b; OECD 2022). Other recent topics of interest are the implications of mitigation policies for global commodity markets and financial markets, as well as for fiscal and monetary policies (see the October 2019 *Fiscal Monitor*; April 2020 *Global Financial Stability Report*; October 2021 WEO; McKibbin, Konradt, and Mauro 2021; and IEA 2021). The literature discusses mitigation policy choices and design, given the recommended limits on temperature increases and the need to avoid catastrophic consequences of climate change (Parry, Black, and Roaf 2021; Jaumotte and Schwerhoff 2021).

A potentially important gap in this literature is the external sector impact of mitigation policies. The green transition will induce a major economic transformation. Comparable past episodes of energy transitions, such as oil discoveries, have led to large external sector adjustments in the affected economies (Box 2.1). A global green transition would not impact the external sector if countries and mitigation policies were identical. However, there are significant structural differences across countries—for example, the degree of fossil fuel dependence and the role of renewables in energy generation—that can induce and magnify external sector responses. Differences in the content and pace of implementation of mitigation policies are another source of cross-country asymmetries that could trigger external sector adjustments.

To address this gap in the literature, this chapter examines the effect of mitigation policies on the external sector using a model-based approach. The chapter builds on the net-zero emissions by 2050 scenario analyzed in the October 2020 WEO, based on the G-Cubed global macroeconomic model (McKibbin and Wilcoxon 2013; Liu and others 2020). Taking as

given the set of mitigation policies from the scenario analyzed in the October 2020 WEO—a carbon tax with a compensatory transfer to households to ensure inclusion, a green subsidy to the renewables sector, and green infrastructure investment—the chapter examines the following questions:<sup>1</sup>

- What are the consequences of climate mitigation policies on countries' external sectors?
- How do the resulting external sector outcomes depend on the countries' (sectoral) structural characteristics?
- How does the coordination of mitigation policies across countries impact external sector outcomes?
- What effect does burden sharing of emission reductions between advanced and developing economies have on the external sector adjustment?
- What are the implications of mitigation policies for global current account balances, capital flows, and global interest rates?<sup>2</sup>

The analysis is limited to a specific climate change mitigation scenario. Research on climate change and associated policies is still nascent. The literature on the topic continues to debate many of the important aspects underlying the construction of the scenario, including the economy's response to carbon pricing policies and the role of technological progress in the green transition. Furthermore, economic consequences of climate policies can vary significantly with the assumed long-run input substitutability or the mobility of production factors. Therefore, the findings of this chapter need to be interpreted in the context of the scenario being considered. Global current account balances in the chapter are used as a descriptive concept, not carrying policy or normative implications.

The investigation focuses on medium-term outcomes for the global economy partitioned into the largest economies and key regions. Specifically, the chapter restricts attention to external sector impacts over the next decade, because the longer-term climate change outcomes and their economic consequences are highly uncertain. Coverage of the largest economies and aggregated regions that together constitute the

<sup>1</sup>The carbon tax assumed in this chapter may differ from the way carbon pricing is implemented. Alternative instruments and policies such as emissions trading systems, adjustments to preexisting taxes or subsidies, and nonpricing approaches based on regulations can be translated into a carbon price equivalent policy (Black and others 2022; Chateau, Jaumotte, and Schwerhoff 2022a).

<sup>2</sup>Global current account balances are defined as the sum of absolute current account balances across all countries.

global economy allows the scenario to account for the global general equilibrium effects of climate policies.

The chapter finds that, while ensuring the paramount objective of addressing climate change, a range of future climate mitigation policy choices could have a substantially different medium-term impact on current account balances by changing current investment and saving decisions.

- A credible and globally coordinated carbon tax decreases the current account in the greener advanced economies and increases it in the more fossil-fuel-dependent developing countries. On the investment side, the tax permanently reduces the return on carbon-intensive investment. In response, investment falls globally, more so in fossil-fuel-dependent economies, bringing about significant differences in the investment response across countries.<sup>3</sup> On the saving side, the global decline in investment reduces the global interest rate, which decreases saving across countries in a relatively uniform manner. As a result, current account movements are driven by the investment response, which is ultimately determined by country characteristics such as the initial intensity of carbon emissions and the net fossil fuel exports.
- Globally coordinated supply-side policies—a green subsidy for renewables and infrastructure investment—boost investment and saving and increase the global interest rate. Compared with the carbon tax, these policies have a more limited impact on the external sector, either because of the limited pace of sectoral expansion for renewables or because of the imposed identical size of the boost to the green infrastructure, which leads to comparable investment and saving responses within countries, leaving the current account broadly unchanged.
- For the global economy, a coordinated climate change mitigation policy package reduces global current account balances by 25 percent by 2027, while capital flows shift toward the greener advanced economies. The global interest rate, following an initial green-infrastructure-induced rise, falls over time as the persistently increasing carbon tax reduces investment globally, shifting economic activity toward more labor-intensive sectors.
- Partial implementation of mitigation policies can reverse or magnify external sector effects relative to

<sup>3</sup>In support of the model scenario, the April 2022 WEO estimates that, in part as a result of anticipated and implemented climate policies, investment in gas and oil sectors declined globally by 40 percent between 2014 and 2019.

globally coordinated implementation, depending on the type of policy and the country implementing it. For example, a unilateral carbon tax in Europe increases the current account in that region (instead of a decrease in the current account under coordinated implementation), because the tax reduces domestic investment and shifts capital abroad.<sup>4</sup> By contrast, a unilateral green subsidy in Europe magnifies the external sector response in that region by further reducing the current account balance. However, a critical shortcoming of partial implementation is the failure to address climate change.

- Increased burden sharing in emission reductions, consistent with the proposed internationally coordinated carbon price floor (October 2022 *Fiscal Monitor*), could reduce the size of the climate-policy-induced external sector adjustment between advanced and developing economies by a third. A further moderation of the external sector response could result from policies that accelerate the pace of investment in developing economies with less developed renewables sectors.

### The Approach: The Model-Based Mitigation Scenario

This section summarizes the model and the climate change mitigation scenario featured in the October 2020 WEO, emphasizing aspects that are particularly relevant for studying the external sector impact.

#### The G-Cubed Model

The chapter's findings are based on simulations of the G-Cubed global macroeconomic model. This large intertemporal general equilibrium model partitions the world economy into 10 countries and regions, separating out major economies as well as fossil-fuel-producing countries and regions (Table 2.1). The model includes 20 sectors, with rich sectoral detail on energy sectors and power generation, including three key fossil fuel sectors—oil, gas, and coal—as well as renewables-based electricity generation sectors (Table 2.2).

The model's sectoral detail captures key asymmetries central to the analysis of the external sector. First, regions differ in the carbon intensity of economic activity (Figure 2.1, panel 1). Carbon intensity

<sup>4</sup>“Europe” throughout the chapter refers to the EUW group of countries, as defined in Table 2.1.

**Table 2.1. Regions in the G-Cubed Model**

Region/Country Code	Region or Country
AUS	Australia
CHN	China
EUW	EU and selected other European Countries
IND	India
JPN	Japan
OEC	Rest of the advanced OECD
OPC	Selected oil exporters and other economies
ROW	Rest of the world
RUS	Russia
USA	United States

Sources: McKibbin and Wilcoxon (1999, 2013); Liu and others (2020). Note: EUW comprises the European Union (EU), Norway, Switzerland, and the United Kingdom; OEC comprises Canada, Iceland, Liechtenstein, and New Zealand; OPC comprises Algeria, Angola, Bahrain, the Democratic Republic of the Congo, Ecuador, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Nigeria, Oman, the West Bank and Gaza, Qatar, Saudi Arabia, Syria, the United Arab Emirates, Venezuela, and Yemen; ROW comprises all countries not included in the other groups. OECD = Organisation for Economic Co-operation and Development.

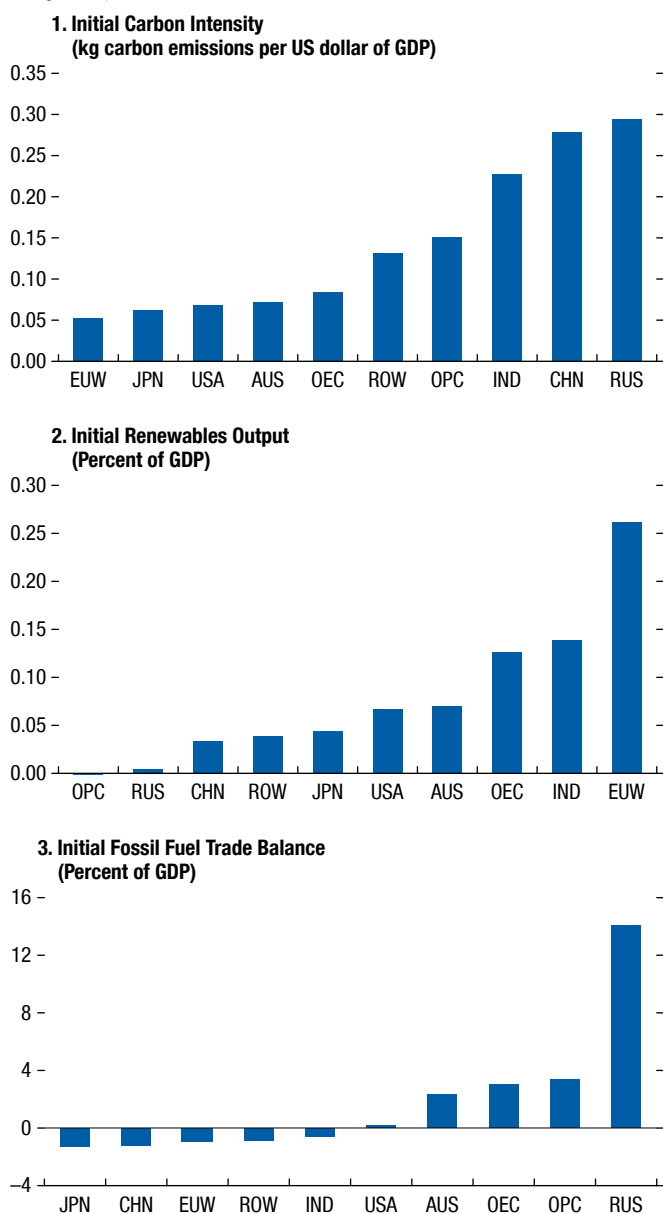
**Table 2.2. Sectors in the G-Cubed Model**

Number	Sector Name	Note
1	Electricity delivery	
2	Gas extraction and utilities	
3	Petroleum refining	Energy sectors other than generation
4	Coal mining	
5	Crude oil extraction	
6	Construction	
7	Other mining	
8	Agriculture and forestry	
9	Durable goods	Goods and services
10	Nondurable goods	
11	Transportation	
12	Services	
13	Coal generation	
14	Natural gas generation	
15	Petroleum generation	
16	Nuclear generation	Electricity generation sectors
17	Wind generation	
18	Solar generation	
19	Hydroelectric generation	
20	Other generation	

Sources: McKibbin and Wilcoxon (1999, 2013); Liu and others (2020).

## Figure 2.1. Structural Asymmetries

Countries differ in terms of their initial level of carbon intensity, the initial size of their renewables sectors, and the initial size of their fossil fuel trade balances. This heterogeneity plays a role in the response to mitigation policies.



Source: IMF staff calculations.

Note: The panels show the baseline characteristics used to run the simulation in the G-Cubed global macroeconomic model in the October 2020 *World Economic Outlook* (WEO). See Online Annex 3.4 in that WEO for a description of the baseline assumptions. The fossil fuel sector includes coal, natural gas, and petroleum. The renewables sector includes wind, solar, and other renewable electricity-generating sectors. See Table 2.1 for a list of region and country codes. kg = kilograms.

is higher in fast-growing emerging market economies such as China and India, as their fossil energy structures rely more heavily on coal. These economies also rely more on carbon-intensive industries. Less carbon-intensive advanced economies rely relatively more on gas and oil for energy generation. Second, regions differ in the importance of renewable energy for electricity generation (Figure 2.1, panel 2). The renewables sector is dominated by Europe, which accounts for 62 percent of global renewable energy (including solar, wind, and other renewables). This sector magnifies differences in carbon intensities across countries and regions. While renewables account for about 20 percent of energy generation in Europe and the OEC (see Table 2.1 for an explanation of the region codes), they represent less than 5 percent of the total in all fossil fuel exporters. Third, regions and countries differ in energy trade (Figure 2.1, panel 3). Russia and the OPC group are the main fossil fuel exporters, while other countries, such as Japan, are fossil fuel importers, especially of oil and gas.

The G-Cubed model includes standard features of large macro models, including several that are worth highlighting:

- Intertemporal general equilibrium with standard optimization.
- Rigidities, such as limits on the pace of investment, that prevent economies from moving quickly from one equilibrium to another.
- Cross-border capital and trade flows and bilateral cross-border input linkages.
- Heterogeneous households and firms—besides conventional forward-looking agents, a fraction of households simply consume their current income, and a fraction of firms make backward-looking investment decisions.
- Monetary and fiscal policy rules.

The model, discussed in detail in McKibbin and Wilcoxon (1999, 2013), Liu and others (2020), and Online Annex 3.4 of the October 2020 WEO, has been applied to study a wide range of macroeconomic policy questions.

Importantly, the model incorporates a full-fledged external sector. Intertemporal decisions of households and firms determine both saving and investment in response to the change in government policies. The gap between aggregate saving and investment determines the current account. A key variable that affects national saving, investment, and current accounts is the real interest rate, which



directly affects both saving and investment decisions as well as human wealth through a discounting channel.<sup>5</sup> Flexible exchange rates and open capital accounts are assumed for the model's 10 countries and regions.

### Climate Change Mitigation Scenario

The October 2020 WEO climate change mitigation scenario brings net carbon emissions to zero by 2050 with the help of a policy package that consists of carbon taxes, accompanied by compensatory transfers to households, and green supply policies—infrastructure investment and a subsidy to renewables—designed as follows:<sup>6</sup>

- *Carbon tax:* Carbon prices are calibrated to achieve an 80 percent reduction in emissions in each region by 2050 relative to 2018, after accounting for emission reductions from the infrastructure investment and the green subsidy are accounted for.<sup>7</sup> The carbon tax consists of an initial tax rate followed by an annual increase of 7 percent. A quarter of the resulting carbon tax revenue is transferred back to households to help protect the purchasing power of the poorest households from the increase in energy prices. The remaining three-quarters of the revenue is recycled to reduce government debt.

<sup>5</sup>Note that the precautionary saving motive is absent from the model. Given uncertainties associated with climate change and the green transition, precautionary considerations could provide an additional motive for saving.

<sup>6</sup>The G-Cubed model baseline without the climate mitigation policies relies on country-specific projections for labor force, country- and sector-specific projections of productivity growth rates as well as projections of energy efficiency improvements based on historical experience. Regions and countries are assumed to gradually catch up with the worldwide productivity frontier, and a catch-up in energy efficiency is assumed for China and India. The baseline scenario abstracts from the 2020 COVID-19 pandemic-related fall in output and emissions, assuming that the subsequent rebound brings output and emission levels in 2021 close to their 2019 level—the most recent year for which the model has been calibrated. The baseline projects that global carbon emissions will continue rising at an average annual pace of 1.7 percent, reaching 57.5 gigatons by 2050 (Figure 2.2). Improvements in energy efficiency and growth in renewables cannot offset the forces of population and economic growth that are driving emissions. Projected economic growth over the next 30 years determines the expected growth of future emissions and hence the scale of efforts needed to keep temperature increases at 1.5°–2°C. For further details on the model baseline scenario, see Jaumotte, Liu, and McKibbin (2021).

<sup>7</sup>The October 2020 WEO scenario assumes that the remaining 20 percent of carbon emission reductions would come from factors not captured by the model, such as natural emission sinks and carbon removal technologies.

An exception is made for the OPC region, for which emissions are kept at the initial level because of an outsized negative economic impact from the global decline in demand for fossil fuels.

- *Green subsidy:* Output of renewables—solar and wind electricity generation sectors—is subsidized by 80 percent. The subsidy is financed by government debt.
- *Low-carbon infrastructure investment:* An initial green public infrastructure investment of 1 percent of GDP gradually declines to zero over 10 years. Public investment is assumed to occur in the renewables and other low-carbon energy sectors, transport infrastructure, and services.<sup>8</sup> In line with the analysis in Calderón, Moral-Benito, and Servén (2015), it is assumed that for every 10 percent increase in the aggregate stock of infrastructure capital, productivity in private sector output rises by 0.8 percent. The new infrastructure, once in place, is sustained by spending an additional 0.2 percent of GDP to offset depreciation, which locks in the productivity gains of the sectors that benefit from the green infrastructure.

The three mitigation policies play distinct roles in reducing emissions and supporting economic growth. The carbon tax by 2050 accounts for 80 percent of emission reductions, but negatively impacts economic growth (Figure 2.2). Meanwhile, the green supply-side policies provide limited contributions to the emission reductions but ensure that the green transition is growth neutral.<sup>9</sup>

The assumption that all countries and regions reduce emissions to the same extent imposes a disproportionate and inequitable burden of economic adjustment on developing economies. To address such concerns, the chapter complements the baseline scenario with one of increased burden sharing in mitigation efforts between advanced and developing economies. This alternative scenario highlights the external sector impact of switching from uniform emission reduction targets to income-differentiated mitigation efforts.

### Mechanisms

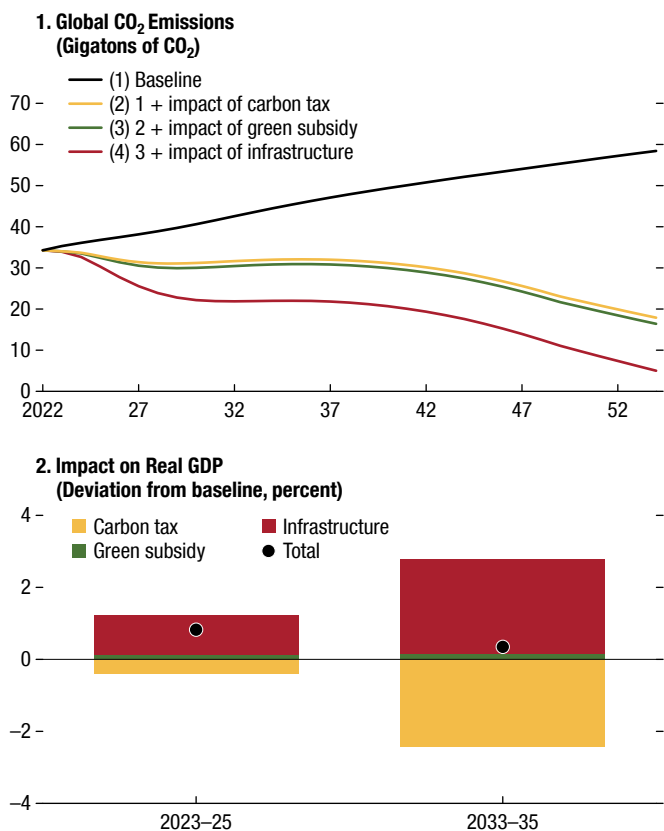
The mitigation policy package affects carbon emissions and the macroeconomy through two main channels. First, the carbon tax increases the relative price of fossil fuel energy, encouraging energy efficiency and discouraging energy usage. This is the scenario's main channel for reducing carbon emissions, with important implications. As economies reduce energy

<sup>8</sup>The latter aims to capture the higher energy efficiency of buildings.

<sup>9</sup>The scenario is also designed to be employment-neutral and public-debt-neutral for the global economy.

**Figure 2.2. Policy Package**

The reduction in emissions is achieved through a carbon tax, a green subsidy, and infrastructure investment. Infrastructure investment and the green subsidy are growth friendly, while the carbon tax has a negative impact on growth but generates the bulk of emission reductions. Initially there is a boost in global activity, followed by a decline.



Source: IMF staff calculations.

Note: The simulations are run using the G-Cubed global macroeconomic model of the October 2020 *World Economic Outlook* (WEO). The climate change mitigation policy package is calibrated to reduce gross emissions by 80 percent in every country/region by 2050 and is composed of (1) gradually rising carbon taxes, (2) a green fiscal stimulus consisting of green infrastructure investment, and (3) a subsidy for renewables production. See Online Annex 3.4 of the October 2020 WEO for more details on the implementation of the simulation. CO<sub>2</sub> = carbon dioxide.

usage, economic activity shifts from capital-intensive high-carbon sectors to more labor-intensive low-carbon sectors. Hence, the impact of decarbonization is more negative for investment than it is for output and employment. Less energy-intensive aggregate economic activity also limits the size of carbon tax revenues that can be raised. Second, both the carbon tax and the green supply policies increase the price of fossil fuel energy relative to that of renewables-based energy, contributing to the growth and investment in the renewables sector. However, this shift in energy composition

is a slow-moving process because of limits to the pace of sectoral expansion, with a potential role for targeted policies to facilitate the growth of the sector. Importantly, the credibility and anticipation of the mitigation policies, implemented over the next three decades, are crucial for generating the outcomes of the climate change mitigation scenario. Credible carbon tax policy can trigger large changes in immediate economic outcomes, including investment responses and dynamic effects, even if the initial size of the tax is small.

Two additional considerations are worth noting. First, the global economic transformation entailed by the mitigation scenario studied in the October 2020 WEO is gradual and orderly, avoiding abrupt adjustments in fossil fuel prices, which increase persistently over the scenario's horizon. There are also no technological breakthroughs, including technology leapfrogging, assumed that would facilitate the green transition, beyond the spillovers from the green infrastructure investment. Second, the results presented in this chapter abstract from long-term climate damages. A model extension that incorporates climate damages suggests a very limited economic and external sector impact for the global economy over the next decade (Fernando, Liu, and McKibbin 2021).

## External Sector Impact

To investigate the external sector impact of the net-zero emissions by 2050 scenario, this section analyzes the three mitigation policies individually, followed by an analysis of the full policy package. The section also examines alternative policy scenarios, including partial implementation of climate mitigation policies and burden sharing of emissions reductions and explores the implications of climate change mitigation policies for the global economy.

### Carbon Tax

The carbon tax policy resembles a negative productivity shock that varies by sector and country, depending on the current and anticipated path of carbon dependence. Greener countries are the least affected, while fossil fuel extraction activities are permanently reduced. The economic impact of the policy is back-loaded, with tax levels gradually increasing until 2050 to achieve the emission targets (see Online Annex 3.4 of the October 2020 WEO).

The internal investment-saving balance approach is adopted to gauge the external sector response to the tax, distinguishing between (1) global intertemporal implications and (2) cross-country variation in response to the tax. To focus on the responses over the first decade, results are reported in terms of average deviations from the baseline growth path for the first 10 years of the simulation.

The carbon tax decreases aggregate investment globally as the anticipated return on fossil-fuel-linked investment is permanently reduced.<sup>10</sup> The global interest rate falls, shifting income toward consumption and reducing global saving until the global investment-saving balance is restored.<sup>11</sup> The economic magnitude of the adjustment is sizable, with investment and saving declining by 2 percent of global GDP over the first decade, reflecting the high capital intensity of fossil-fuel-dependent economic activity. Meanwhile, the global interest rate declines by 0.25 percentage point.

Results reveal a large variation in the investment response across countries. To examine such cross-country differences, Figure 2.3 reports results for all 10 of the model's countries and regions, ordered by the size of the investment response. The contraction in investment is most pronounced in the fossil-fuel-producing countries and regions (Russia, OEC, ROW, OPC), while relatively greener advanced economies and regions (Japan, EUW) are affected the least (Figure 2.3, panel 1). China and India are more negatively affected than advanced economies because of their carbon-intensive manufacturing activities.<sup>12</sup> Saving declines more evenly across countries, dominated by the decline in the global interest rate, while other underlying drivers vary less (Figure 2.3, panel 2).<sup>13</sup>

The response of the current account is driven by heterogeneity in the investment response across

<sup>10</sup>This overall decline in investment relies importantly on the investment response in the expansion of renewables.

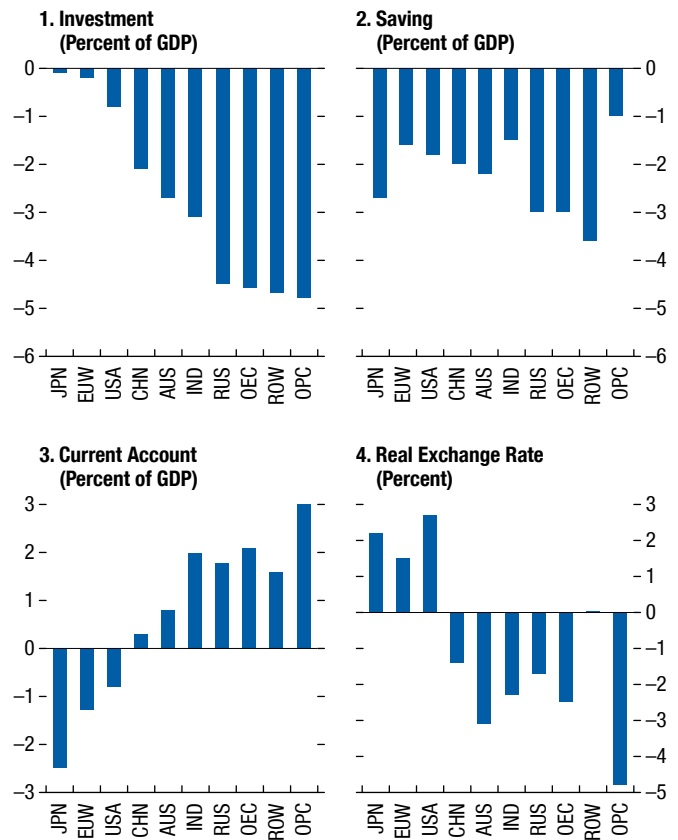
<sup>11</sup>Public sector surpluses stemming from carbon tax revenues are more than offset by private dissaving, resulting in decreased aggregate saving.

<sup>12</sup>Using a different computable general equilibrium model-based climate change mitigation scenario, the OECD (2022) reports a similar higher cost of decarbonization, in terms of the investment response, for China and India.

<sup>13</sup>The overall saving is also impacted by the intertemporal consumption smoothing motive, as income declines in response to the persistently increasing carbon tax. More of the income is saved in the initial decade in economies and regions in which the income decline is anticipated to be the steepest. However, the variation in this saved income share plays a limited role quantitatively.

**Figure 2.3. Impact of a Coordinated Carbon Tax on the External Sector**  
(Deviations from baseline; 2023–33 average)

Following a carbon tax, investment falls globally. The external sector response is determined by the heterogeneity in the decline in investment. In countries where investment contracts least, the current account decreases, while in countries with the largest decline in investment, the current account increases relative to the baseline. To facilitate the adjustment, the real exchange rate depreciates in countries where the current account increases, decreasing imports and increasing exports.



Source: IMF staff calculations.

Note: The simulations are based on a net-zero emissions by 2050 scenario run using the G-Cubed global macroeconomic model (October 2020 *World Economic Outlook* [WEO]). See Online Annex 3.4 of the October 2020 WEO for further details. See Table 2.1 for a list of region codes.

countries (Figure 2.3, panel 3). The current account decreases where investment contracts the least and increases in countries where the carbon tax decreases investment the most, as capital is relocated toward greener economies. The dominant role of aggregate investment in driving external sector responses is captured by a strong negative cross-country correlation ( $-0.94$ ) between investment and current account responses and an absence of correlation between the current account and aggregate saving ( $0.01$ ). A stylized

two-country graphic illustration of these economic forces is presented in Box 2.2.

The real exchange rate (RER) plays a shock absorber role for the most affected countries and regions. In response to the carbon tax, the RER depreciates in countries with the most negative economic impact—with the largest declines in investment and capital outflows (Figure 2.3, panel 4). For such economies the RER facilitates the external sector adjustment through the expenditure switching channel, as the demand at home shifts from imported to domestic goods and services and exports are boosted. Reverse economic forces are at work in countries that are the least affected by the carbon tax, exhibiting capital inflows and current account deficits relative to the baseline. The strong link between the current account and the RER adjustment is captured by a  $-0.86$  cross-country correlation for responses.

The external sector impact of the carbon tax is sizable. The absolute value of the 10-year average current account response ranges from 0.3 to 3 percent of GDP. The absolute value of the RER adjustments, relative to the baseline path, ranges from 0 to 4.8 percent, with an outsized response in initial years.

Increased current accounts in the fossil-fuel-dependent economies contrast with the historically observed positive relationship between carbon revenues and current account balances. This result is due to the permanent nature of the carbon tax increase. While the negative economic impact of a temporary fall in the carbon price can be absorbed by reducing the current account, a credible and anticipated permanent decrease in carbon revenues requires a structural adjustment as aggregate investment declines and countries transition away from investment-intensive carbon-based economic activity. It is also important to note that the model does not capture intergenerational equity considerations stemming from the exhaustible nature of fossil fuels, which could decrease the current account of fossil-fuel-exporting countries in response to a globally coordinated carbon tax.<sup>14</sup> The overall current account response would need to reflect both the necessary structural adjustment and the fall in aggregate investment captured by the model, as well as the

impact of the carbon tax on intergenerational equity considerations.

### Which Country Characteristics Shape the External Sector Response to the Carbon Tax?

Country-specific determinants of carbon emissions drive the cross-country differences in the external sector response. One key characteristic, discussed earlier, is initial carbon intensity (Figure 2.1, panel 1). In addition, long-run growth of carbon emissions will be higher in countries with higher projected labor force and productivity growth rates and in sectors with a more limited scope for reducing reliance on carbon-intensive inputs. Each of these carbon-emission-inducing factors necessitates a higher carbon tax to reach the 2050 emission targets. Cross-country differences in the role of these factors can be summarized with the collected carbon tax revenues, which exhibit a strong positive correlation with the change in the current account. In countries or regions where the revenues collected from the tax (and projected carbon emissions) are the highest, the current account increases the most (Figure 2.4, panel 1), suggesting a form of twin surpluses. Conversely, countries and regions with relatively low carbon tax revenues exhibit current account decreases.

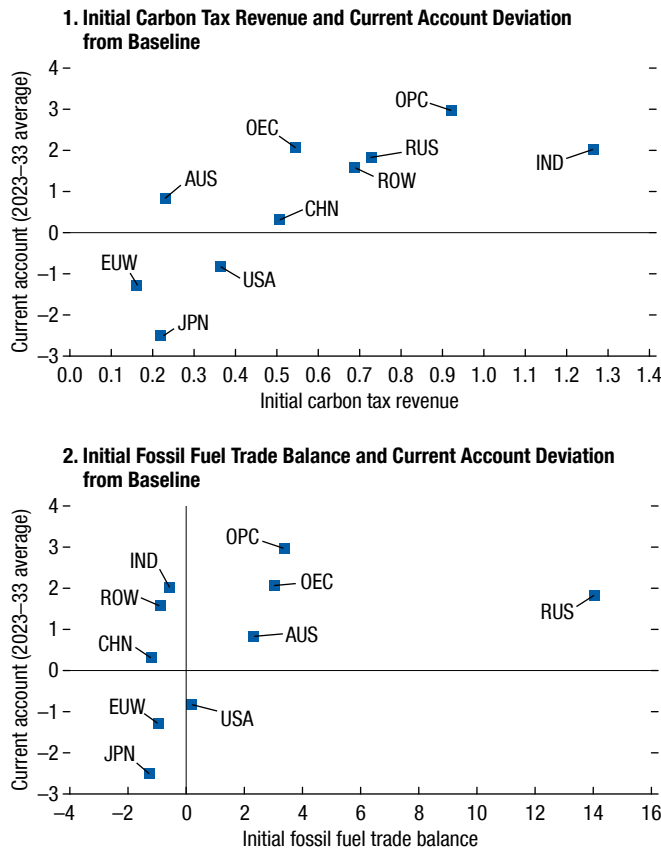
A country's status as a net fossil fuel exporter is an important additional determinant of the current account response. Net fossil-fuel-exporting countries face a reduced demand for fossil fuel from abroad, which further depresses investment and increases the current account (Figure 2.4, panel 2). This channel operates and exerts an economically significant impact on the external sector even if the fossil-fuel-exporting country does not impose a carbon tax.<sup>15</sup> More generally, the nature of this cross-border demand spillover could differ drastically across net resource-exporting countries. While net exporters of fossil fuels are negatively affected, the demand for metals critical for green energy transition could surge (Box 2.3). However, the G-Cubed model does not incorporate sufficient detail on mineral resources to explore such additional considerations.

<sup>14</sup>As fossil fuel exports fall permanently in response to a carbon tax, saving and the current account would decrease, reflecting the reduced income from the exhaustible resource.

<sup>15</sup>See panel 2 of Figure 2.8 for a simulation of this external sector spillover effect on net fossil fuel exporters from a carbon tax imposed in Europe only.

**Figure 2.4. Country Characteristics and External Sector Impact of the Carbon Tax**  
(Percent of GDP)

Country characteristics such as the initial carbon intensity, labor force, and productivity growth rates and substitutability of carbon-intensive inputs—proxied with the carbon tax revenue—drive investment and current account responses in the model. For net fossil fuel exporters, cross-border spillovers from permanently reduced foreign demand also contribute to the decline in investment and the increase in current accounts.



Source: IMF staff calculations.

Note: The simulations are based on a net-zero emissions by 2050 scenario run using the G-Cubed global macroeconomic model (October 2020 *World Economic Outlook* [WEO]). See Online Annex 3.4 of the October 2020 WEO for further details. See Table 2.1 for a list of region codes.

**Green Subsidy**

The green output-based subsidy to the renewables sector—that is, solar and wind energy generation—is reminiscent of a positive sector-specific productivity shock. The subsidy complements the carbon tax in stimulating a shift in energy generation from fossil fuels to renewables.

For the global economy, the green subsidy triggers an intertemporal adjustment familiar from the discussion of the carbon tax, but operating in reverse.

The subsidy boosts investment in renewable activities, which leads to an increase in the global interest rate and saving until the global investment-saving balance is restored. Despite the large subsidy, the magnitude of the response is limited when compared with the carbon tax. Investment (and saving) increase globally by 0.1 percent of GDP, while the interest rate rises by 0.11 percentage point. The muted response is explained by the small initial size of the renewables sector—at a mere 0.1 percent of the global output—and by the limits on the pace of investment.<sup>16</sup>

There are stark differences in the investment response across countries and regions (Figure 2.5, panel 1). Europe, with its abundant renewable energy generation, has the strongest investment boom because limits to the pace of investment provide an advantage to regions with capital for renewables already in place (Figure 2.1, panel 2). At the other end of the spectrum, for fossil-fuel-producing countries and regions with small renewables sectors (RUS, OPC), the increased relative price of fossil-fuel-based energy reduces demand for fossil fuels, decreasing investment in the sector. While the renewables sector is attracting investment and growing rapidly, the sector’s small size limits investment’s macroeconomic impact. Saving increases in all regions in tandem with the rise in the global interest rate (Figure 2.5, panel 2).

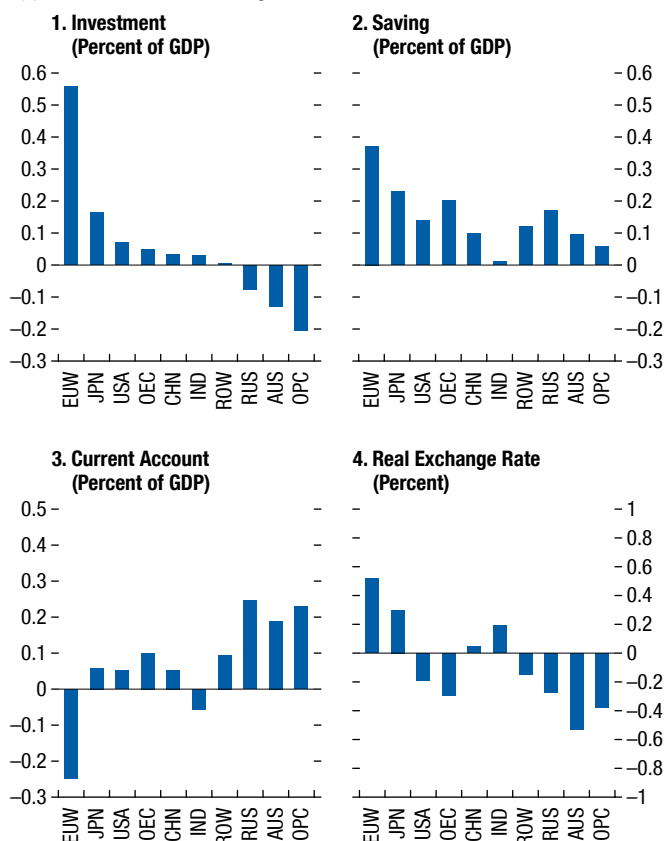
Changes in the current account are driven mainly by the heterogeneity in the investment response across countries and regions. There is an outsized decrease in Europe, reflecting the investment boom, while current accounts increase the most in fossil-fuel-dependent countries (Figure 2.5, panel 3).<sup>17</sup> The cross-country correlation between investment and current account responses is  $-0.91$ . As in the case of the carbon tax, the RER response facilitates the current account adjustment, with the largest appreciation in Europe and depreciations for fossil fuel exporters (Figure 2.5, panel 4). Reflecting investment responses, current account and RER adjustments are a fraction of those generated by the carbon tax.

<sup>16</sup>The model includes quadratic investment adjustment costs. As a result, countries that have smaller initial capital stocks in renewable activities experience a higher cost of adjustment per unit of capital investment because their marginal costs rise faster, constraining the pace of sectoral expansion.

<sup>17</sup>The stylized two-country graphic illustration of the model’s forces in Box 2.2 can be modified to capture the investment-saving and current account impacts of the green subsidy. The key change is that a green subsidy shifts the investment curve outward, rather than inward, and the shift is larger for the green region.

**Figure 2.5. Impact of the Green Subsidy on the External Sector**  
(Deviations from baseline; 2023–33 average)

The green subsidy stimulates investment in the renewables sector and decreases the relative price of renewables-based energy. The resulting investment boom is most pronounced in Europe, where the renewable sector is the largest. Fossil fuel exporters see a decline in investment due to an increase in the relative price of fossil fuels. The impact on the external sector is determined by the heterogeneity in the response of investment. An investment boom decreases the current account and appreciates the real exchange rate.



Source: IMF staff calculations.

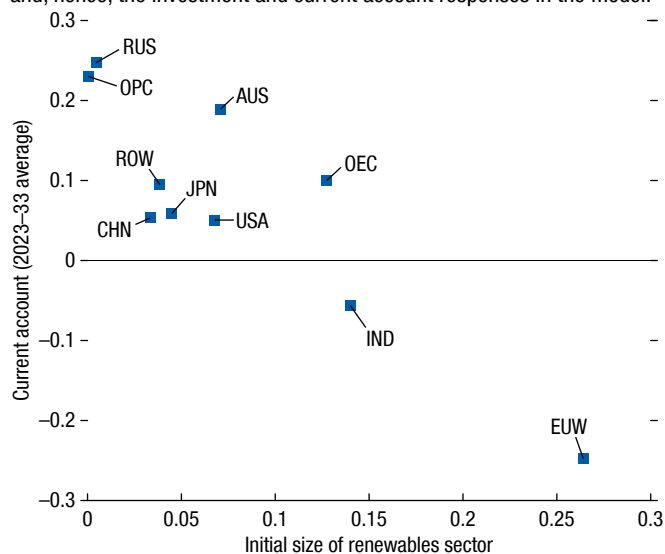
Note: The simulations are based on a net-zero emissions by 2050 scenario run using the G-Cubed global macroeconomic model (October 2020 *World Economic Outlook* [WEO]). See Online Annex 3.4 of the October 2020 WEO for further details. See Table 2.1 for a list of region codes.

### Which Country Characteristics Shape the External Sector Response to the Green Subsidy?

The external sector impact of the subsidy is ultimately driven by the cross-country variation in the initial size of the renewables sector. Given the constrained pace of sectoral expansion, in countries and regions where the initial size of the renewables sector is the smallest (RUS, OPC), the average size of the output-based green subsidy over the first decade

**Figure 2.6. Country Characteristics and External Sector Impact of the Green Subsidy**  
(Percent of GDP)

With limits to the pace of expansion in the renewables sector, the initial size of the renewables sector determines the size of the fiscal subsidy and, hence, the investment and current account responses in the model.



Source: IMF staff calculations.

Note: The simulations are based on a net-zero emissions by 2050 scenario run using the G-Cubed global macroeconomic model (October 2020 *World Economic Outlook* [WEO]). See Online Annex 3.4 of the October 2020 WEO for further details. See Table 2.1 for a list of region codes.

remains below 0.04 percent of GDP, and the current account increases the most (Figure 2.6). Meanwhile, Europe provides the largest subsidy—at 0.3 percent of its GDP and 57 percent of the global green subsidy—and exhibits the largest decrease in the current account.

Policies accelerating the adoption of green energy in countries with less developed renewables sectors could moderate the external sector responses to the green subsidy and counter the impact of the globally coordinated carbon tax. For example, in developing economies it might be difficult to attract the financing necessary for renewables-related investment, which could boost the growth of the sector, reducing the cross-country dispersion of current account responses to the green subsidy. A targeted recycling of the carbon tax could be one financing source for the investment, while international financing could also contribute. Support could also come in the form of technology transfers, allowing for technology leapfrogging in developing countries that would increase their contributions to global emission reductions.

### Infrastructure Investment

The green public infrastructure component of the mitigation policy package amounts to a sizable and front-loaded fiscal expansion that aims to counter the negative growth impact of the carbon tax. An additional economic boost stems from the assumed private sector productivity spillover, induced by the increased public infrastructure capital stock (Calderón, Moral-Benito, and Servén 2015).<sup>18</sup> Importantly, the aggregate size of both components of the infrastructure investment policy—temporary fiscal expansion and private sector productivity spillover—is assumed to be identical across countries.

The symmetric and coordinated nature of the infrastructure investment policy limits its impact on the external sector.<sup>19</sup> This finding should come as no surprise, as what matters for the current account response is the fiscal policy action (and productivity gains) relative to those in the rest of the world, as well as country-specific characteristics, such as the degree of openness. Intuitively, when policy-induced shifts in the investment curve are identical across countries, the resulting increase in investment and saving broadly offsets, increasing the interest rate but leaving the current account unchanged (Box 2.2). However, these external sector findings need to be interpreted with caution. First, they depend crucially on the assumed symmetric size of the infrastructure investment across countries. Second, the external sector results could be sensitive to the assumed symmetry in productivity spillovers as well as to their sectoral distribution.

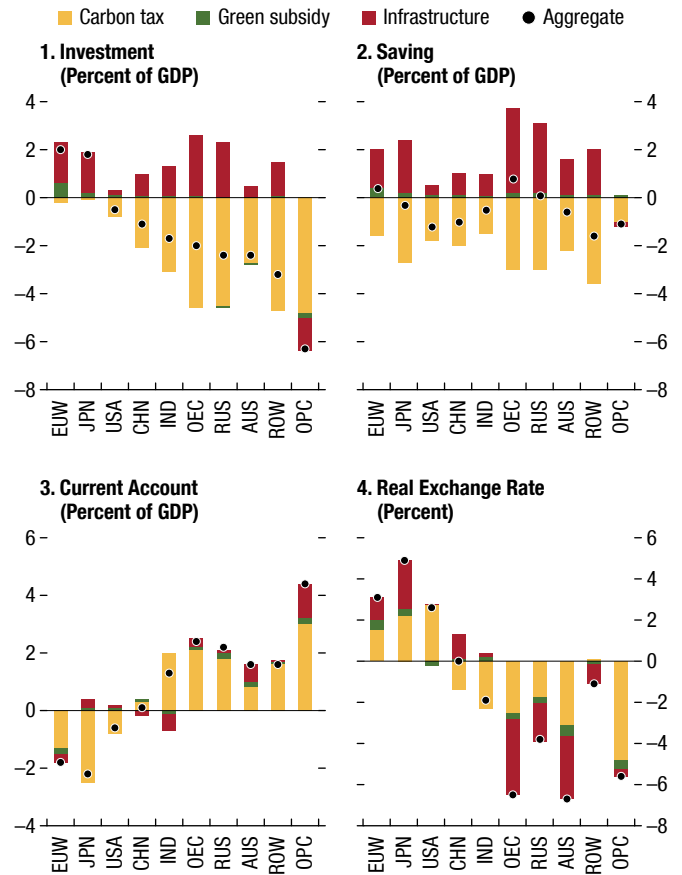
### Mitigation Policy Package

The mitigation policy package is designed to be growth and public debt neutral by 2050. Its external sector impact is equal to the sum of the impacts of the three individual mitigation policies—carbon tax, green subsidy, and infrastructure investment (Figure 2.7). Several takeaways are worth highlighting.

First, despite the policy package delivering positive output growth globally during the initial decade, aggregate investment falls in all but the least carbon-intensive

**Figure 2.7. Impact of Mitigation Policy Package on the External Sector**  
(Deviations from baseline; 2023–33 average)

The overall external sector impact is dominated by the carbon tax. The relatively small initial size of the renewables sector—and any resultant subsidy to the sector—constrains the subsidy’s external sector impact. The sizable infrastructure investment is symmetric across countries, limiting the external sector response.



Source: IMF staff calculations.

Note: The simulations are based on a net-zero emissions by 2050 scenario run using the G-Cubed global macroeconomic model (October 2020 *World Economic Outlook* [WEO]). See Online Annex 3.4 of the October 2020 WEO for further details. See Table 2.1 for a list of region codes.

economies (Figure 2.7, panel 1). The public infrastructure boost offsets approximately half of the carbon-tax-induced decline in investment globally. The remaining negative impact on investment is mainly due to the higher capital intensity of fossil-fuel-producing sectors, the role of which declines significantly in the global economy as carbon emissions are reduced, shifting economic activity toward more labor-intensive sectors.

Second, the external sector impact is dominated by the carbon tax, while the other policies have much

<sup>18</sup>For details on the modeling of the private sector productivity spillover, see Jaumotte, Liu, and McKibbin (2021).

<sup>19</sup>Figure 2.7 reports the impact of the infrastructure investment policy on the external sector and compares it with that of the other mitigation policies.

smaller effects, as discussed earlier. For the model's median region, the carbon tax accounts for 91 percent of the total current account response to the mitigation policy package (Figure 2.7, panel 3). The carbon tax is also the main driver of the RER response, accounting for 46 percent of the overall adjustment. In the greener advanced countries and regions (JPN, EUW), the sizable current account and RER adjustments that occur as investment increases while saving remains broadly unchanged generate a Dutch-disease-type effect, with export activity shrinking as a share of GDP.

Finally, individual country responses to the mitigation policy package and its components exhibit a sizable country-specific component. Despite strong correlations, current account and RER responses cannot be fully explained by the investment behavior. This is to be expected, given the significant variation in the size of policy shocks across countries, as well as in country characteristics. For example, countries vary in their degree of openness (that is, the shares of their output that are exported and the shares of their final demand that are imported), their bilateral exposures, the sectoral structure of their economic activity, and their labor force trends.

## Alternative Scenarios

### Role of Policy Synchronization

A partial or asynchronous implementation of mitigation policies adds a policy asymmetry that can alter external sector outcomes. The analysis thus far has examined globally coordinated implementation of mitigation policies, with all countries reaching the emission reduction targets. However, the progress and medium-term commitments toward climate change mitigation vary considerably across countries.<sup>20</sup> To explore the implications of the uneven progress, this section examines an alternative partial implementation scenario, focusing on a case in which only one region—Europe—implements the carbon tax and the green subsidy.<sup>21</sup>

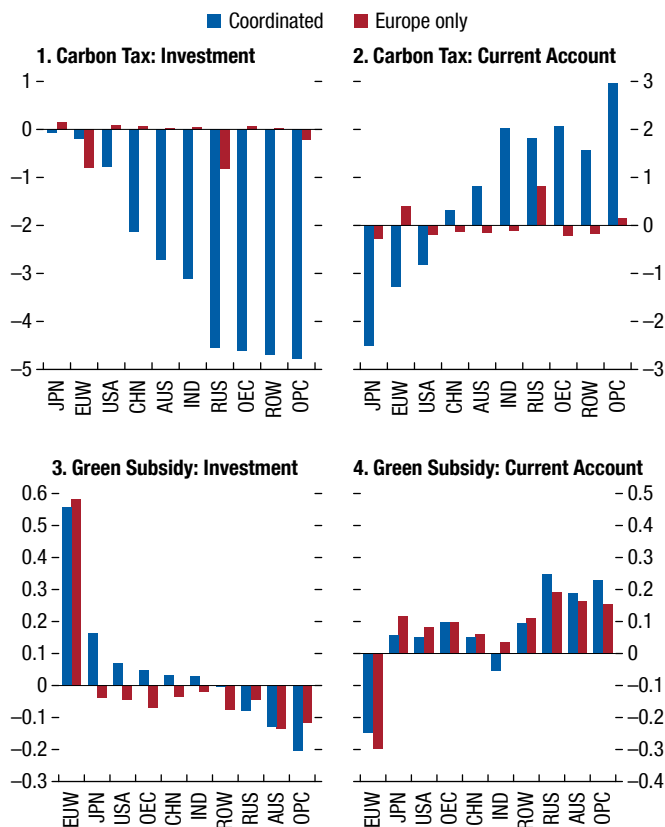
For the global economy, the implementation of the carbon tax in Europe leads to the familiar intertemporal adjustment in the investment-saving balance: a fall in investment and saving, accompanied by a reduction in the global interest rate. With only Europe implementing

<sup>20</sup>See the IMF Climate Change Dashboard at <https://climatedata.imf.org/>.

<sup>21</sup>While Europe, as the green transition front-runner, is an instructive scenario specification, broadly similar findings were obtained with other partial-implementation scenarios (for example, the case of mitigation policies implemented only by advanced economies).

**Figure 2.8. Impact of Partially Implemented Mitigation Policies on the External Sector**  
(Deviations from baseline; 2023–33 average; percent of GDP)

If only Europe implements the carbon tax, the fall in investment in Europe is magnified, relative to what takes place under a coordinated implementation of the tax. Upstream energy supplies are similarly impacted. As a result, the current account response in Europe is reversed from a decline to an increase.



Source: IMF staff calculations.

Note: The simulations are based on a net-zero emissions by 2050 scenario run using the G-Cubed global macroeconomic model (October 2020 *World Economic Outlook* [WEO]). See Online Annex 3.4 of the October 2020 WEO for further details. See Table 2.1 for a list of region codes.

the tax, the size of the adjustment is significantly smaller than under coordinated implementation, with a mere 0.2 percent of GDP drop in investment (and saving) globally and a 0.02 percentage point decrease in the interest rate over the first decade.

The muted global impact hides large differences in investment and current account responses across countries (Figure 2.8, panels 1 and 2). As the carbon tax reduces the anticipated return on investment in Europe, investment and saving fall in that region (Figure 2.8, panel 1). For fossil fuel exporters there is a sizable negative economic impact. Spillovers from reduced demand



for fossil fuels in Europe depress investment upstream in Europe's fossil-fuel-supplying countries—Russia and to a lesser extent other fossil-fuel-exporting developing economies (such as those in the OPC group). For the other regions, in the absence of a carbon tax, investment increases marginally, while saving declines, as in Europe. Reflecting the investment responses, capital flows out of Europe and its fossil fuel suppliers and into the regions and countries that do not impose the carbon tax, as revealed by current account surpluses in Europe and fossil-fuel-producing countries and regions and deficits in other countries and regions (Figure 2.8, panel 2). Box 2.2 presents a stylized two-country graphic illustration of these economic forces, excluding the spillovers to fossil fuel suppliers.

Relative to coordinated implementation, a unilateral carbon tax in Europe reveals a sizable negative competitiveness impact for that region. The fall in investment in Europe is magnified because the carbon tax (and the anticipated decline in the return on investment) is accommodated by a smaller decline in the global interest rate than would occur with coordinated implementation (Figure 2.8, panel 1). Furthermore, the current account response is reversed, as the outsized fall in investment increases the current account in Europe (Figure 2.8, panel 2). Instead of drawing capital inflows, the imposed permanent carbon tax turns Europe into a source of capital outflows as investment shifts toward regions with a higher return on investment.<sup>22</sup>

By contrast, the green subsidy, when implemented in Europe only, further boosts economic activity in the region. Not surprisingly, given Europe's outsized role in the global green subsidy, results for this scenario resemble those of the coordinated implementation scenario (Figure 2.8, panels 3 and 4). The key difference between the results in the two scenarios is that a subsidy only in Europe raises the global interest rate by less. As a result, investment in Europe is boosted, further decreasing the region's current account.<sup>23</sup> For other countries

<sup>22</sup>Recent literature explores border carbon adjustments as a policy tool to reduce the negative competitiveness effect from a unilateral carbon tax. While not examined in this chapter, such an adjustment would be implemented by countries with stricter climate policies on the imported carbon content from regions with more limited climate change mitigation efforts. The bulk of the impact of border carbon adjustments can be achieved by focusing on energy-intensive and trade-exposed sectors (Chateau, Jaumotte, and Schwerhoff 2022b).

<sup>23</sup>In the stylized two-country graphic illustration of the model's forces shown in Box 2.2, the Europe-only green subsidy would be captured by an outward shift in the investment curve in the green region only, that is, a reverse of the case covered in Figure 2.2.2.

and regions, external sector outcomes reflect a trade-off between the green subsidy and a more muted increase in the global interest rate. Where the subsidy under coordinated implementation is small (OPC, Russia), the interest rate effect dominates, increasing investment and reducing the current account balance. Where the subsidy is more sizable (Japan, United States), the absence of the subsidy dominates, reducing investment and increasing the current account (Figure 2.8, panel 4).

Overall, partial implementation of mitigation policies can have sizable and varied impacts on the external sector, either putting countries at a competitive disadvantage or magnifying the economic boost from a mitigation policy. However, a critical shortcoming of partial implementation is the failure to deliver the necessary global carbon emission reductions. To succeed in averting climate change, it is essential that both advanced economies and developing countries cooperate in achieving the climate mitigation targets, including through burden-sharing arrangements such as income-differentiated carbon price floors or sectoral carbon pricing (Parry, Black, and Roaf 2021; Chateau, Jaumotte, and Schwerhoff 2022b).

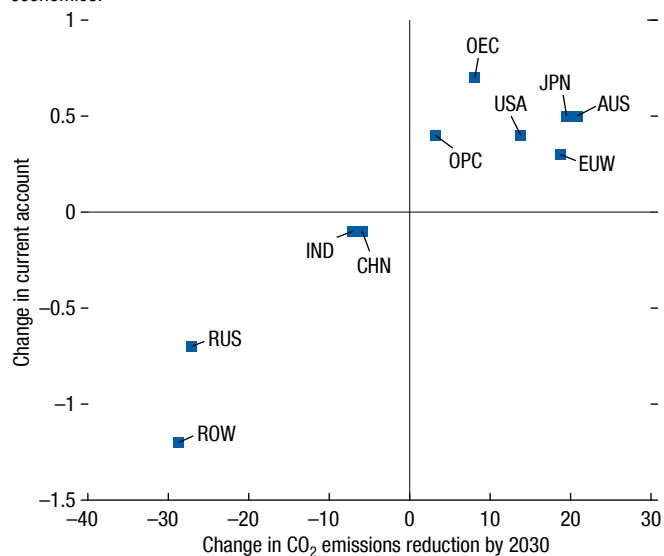
### Differentiated Mitigation Efforts

One concern with the net-zero emissions by 2050 scenario is the disproportionate economic cost imposed on developing economies. The globally growth-neutral design of the mitigation policy package hides considerable differences across countries, with the more carbon-intensive developing economies incurring disproportionate declines in investment, output, and employment in response to the carbon tax (see the October 2020 WEO; see also Jaumotte, Liu, and McKibbin 2021). Although in the longer term there is little room for differentiation of mitigation efforts across countries, over the next decade advanced economies have pledged to lead the effort (IEA 2021; Parry, Black, and Roaf 2021). How would mitigation efforts centered on advanced economies impact this chapter's external sector findings?

To address this question, an alternative scenario increases the carbon tax for the five advanced regions and countries to double emission reductions from an average of 20 percent to 40 percent by 2030, relative to the baseline. The more stringent targets are broadly consistent with the 2030 mitigation pledges by advanced economies (Parry, Black, and Roaf 2021). For developing regions, 2030 emission targets are reduced from an average of 32 percent to 20 percent,

**Figure 2.9. Impact of Larger Emission Reductions in Advanced Economies**  
(Percentage points relative to baseline mitigation scenario)

Increased burden sharing in climate change mitigation efforts between advanced and developing countries would moderate the external sector impact of the carbon tax. Relative to the baseline scenario, current accounts in advanced economies would increase and those of developing countries would decrease, reducing the shift in global capital flows toward the greener advanced economies.



Source: IMF staff calculations.

Note: The simulations are based on a net-zero emissions by 2050 scenario run using the G-Cubed global macroeconomic model (October 2020 *World Economic Outlook* (WEO)). See Online Annex 3.4 of the October 2020 WEO for further details. See Table 2.1 for a list of region codes.

again reflecting available country-specific pledges.

Thus, broadly in line with the internationally coordinated carbon price floor proposal in the October 2022 *Fiscal Monitor*, by 2030 advanced economies reduce emissions by approximately twice as much as developing economies.<sup>24</sup>

<sup>24</sup>Full consistency cannot be ensured, because the October 2022 *Fiscal Monitor* limits the proposal to selected economies and does not specify post-2030 paths for carbon emissions. Analysis of the differentiated mitigation efforts builds on the examination of the carbon tax as the sole mitigation policy in Jaumotte, Liu, and McKibbin (2021). Reported results assume that (1) following increased medium-term (2030) burden sharing, country-specific emission reduction targets of 80 percent are met by 2050, except for the OPC region; and (2) all carbon tax revenues are applied toward public debt repayment. The main findings remain broadly unchanged if instead all carbon tax revenues are transferred to households. Qualitative findings are also not altered if 2050 emission targets are not imposed and instead the 2030 differentiated mitigation efforts are maintained during the subsequent decades.

Increased burden sharing of emission reductions tempers the external sector response to the carbon tax. Higher 2030 emission cuts in advanced economies increase their current accounts relative to the baseline net-zero emissions by 2050 scenario (Figure 2.9). Conversely, the more gradual emission reductions in developing economies by 2030 reduce their current accounts relative to the same benchmark. The size of the shift in capital flows toward the five higher-income regions and countries is reduced by a third. These changes are driven by the higher (lower) carbon taxes in advanced (developing) economies.

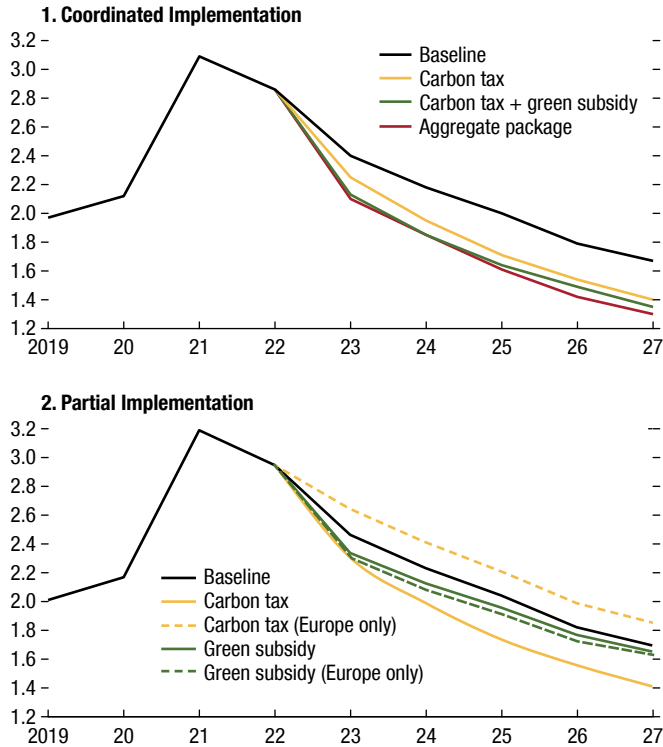
### Fiscal Revenue Recycling Assumptions

The baseline carbon tax policy transfers a quarter of the tax revenues back to households to help protect their purchasing power from the increase in energy prices. The remaining three-quarters is recycled to reduce government debt. Since the external sector impact of the climate mitigation package is dominated by the carbon tax, it is important to understand whether the results are sensitive to this recycling assumption.

An expanded scenario analysis reveals a limited impact from the fiscal recycling assumption for the external sector outcomes. The analysis examines two opposing scenarios, with the tax revenues either used to reduce public debt or fully transferred to households. Quantitatively, current account responses are larger when the revenue is recycled to reduce government debt. However, the average difference in the absolute current account response across the 10 countries and regions (when the two extreme revenue-recycling assumptions are compared) is smaller than 0.25 percent of GDP, suggesting that the chapter's findings are not driven by the specific revenue-recycling assumption. The limited impact can be explained by the relatively small size of carbon tax revenue during the first decade, at 0.6 percent of GDP for the average country. The small size of carbon tax revenue would also limit the external sector impact of alternative tax specifications, including revenue-neutral approaches. Such alternative specifications can impact aggregate investment behavior but will have a more limited effect on the heterogeneity of the investment response, which determines the external sector adjustment.

**Figure 2.10. Mitigation Policies and Global Balances**  
(Percent of global GDP)

Coordinated mitigation policies would reduce global balances, with the carbon tax providing the largest contribution by 2027. However, partial implementation could strengthen or reverse this effect.



Sources: IMF, *World Economic Outlook*; and IMF staff calculations.  
Note: The simulations are based on a net-zero emissions by 2050 scenario run using the G-Cubed global macroeconomic model (October 2020 *World Economic Outlook* [WEO]). See Online Annex 3.4 of the October 2020 WEO for further details. Global balances are defined as the sum of absolute current account balances. “Baseline” refers to April 2022 WEO projections for output and current account.

## Global Implications

Beyond the impact on individual countries and regions, the model simulations reveal several important implications for the global economy.

The globally coordinated climate change mitigation policy package reduces global balances. To assess the impact, model-based current account and output deviations from the baseline are added to the April 2022 WEO medium-term current account and output projections. Results show a 0.3 percent of global GDP reduction in global current account balances by 2027, with contributions from each of the three individual mitigation policies (Figure 2.10, panel 1).

The carbon tax accounts for more than two-thirds of the decline. Current account surplus countries and regions, including Europe and Japan, where the carbon tax decreases the current account, are the main individual contributors.

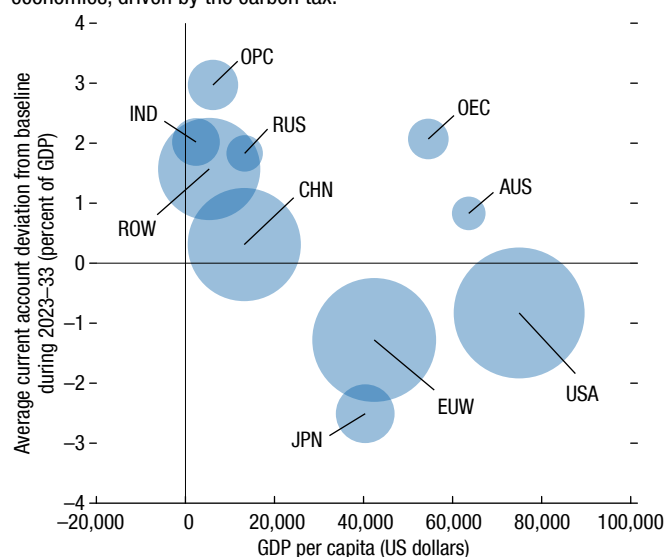
However, the reduction in global balances can depend on coordinated implementation of mitigation policies. In a Europe-only partial implementation scenario, the carbon tax increases global balances (Figure 2.10, panel 2) as the current account in Europe increases. At the same time, partial implementation of the green subsidy in Europe reduces global balances by more than coordinated implementation. The difference is again driven by the current account response in Europe, with the decrease magnified under partial implementation (Figure 2.8, panel 4). Separately, results show that the burden sharing effort would moderate the decline in global balances by 15 percent by 2027, as current accounts in advanced economies would decrease by less.

The globally coordinated mitigation policy package shifts global capital flows toward advanced economies. Inflows into Europe, Japan, and the United States are met with outflows from lower-income oil-exporting developing economies, India, and other countries included in the model’s “rest of the world” region (Figure 2.11). As already indicated in panel 3 of Figure 2.7, cross-border capital flows are driven by the carbon tax policy, which decreases the current account in greener economies and increases it in the more carbon-intensive regions.

Prospects for the global interest rate are closely linked to the dynamics of aggregate investment. Carbon taxes reduce investment, gradually decreasing the interest rate over the three decades of globally coordinated climate change mitigation efforts (Figure 2.12). In contrast, the front-loaded green infrastructure policy raises the global interest rate in the short term, but its impact is transitory, dissipating as the infrastructure boom moderates after the first decade. Given its limited size, the green subsidy has a muted impact on the global interest rate. Overall, following an initial infrastructure-investment-induced rise, the mitigation policy package leads to a gradual decline in the global interest rate.

**Figure 2.11. Mitigation Policies and Cross-Border Capital Flows**

Capital flows toward higher-income and less carbon-intensive economies, driven by the carbon tax.



Sources: IMF, *World Economic Outlook*; and IMF staff calculations.

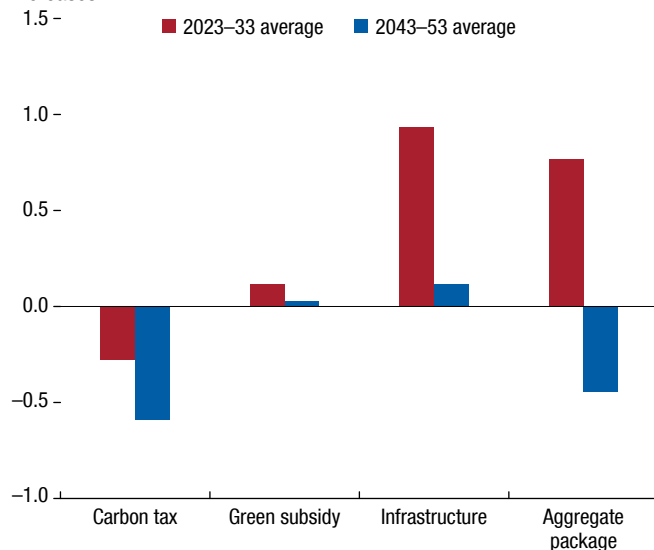
Note: The simulations are based on a net-zero emissions by 2050 scenario run using the G-Cubed global macroeconomic model (October 2020 *World Economic Outlook* [WEO]). See Online Annex 3.4 of the October 2020 WEO for further details. See Table 2.1 for a list of region codes.

## Conclusion

While ensuring that paramount climate targets are met, a range of climate mitigation policies could imply substantially different external sector adjustments. A globally coordinated carbon tax disproportionately reduces investment in more carbon-intensive economies as the return on investment in carbon-intensive activities falls permanently. The heterogeneous investment responses, in turn, sizably decrease current accounts in the greener advanced economies and increase current accounts in the more carbon-intensive and fossil-fuel-dependent countries. Ultimately, country characteristics such as initial carbon intensity and net fossil fuel exporter status, as well as projected labor force and productivity growth rates, drive the current account response in the model. In contrast to the carbon tax, supply-side policies—green subsidies and infrastructure investment—have a more limited impact on the external sector, either because of their constrained size or because of their symmetric nature, which induces comparable investment and saving responses, leaving the current account broadly unchanged.

**Figure 2.12. Mitigation Policies and Global Interest Rates**  
(Percentage point deviation from baseline)

Responding to changes in investment, global interest rates fall with the carbon tax and increase with the boost to green infrastructure. The mitigation policy package results in an initial rise in the global interest rate—given the front-loaded nature of the green infrastructure component—followed by a sustained decline as the carbon tax increases.



Source: IMF staff calculations.

Note: The simulations are based on a net-zero emissions by 2050 scenario run using the G-Cubed global macroeconomic model (October 2020 *World Economic Outlook* [WEO]).

The external sector impact of climate change mitigation policies depends crucially on the degree of policy synchronization across regions. When the carbon tax is implemented in Europe alone, the current account there increases (instead of a decline under coordinated implementation) because the tax hike reduces domestic investment and shifts capital abroad. By contrast, a partial implementation of the green subsidy, when implemented in Europe alone, magnifies the external sector impact: the more muted interest rate response stimulates investment, further decreasing the current account. Partial implementation scenarios also highlight the importance of bilateral linkages and spillovers (for example, Europe's historical dependence on Russia's fossil fuel exports) in determining region-specific external sector outcomes following a policy shock. A crucial shortcoming of partial implementation is its failure to address climate change.

Targeted modifications to the coordinated mitigation policy package can moderate its external sector impact.

Increased burden sharing, whereby advanced economies undertake a heavier load of emission reductions by 2030, can reduce the external sector adjustment by muting the differences in investment responses across countries. Similarly, policies that expand the renewables sector in countries where the sector is the smallest can accelerate investment where it is constrained the most, again moderating the external sector responses across countries.

A coordinated net-zero emissions by 2050 mitigation policy package would reduce global balances

one-quarter by 2027. Carbon taxes would account for three-fourths of this reduction. This finding, however, could be reversed if mitigation policy implementation is not coordinated across regions. Results also reveal a shift in cross-border capital flows toward the greener economies, which can be moderated by increased burden sharing in carbon emission reductions. Finally, the mitigation policy package affects global interest rates. Following an initial rise reflecting the front-loaded infrastructure investment policy, the global interest rate falls over time as carbon tax levels increase.

### Box 2.1. Oil Discoveries and the External Sector

Energy transitions following significant oil discoveries can have large external sector effects. This box analyzes the examples of one advanced economy (Norway), one low-income economy (Equatorial Guinea), and one emerging economy (Mexico) (Figure 2.1.1). In these three cases there is a clear pattern in the response of investment and the current account following the discovery. First, investment booms at the time of the oil discovery and during the subsequent years in order to build up extraction and production facilities; second, this investment boom results in a current account decline.

The case of Norway and the North Sea oil discoveries is documented in earlier literature (Arezki, Ramey, and Sheng 2017; Obstfeld and Rogoff 1995). In the four years following the oil discovery (between 1974 and 1978), investment increased on average by 17 percent, while the current account deficit more than doubled. Investment and current account deficits peaked three years after the oil discovery. Afterward, growth in oil exports increased the current account, while investment returned to preboom levels.

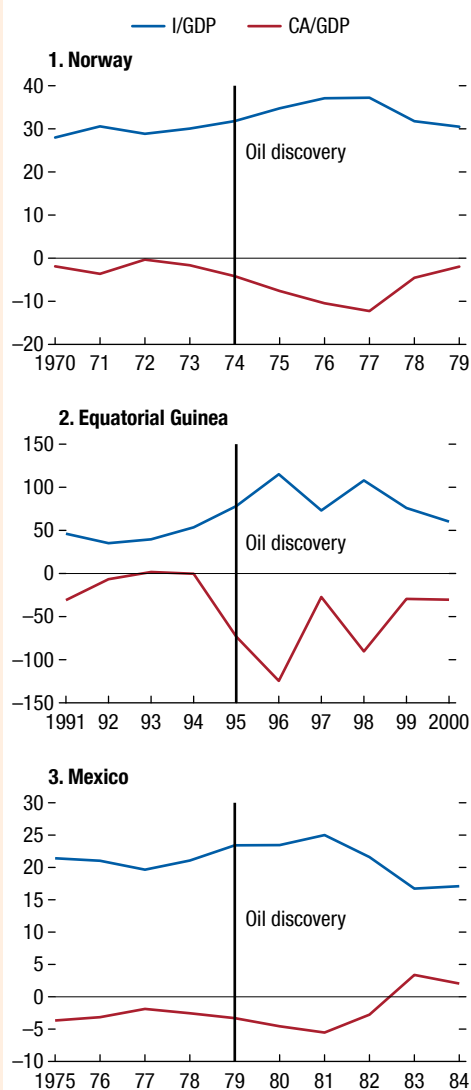
In Equatorial Guinea the Zafiro oil field discovery in 1995 resulted in an investment surge of 74 percent on average between 1995 and 1998, while the current account reached a deficit of 90 percent of GDP in 1998.

In Mexico, the discovery of the Ku-Maloob-Zaap field in 1979 resulted in an average investment increase of 11 percent between 1979 and 1982, while the current account as a share of GDP peaked with a deficit of 5.5 percent in 1981.

The transmission mechanism for the cases of oil discovery fits well with the narrative analyzed in this chapter. The economic forces are present in the G-Cubed model simulations analyzed, with the sign flipped, as the mitigation policies analyzed lead to an overall reduction in investment instead of an increase.

The author of this box is Luciana Juvenal.

**Figure 2.1.1. Evolution of the Current Account and Investment Following an Oil Discovery**  
(Percent of GDP)



Sources: External Wealth of Nations database; IMF, International Financial Statistics database; IMF, *World Economic Outlook*; and World Bank, World Development Indicators database.

Note: CA/GDP = current account as a share of GDP; I/GDP = investment as a share of GDP.

**Box 2.2. Understanding the Carbon Tax Effects in the G-Cubed Model**

This box uses a simple Metzler diagram to provide intuition for the current account results of the G-Cubed model.

*Setup*

The current account of a given country equals the difference between saving and investment,  $CA = S - I$ . In turn, saving depends positively on interest rates, while investment depends negatively on them. The saving-investment relationship can therefore be illustrated in a so-called Metzler diagram.

*The Impact of a Carbon Tax*

The diagram in Figure 2.2.1 considers a two-region world economy differentiated by each region’s respective carbon intensity—a country characteristic that determines external sector outcomes. In the initial steady state, captured with blue lines, saving equals investment, and the current account is zero in both economies. The introduction of a carbon tax, represented by the red curves, shifts the investment curve left in both regions, capturing the reduced return on investment. The shift is larger in the more carbon-intensive region (Region 2), because a given carbon

tax reduces the return on investment by more when carbon intensity is higher.

*Takeaways*

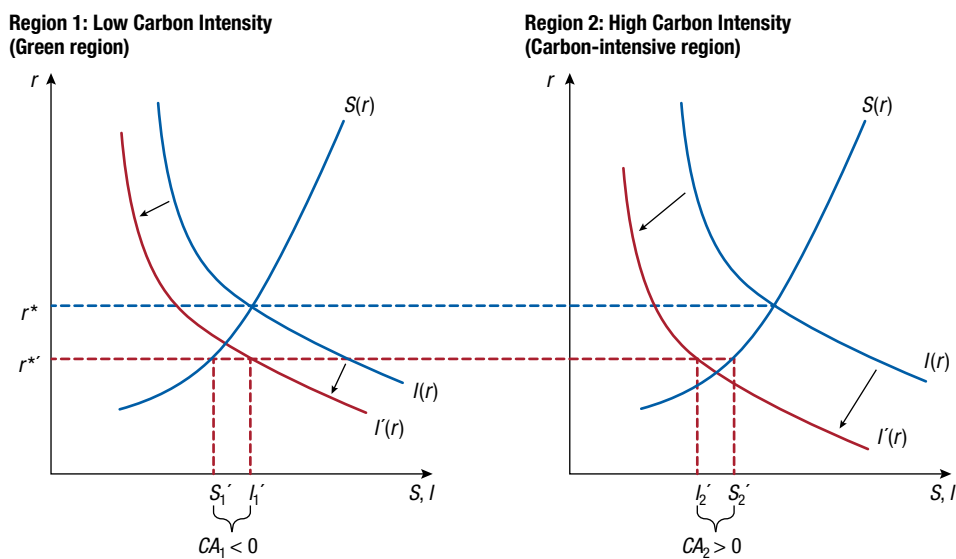
As a result of the carbon tax:

- The global interest rate falls ( $r^* \rightarrow r^{*'}$ ) until the global current account adding-up constraint holds ( $CA_1 + CA_2 = 0$ ).
- In the new equilibrium, saving falls in both regions by an equal amount, as there is movement along the identical  $S(r)$  curve.
- Investment also falls in both regions, but by less in the greener region (Region 1).
- The current account falls in the greener economy, with an offsetting increase in the more carbon-intensive economy. The current account response is driven by the heterogeneity in the investment response.

Two additional points are worth mentioning. First, if carbon intensities are identical in the two regions, then the declines in investment and saving coincide, and the current account would stay at zero ( $CA_1 = CA_2 = 0$ ). Second, in a richer setting, such as in the G-Cubed model, the saving curve can differ across countries (for example, owing to differences in labor force projections), generating some variation in

The author of this box is Rudolf Bems.

**Figure 2.2.1. The Carbon Tax Impact—Case of Coordinated Implementation**



**Box 2.2 (continued)**

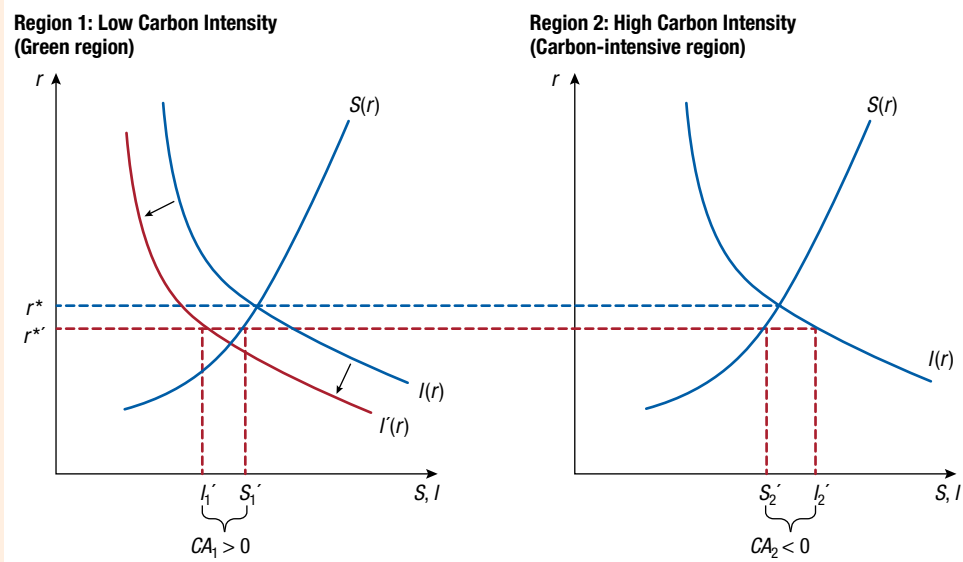
the saving response between the regions. The saving curve could also shift to varying degrees across countries in response to the tax, for example, reflecting intertemporal smoothing. Nevertheless, the carbon-tax-induced shift in the investment curve remains the main driver of the current account response.

By contrast, if the greener region (Region 1) acts alone in implementing the same carbon tax, the external sector impact is reversed relative to what was observed in Figure 2.2.1. In this case, as under coordinated implementation, the interest rate falls, and saving is reduced by the same amount in both regions, although partial implementation reduces the magnitude of the required adjustment for both

variables (Figure 2.2.2).<sup>1</sup> However, investment now falls by more in Region 1, while increasing in Region 2, which in the absence of a tax takes advantage of the reduced interest rate. As a result, the current account impact is reversed under partial implementation: it decreases in Region 1 and increases in Region 2.

<sup>1</sup>In a richer modeling environment, the magnitude of the adjustment for the interest rate and saving will depend on the relative size of the region that implements the carbon tax. If Region 1 is small enough not to affect the global interest rate, then only investment in Region 1 would decrease in response to the tax shock.

**Figure 2.2.2. The Carbon Tax Impact—Case of Partial Implementation**





**Box 2.3. The Green Energy Transition and Its Impact on Metal Mining**

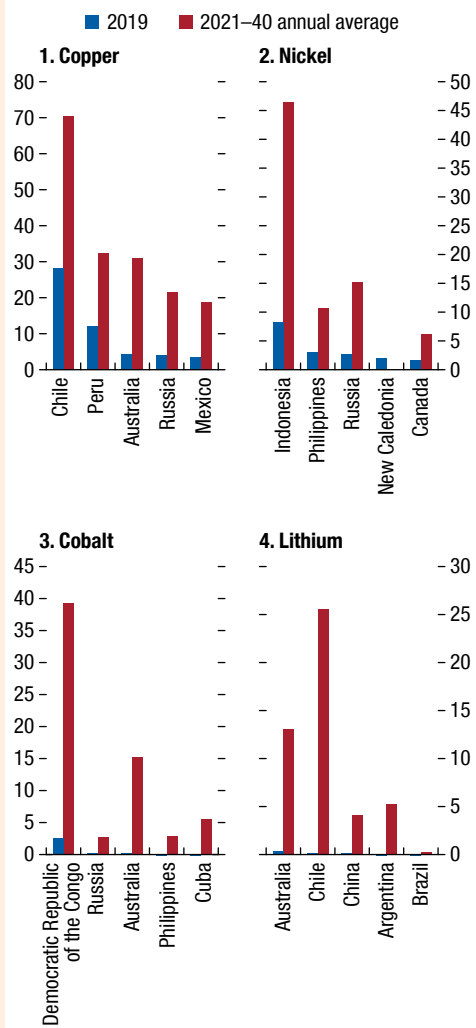
This box looks at the impact of the green energy transition on producers of four critical metals: copper, nickel, cobalt, and lithium.

Not all commodity exporters will face a demand contraction as a result of the green transition. While demand for fossil fuels will decline, the International Energy Agency’s net-zero emissions by 2050 scenario projects a significant rise in demand for metals critical for green energy transitions. For example, the value of annual copper production could more than double in main exporting countries over the next two decades under such a scenario. Projected increases for the other metals are even more dramatic (Figure 2.3.1).

The advent of metals critical for the energy transition could strengthen the impact of global commodity cycles on global current account balances. Commodity cycles are an important driver of global current account balances, reflecting both the historical role of cross-border trade in satisfying demand for commodities and the pronounced nature of commodity price cycles. The geographic concentration of production and reserves for the four critical metals is even higher than that for fossil fuels (Figure 2.3.2). Hence, as metals replace fossil fuels, the role of cross-border trade in satisfying global demand for commodities could increase, strengthening the impact on global current account balances.

The authors of this box are Rudolfs Bems and Martin Stuermer.

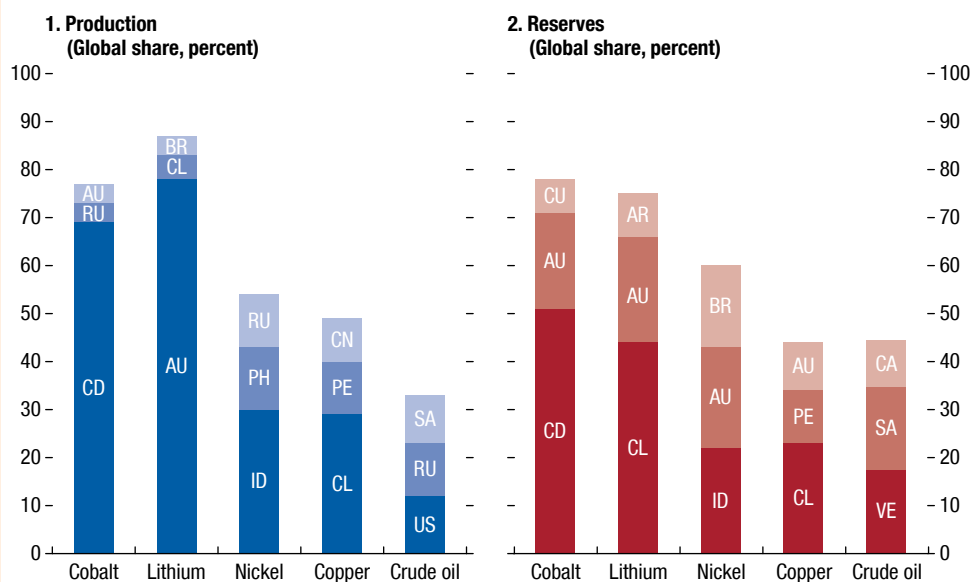
**Figure 2.3.1. Projected Increase in Revenue for Metal Producers**  
(Billion of US dollars)



Sources: Boer, Pescatori, and Stuermer (2021); International Energy Agency (IEA); US Geological Survey; and IMF staff calculations.  
Note: The scenario value of production is based on reserves data and the IEA net-zero emissions scenario.

**Box 2.3 (continued)**

**Figure 2.3.2. Comparison of the Geographic Concentration of Production and Reserves for “Green” Metals versus Crude Oil**  
(Top three countries)



Sources: US Geological Survey; and IMF staff calculations.

Note: Cobalt and lithium production data are for 2019. All other data are for 2020. AR = Argentina; AU = Australia; BR = Brazil; CA = Canada; CD = Democratic Republic of Congo; CL = Chile; CN = China; CU = Cuba; ID = Indonesia; PE = Peru; PH = Philippines; RU = Russia; SA = Saudi Arabia; US = United States; VE = Venezuela.

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### Methodology and Process

The individual economy assessments use a wide range of methods to form an integrated and multilaterally consistent view of economies' external sector positions. These methods are grounded in the latest vintage of the External Balance Assessment (EBA), developed by the IMF's Research Department to estimate desired current account balances and real exchange rates.<sup>1</sup> Model estimates and associated discussions on policy distortions (see Box 3.1 for an example) are accompanied by a holistic view of other external indicators, including capital and financial account flows and measures, foreign exchange intervention and reserves adequacy, and foreign asset or liability positions.<sup>2</sup> The policy discussion in the individual economy assessments highlights policies and reforms that contribute to supporting convergence toward (or maintenance of) external balance, in the context of a summary of the overall policy advice.

The EBA models provide numerical inputs for the identification of external imbalances but, in some cases, may not sufficiently capture all relevant economic characteristics and potential policy distortions. In such cases, the individual economy assessments may need to be complemented by analytically grounded judgment and economy-specific insights in the form of adjustors. IMF staff members estimate an economy's current account gap by combining the EBA model's current account gap estimate with adjustors. For the 2021 assessments, similar to the previous year, additional adjustors to account for the effects of the COVID-19 crisis on external positions were introduced (see Online Annex 1.2, Chapter 1). The IMF staff estimates the real effective exchange rate (REER) gap consistent with the staff current account gap by applying a country-specific elasticity, although in some cases additional information is used, such as the EBA REER regression models, unit-labor-cost-based measures, and metrics, to arrive at the staff REER gap estimate. To integrate country-specific judgment in an objective, rigorous, and evenhanded manner, a process was developed for multilaterally

consistent external assessments for the 30 largest economies, representing about 90 percent of global GDP. These assessments are also discussed with the respective authorities as part of bilateral surveillance.

External assessments are presented in ranges, in recognition of inherent uncertainties, and in different categories generally reflecting deviations of the overall external position from fundamentals and desired policies. As reported in Annex Table 1.1.2 (Chapter 1), the ranges of uncertainty for IMF staff-assessed current account gaps are based on country-specific estimated measures. For the REER, the ranges of uncertainty vary by country, reflecting country-specific factors, including different exchange rate semielasticities applied to the staff-assessed current account gaps. Overall external positions are labeled as either "broadly in line," "moderately weaker (stronger)," "weaker (stronger)," or "substantially weaker (stronger)" (See Table 3.A). The criteria for applying the labels to overall external positions are multidimensional.

Regarding the wording to describe the current account and REER gaps, (1) when comparing the cyclically adjusted current account with the current account norm, the wording "higher" or "lower" is used, corresponding to positive or negative current account gaps, respectively; (2) a quantitative estimate of the IMF staff's view of the REER gap is generally reported as (–) percent "over" or "under" -valued. External positions that are labeled as being "broadly in line" are consistent with current account gaps in the range of  $\pm 1$  percent of GDP as well as REER gaps in a range that reflects the country-specific exchange rate semielasticity (for example,  $\pm 5$  percent based on an elasticity of  $-0.2$ ).

### Selection of Economies

The 30 systemic economies analyzed in detail in this report and included in the individual economy assessments are listed in Table 3.B. They were generally chosen on the basis of a set of criteria, including each economy's global rank in terms of purchasing power GDP, as reported in the IMF's *World Economic Outlook*, and in terms of the level of nominal gross trade and degree of financial integration.

<sup>1</sup>See Cubeddu and others (2019) for a complete description of the EBA methodology and for a description of the most recent refinements.

<sup>2</sup>The individual economy assessments for 2021 are based on data and IMF staff projections as of June 30, 2022.

**Table 3.A. Description in External Sector Report Overall Assessment**

CA Gap	REER Gap (Using Elasticity of -0.2)	Description in Overall Assessment
>4%	<-20%	... substantially stronger ...
2%, 4%	-20%, -10%	... stronger ...
1%, 2%	-10%, -5%	... moderately stronger ...
-1%, 1%	-5%, 5%	The external position is broadly in line with fundamentals and desirable policies.
-2%, -1%	5%, 10%	... moderately weaker ...
-4%, -2%	10%, 20%	... weaker ...
<-4%	>20%	... substantially weaker ...

**Table 3.B. Economies Covered in the External Sector Report**

Argentina	Euro area	Italy	Poland	Sweden
Australia	France	Japan	Russia	Switzerland
Belgium	Germany	Korea	Saudi Arabia	Thailand
Brazil	Hong Kong SAR	Malaysia	Singapore	Türkiye
Canada	India	Mexico	South Africa	United Kingdom
China	Indonesia	The Netherlands	Spain	United States

**Box 3.1. Assessing Imbalances: The Role of Policies—An Example**

**A two-country example:** To clarify how to analyze policy distortions in a multilateral setting and how to distinguish between domestic policy distortions, which may require a country to take action to reduce its external imbalance, and foreign policy distortions, which require no action by the home country (but for which action by the other would help reduce the external imbalance), consider a stylized example of a two-country world.

- Country A has a large *current account deficit* and a large fiscal deficit, as well as high public and external debt.
- Country B has a *current account surplus* (matching the deficit in Country A) and a large creditor position but has no policy distortions.

**Overall external assessment:** The analysis would show that Country A has an external imbalance reflecting its large fiscal deficit. Country B would have an equal and opposite surplus imbalance. Country A's exchange rate would look overvalued and Country B's undervalued.

**Policy gaps:** The analysis of policy gaps would show that Country A has a domestic policy distortion that needs adjustment. The analysis would also show that there are no domestic policy gaps in Country B—instead, adjustment by Country A would automatically eliminate the imbalance in Country B.

**Individual economy write-ups:** While the estimates of the needed *current account adjustment* and associated *real exchange rate change* would be equal and opposite in both cases (given there are only two

economies in the world), the individual economy assessments would identify the different issues and risks facing the two economies.

- In the case of Country A, the *capital flows and foreign asset and liability position* sections would note the vulnerabilities arising from international liabilities, and the *potential policy response* section would focus on the need to rein in the *fiscal deficit* and limit *financial excesses*.
- For Country B, however, as there were no domestic policy distortions, the write-up would find no fault with policies and would note that adjustment among other economies would help reduce the imbalance.

**Implications:** It remains critical to distinguish between domestic and foreign fiscal policy gaps. The elimination of the fiscal policy gap in a systemic deficit economy would help reduce excessive surpluses in other systemic economies. More generally, policy actions that contribute to addressing external imbalances relate to the determinants of current account balances, namely the private and public saving-investment balances. Structural or policy distortions can contribute to excessive or inadequate saving and investment, and the policy advice in the individual economy assessments highlights reforms and policy changes that can contribute to addressing these gaps. Policy advice also seeks to address vulnerabilities associated with external stock positions, including reserves, as well as foreign exchange intervention policies.

## Abbreviations and Acronyms

Adj.	adjusted
ARA	assessing reserve adequacy
CA	current account
CFM	capital flow management
COVID-19	Coronavirus disease 2019
CPI	consumer price index
Cycl.	cyclically
EBA	External Balance Assessment
ECB	European Central Bank
EU	European Union
FDI	foreign direct investment
FX	foreign exchange
GDP	gross domestic product
IIP	international investment position
Liab.	liabilities
NEER	nominal effective exchange rate
NIIP	net international investment position
PIF	Public Investment Fund
QFII	Qualified Institutional Investor
REER	real effective exchange rate
Res.	residual
RQFII	Renminbi Qualified Institutional Investor
SDR	special drawing right
TARGET2	Trans-European Automated Real-Time Gross Settlement Express Transfer System
ULC	unit labor cost
VAT	value-added tax

**Table 3.1. Argentina: Economy Assessment**

<p><b>Overall Assessment:</b> <i>The external position in 2021 was weaker than the level implied by medium-term fundamentals and desirable policies, an assessment based holistically on elevated external debt vulnerabilities, precariously low international reserves, and lack of access to international capital markets.</i> The recent sovereign FX debt restructuring agreements with private creditors have provided important short-term cash flow relief, but it remains critical to implement policies that rebuild international reserves and address external debt service obligations over the medium term. A CA surplus near 1 percent of GDP is projected over the medium to long term, supported by sustained fiscal consolidation.</p> <p><b>Potential Policy Responses:</b> Policies should carefully balance the need to support the recovery and strengthen domestic and external stability. Growth-friendly fiscal consolidation, combined with prudent monetary policies, is essential to contain excessive domestic demand growth, maintain a strong trade surplus, rebuild international reserves, regain market access, and ensure debt sustainability, although this path will depend on the evolution of global conditions. In addition, structural reforms to boost Argentina's export capacity and encourage FDI are required. As stability and confidence are reestablished, a gradual conditions-based easing of CFM measures will need to be considered.</p>							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> Argentina's external gross liabilities stood at 60.9 percent of GDP at the end of 2021, well above the level of 34 percent of GDP at the end of 2015. That said, the NIIP remained positive, reaching 25 percent of GDP in the fourth quarter of 2021 (up 16 percentage points since the end of 2015), driven by continued private capital outflows and deleveraging by firms, despite tight CFM measures.</p> <p><b>Assessment.</b> In 2020, Argentina restructured US\$82 billion (21.4 percent of GDP) in domestic and foreign law sovereign FX debt held by the private sector, with cash flow relief of US\$34 billion during 2020–30. Additional relief was achieved during 2021, as provincial governments restructured US\$13 billion in foreign law FX debt obligations, with total cash flow savings estimated at about US\$6.5 billion for 2021–27. Gross debt and debt service obligations remain substantial and meeting these obligations over the medium term will depend on implementation of a strong economic reform plan that restores market access.</p>						
	2021:Q4 (% GDP)	NIIP: 25.2	Gross Assets: 86.0	Res. Assets: 8.2	Gross Liab.: 60.9	Debt Liab.: 45.8	
<b>Current Account</b>	<p><b>Background.</b> The CA surplus rose to 1.4 percent of GDP in 2021, reflecting an improvement in the income balance (largely due to lower interest payments related to the debt restructuring operations), while the sharp rebound in imports broadly offset stronger exports, including from improved terms of trade. The CA balance is projected to narrow slightly in 2022, mainly on account of rising domestic demand, as spillovers from the war in Ukraine are expected to have limited net effects—with higher energy and fertilizer imports being broadly offset by higher grain exports.</p> <p><b>Assessment.</b> The EBA CA cyclically adjusted balance reached a surplus of 0.5 percent of GDP in 2021, compared with an EBA CA norm equivalent to a surplus of 0.2 percent of GDP. The transitory impacts of the COVID-19 crisis in relation to the travel services (including tourism) and transport sectors cancel each other out. Furthermore, consistent with the need to bring down external debt service to more manageable levels and pave the way for market access, the IMF staff judges the near- to medium-term CA norm to be closer to 1 percent of GDP, implying an adjustment of 0.8 percent of GDP. As such, the IMF staff assesses the CA gap to be <math>-0.5 \pm 1</math> percent of GDP.<sup>1</sup></p>						
	2021 (% GDP)	CA: 1.4	Cycl. Adj. CA: 0.5	EBA Norm: 0.2	EBA Gap: 0.3	COVID-19 Adj.: 0	Other Adj.: 0.8
<b>Real Exchange Rate</b>	<p><b>Background.</b> After depreciating by nearly 30 percent between the end of 2017 and the end of 2019, the REER has been relatively stable, with some appreciation during the course of 2021 as the rate crawl lagged headline inflation. The average 2021 REER appreciated by 4.3 percent compared with the 2020 average, yet it is up over 20 percent when comparing end-of-period levels. The REER through May 2022 was up 18.3 percent relative to the 2021 average.</p> <p><b>Assessment.</b> The IMF staff CA gap implies a REER gap of about 4 percent in 2021 (applying an estimated elasticity of 0.13). The EBA REER index model suggests a REER gap of 7.6 percent, while the EBA REER level model estimates a gap of -8.7 percent, albeit surrounded by significant uncertainty. Overall, the IMF staff assesses the 2021 REER gap to be in the range of -5 to 5 percent.</p>						
	<p><b>Capital and Financial Accounts: Flows and Policy Measures</b></p> <p><b>Background.</b> Various CFM measures were introduced in 2019, with subsequent adjustments. The country's central bank (BCRA) and securities authority (CNV) introduced regulations to (1) restrict official FX market (MULC) access for financial account transactions; (2) restrict participation in securities markets (MEP/CCL); (3) subject FX purchases to two separate taxes of 30 and 35 percent; (4) apply tight repatriation and surrender requirements on export proceeds; (5) limit cash withdrawals and restrict selected capital-flow-related credit card transactions abroad; and (6) limit FX holdings of banks, mutual funds, and exchange bureaus. These are all considered to be CFM measures under the IMF's institutional view on capital flows. The BCRA has stopped intervening in the FX securities market, and regulations issued to limit trading in this market have been eased.</p> <p><b>Assessment.</b> The CFM measures have generally slowed capital outflows but have introduced distortions that tend to discourage trade and foreign investment. Importantly, the measures are not a substitute for macroeconomic policies to address underlying imbalances, and while they are needed in the near term, controls on trade flows should be avoided and a conditions-based easing will be necessary, especially to encourage FDI.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> Gross international reserves stood at US\$39.7 billion at the end of 2021,<sup>2</sup> generally unchanged relative to 2020, yet US\$5 billion below levels at the end of 2019. Meanwhile, net international reserves (NIR), after excluding swap lines with other central banks, reserve requirements on domestic US dollar deposits, and deposit insurance, fell to US\$2.3 billion at the end of 2021. Despite current account surpluses, debt restructuring efforts and capital controls, reserve accumulation has been challenged by continued outflows, including from net private debt amortization payments. NIR had reached US\$3.8 billion by the end of March 2022,<sup>3</sup> reflecting in part net IMF program disbursements.</p> <p><b>Assessment.</b> Gross international reserves are estimated at about 63 percent of the IMF's composite metric as of the end of 2021 after smoothing of temporary effects, and about 68 percent without the adjustment.<sup>4</sup> Tighter fiscal and monetary policies are necessary to secure the projected trade surpluses and improve reserve coverage, which in turn is essential to pave the way for market access and the easing of CFM measures over the medium term. Given reserve scarcity, FX sales (in the official or parallel market) should be consistent with reserve accumulation goals, while taking into account variability coming from seasonal factors and temporary bouts of excessive volatility.</p>						



**Table 3.2. Australia: Economy Assessment**

<b>Overall Assessment:</b> <i>The external position in 2021 was stronger than the level implied by medium-term fundamentals and desirable policies. A significant improvement in Australia's terms of trade and higher savings (partly due to COVID-19-related factors) contributed to the increase in the CA balance in 2021. The CA balance is expected to remain in surplus in 2022 due to elevated commodity prices in the wake of the war in Ukraine, but is projected to return to a slight deficit in the medium term as commodity prices decline, savings return to historical levels, and investment picks up.</i>							
<b>Potential Policy Responses:</b> <i>Withdrawing fiscal and monetary stimulus at an appropriate pace is warranted for Australia as it emerges from the pandemic. Private savings, which are at elevated levels in part due to the large pandemic-related fiscal stimulus, are expected to decline in the medium term. Furthermore, policies that boost investment can help reduce the CA gap. In particular, executing planned infrastructure investment, streamlining product market regulation, promoting R&amp;D and innovation investment, and reducing the tax burden on companies can help boost investment. Australia's commitment to a floating exchange rate should also help close the CA gap.</i>							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> Australia's NIIP improved to -35.4 percent of GDP in 2021 from -55 percent of GDP in 2020 (and an average of -52 percent over the last five years), driven by the large CA surplus, significant valuation gains, and substantial growth of nominal GDP. Although about half of Australia's gross liabilities are debt obligations, more than half of the debt liabilities are denominated in domestic currency, while assets are in foreign currency. Foreign liabilities are composed of about one-quarter FDI, one-half portfolio investment (principally banks' borrowing abroad and foreign holdings of government bonds), and one-quarter other investments and derivatives.</p> <p><b>Assessment.</b> The NIIP level and trajectory are sustainable. The structure of Australia's external balance sheet reduces the vulnerability associated with its negative NIIP. With a positive net foreign currency asset position, a nominal depreciation tends to strengthen the external balance sheet, all else equal. The banking sector's net foreign currency liability position is mostly hedged, and the maturity of banks' external funding has lengthened since the global financial crisis. Despite the recent increase in debt, the government's balance sheet remains strong and can provide credible support in a tail-risk event in which domestic banks suffer a major loss.</p>						
2021 (% GDP)	NIIP: -35.4	Gross Assets: 148.2	Debt Assets: 38.4	Gross Liab.: 183.7	Debt Liab.: 85.5		
<b>Current Account</b>	<p><b>Background.</b> While Australia has historically run CA deficits, the CA balance switched to a surplus in 2019, and increased further from 2.6 percent of GDP in 2020 to 3.5 percent of GDP in 2021. The goods and services balance increased by 1.9 percent of GDP, driven by high prices for Australian commodity exports, most notably iron ore. The improvement in the trade balance was partly offset by a 1.2 percent of GDP deterioration in the primary income balance, as dividend payments on Australia's equity liabilities (which had declined significantly in 2020 due to temporary pandemic-related factors) recovered. However, the income balance remained 0.8 percent of GDP stronger than pre-COVID-19 levels as the net compensation of employees (due to border closures) and net interest payments (due to low interest rates on debt liabilities) remained above historical averages. From a savings-investment perspective, the recent CA surpluses reflect a decline in investment rates, including mining investment, as well as a steep rise in private savings during the pandemic on account of pandemic-related uncertainty and generous fiscal support. While there is considerable uncertainty, the CA is expected to gradually return to a small deficit over the medium term.</p> <p><b>Assessment.</b> The EBA model estimates a cyclically adjusted CA surplus of 1.7 percent of GDP compared with a CA norm of -0.9 percent of GDP, suggesting a model-based CA gap of 2.6 percent of GDP. However, in the IMF staff's view, two adjustments are warranted to the cyclically adjusted CA balance: (1) a net adjustment of +0.2 percent of GDP to reflect temporary factors related to the COVID-19 shock, including changes in the travel services (-0.1) and transport services balances (+0.3) and higher imports of medical goods (+0.2); and (2) an adjustment of -0.2 percent of GDP to reflect a temporarily higher net compensation of employees. Taking these adjustments into consideration, the IMF staff-adjusted CA gap is in the range of 2.1 to 3.3 percent of GDP, with a midpoint of 2.7 percent of GDP. Part of the CA gap may reflect the pension system (which is not captured by the EBA model), for which mandated individual contributions to superannuation have increased in recent years, potentially contributing to higher savings.</p>						
2021 (% GDP)	CA: 3.5	Cycl. Adj. CA: 1.7	EBA Norm: -0.9	EBA Gap: 2.6	COVID-19 Adj.: 0.2	Other Adj.: 0	Staff Gap: 2.7
<b>Real Exchange Rate</b>	<p><b>Background.</b> Australia's REER appreciated by 6 percent in 2021 compared with the 2020 average and was about 1.5 percent higher than its five-year average. After appreciating in the first half of 2021, the REER depreciated in the latter half of the year amid renewed lockdowns, a decline in Australian yields relative to other advanced economies, and lower iron ore prices. As of May 2022, the REER was 0.6 percent above the 2021 average.</p> <p><b>Assessment.</b> The IMF staff CA gap implies a REER gap of -13.7 percent (applying an estimated elasticity of 0.2). The EBA REER level model points to an overvaluation of 24.6 percent, while the index model points to an undervaluation of 2.3 percent. Consistent with the CA gap, the IMF staff assesses the REER gap to be in the range of -16.7 to -10.7 percent, with a midpoint of -13.7 percent.</p>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<p><b>Background.</b> The financial account recorded net outflows in 2021, reflecting the sizable CA surplus. Net FDI inflows (1 percent of GDP in 2021) recovered from the COVID-19-induced low in 2020 (0.5 percent of GDP), though they remained lower than the pre-pandemic average (3.2 percent of percent of GDP over 2015-19). FDI inflows were offset by large net portfolio outflows (3.9 percent of GDP), mainly reflecting equity investments abroad by Australian residents, including by pension funds (superannuation). Net derivative outflows were small, with inflows and outflows of about 1.2 percent of GDP.</p> <p><b>Assessment.</b> Vulnerabilities related to the financial account remain contained, supported by a credible commitment to a floating exchange rate.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> The currency has been free floating since 1983. The central bank has not intervened in the FX market since the global financial crisis. Reserve assets increased, mainly reflecting the IMF's SDR allocation.</p> <p><b>Assessment.</b> The authorities are strongly committed to a floating regime, which reduces the need for reserve holdings. Although domestic banks' external liabilities remain sizable, they are either in local currency or hedged, so reserve needs for prudential reasons are also limited.</p>						

**Table 3.3. Belgium: Economy Assessment**

<p><b>Overall Assessment:</b> <i>The external position in 2021 was weaker than the level implied by medium-term fundamentals and desirable policies.</i> The CA balance turned into a deficit of 0.4 percent of GDP, largely due to a narrowing of the trade surplus, reflecting a swing to deficit in the goods balance. While the economy had been recovering well in 2021, and COVID-19 relief measures were unwound, the war in Ukraine has clouded the economic outlook. The CA balance is projected to deteriorate in the near term, mainly due to the effects of higher energy prices, before returning to a surplus in the medium term with the narrowing of fiscal imbalances.</p> <p><b>Potential Policy Responses:</b> In the near term, outlays on energy bill support and expenses related to spillovers from the war in Ukraine (for example, refugee support) will delay much-needed fiscal adjustment, given elevated deficit/debt levels and aging-related spending pressures. Narrowing policy space requires fiscal support measures to be targeted and time-bound, balancing the protection of vulnerable households and viable firms with facilitating resource reallocation to mitigate scarring and with increasing energy efficiency. In light of imbalances that existed before the COVID-19 outbreak, policies in the medium term should focus on rebuilding fiscal buffers through a credible, expenditure-led consolidation that also creates space to support green and digital transformation through planned increases in investment. Policies should also focus on strengthening competitiveness by addressing structural challenges, including social benefit and labor and product market reforms and other actions to foster green, digital, and inclusive growth. These steps are expected to bring the external position closer in line with medium-term fundamentals and desirable policy settings.</p>							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> The NIIP increased to 57 percent of GDP at the end of 2021 from 44 percent at the end of 2020. This was mainly due to a decrease in gross liabilities by 9 percentage points of GDP, reflecting largely valuation changes. Gross foreign assets reached 460 percent of GDP in 2021 (up 11 percentage points of GDP from the pre-COVID-19 level in 2019), inflated by intragroup corporate treasury activities. Belgium's large creditor position is also underpinned by sizable net household financial wealth. Following a decade of consolidation and deleveraging, gross foreign assets of the banking sector declined to 74 percent of GDP at the end of 2021, well below the pre-global-financial-crisis peak of more than 200 percent. External public debt—predominantly denominated in euros—decreased to 67 percent of GDP in 2021 from 74 percent of GDP in 2020. This represented a reversal, following a sharp increase in financing needs in 2020 due to fiscal response measures to address the pandemic (and a decline in nominal GDP).</p> <p><b>Assessment.</b> Belgium's large gross international asset and liability positions are elevated by the presence of corporate treasury units, which do not appear to create macro-relevant mismatches. Looking ahead, based on the projected CA and growth paths, the NIIP-to-GDP ratio is expected to decline. The large and positive NIIP and its trajectory do not raise sustainability concerns.</p>						
2021 (% GDP)	NIIP: 57	Gross Assets: 460	Debt Assets: 161	Gross Liab.: 403	Debt Liab.: 178		
<b>Current Account</b>	<p><b>Background.</b> The CA averaged 0.5 percent of GDP over 2015–20 and has been on a downward but volatile path since its post-global-financial-crisis peak of 1.4 percent of GDP in 2015. Volatility in the trade and primary income balances is driven in part by sizable operations of multinationals and large revisions.<sup>1</sup> Preliminary data suggest that in 2021 the CA turned into a deficit of 0.4 percent of GDP from a surplus of 0.8 percent of GDP in 2020, driven by a deterioration of the trade balance (1.4 percent of GDP) and a modest decline in net income inflows (0.2 percent of GDP). Net current transfer outflows declined slightly (0.3 percent of GDP). The narrowing of the trade surplus reflected a swing to deficit in the goods balance (by 1.3 percent of GDP), as buoyant export growth (30 percent) was surpassed by an even stronger recovery of imports (34 percent). By major goods categories, there was an increase in net oil/fuel imports (1.3 percent of GDP) due to higher oil prices and net chemical imports (excluding pharmaceuticals) (2.6 percent of GDP); these offset a large increase in net exports of pharmaceutical products (1.9 percent of GDP). From a saving-investment perspective, the improvement in gross national saving that was led by a narrowing of public dissaving, was more than offset by a larger increase in gross capital formation that was largely driven by a pickup in private investment (increases in business investments in information technology and digitalization and a revival of residential property investment).</p> <p><b>Assessment.</b> EBA model estimates yield a CA gap of –3.1 percent of GDP for 2021, based on a cyclically adjusted CA balance of 0 percent of GDP. Adjustment for transitory COVID-19 effects on the CA of –0.2 percent of GDP—driven by –0.3 percent of GDP for travel services (including tourism), 0.4 percent of GDP for transport, –0.1 percent of GDP for the shift in household consumption from services to consumer goods, and –0.2 percent of GDP for the impact on medical goods trade—brings the gap to –3.3 percent of GDP (relative to an estimated norm of 3.1 percent of GDP). This is within a range estimated by the IMF staff for the CA gap of between –3.6 and –3 percent of GDP, applying the standard error of the CA norm, estimated at ±0.3 percent of GDP.</p>						
2021 (% GDP)	CA: –0.4	Cycl. Adj. CA: 0	EBA Norm: 3.1	EBA Gap: –3.1	COVID-19 Adj.: –0.2	Other Adj.: —	Staff Gap: –3.3
<b>Real Exchange Rate</b>	<p><b>Background.</b> The ULC- and CPI-based REER appreciated in 2021 by 0.4 and 0.1 percent, respectively, relative to the 2020 average. This brings the cumulative appreciation of the ULC-based and CPI-based REER in recent years to 4 and 7 percent, respectively, thus broadly reversing the sharp depreciation in 2014–15 brought about by wage moderation. As of May 2022, the REER was 1.8 percent below the 2021 average.</p> <p><b>Assessment.</b> The IMF staff assesses the REER gap, based on the staff-assessed CA gap range, to be overvalued in the range of 4.4 to 5.3 percent, with a midpoint of 4.9 percent (applying an estimated elasticity of the CA balance to the REER of 0.68). EBA model estimates point to a REER overvaluation of between 12 and 26.1 percent, based on the CPI-based REER index and level models.</p>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<p><b>Background.</b> Gross financial outflows and inflows were on an upward trend prior to the global financial crisis as banks expanded their cross-border operations. These flows have shrunk considerably and become more volatile as banks have deleveraged. Short-term external debt accounted for 27 percent of gross external debt in 2021. The capital account is open.</p> <p><b>Assessment.</b> Belgium remains exposed to financial market risks, but the structure of financial flows does not point to specific vulnerabilities. The large and positive NIIP reduces the vulnerabilities associated with high external public debt.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> The euro has the status of a global reserve currency.</p> <p><b>Assessment.</b> Reserves held by the euro area are typically low relative to standard metrics, but the currency is free floating.</p>						

**Table 3.4. Brazil: Economy Assessment**

<b>Overall Assessment:</b> <i>The external position in 2021 was broadly in line with the level implied by medium-term fundamentals and desirable policies. The CA deficit is expected to narrow in 2022 on the back of higher commodity prices related to the war in Ukraine, but then to gradually widen to about 2 percent of GDP in the medium term as growth recovers.</i>							
<b>Potential Policy Responses:</b> Policies that would help keep the CA in line with its norm include the continuation of fiscal consolidation into the medium term to increase savings as well as structural reforms to raise potential growth and investment, and thereby maintain the savings-investment balance. FX intervention, including using derivatives, may be appropriate to alleviate disorderly market conditions in the FX market.							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> Brazil's NIIP was –30 percent of GDP at the end of 2021, modestly stronger than the 2016–20 average (–35 percent of GDP) stemming from higher GDP growth and valuation effects associated with the currency depreciation (assets are predominantly denominated in FX while liabilities are more concentrated in local currency). Over the medium term, the NIIP is projected to be about –33 percent of GDP. FDI accounts for half of all liabilities. Estimated external debt at the end of 2021 improved to 41 percent of GDP and 234 percent of exports, relative to 44 percent of GDP and 303 percent of exports in 2020.</p> <p><b>Assessment.</b> Brazil's NIIP has been negative since the series was first published in 2001. Over the medium term, gross external financing needs are moderate at 10 percent of GDP annually, with capital flows and the exchange rate particularly sensitive to global financing conditions. The CA deficit required to stabilize the NIIP at –30 percent is 1.5 percent of GDP.</p>						
2021 (% GDP)	NIIP: –30	Gross Assets: 59.8		Res Assets: 22.5	Gross Liab.: 89.6		Debt Liab.: 41.4
<b>Current Account</b>	<p><b>Background.</b> The CA deficit was 1.7 percent of GDP in 2021, broadly unchanged from 2020. While exports and imports rebounded strongly in 2021, the trade surplus remained unchanged, with the terms of trade rising in the first half of the year before falling during the second half. Imports in 2020 and 2021 saw an increase of approximately 0.9 percent of GDP of an accounting nature related to transactions under the Repetro program.<sup>1</sup> In 2022, exports are expected to benefit from higher global commodity prices, related to the war in Ukraine, narrowing the CA deficit to 1.3 percent of GDP. In the medium term, the CA deficit is expected to gradually widen to about 2 percent of GDP as growth recovers.</p> <p><b>Assessment.</b> In 2021, the cyclically adjusted CA balance was –2.8 percent of GDP. EBA estimates suggest a CA norm in 2021 of –1.6 percent of GDP. This implies a CA gap of –1.2 percent of GDP, with an estimated contribution of identified policy gaps of 0.3 percent of GDP. The identified policy gaps mainly reflect a positive total fiscal policy gap from the more expansionary fiscal policy stances in trading partners relative to Brazil, partly countered by strong credit growth. Adjustments were made to account for (1) the transitory impacts of the COVID-19 crisis on travel and transport (–0.3 percent of GDP) and the medical goods sectors (0.1 percent of GDP); (2) higher liquefied natural gas imports due to the drought effect on hydropower generation (0.1 percent of GDP); and (3) the lagged temporary increase in the export and import data, which are of an accounting nature only, owing to the Repetro program that ended in December 2020 (0.9 percent of GDP). With these adjustments, IMF staff estimates the CA gap in the range of –0.9 to 0.1 percent of GDP with a midpoint of –0.4 percent of GDP.</p>						
2021 (% GDP)	CA: –1.7	Cycl. Adj. CA: –2.8	EBA Norm: –1.6	EBA Gap: –1.2	COVID-19 Adj.: –0.2	Other Adj.: 1	Staff Gap: –0.4
<b>Real Exchange Rate</b>	<p><b>Background.</b> After a sharp depreciation in 2020 (–20.6 percent), the REER remained broadly stable in 2021 (–3.2 percent). The REER saw mild appreciation in the first half of 2021 followed by a depreciation in the second half consistent with the movement in the terms of trade. As of the end of May 2022, the REER had appreciated by 17.8 percent relative to the 2021 average.</p> <p><b>Assessment.</b> The IMF staff CA gap implies a REER gap of 3.1 percent in 2021 (applying an estimated elasticity of 0.12). The REER index and level methodologies indicate a 36.4 percent and 19.6 percent undervaluation, respectively, for 2021. Consistent with the staff CA gap, staff assesses the REER gap to be in the range of –1.1 to 7.3 percent, with a midpoint of 3.1 percent.</p>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<p><b>Background.</b> Brazil continues to attract sizable capital flows. Despite a reduction to 1.7 percent of GDP (from 2.8 percent of GDP in 2020), net FDI has continued to fully finance the CA deficit since 2015 (averaging 2.9 percent of GDP during 2015–21, while CA deficits averaged 2.2 percent). Net portfolio flows were positive at 0.4 percent for the first time since 2015, with the wider interest rate gap between Brazil and competitor economies attracting debt inflows. Recently, the government issued a decree that gradually reduces the Tax on Financial Operations (IOF) on FX operations to zero by 2029, as part of the process of Brazil's entry into the Organization for Economic Co-operation and Development.</p> <p><b>Assessment.</b> The composition of capital flows is expected to have a favorable risk profile over the medium term, with positive net FDI inflows outweighing negative portfolio outflows. Nevertheless, uncertainties related to the war in Ukraine and the COVID-19 pandemic, tighter global financial conditions, insufficient progress on reforms, and political uncertainty pose downside risks to capital flows.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> Brazil has a floating exchange rate. In 2021, the central bank sold FX in the spot, repo, and FX swap markets to dampen excess exchange rate volatility. Nevertheless, reserves remained high at US\$362 billion at the end of 2021.</p> <p><b>Assessment.</b> The flexible exchange rate has been an important shock absorber. Reserves are adequate relative to various criteria, including the IMF's reserve adequacy metric (162 percent as of the end of 2021) and serve as insurance against external shocks. Intervention should be limited to alleviating disorderly FX market conditions.</p>						

**Table 3.5. Canada: Economy Assessment**

<b>Overall Assessment:</b> <i>The external position in 2021 was moderately weaker than the level implied by medium-term fundamentals and desirable policies.</i> The CA balance turned marginally positive driven largely by the recovery of global demand and higher prices of major exporting goods, notably energy products. With commodity prices surging further in the aftermath of the Russian war in Ukraine, the CA balance is expected to grow further in 2022. Over the medium term, the CA is projected to revert to a moderate deficit as export prices normalize and domestic demand continues to recover.							
<b>Potential Policy Responses:</b> Policies should aim to boost Canada's nonfuel exports. These policies include measures geared toward improving labor productivity; removing nontariff trade barriers, investing in R&D and physical capital, investing in the green transformation, promoting FDI, developing services exports, and diversifying Canada's export markets. The recent sharp increase in government debt that resulted from the government's response to COVID-19 underscores the importance of developing a medium-term fiscal consolidation plan underpinned by sustainable policy measures to support external rebalancing.							
<b>Foreign Asset and Liability Position and Trajectory</b>	<b>Background.</b> Canada's NIIP has improved since 2011, reaching 68.8 percent of GDP in 2021, up from 53.3 percent in 2020, 20.2 percent in 2016, and -17.1 percent in 2011. This largely reflects valuation gains on external portfolio assets. At the same time, gross external debt decreased to 133.8 percent of GDP at the end of 2021, of which around 51 percent of GDP is short-term debt.						
	<b>Assessment.</b> Canada's foreign assets have a higher foreign currency component than its liabilities, which provides a hedge against currency depreciation. The NIIP level and trajectory are sustainable.						
2021 (% GDP)	NIIP: 68.8	Gross Assets: 311.3	Debt Assets: 77.3	Gross Liab.: 242.5	Debt Liab.: 133.8		
<b>Current Account</b>	<b>Background.</b> The estimated CA balance was at 0 percent of GDP in 2021, up from -1.8 percent of GDP in 2020, reflecting the recovery of global demand and the improvement in the terms of trade.						
	<b>Assessment.</b> The EBA estimates a CA norm of 2.6 percent of GDP and a cyclically adjusted CA gap of -3.0 percent of GDP for 2021. The IMF staff assesses the CA gap to be narrower after considering (1) the temporary impact of the COVID-19 crisis on travel, transport, household consumption composition, and trade in medical products <sup>1</sup> and (2) the biases in measuring inflation and retained earnings. <sup>2</sup> Taking these factors into account, the IMF staff assesses the CA gap to be in the range between -1.9 and -1.1 percent of GDP, with a midpoint of -1.5 percent of GDP.						
2021 (% GDP)	CA: 0.0	Cycl. Adj. CA: -0.4	EBA Norm: 2.6	EBA Gap: -3.0	COVID-19 Adj.: 0.1	Other Adj.: 1.5	Staff Gap: -1.5
<b>Real Exchange Rate</b>	<b>Background.</b> Relative to the 2020 average, the REER appreciated by 4.9 percent on average in 2021. As of May 2022, the REER was 0.3 percent below the 2021 average.						
	<b>Assessment.</b> The EBA REER index model points to an overvaluation of 6.7 percent in 2021, while the REER level model points to an undervaluation of 7.4 percent. Consistent with the IMF staff CA gap, the IMF staff assesses the REER to be overvalued in the range of 4.2 to 7.4 percent, with a midpoint of 5.8 percent. <sup>3</sup>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<b>Background.</b> FDI saw net outflows of 1.9 percent of GDP in 2021 (comparable with levels in 2020 and 2019). Portfolio investments recorded net inflows of 2.1 percent of GDP in 2021, down from 4.1 percent in 2020, whereas other investments recorded inflows of 0.6 percent of GDP in 2021 compared to net outflows in 2020 of around 0.8 percent of GDP. The errors and omissions recorded a net inflow of 0.2 percent of GDP.						
	<b>Assessment.</b> Canada has an open capital account. Vulnerabilities are limited by a credible commitment to a floating exchange rate.						
<b>FX Intervention and Reserves Level</b>	<b>Background.</b> Canada has a free-floating exchange rate regime and has not intervened in the FX market since September 1998 (except for participating in internationally concerted interventions). Canada has limited reserves, but its central bank has standing swap arrangements with the US Federal Reserve and four other major central banks (it has not drawn on these swap lines).						
	<b>Assessment.</b> Policies in this area are appropriate to the circumstances of Canada. The authorities are strongly committed to a floating regime which, together with the swap arrangement, reduces the need for reserve holdings.						

**Table 3.6. China: Economy Assessment**

<b>Overall Assessment:</b> <i>The external position in 2021 was broadly in line with the level implied by medium-term fundamentals and desirable policies.</i> The CA surplus was slightly higher than in 2020, reflecting the continuing influence of transitory factors linked to the global COVID-19 crisis, such as elevated pandemic-related exports and limited outbound travel, despite stronger imports on the back of higher commodity prices. Once these temporary factors fully dissipate, the CA surplus is expected to return to its medium-term downward trend as China's economy rebalances toward higher-quality, more consumption-driven growth.							
<b>Potential Policy Responses:</b> Policies to ensure that the external position remains broadly in line with fundamentals include (1) accelerating structural reforms—a further opening up of domestic markets, reforming state-owned enterprises, and ensuring competitive neutrality with private firms while promoting green investment—to boost potential growth and income; (2) shifting policy support toward strengthening social protection to reduce high household precautionary saving and free up income for consumption; and (3) further increasing exchange rate flexibility to help the economy adjust to the changing external environment. China has room to provide more fiscal support, preferably through household support and green investment.							
<b>Foreign Asset and Liability Position and Trajectory</b>	<b>Background.</b> The NIIP further declined to 11.2 percent of GDP in 2021, significantly below the peak of 30.4 percent in 2008. The drop came despite the CA surplus and continued external lending and reflected continuing inward direct investment and securities investment received. <b>Assessment.</b> The NIIP-to-GDP ratio is expected to remain positive, with a modest decline over the medium term. The NIIP is not a major source of risk, as assets remain high—reflecting large foreign reserves (US\$3.4 trillion, 19.3 percent of GDP). Liabilities are mostly FDI-related.						
2021 (% GDP)	NIIP: 11.2	Gross Assets: 52.5	Debt Assets: 14.9	Gross Liab.: 41.4	Debt Liab.: 13.4		
<b>Current Account</b>	<b>Background.</b> The CA surplus was 1.8 percent of GDP in 2021 (compared with 1.7 percent of GDP in 2020). Pandemic-related factors continued to elevate the CA surplus in 2021, including medical trade, shifting of household consumption abroad toward goods, still subdued outbound tourism, and increases in transportation costs. However, the trade balance narrowed by 0.2 percentage point of GDP due to stronger imports on the back of higher commodity prices, which was partly offset by the wider income balance deficit (0.1 percent of GDP). Higher energy and commodity prices, partly as a consequence of the war in Ukraine, will increase import costs in 2022. Over the medium term, the CA surplus is projected to converge to about 0.5 percent of GDP based on the assumption of continued rebalancing toward higher-quality and more consumption-driven growth. <b>Assessment.</b> The EBA CA methodology estimates the CA gap in 2021 to be 1.4 percent of GDP. Considering that pandemic-related temporary factors raised the CA surplus by 1.6 percent of GDP (with contributions of 0.7 percentage point from the travel services balance, 0.3 percentage point from the shift in global household consumption from services to consumer goods, 0.4 percentage point from the impact on the medical goods trade, and 0.2 percentage point from the impact on the transportation services balance, respectively), the IMF staff assesses the CA gap to range from -0.9 to 0.3 percent of GDP, with a midpoint of -0.3 percent. EBA-identified policy gaps are estimated to be about 1.3 percent of GDP, driven by relatively low credit growth, continued reserve accumulation with a relatively closed capital account (in a de jure sense), the larger fiscal contraction in 2021 than in other countries, and inadequate social safety nets.						
2021 (% GDP)	CA: 1.8	Cycl. Adj. CA: 2.2	EBA Norm: 0.8	EBA Gap: 1.4	COVID-19 Adj.: -1.6	Other Adj.: 0	Staff Gap: -0.3
<b>Real Exchange Rate</b>	<b>Background.</b> The REER appreciated by 3 percent in 2021 from the 2020 average, largely driven by the NEER appreciation (5.4 percent). This continued the REER appreciation in 2020 (by 2.1 percent) after a depreciation of 7 percent during 2015–19. As of May 2022, the REER was 1.3 percent below the 2021 average. <b>Assessment.</b> The IMF staff CA gap implies a REER gap of 1.9 percent in 2021 (applying an estimated elasticity of 0.14). The EBA REER index regression estimates the REER gap in 2021 to be 10.5 percent, and the EBA REER level regression estimates the REER gap to be 10.5 percent. Consistent with the staff CA gap, the IMF staff assesses the REER gap to be in the range of -2.3 to 6.2 percent, with a midpoint of 1.9 percent.						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<b>Background.</b> Net capital outflows (including errors and omissions) declined to US\$129 billion (0.7 percent of GDP) in 2021, down from \$220 billion (1.5 percent of GDP) in 2020. This was largely due to the decline in gross capital outflows (including outward direct investment, equity outflows, and overseas bank loans). Since December 2020, CFM measures have included the following: (1) The ceiling on cross-border financing under the macroprudential assessment framework was lowered to the original level in December 2020 for financial institutions and in January 2021 for enterprises. (2) QFII investors were allowed to trade commodity futures, commodity options, and stock index options starting in November 2021. As of December 2021, the total Qualified Domestic Institutional Investor quota stood at US\$157.5 billion. <sup>1</sup> <b>Assessment.</b> While currently absent, substantial net outflow pressures may resurface as the private sector seeks to accumulate foreign assets faster than nonresidents accumulate Chinese assets. Over the medium term, the sequence of further capital account opening consistent with exchange rate flexibility should carefully consider domestic financial stability. Specifically, further capital account opening is likely to create substantially larger two-way gross flows. Hence, the associated balance sheet adjustments and the shifts in market sentiment require prioritizing the shift to an effective float (while using FX intervention to counter disorderly market conditions) and strengthening domestic financial stability prior to substantial further opening.						
<b>FX Intervention and Reserves Level</b>	<b>Background.</b> FX reserves continued to increase (by US\$34 billion in 2021) and reached US\$3.3 trillion in 2021, mainly reflecting valuation effects, return on reserves, and adjustments in net forward positions, with no sign of large FX intervention. <b>Assessment.</b> The level of reserves—68 percent of the IMF's standard composite metric at the end of 2021 (75 percent in 2020) and 109 percent of the metric adjusted for capital controls (120 percent in 2020)—is assessed to be adequate. The decline in the ratios reflects higher exports, broad money, external debt, and other liabilities, all of which raised the metric.						

**Table 3.7. Euro Area: Economy Assessment**

<b>Overall Assessment:</b> <i>The external position in 2021 was moderately stronger than the level implied by medium-term fundamentals and desirable policies.</i> The CA surplus increased to 2.4 percent of GDP in 2021 from 1.9 percent of GDP in 2020 largely on the back of stronger external demand, especially for services. However, this increase is projected to be reversed in 2022 due to weaker external demand, high energy prices, and persistent supply disruptions, all of which were amplified by Russia's invasion of Ukraine. Over the medium term, the euro area's CA surplus is projected to increase compared to the 2021 level, although the range of uncertainty around this projection is exceptionally high given the pandemic and war-related unknowns. National external imbalances that existed prior to the COVID-19 outbreak could remain sizable.							
<b>Potential Policy Responses:</b> Short-term policies focused on reducing scarring from the COVID-19 crisis (including the Next Generation EU response) and mitigating the fallout from Russia's invasion of Ukraine, including by supporting vulnerable households and firms in the face of high energy prices, would help increase investment and consumption, thereby raising imports and reducing the CA surplus. Fiscal policy should remain supportive over the near term by allowing automatic stabilizers to operate, while medium-term fiscal consolidation would help reduce vulnerabilities in high-debt countries. If historical imbalances in policy gaps at the national level persist, then countries with excess CA surpluses should continue increasing investment and potential growth. Countries with weak external positions should undertake reforms to raise productivity, reduce structural and youth unemployment, and enhance competitiveness in order to reduce external financing vulnerabilities. Euro-area-wide initiatives to make the currency union more resilient (for example, establishing a banking and capital markets union and central fiscal capacity for macroeconomic stabilization) could reinvigorate investment, thus reducing the CA surplus.							
<b>Foreign Asset and Liability Position and Trajectory</b>	<b>Background.</b> The NIIP of the euro area had fallen to –20.5 percent of GDP by the end of 2009 but then rose substantially to –1.5 percent of GDP by the end of 2021, mainly due to stronger CA balances. Relative to 2020, the NIIP increased by 3.4 percentage points of GDP, reflecting primarily higher net direct investment and lower inbound portfolio investment, partially offset by an increase in other inbound investment. Gross foreign positions were 274.6 percent of GDP for assets and 276.0 percent of GDP for liabilities as of the end of 2021. Net external assets reached elevated levels in large net external creditors such as Germany and The Netherlands, whereas net external liabilities remained high in countries such as Portugal and Spain.						
	<b>Assessment.</b> Projections of continued CA surpluses over the medium term suggest that the NIIP-to-GDP ratio will rise further, at a moderate pace. While the region's overall NIIP financing vulnerabilities appear low in aggregate, large net external debtor countries bear an elevated risk of a sudden stop of gross inflows.						
2021 (% GDP)	NIIP: –1.5	Gross Assets: 274.6	Debt Assets: 105.0	Gross Liab.: 276.0	Debt Liab.: 104.4		
<b>Current Account</b>	<b>Background.</b> The CA balance for the euro area increased to 2.4 percent of GDP in 2021 from 1.9 percent of GDP in 2020. The services balance recovered especially strongly, alongside modest increases in primary and secondary income balances, while the goods balance modestly declined amid supply-chain disruptions. With the strong economic recovery and the phasing out of support related to the COVID-19 crisis, public sector saving increased, while private sector saving modestly declined, with the overall increase in saving outpacing a smaller increase in investment. Some large creditor countries, such as Germany and The Netherlands, continued to have sizable surpluses, reflecting high corporate and household saving and weak investment. At the end of the projection horizon, the CA balance is projected to be above the 2019 pre-pandemic level, mainly driven by higher private sector saving in some small euro area countries, including Ireland.						
	<b>Assessment.</b> The EBA model estimates a CA norm of 0.6 percent of GDP, against a cyclically adjusted CA of 2.3 percent of GDP. This implies a gap of 1.7 percent of GDP. IMF staff analysis indicates a CA norm of 0.2 percent of GDP higher than that estimated by the EBA model, reflecting policy commitments to reduce the large net external liability positions (for example, Greece and Spain). In addition, adjustments were made to the underlying CA, totaling –0.4 percent to reflect CA measurement issues in Ireland and The Netherlands. Adjustments for the transitory impact of the COVID-19 crisis on household consumption composition, medical goods, transportation, and travel services (including tourism) are estimated at 0.1 percent of GDP. Considering these factors and uncertainties in the estimates, including the cyclical adjustment, the IMF staff assesses the CA gap to be 1.2 percent of GDP in 2021, with a range of 0.6 to 1.8 percent of GDP.						
2021 (% GDP)	CA: 2.4	Cycl. Adj. CA: 2.3	EBA Norm: 0.6	EBA Gap: 1.7	COVID-19 Adj.: 0.1	Other Adj.: –0.6	Staff Gap: 1.2
<b>Real Exchange Rate</b>	<b>Background.</b> The euro area REER peaked during the global financial crisis before depreciating by almost 20 percent between 2009 and 2015. Between 2015 and 2021, the CPI-based REER registered a cumulative appreciation of 7.1 percent, while the ULC-based REER remained broadly unchanged. The CPI-based REER appreciated by 0.5 percent in 2021 compared with 2020. This reflected a nominal appreciation of 1.7 percent, which was partially offset by weaker euro area inflation relative to its trading partners. The ULC-based REER depreciated by 1.7 percent. As of May 2022, the REER was 5.4 percent below its 2021 average.						
	<b>Assessment.</b> Consistent with the staff CA gap, the IMF staff assesses the REER gap to be –3.4 percent in 2021, with a range of –1.7 to –5.1 percent, based on the estimated CA-REER elasticity of –0.35. <sup>1</sup> As with the CA gap, the aggregate REER gap masks a large degree of heterogeneity in REER gaps across euro area member states, ranging from an undervaluation of 10.8 percent in Germany to an overvaluation of 4.9 percent in Belgium. The substantial differences in REER gaps within the euro area highlight the continued need for net external debtor countries to improve their external competitiveness and for net external creditor countries to boost domestic demand. The EBA REER index and level models suggest overvaluations of 6.8 percent and 7.1 percent, respectively.						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<b>Background.</b> Mirroring the CA surplus in 2020, the euro area experienced net capital outflows, largely driven by lower inbound FDI and portfolio debt investment, which more than offset higher portfolio equity and other investment into the euro area.						
	<b>Assessment.</b> Gross external indebtedness of euro area residents increased by 0.5 percentage point of GDP in 2021 as lower external debt of governments and the nonfinancial sector was offset by higher external debt of the euro system, with stable external debt of deposit-taking institutions.						
<b>FX Intervention and Reserves Level</b>	<b>Background.</b> The euro has the status of a global reserve currency.						
	<b>Assessment.</b> Reserves held by euro area economies are typically low relative to standard metrics, but the currency is free floating.						

**Table 3.8. France: Economy Assessment**

<b>Overall Assessment:</b> <i>The external position in 2021 was broadly in line with medium-term fundamentals and desirable policies.</i> The CA balance is expected to decline in 2022 driven by the large terms-of-trade shock and lower external demand from trading partners affected by the war in Ukraine, as well as through supply-chain effects. Over the medium term, the CA balance is expected to move to a deficit of less than 0.5 percent of GDP as the effects of the pandemic and the war fade and structural reforms to improve competitiveness of the economy are implemented.							
<b>Potential Policy Responses:</b> In response to the COVID-19 pandemic, France deployed significant fiscal resources to bolster the health care system and provide targeted support to affected firms and individuals. Maintaining consistency of the external position with medium-term fundamentals will require structural reforms to continue enhancing productivity and sustain higher private investment to facilitate the green transition and digitalization, while rebuilding fiscal space once the shock dissipates.							
<b>Foreign Asset and Liability Position and Trajectory</b>	<b>Background.</b> The NIIP stood at –34.3 percent of GDP in the fourth quarter of 2021, below the range observed during 2014–19 (between –16 and –23 percent of GDP). The NIIP fell by about four percent of GDP since the end of 2020, largely driven by a fall in direct and other investment. While the net position is moderately negative, gross positions are large. Gross assets stood at 341 percent of GDP in the fourth quarter of 2021, of which banks' non-FDI-related assets accounted for about 39 percent, reflecting their global activities. Gross liabilities reached 375 percent of GDP in the fourth quarter of 2021, of which external debt was about 237 percent of GDP (54 percent accounted for by banks and 25 percent by the public sector). About three-quarters of France's external debt liabilities are denominated in domestic currency. The average TARGET2 balance in 2021 was about €6.4 billion. <b>Assessment.</b> The NIIP is negative, but its size and projected stable trajectory do not raise sustainability concerns. However, there are vulnerabilities coming from large public external debt (59.2 percent of GDP in the fourth quarter of 2021) and banks' gross financing needs—the stock of banks' short-term debt securities was €116 billion in the fourth quarter of 2021 (4.6 percent of GDP), and financial derivatives stood at about 39.3 percent of GDP.						
2021 (% GDP)	NIIP: –34.3	Gross Assets: 341	Debt Assets: 194.3	Gross Liab.: 375.2	Debt Liab.: 237.2		
<b>Current Account</b>	<b>Background.</b> The CA balance moved to a surplus of 0.4 percent of GDP (from a deficit of 1.8 percent in 2020), driven by an uptick in services exports. One-off factors continued to weigh-in on the current account deficit (for example, imports of health-care-sector equipment) together with temporary factors that are expected to gradually normalize (for example, the services balance, including business and tourism travel). Despite limited direct trade and investment linkages with Russia and Ukraine, the CA balance is expected to move to a deficit of 1.4 percent of GDP in 2022, driven by a large terms-of-trade shock and lower external demand from trading partners affected by the war as well as through supply-chain effects. Over the medium term, the IMF staff projects the CA balance to move to a deficit of less than 0.5 percent of GDP by 2026 as temporary factors from the pandemic dissipate, the effects from the war fade, and reforms to improve France's competitiveness start to pay off. <b>Assessment.</b> The 2021 cyclically adjusted CA balance is estimated at 0.2 percent of GDP compared with an EBA-estimated norm of a 0.3 percent surplus. The IMF staff estimates CA net adjustments related to COVID-19 at 0.0 percent of GDP, driven by travel-services-related transitory factors (0.2 percent of GDP), transport (–0.7 percent of GDP), exports of aeronautics (0.4 percent of GDP), <sup>1</sup> exports of medical goods (0.3 percent) and the shift in household consumption composition to durable goods (–0.2 percent of GDP). On this basis, the IMF staff assesses that the CA gap in 2021 is between –0.5 and 0.3 percent of GDP (compared with –2.7 to –1.7 percent of GDP in 2020), with a midpoint of –0.1 percent of GDP.						
2021 (% GDP)	CA: 0.4	Cycl. Adj. CA: 0.2	EBA Norm: 0.3	EBA CA Gap: –0.1	COVID-19 Adj.: 0.0	Other Adj.: 0.0	Staff CA Gap: –0.1
<b>Real Exchange Rate</b>	<b>Background.</b> Following an appreciation in 2020 of the REER based on the ULC of 4.7 percent and an appreciation of the REER based on the CPI of 1 percent, both REER measures depreciated in 2021. The ULC-based REER depreciated by 2.9 percent with respect to the 2020 average, while the CPI-based REER depreciated by 0.6 percent. From a longer-term perspective, although both REER measures depreciated by about 7 to 9 percent between 2008 and 2020, France has not managed to regain the loss of about one-third of its export market share registered in the early 2000s (while the export market share of the euro area remained broadly stable between 2000 and 2020). As of May 2022, the REER was 4.7 percent below the 2021 average. <b>Assessment.</b> The IMF staff CA gap implies a REER gap of 0.2 percent in 2021 (applying an estimated elasticity of 0.26). The EBA REER index model points to a REER gap of –2.1 percent, while the EBA REER level model points to a REER gap of 8.2 percent. Consistent with the IMF staff CA gap, the IMF staff assesses the REER to be overvalued in the range of –1.3 to 1.7 percent, with a midpoint of 0.2 percent.						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<b>Background.</b> Inward foreign direct investment normalized in 2021 after decreasing significantly between 2019 and 2020, by 2.3 percent of GDP. The capital account is open. <b>Assessment.</b> France remains exposed to financial market risks owing to the large refinancing needs of the sovereign and banking sectors.						
<b>FX Intervention and Reserves Level</b>	<b>Background.</b> The euro has the status of a global reserve currency. <b>Assessment.</b> Reserves held by the euro area are typically low relative to standard metrics, but the currency is free floating.						

**Table 3.9. Germany: Economy Assessment**

<b>Overall Assessment:</b> <i>The external position in 2021 was stronger than the level implied by medium-term fundamentals and desirable policies.</i> This assessment accounts for continued temporary weakness in outbound travel in 2021 due to the ongoing COVID-19 pandemic. Russia's invasion of Ukraine in February 2022 and the associated economic sanctions are expected to weaken Germany's current account significantly in 2022, as energy import prices surge, supply disruptions intensify and exports to Russia collapse. The current account surplus is projected to increase in 2023 and 2024 as energy prices and supply bottlenecks ease, before declining over the medium term on reduced competitiveness and revived domestic demand.							
<b>Potential Policy Responses:</b> Policies aimed at promoting investment and diminishing excess saving would support external rebalancing and a further reduction of the current account balance towards its norm. In particular, the sizeable fiscal stimulus in response to the COVID-19 crisis and the fiscal measures to relieve the current impact of high energy prices are welcome. An investment push is a key priority to achieve Germany's climate, digital, and energy security goals, including to expand the generation and distribution of renewable electricity, broaden the network of electric vehicle charging stations, and widen coverage of fiber optic and 5G mobile networks. Structural reforms to foster innovation, including development of the venture capital market and reducing the administrative steps needed to start a business, would also stimulate investment. Additional tax relief for lower-income households would help reduce excess saving and ameliorate external imbalances.							
<b>Foreign Asset and Liability Position and Trajectory</b>	<b>Background.</b> Germany's NIIP reached 65 percent of GDP in 2021, from 67 percent in 2020. The NIIP increased in 2021 slightly less than the year's CA balance, suggesting slight valuation losses over the year. Germany's TARGET2 claims on the Eurosystem increased to €1.3 trillion by end-2021, from €1.1 trillion at the end of 2020. In 2021, the NIIP was revised up by 3.4 percent of GDP, for the period between 2017 and 2021, due to new data becoming available on the safe custody accounts abroad of German insurers and pension funds. The allocation of SDRs in 2021 did not affect the NIIP, because it caused both assets and liabilities to rise by the same amounts. Between 2017 and 2021, the NIIP has increased by some 23 percent of GDP, which lifts the primary income balance of the CA going forward. <b>Assessment.</b> Germany's exposure to the Eurosystem remains large, given continued quantitative easing by the ECB.						
2021 (% GDP)	NIIP: 65	Gross Assets: 302	Debt Assets: 170	Gross Liabilities: 237	Debt Liabilities: 163		
<b>Current Account</b>	<b>Background.</b> The current account surplus came in at 7.4 percent of GDP in 2021 (compared with 7.1 percent in 2020 and 7.8 percent on average over 2017–19). The strengthening of the current account in 2021 was driven by a recovery of earnings on foreign direct investment, within the primary income balance. The goods trade balance remained weaker than pre-pandemic levels, largely due to costlier energy imports. The services trade balance remains stronger than pre-pandemic levels, due to elevated licensing fees for COVID-19 vaccines and still subdued imports of tourism and travel services. The bulk of the CA surplus reflects the large saving-investment surplus of households, which is only partially offset by the saving-investment deficit of the government. <b>Assessment.</b> The cyclically adjusted CA balance is estimated by the EBA model to reach 7.6 percent of GDP. Staff assess the cyclically adjusted CA balance to be 7 percent of GDP, which is 0.6 percent of GDP lower than estimated by the model, after accounting for the temporary drop in outbound travel (+0.5), the temporary pandemic-induced shift of consumption from services to goods (+0.2), and temporarily higher net exports of medical goods (–0.1), all associated with the pandemic. Staff assesses the CA norm to be between 2.8 and 3.8 percent of GDP, with a midpoint of 3.3 percent of GDP, in line with the EBA model. The difference between the cyclically adjusted CA and the CA norm implies that the CA gap in 2021 is in the range of 3.2 to 4.2 percent of GDP, with a midpoint of 3.7 percent of GDP. Note that the demographic adjuster from past assessments has been phased out this year.						
2021 (% GDP)	CA: 7.4	Cycl. Adj. CA: 7.6	EBA Norm: 3.3	EBA Gap: 4.3	COVID-19 Adj.: –0.6	Other Adj.: 0	Staff Gap: 3.7
<b>Real Exchange Rate</b>	<b>Background.</b> The REER based on consumer prices depreciated by 2 percent in 2021, driven by real depreciations against the United States, China, and the United Kingdom. Between December 2021 and February 2022, the REER based on consumer prices depreciated a further 0.3 percent. As of May 2022, the REER was 3 percent below the 2021 average. <b>Assessment.</b> The staff CA gap implies a REER gap of 10.8 percent in 2021, after applying an estimated elasticity of 0.34. The EBA REER level and index models suggest an undervaluation of 7.9 percent and an overvaluation of 7.7 percent, respectively. Consistent with the staff CA gap, staff assess the REER to be undervalued with a midpoint of 10.8 percent and a range of uncertainty of ±1.5 percent.						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<b>Background.</b> In 2021, the global economy began to recover from the COVID-19 pandemic. As such, the safe-haven inflows that Germany experienced in 2020 were reversed in 2021, resulting in large portfolio outflows. Net foreign direct investment outflows resumed in 2021, after recording negligible outflow in 2020. The portfolio and direct investment outflows were partially mirrored by “other” inflows, which partly reflect (1) declining net foreign assets of the Bundesbank and (2) banks' transfer of some securities business from the United Kingdom to Germany. <b>Assessment.</b> Risks are limited, given Germany's safe haven status and the strength of its external position.						
<b>FX Intervention and Reserves Level</b>	<b>Background.</b> The euro has the status of a global reserve currency. <b>Assessment.</b> Reserves held by euro area countries are typically low relative to standard metrics. The currency floats freely.						



**Table 3.10. Hong Kong SAR: Economy Assessment**

<b>Overall Assessment:</b> <i>The external position in 2021 was broadly in line with the level implied by medium-term fundamentals and desirable policies.</i> The CA surplus (in percent of GDP) widened further in 2021, reflecting a recovery of reexports vis-à-vis mainland China as well as a stronger income balance, and is expected to gradually decline over the medium term with the recovery in domestic demand. Under the Linked Exchange Rate System (LERS), short-term movements in the REER largely reflect US dollar developments. The credibility of the currency board arrangement has been ensured by a transparent set of rules governing the arrangement, large fiscal and FX reserves, strong financial regulation and supervision, the flexible economy, and a prudent fiscal framework.							
<b>Potential Policy Responses:</b> Expansionary fiscal policy in the near term to mitigate the impact of adverse shocks and support the recovery, while taking measures to ensure fiscal sustainability over the medium to long term given the rapidly aging population, would help ensure that the external position will remain broadly in line with fundamentals. Maintaining policies that support wage and price flexibility is crucial to preserving competitiveness under the currency board arrangement. Robust and proactive financial supervision and regulation, prudent fiscal management, flexible markets, and the LERS have worked well, and continuation of these policies will help keep the external position broadly in line with fundamentals.							
<b>Foreign Asset and Liability Position and Trajectory</b>	<b>Background.</b> The NIIP decreased to 578 percent of GDP in 2021 from 615 percent in 2020. This was mainly due to a decrease in gross assets by 76 percentage points of GDP, following a large increase of 279 percentage points of GDP recorded in 2020. Both gross assets and liabilities are high, reflecting Hong Kong SAR's status as an international financial center. Valuation changes have been sizable as the increase in the NIIP during 2016–21 (218 percent of GDP) far exceeded the cumulative financial account balances (39 percent of GDP).						
	<b>Assessment.</b> Vulnerabilities are low given the positive and sizable NIIP and its favorable composition. FX reserves are large and stable (135 percent of GDP at the end of 2021) and direct investments account for a large share of gross assets and liabilities (35 and 50 percent, respectively) while only 12 percent of gross liabilities are portfolio investments.						
2021 (% GDP)	NIIP: 578	Gross Assets: 1,747	Debt Assets: 591	Gross Liab.: 1,169	Debt Liab.: 433		
<b>Current Account</b>	<b>Background.</b> The CA surplus widened to 11.3 percent of GDP in 2021 from 7 percent in 2020, amid a large increase in public savings resulting from a tightening of the fiscal policy stance. The goods balance turned into a surplus driven by a recovery of reexports via-à-vis mainland China, leading to a large increase in the overall trade surplus despite a slow recovery of the service surplus. The income balance also improved further, driven by strong portfolio investment income flows. The CA surplus has been on a widening trend over the past five years, largely due to a notable decline in private investment as the economy has faced multiple domestic and external shocks, including social unrest, China–United States tensions, and the COVID-19 pandemic. The CA balance is projected to gradually decline over the medium term with the recovery in domestic demand.						
	<b>Assessment.</b> After adjusting for cyclical factors and for the transitory impact of the COVID-19 crisis on the travel services (including tourism), medical, and transport sectors (adjustments of 0.8, –0.8, and –0.5 percent of GDP, respectively), the CA surplus is estimated to be 10.4 percent of GDP in 2021, which is within the IMF staff–assessed CA norm range of 7.9 to 10.9 percent of GDP. The IMF staff–assessed CA gap range is hence between –0.5 and 2.5 percent of GDP, with a midpoint of 1 percent. Since Hong Kong SAR is not in the EBA sample, the CA norm was estimated by applying EBA-estimated coefficients to Hong Kong SAR and was adjusted for measurement issues related to the large valuation effects in the NIIP and the discrepancies between stocks and flows. <sup>1</sup>						
2021 (% GDP)	CA: 11.3	Cycl. Adj. CA: 10.7	EBA Norm: —	EBA Gap: —	COVID-19 Adj.: –0.5	Other Adj.: —	Staff Gap: 1.0
<b>Real Exchange Rate</b>	<b>Background.</b> Under the currency board arrangement, REER dynamics are largely determined by US dollar developments and inflation differentials between the United States and Hong Kong SAR. In line with the US dollar, after appreciating by about 20 percent over 2012–20, the REER depreciated by about 5 percent in 2021 compared with its 2020 average. As of May 2022, the REER was 2.3 percent above the 2021 average.						
	<b>Assessment.</b> The IMF staff assesses the REER gap, based on the staff-assessed CA gap range, to be in the range of –6.4 to 1.2 percent, with a midpoint of –2.6 percent (based on the average CA-REER elasticity of about 0.4). <sup>2</sup>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<b>Background.</b> As an international financial center, Hong Kong SAR has an open capital account. Nonreserve financial flows turned into a net outflow of US\$49 billion in 2021, from a net inflow of US\$3 billion in 2020, largely driven by portfolio investment outflows. The financial account is typically very volatile, reflecting financial conditions in Hong Kong SAR and mainland China (transmitted through growing cross-border financial linkages), <sup>3</sup> shifting expectations of US monetary policy, and related arbitraging in the FX and rates markets.						
	<b>Assessment.</b> Large financial resources, proactive financial supervision and regulation, and deep and liquid markets should help limit the risks from potentially volatile capital flows and the war in Ukraine. The greater financial exposure to mainland China could also pose risks to the financial sector through real sector linkages, particularly trade and tourism, credit exposures of the banking sector, and fundraising by Chinese firms in local financial markets. However, Hong Kong SAR's banking system, with its high capital buffers and profitability, is assessed to be broadly resilient to macro-financial shocks.						
<b>FX Intervention and Reserves Level</b>	<b>Background.</b> The Hong Kong dollar has continued to trade in a smooth and orderly manner within the Convertibility Zone during the COVID-19 crisis. Total reserve assets decreased to 135 percent of GDP at the end of 2021 (or 1.8 times the monetary base) from 143 percent of GDP at the end of 2020.						
	<b>Assessment.</b> FX reserves are currently adequate for precautionary purposes and should continue to evolve in line with the automatic adjustment inherent in the currency board system. Despite a large fiscal deficit in 2020 and 2021, Hong Kong SAR still holds significant fiscal reserves (about 34 percent of GDP at the end of 2021) built up through a track record of strong fiscal discipline in previous years.						

**Table 3.11. India: Economy Assessment**

<p><b>Overall Assessment:</b> <i>The external position in fiscal year 2021/22 (ending in March 2022) was broadly in line with the level implied by medium-term fundamentals and desirable policies.</i> Running CA deficits is broadly consistent with India's level of per capita income, favorable growth prospects, demographic trends, and development needs. External vulnerabilities stem from volatile global financial conditions and significant increases in commodity prices. In part reflecting the impact of the war in Ukraine on oil prices, the CA deficit is projected to widen in fiscal year 2022/23 but then stabilize over the medium term. The authorities have made some progress in external trade promotion and the liberalization of FDI and portfolio flows, but the existing tariff structure remains broadly unchanged.</p> <p><b>Potential Policy Responses:</b> To maintain the external sector balance at a comfortable level over the medium term, gradual withdrawal of fiscal and monetary policy stimulus, development of export infrastructure, and negotiation of free trade agreements with main trading partners to provide a sustainable boost to exports of goods and services should be accompanied by further investment regime liberalization and a reduction in tariffs, especially on intermediate goods. Structural reforms could deepen integration in global value chains and attract FDI, hence mitigating external vulnerabilities. Exchange rate flexibility should act as the main shock absorber, with intervention limited to addressing disorderly market conditions.</p>							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> As of the end of 2021, India's NIIP had improved to -11.1 percent of GDP from -13.5 percent of GDP at the end of 2020. This reflected a relatively low CA deficit (amid the COVID-19 pandemic) and the accumulation of reserve assets. Gross foreign assets and liabilities were 30.5 percent of GDP and 41.7 percent of GDP, respectively. The bulk of assets were in the form of official reserves and FDI, whereas liabilities included mostly FDI and other investments.</p> <p><b>Assessment.</b> With the CA deficit projected to widen in 2022 (due to external shocks) and stabilize at a lower level thereafter, the NIIP-to-GDP ratio is expected to strengthen marginally over the medium term. India's external debt liabilities are moderate compared with peers, and short-term rollover risks are limited. The moderate level of foreign liabilities reflects India's incremental approach to capital account liberalization, which has focused primarily on attracting FDI.</p>						
2021 (% GDP)	NIIP: -11.1	Gross Assets: 30.5	Debt Assets: 2.6	Gross Liab.: 41.7	Debt Liab.: 20.1		
<b>Current Account</b>	<p><b>Background.</b> In fiscal year 2021/22, the CA returned to a small deficit of 1.2 percent of GDP from an unusual surplus of 0.9 percent of GDP in the previous year (due to the COVID-19 pandemic). As the pandemic eased, imports rebounded faster than exports on the back of pent-up domestic demand and rising prices of oil and other commodities. The CA deficit is projected to widen further to about 3 percent of GDP in fiscal year 2022/23, reflecting both the post-COVID economic recovery and the terms-of-trade shock from the Ukraine war, which affects India mostly through higher (and volatile) oil prices. Over the medium term, the CA deficit is projected to stabilize and converge to about 2.6 percent of GDP.</p> <p><b>Assessment.</b> The EBA cyclically adjusted CA balance stood at -1.6 percent of GDP in fiscal year 2021/22. The EBA CA regression estimates a norm of -1.9 percent of GDP, with a standard error of 0.7 percent, thus implying a CA gap of 0.3 percent of GDP. In the judgment of the IMF staff, a CA deficit of up to 2½ percent of GDP is financeable over time. Steady FDI inflows are not yet sufficient to cover protracted and large CA deficits, while portfolio flows are volatile and susceptible to changes in global risk appetite. Additional cyclical considerations are given to factor in the transitory impacts of the COVID-19 crisis (0.7 percent of GDP), which includes the impacts on travel (0.4 percent of GDP), transportation (0.6 percent of GDP), shifts in household consumption (-0.1 percent of GDP), and medical goods of (-0.1 percent of GDP). Thus, with the IMF staff-assessed CA norm and COVID-19-related adjuster, the IMF staff assesses the CA gap to be 1 percent of GDP, with a range of 0.3 to 1.7 percent of GDP. Positive policy contributions to the CA gap stem mostly from the domestic credit gap.</p>						
2021 (% GDP)	CA: -1.2	Cycl. Adj. CA: -1.6	EBA Norm: -1.9	EBA Gap: 0.3	COVID-19 Adj.: 0.7	Other Adj.: 0	Staff Gap: 1.0
<b>Real Exchange Rate</b>	<p><b>Background.</b> In 2020 and early 2021, unusual CA surpluses resulted in appreciation pressures on the rupee. This trend abated and reversed when the CA returned to deficit in the second half of 2021 and volatile portfolio investments shifted to net outflows. The average REER in 2021 depreciated by about 1.1 percent from its 2020 average. As of May 2022, the REER was 2.4 percent above the 2021 average.</p> <p><b>Assessment.</b> The IMF staff CA gap implies a REER gap of -6 percent (applying an estimated elasticity of 0.16). EBA REER index and level models suggest an overvaluation of 10.1 percent and 8.5 percent, respectively. Consistent with the staff CA gap, however, the IMF staff assesses the REER gap to be in the range of -10.3 to -1.7 percent, with a midpoint of -6 percent, for fiscal year 2021/22.</p>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<p><b>Background.</b> In FY2021/22, the financial account balance was about -1.2 percent of GDP (indicating net inflows to India), compared with outflows of 0.8 percent of GDP in 2020/21. FDI inflows decreased to 1.2 percent of GDP (from 1.6 percent of GDP in the prior year) and volatile portfolio investments shifted to outflows of about 0.5 percent of GDP, while other investments reflecting mostly debt-creating flows increased to about 2.2 percent of GDP. During the year, the Indian authorities made further steps towards capital account liberalization. They increased the limits on FDI and portfolio investments, particularly for the oil, gas, and life insurance sectors.</p> <p><b>Assessment.</b> While FDI inflows covered the CA deficit in FY2021/22, structural reforms and improvement of the investment regime to promote FDI are needed. Volatile portfolio investments are very sensitive to changes in global financial conditions and country risk premia. Expected inclusion of India in international bond indices should increase portfolio investment inflows for financing the CA deficit over the medium term.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> An unusual period of CA surpluses in 2020 and early 2021 allowed the Reserve Bank of India to replenish official FX reserves, which reached a record high of about US\$638.5 billion at the end of 2021. The reserves decreased in subsequent months but remained at a comfortable level of about eight months of import coverage.</p> <p><b>Assessment.</b> Various criteria confirm that official FX reserves are adequate for precautionary purposes. As of the end of 2021, they represented about 223 percent of short-term debt (on residual maturity) and 195 percent of the IMF's composite metric. Consequently, accumulation of additional reserves is less warranted, and FX interventions should be limited to addressing disorderly market conditions.</p>						

**Table 3.12. Indonesia: Economy Assessment**

<b>Overall Assessment:</b> <i>The external position in 2021 was broadly in line with the level implied by medium-term fundamentals and desirable policies. In the medium term, exchange rate flexibility and structural policies should help contain the CA deficit, keeping it in line with its norm of near-balance. External financing needs appear sustainable. However, they are sizable, and with a relatively large share of foreign portfolio investment, they expose the economy to fluctuations in global financial conditions.</i>							
<b>Potential Policy Responses:</b> The projected effect of fiscal consolidation on the CA would be more than offset by the projected pickup in economic activity as the impact of the pandemic unwinds. Therefore, maintaining external balance will require structural reforms to enhance productivity and facilitate post-COVID-19 sectoral adjustments. Reforms should include higher infrastructure and social spending to foster human capital development and strengthen the social safety net (while maintaining fiscal sustainability through revenue mobilization), a reduction of restrictions on FDI and external trade (nontariff trade barriers), and promotion of greater labor market flexibility (for example, by streamlining stringent job protection rules and improving job placement services). Flexibility of the exchange rate should continue to support external stability with the ongoing structural transformation of the Indonesian economy.							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> At the end of 2021, Indonesia's NIIP was -23.5 percent of GDP, improving from -26.4 percent at the end of 2020. The improvement was mainly explained by a decrease of 5 percentage points in gross external liabilities to 59.9 percent of GDP at the end of 2021, reflecting in part a strong rebound in nominal GDP, but also an 8½ percent drop in nonresident investors' holdings of rupiah-denominated government bonds relative to the end of 2020. Gross external assets also fell slightly to 36.4 percent of GDP (one-third of which were reserve assets) from 38 percent at the end of 2020. Indonesia's gross external debt remained moderate at 35 percent of GDP at the end of 2021 (down from 39.4 percent of GDP at the end of 2020), with only 14 percent of external debt (amounting to 5 percent of GDP) having a remaining maturity of less than one year.</p> <p><b>Assessment.</b> The level and composition of the NIIP and gross external debt indicate that Indonesia's external position is sustainable and subject to limited rollover risk. The share of nonresident holdings of rupiah-denominated government bonds declined from 25 percent of the total stock at the end of 2020 to 19 percent (or 5.3 percent of GDP) at the end of 2021 but remains sizable, making Indonesia vulnerable to global financial volatility, higher US interest rates, and a stronger US dollar. The NIIP as a percent of GDP is projected to strengthen in the medium term, reflecting projected small CA deficits and strong nominal GDP growth.</p>						
2021 (% GDP)	NIIP: -23.5	Gross Assets: 36.4	Res. Assets: 12.2	Gross Liab.: 59.9	Debt Liab.: 35		
<b>Current Account</b>	<p><b>Background.</b> The CA balance recorded a modest surplus of 0.3 percent of GDP in 2021 compared with a deficit of 0.4 percent in 2020. While domestic demand and imports picked up with the economic recovery, exports grew at a higher rate than imports, reflecting higher international commodity prices and export volumes. On the savings-investment side, the positive impact on national savings of the higher commodity terms of trade and related higher government revenue was sufficient to offset lower private savings and investment. In 2022, the increase in global commodity prices following the war in Ukraine is expected to improve Indonesia's terms of trade to yield a sizable CA surplus. While this positive shock is expected to dissipate in 2023–24, structural policies will help maintain the CA balance close to the norm in the medium term.</p> <p><b>Assessment.</b> The IMF staff estimate of a CA gap of 0.2 percent of GDP for 2021 is consistent with (1) an estimated cyclically adjusted CA deficit of 1.5 percent of GDP; (2) an additional adjustor for the effects of the COVID-19 crisis estimated at 0.6 percent of GDP (0.4 percent travel; 0.1 percent transport; -0.2 percent household consumption; 0.3 percent medical); and (3) a CA norm of -0.8 percent of GDP adjusted by -0.4 percent of GDP for demographics, yielding -1.2 percent of GDP.<sup>1</sup> Considering uncertainties in the estimation of the norm, the IMF staff assessment of the CA gap for 2021 is in the range of -0.3 to 0.7 percent of GDP, with a midpoint of 0.2 percent.<sup>2</sup></p>						
2021 (% GDP)	CA: 0.3	Cycl. Adj. CA: -1.5	EBA Norm: -0.8	EBA Gap: -0.7	COVID-19 Adj.: 0.6	Other Adj.: 0.4	Staff Gap: 0.2
<b>Real Exchange Rate</b>	<p><b>Background.</b> Indonesia's REER held steady within a narrow band in 2021, with the average REER over the year depreciating by 1.4 percent relative to the 2020 average, or by 2 percent relative to the 2016–20 REER average. As of May 2022, the REER was 2.7 percent above the 2021 average.</p> <p><b>Assessment.</b> The IMF staff CA gap estimate of 0.2 percent of GDP implies a REER gap of -1.7 percent (applying an estimated elasticity of 0.14).<sup>3</sup> The REER index and level models point to 2021 REER gaps of about 1.9 percent and -18.1 percent, respectively. Consistent with the staff CA gap, the IMF staff assesses the REER gap in the range of -5.3 to 1.9 percent, with a midpoint of -1.7 percent.</p>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<p><b>Background.</b> Net financial inflows stabilized at 1 percent of GDP in 2021 after a decline to 0.7 percent of GDP in 2020 (from 3.3 percent in 2019) in the context of large volatility at the onset of the pandemic. Net portfolio inflows inched their way back up to 0.4 percent of GDP (from 0.3 percent at the end of 2020), including positive net equity inflows for the first time since 2016. However, with markets anticipating monetary policy normalization in advanced economies, inflows into rupiah government securities remained volatile, with the share of nonresident holdings of rupiah government bonds declining to 19 percent of GDP at the end of 2021 from 25 percent at the end of 2020. Net FDI inflows rose to 1.4 percent of GDP from 1.3 percent at the end of 2020.</p> <p><b>Assessment.</b> Net and gross financial flows continue to be prone to periods of volatility. The contained CA balance and strengthened policy frameworks, including exchange rate flexibility since mid-2013, have helped reduce capital flow volatility. Continued strong policies focused on safeguarding the fiscal position, curbing inflation, advancing financial deepening, and easing obstacles to investment through structural reforms would help differentiate Indonesia and sustain capital inflows in the medium term.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> Since mid-2013, Indonesia has had a more flexible exchange rate policy framework. At the end of 2021, reserves were US\$145 billion, compared with US\$136 billion at the end of 2020. Two-thirds of the increase in reserves reflects the IMF's 2021 SDR allocation, which the authorities intend to keep as reserves.</p> <p><b>Assessment.</b> The current level of reserves—equal to 12.2 percent of GDP, 110.7 percent of the IMF's reserve adequacy metric, and about 6.6 months of prospective imports of goods and services—should provide a sufficient buffer against external shocks, with predetermined drains also manageable. Exchange rate flexibility should continue to help absorb shocks. If external pressures result in disorderly market conditions in the FX market, the use of FX intervention could be appropriate to mitigate the negative impact on balance sheet exposures.</p>						

**Table 3.13. Italy: Economy Assessment**

<p><b>Overall Assessment:</b> <i>The external position in 2021 was broadly in line with the level implied by medium-term fundamentals and desirable policies.</i> The combined current and capital account surplus declined as private sector saving net of investment declined by more than the increase in government saving net of investment as pandemic-related income support was wound down. Generous tax credits and other fiscal programs under the National Recovery and Resilience Plan, mainly funded by the European Union, lifted private and public investment in 2021. Nonetheless, chronic weak productivity and uncertain medium-term growth prospects could dampen private investment once these programs expire. How the current account balance evolves over the medium term will depend on progress with the green transition, ability to adapt to fragmentation of global value chains, and how successfully structural reforms are implemented. Under the baseline scenario, the CA surplus is expected to moderate over the next few years due to the adverse commodity terms-of-trade shock and higher imports of capital goods to support the green transition and digitalization, after which the CA balance would gradually improve.</p> <p><b>Potential Policy Responses:</b> Raising productivity and improving the business climate through structural reforms would sustain the higher private investment while the fiscal primary balance returns to surplus and household saving moderates. In particular, upskilling the workforce and increasing the quality of infrastructure and the effectiveness of the judiciary and public administration would boost productivity, reduce high unemployment, and raise output and domestic absorption. Vulnerabilities associated with rollover of public debt would be reduced by improving budget efficiency and fully implementing the National Recovery and Resilience Plan.</p>							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> Italy's NIIP further increased to 7.4 percent of GDP at the end of 2021, continuing its gradual upward trend owing to sustained CA surpluses and net valuation gains on external positions. Gross foreign assets and liabilities increased during 2021 to 188 and 181 percent of GDP, respectively. This includes an increase in TARGET2 liabilities to a record high of 33 percent of GDP. About half of gross external liabilities is attributed to the general government and the Bank of Italy. A steady accumulation of direct and portfolio investments in foreign equities and a net long US dollar external position contributed to the net valuation gains on Italy's NIIP over the past decade.</p> <p><b>Assessment.</b> Further strengthening public balance sheets and undertaking structural reforms would reduce vulnerabilities associated with the high public debt, reinvigorate economic growth, and reduce the potential for negative feedback loops between the debt stock and debt servicing costs.</p>						
	2021 (% GDP)	NIIP: 7.4	Gross Assets: 188.1	Debt Assets: 45.4	Gross Liab.: 180.6	Debt Liab.: 103.0	
<b>Current Account</b>	<p><b>Background.</b> Italy's CA has continued to gradually increase, averaging 2.9 percent of GDP during 2016–20. This increase was underpinned by rising private sector gross national saving and lower public and private sector gross domestic investment. More than half of the increase in the CA balance is due to the trade surplus, with the rest reflecting strong dividend and interest income on the rising foreign asset holdings of the nonfinancial private sector as well as declining interest payments on external liabilities owing to the ECB's accommodative monetary stance. Due to the pandemic, the CA balance reached a high of 3.7 percent of GDP in 2020 as private saving surged and private investment declined. In 2021, the CA moderated to 2.4 percent of GDP, mainly due to a 1.1 percent of GDP increase in the energy trade deficit on much higher energy import prices in the latter part of the year, despite a recovery in exports of services and a strong rebound in goods exports. This moderation was underpinned by a larger increase in investment than the increase in total saving, with declines in private saving more than offset by higher government saving. Italy's overall trade and financial linkages with Russia and Ukraine are limited (3 percent of imports and 2 percent of exports). However, Italy is heavily reliant on energy imports from Russia (including 40 percent of Italy's natural gas consumption). The war in Ukraine has pushed up international commodity prices, widening Italy's energy trade deficit, and reduced export demand from regional trade partners, with the impact on the current account felt mostly beginning in 2022.</p> <p><b>Assessment.</b> The cyclically adjusted CA is estimated at 2.2 percent of GDP in 2021, 1.2 percentage points below the EBA-estimated CA norm of 3.4 percent of GDP. An Italy-specific COVID-19 adjuster of 0.3 percent of GDP is applied to account for a temporary decline in travel (0.4 percent) and transport (0.1 percent) net receipts, medical trade (0.1 percent), and the household shift in consumption (–0.2 percent) caused by the pandemic. Therefore, and taking into account uncertainty around the estimate, the IMF staff assesses the CA gap to be in the range of –1.6 to –0.2 percent of GDP.</p>						
	2021 (% GDP)	CA: 2.4	Cycl. Adj. CA: 2.2	EBA Norm: 3.4	EBA Gap: –1.2	COVID-19 Adj.: 0.3	Other Adj.: 0
<b>Real Exchange Rate</b>	<p><b>Background.</b> During 2016–20, the CPI-based REER appreciated by 2.2 percent while the ULC-based REER was unchanged. During 2021, the CPI-based REER was broadly stable, with a 0.3 percent depreciation relative to the 2020 average, mainly on account of a weakening euro. However, during this pandemic period, official statistics may not fully capture actual price and wage dynamics. As of May 2022, the REER was 4.1 percent below the 2021 average.</p> <p><b>Assessment.</b> The IMF staff CA gap implies a REER gap of 3.3 percent in 2021 (applying an estimated elasticity of 0.26). The level and index CPI-based REER models suggest an overvaluation in 2021 of 10.8 percent and 8.6 percent, respectively, with an average of 9.7 percent. Taking into account the staff CA gap, the IMF staff assesses a REER gap range of 0.7 to 6 percent, with a midpoint of 3.3 percent.</p>						
	<p><b>Capital and Financial Accounts: Flows and Policy Measures</b></p> <p><b>Background.</b> The capital account balance remained unchanged at –0.1 percent of GDP in 2021. The financial account posted net outflows of 1.5 percent of GDP in 2021, reflecting residents' net purchases of foreign assets. Large portfolio investment outflows were mostly offset by inflows of other investment, including a €4 billion increase in Italy's TARGET2 liabilities.</p> <p><b>Assessment.</b> The low global interest rate environment has been conducive to the smooth functioning of the sovereign debt market. However, rising inflation and geopolitical tensions, large refinancing needs of the sovereign and the banking sector, and exposures to the current geopolitical situation and energy shocks suggest Italy remains vulnerable to market volatility.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> The euro has the status of a global reserve currency. Italy's reserves increased by €21 billion in 2021 mostly on account of the IMF's SDR allocation.</p> <p><b>Assessment.</b> Reserves held by the euro area are typically low relative to standard metrics, but the currency is free floating.</p>						

**Table 3.14. Japan: Economy Assessment**

<b>Overall Assessment:</b> <i>The external position in 2021 was broadly in line with the level implied by medium-term fundamentals and desirable policies. Japan's CA surplus narrowed in 2021, driven by transitory factors amid the continued global pandemic. When these temporary factors dissipate, the CA surplus is expected to rise to a level slightly above 3 percent of GDP in the medium term. The continued CA surplus primarily reflects an income surplus arising from a large positive NIIP and high net returns, as well as a high private sector saving-investment balance, notably net saving by firms.</i>							
<b>Potential Policy Responses:</b> The authorities' broad-based policy support to counter the adverse impact of the pandemic has been appropriate. Near-term policy should remain supportive but increasingly shift toward more targeted measures, and the scale and composition of support should be adjusted in response to epidemiological, economic, and geopolitical developments. Once the recovery is firmly in place, policies should shift toward structural reforms and fiscal sustainability. While fiscal consolidation should proceed in a gradual manner, it should be accompanied by a credible medium-term fiscal framework, accommodative monetary policy, and structural reforms that support domestic demand. Priority should be given to reforms to increase labor supply and boost productivity and wages. Broadening and deepening of corporate governance and regulatory reforms would encourage firms to deploy their accumulated savings and boost investment and productivity.							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> Japan's NIIP has risen since 2016, reaching 75.9 percent of GDP at the end of 2021, up from 61.8 percent in 2016 and 67.8 percent in 2020. This has been largely driven by an increase in foreign assets related to outward FDI and portfolio outflows. Japan holds the world's largest stock of net foreign assets, valued at US\$3.6 trillion at the end of 2021.</p> <p><b>Assessment.</b> Japan's foreign asset holdings are well diversified, both by geography and risk classes. At the end of 2021, gross foreign assets were largely composed of portfolio investments, accounting for about 46 percent of the total. Of that portfolio investment, about 21 percent was yen-denominated and 51 percent US dollar-denominated. In the event of appreciation of the yen against the US dollar, the risk of negative valuation effects could materialize. The vulnerabilities of liabilities are contained, given that equity and direct investment account for a third of gross foreign liabilities. Japan's large positive NIIP is partly related to asset accumulation for old-age consumption. A gradual decumulation of such assets is expected over the long term.</p>						
2021 (% GDP)	NIIP: 75.9	Gross Assets: 230.6	Debt Assets: 89.9	Gross Liab.: 154.8	Debt Liab.: 95.9		
<b>Current Account</b>	<p><b>Background.</b> Japan's CA surplus reflects a sizable income balance, at 3.8 percent of GDP, owing to its large net foreign asset position. From a saving-investment perspective, it reflects a high private sector saving-investment balance, notably net saving by firms, that more than compensates for the low government saving-investment balance. The CA surplus was 2.9 percent of GDP in 2021, broadly unchanged from 3 percent in 2020, albeit well below the average of 3.8 percent during 2016–19. The narrowing in the 2020 and 2021 CA surplus was largely driven by a decline in the services trade balance amid international travel restrictions, while the goods trade balance remained in surplus. While Japan has limited trade and financial linkages with Russia and Ukraine, the spillover effects of the ongoing war have weighed on Japan's external balance, primarily through the commodity price channel. After these temporary factors dissipate, the CA surplus is projected to rise to a level slightly above 3 percent of GDP in the medium term.</p> <p><b>Assessment.</b> The 2021 CA assessment uses the EBA model, which estimates cyclically adjusted CA at 2.9 percent of GDP and the cyclically adjusted CA norm at 3.9 percent of GDP, with a standard error of 1 percent of GDP. IMF staff adjustments were made to account for the transitory impact of the COVID-19 crisis, including on travel services (0.4 percent of GDP), transport balance (0 percent of GDP), the global household consumption composition shift (–0.1 percent of GDP), and trade in medical products (0.1 percent of GDP). Including these adjustments, the 2021 CA gap midpoint is assessed at –0.5 percent of GDP, with the CA gap range between –1.5 and 0.5 percent of GDP. The EBA-identified policy gaps reflect relatively greater medium-term fiscal consolidation needs, as well as a positive credit gap, in relation to medium-term desired policy.<sup>1</sup> The overall gap is accounted for by a relatively large residual, potentially reflecting structural impediments and country-specific factors not included in the model, such as investment bottlenecks, including entrepreneurship entry barriers and corporate savings distortions.</p>						
2021 (% GDP)	CA: 2.9	Cycl. Adj. CA: 2.9	EBA Norm: 3.9	EBA Gap: –0.9	COVID-19 Adj.: 0.4	Other Adj.: 0	Staff Gap: –0.5
<b>Real Exchange Rate</b>	<p><b>Background.</b> The REER depreciated sharply by 8.6 percent in 2021, following a slight appreciation during 2017–20. This reflects a sharp rise in inflation in Japan's major trading partners as well as a shift toward a tighter monetary policy stance of key central banks. As of May 2022, the REER was 13.4 percent below the 2021 average.</p> <p><b>Assessment.</b> The IMF staff CA gap implies a REER gap of 3.6 percent in 2021 (applying an estimated elasticity of 0.15). The EBA REER level and index models deliver REER gaps of –18.4 and –20.1 percent, respectively, for the 2021 average REER. Considering all estimates, the uncertainties around them, and REER depreciation in 2021, the IMF staff assesses the REER gap to be in the range of –3 to 10.2 percent, with a midpoint of 3.6 percent.</p>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<p><b>Background.</b> The CA surplus in 2021 is mirrored by an increase in net FDI outflows to about 2.9 percent of GDP from 1.8 percent in 2020, primarily driven by outward FDI flows to North America. Supported by portfolio inflows from Europe and Oceania, portfolio investment is expected to record net inflows of 0.1 percent of GDP in 2021, as opposed to net outflows of 0.7 percent in 2020. Net short yen positions have emerged since early 2021 due to the relative strength of the US dollar amid changes in monetary policy stances. An increase in reserve assets in 2021 reflects the IMF allocation of SDR 29.5 billion (about US\$42.1 billion or 0.9 percent of GDP).</p> <p><b>Assessment.</b> Vulnerabilities are limited. Inward investment tends to be equity based, and the home bias of Japanese investors remains strong. So far, outward spillovers from Japan's policies to financial conditions in other economies (interest rates, credit growth) are contained.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> Reflecting legacy accumulation, reserves stood at US\$1.3 trillion, or 28 percent of GDP, as of the end of May 2022. There has been no FX intervention in recent years.</p> <p><b>Assessment.</b> The exchange rate is free floating. Interventions are isolated (the most recent occurred in 2011) and intended to reduce short-term volatility and disorderly exchange rate movements.</p>						

**Table 3.15. Korea: Economy Assessment**

<p><b>Overall Assessment:</b> <i>The external position in 2021 is assessed to be broadly in line with fundamentals and desirable policies.</i> The CA surplus widened in 2021, primarily due to a narrowing of the service sector deficit and a favorable income balance. However, the surplus is projected to narrow in 2022 due to high oil prices and supply-chain disruptions, and recover over the medium term as transitory factors related to the COVID-19 shock and the war in Ukraine recede.</p> <p><b>Potential Policy Responses:</b> To support activity following the COVID-19 outbreak, the authorities have deployed fiscal and monetary stimulus, of which a substantial part is expected to be temporary. In a context of expected normalization of fiscal and monetary policy, ensuring that the external position remains broadly in line with medium-term fundamentals will require structural policies to stimulate investment and facilitate rebalancing of the economy toward services and other new growth drivers. Desirable reforms include reducing barriers to firm entry and investment, deregulating the nonmanufacturing sector, and strengthening the social safety net to lessen the need for precautionary saving. Reforms in some of these areas are contained in the authorities' Korean New Deal to be implemented over the next few years. The exchange rate should remain market determined, with intervention limited to preventing disorderly market conditions.</p>							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> The NIIP has been positive since 2014 and stood at 36.4 percent of GDP in 2021, with gross liabilities at 83.9 percent of GDP, of which about 40 percent was gross external debt. The 2021 NIIP level marked an increase by about 7 percent of GDP compared with 2020, largely reflecting the increase of residents' overseas portfolio investment. The NIIP is projected to rise further to about 50 percent of GDP in the medium term on the back of CA surpluses and search-for-yield activity by financial institutions driven by asset accumulation for old-age consumption.</p> <p><b>Assessment.</b> The positive NIIP is a source of external sustainability. Foreign asset holdings are diversified, with about 39 percent held in equity or debt securities. About 60 percent of foreign assets are denominated in US dollars, implying that depreciation of the won could have positive valuation effects. The structure of liabilities limits vulnerabilities, with equity and direct investment accounting for about 60 percent of total liabilities.</p>						
2021 (% GDP)	NIIP: 36.4	Gross Assets: 120.3	Debt Assets: 59.9	Gross Liab.: 83.9	Debt Liab.: 34.9		
<b>Current Account</b>	<p><b>Background.</b> The CA surplus in 2021 was 4.9 percent of GDP, driven by robust technology exports, a narrowing of the services deficit due to an increase in transportation exports, and an improvement in the primary income balance. The CA surplus has been trending down from the peak of 7.2 percent of GDP in 2015, reflecting a fall in savings, particularly for the household sector, and an increase in the investment-to-GDP ratio. The CA surplus is projected to narrow to around 2.8 percent of GDP in 2022 due to high oil prices and supply-chain disruptions, and recover to around 4 percent of GDP over the medium term, as the shocks from COVID-19 and the war in Ukraine recede.</p> <p><b>Assessment.</b> The EBA model estimates the cyclically adjusted CA at 5.6 percent of GDP. The CA norm is estimated at 5 percent of GDP, with a standard error of 0.8 percent of GDP. After accounting for transitory factors arising from the ongoing COVID-19 shock, mainly in the transportation sector (0.9 percent of GDP), travel services (0.2 percent of GDP), and the shift in household consumption composition from services to goods (-0.2 percent of GDP), IMF staff estimates the 2021 CA gap midpoint at -0.3 percent of GDP, with a range of -1.1 to 0.5 percent of GDP. The contribution of the relative policy gap is -0.1 percent of GDP, reflecting the offsetting effects of larger fiscal stimulus in the rest of the world relative to Korea and a positive domestic credit gap for which the authorities have been taking macroprudential policy measures to rein in credit growth, particularly household debt.</p>						
2021 (% GDP)	CA: 4.9	Cycl. Adj. CA: 5.6	EBA Norm: 5	EBA Gap: 0.6	COVID-19 Adj.: -0.9	Other Adj.: 0	Staff Gap: -0.3
<b>Real Exchange Rate</b>	<p><b>Background.</b> Following sustained appreciation during 2015–18, the REER depreciated in 2019 by about 4.3 percent, returning to its 2015 level. The REER showed a brief appreciation in the second half of 2020 by about 4.5 percent, followed by a depreciation in 2021 by about 4.8 percent. The average REER for 2021 remained stable compared with the 2020 average. As of May 2022, the REER was 4.7 percent below the 2021 average.</p> <p><b>Assessment.</b> The IMF staff CA gap implies a REER overvaluation of 1 percent (applying an estimated elasticity of 0.31). The EBA REER index model estimates a 0.8 percent REER undervaluation, while the REER level model estimates a 4.2 percent overvaluation. The IMF staff uses the estimated CA gap for its assessment, given the better fit of the EBA CA model. Consistent with the staff CA gap, the IMF staff assesses the REER gap to be in a range of -1.6 to 3.7 percent, with a midpoint of 1 percent.</p>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<p><b>Background.</b> Net FDI and portfolio outflows have declined since 2017, when outflows reached 4.6 percent of GDP. Net portfolio outflows were 1.1 percent of GDP in 2021, reflecting further portfolio diversification and institutional investors' continued search for yield, but they were largely offset by nonresident debt inflow. Net FDI and portfolio outflows made up the bulk of the 2021 financial account (2.4 and 1.1 percent of GDP, respectively), whereas other investments (net) recorded inflows (0.1 percent of GDP).</p> <p><b>Assessment.</b> The present configuration of net and gross capital flows appears sustainable over the medium term. In recent years, including in the context of the COVID-19 shock, Korea has demonstrated ample capacity to absorb short-term capital flow volatility.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> Korea has a floating exchange rate. As of the end of 2021, reserves stood at 25.6 percent of GDP, largely reflecting legacy accumulation. FX intervention data released by the Bank of Korea show net sales of US\$14 billion (0.8 percent of GDP) in the second half of 2021, conducted to limit excess exchange rate volatility. With an increase in investment returns, gross reserves rose by US\$20 billion (1.1 percent of GDP) year to date.</p> <p><b>Assessment.</b> Intervention has been limited to preventing disorderly market conditions. As of the end of 2021, the preliminary data indicate that FX reserves were about 99 percent of the IMF's composite reserve adequacy metric, which, together with the US\$60 billion swap line with the US Federal Reserve (which expired at the end of 2021), provided an adequate buffer against a wide range of possible external shocks.</p>						

**Table 3.16. Malaysia: Economy Assessment**

<b>Overall Assessment:</b> <i>Malaysia's external position in 2021 was moderately stronger than the level implied by medium-term fundamentals and desirable policies.</i> During the COVID-19 pandemic, Malaysia's CA surplus increased, given strong external demand for pandemic-related exports, including personal protective equipment and electronic and electrical equipment. While a temporary increase in the CA surplus is expected in the short term from higher fuel prices following the war in Ukraine, a decline is projected over the medium term as domestic private demand gradually recovers and as Malaysia moves from the pandemic to the endemic phase of COVID-19.							
<b>Potential Policy Responses:</b> With Malaysia almost fully vaccinated, near-term policies should continue to support the nascent recovery through a targeted fiscal expansion. Over the medium term, a policy mix promoting domestically led growth would support external rebalancing and help bring the CA balance closer to its norm. Fiscal policy should target a gradual and growth-friendly consolidation, while policies that strengthen social safety nets and encourage private investment and productivity growth should be prioritized.							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> Malaysia's NIIP has averaged about 1 percent since 2010 and was 5.5 percent of GDP in 2021 (compared with 5.7 percent of GDP at the end of 2020), reflecting higher gross and reserve assets and an increase in net portfolio investment. Direct investment and portfolio investment abroad contribute most to both assets and liabilities. Total external debt, measured in US dollars, was about 68 percent of GDP in 2021 (compared with 71 percent at the end of 2020) and has remained manageable, with one-third in foreign currency and just over one-third in short-term debt by original maturity (half of which is held by intragroup borrowing among banks and corporations that have been generally stable during the pandemic).</p> <p><b>Assessment.</b> Malaysia's NIIP is projected to rise over the medium term, reflecting projected CA surpluses. Malaysia's balance sheet strength, exchange rate flexibility, and increased domestic investor participation should continue to help withstand shocks (as they have in the context of the COVID-19 crisis).</p>						
2021 (% GDP)	NIIP: 5.5	Gross Assets: 136.9	Debt Assets: 31.5	Gross Liab.: 131.4	Debt Liab.: 29.7		
<b>Current Account</b>	<p><b>Background.</b> Between 2010 and 2019, Malaysia's CA surplus contracted by about 7 percentage points to 3.5 percent of GDP, underpinned by lower national savings and robust domestic demand. After a rise in 2020, the CA surplus decreased in 2021 to 3.8 percent of GDP (4.2 percent of GDP in 2020) as a recovery in overall imports offset exports. The CA surplus continues to be affected by pandemic-related transitory factors, including (1) the decline in travel income given continued international travel restrictions; (2) the sustained strong external demand for pandemic-related exports, including rubber glove products and electronic and electrical equipment; and (3) the decline in outward remittances from the crisis and lockdown measures in 2021.</p> <p><b>Assessment.</b> The EBA CA model estimates a cyclically adjusted CA of 2.6 percent of GDP and a CA norm of -0.1 percent of GDP for 2021. After factoring in the transitory effect on the CA of net exports of pandemic-related medical goods, including rubber glove products (1.3 percent of GDP); the global household consumption composition shift (0.9 percent of GDP); lower net remittances (0.2 percent of GDP); and the decline in receipts from travel services (including tourism) (-1.4 percent) and transport (-0.1), the IMF staff estimates that the CA gap is about 1.8 percent of GDP (<math>\pm 0.5</math> percent of GDP). Relative policy gaps largely explain the CA gap: low public health care expenditures compared with the rest of the world contribute 0.6 percentage point to the CA gap, while the looser fiscal policies adopted in 2021 in the rest of the world relative to Malaysia also contribute 0.6 percentage point to the excess surplus.</p>						
2021 (% GDP)	CA: 3.8	Cycl. Adj. CA: 2.6	EBA Norm: -0.1	EBA Gap: 2.7	COVID-19 Adj.: -0.8	Other Adj.: 0.0	Staff Gap: 1.8
<b>Real Exchange Rate</b>	<p><b>Background.</b> In 2021, the REER depreciated by 0.5 percent relative to the 2020 average and was about 6 percent lower than in 2015. The mild depreciation in 2021 compared with 2020 (-3 percent) reflects a stabilization in capital outflows and the effect of the weakened economic outlook and new COVID-19 waves on the NEER. As of May 2022, the REER was 2.5 percent below the 2021 average.</p> <p><b>Assessment.</b> The IMF staff CA gap implies a REER undervaluation of 4 percent in 2021, applying an estimated elasticity of 0.46. The EBA REER index and level models estimate Malaysia's REER to be undervalued by 22.4 percent and 29.1 percent, respectively. At the same time, considering the lack of underlying macroeconomic stresses, such as inflation or wage pressures, and the broad stability of FX reserves, the IMF staff assesses the REER to be undervalued in the range of 2.9 to 5.1 percent, with a midpoint of 4 percent, consistent with the IMF staff CA gap.</p>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<p><b>Background.</b> Since the global financial crisis, Malaysia has experienced periods of significant capital flow volatility, largely driven by portfolio flows in and out of the local-currency-debt market, in response to both the change in global financial conditions and domestic factors. In 2020, Malaysia saw capital outflows during the March 2020 global risk-off episode, but capital flows stabilized afterward. Capital flows remained broadly stable in 2021 despite the resurgence of COVID-19 waves and the renewal of lockdowns. Net portfolio flows reached US\$7.4 billion by December 2021, primarily driven by sustained net debt inflows (US\$8.2 billion). Since late 2016, the Financial Markets Committee has implemented measures to develop the onshore FX market and increase hedging opportunities, some of which are considered CFM measures under the IMF's Institutional View.<sup>1</sup></p> <p><b>Assessment.</b> Continued exchange rate flexibility and macroeconomic policy adjustments, such as those prescribed by the IMF's Integrated Policy Framework, are necessary to manage capital flow volatility. CFM measures should be gradually phased out, with due regard for market conditions.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> Reserve levels have steadily increased for Malaysia during the COVID-19 pandemic after capital outflows to the region stabilized following the risk-off episode in March 2020. Reserve levels stood at US\$116.9 billion as of December 2021 (compared with US\$107.6 billion at the end of December 2020).</p> <p><b>Assessment.</b> Under the IMF's composite ARA metric, reserves remain broadly adequate, so further accumulation is not called for. Gross official reserves were about 122 percent of the ARA metric at the end of December 2021. FX interventions should continue to be limited to preventing disorderly market conditions, while the exchange rate should continue to adjust as a first line of defense and to serve as a shock absorber in the event such conditions occur.</p>						

**Table 3.17. Mexico: Economy Assessment**

<p><b>Overall Assessment:</b> <i>The external position in 2021 was broadly in line with the level implied by medium-term fundamentals and desirable policies. The rebalancing of Mexico's external position in 2021 was led by the economic reopening and recovery, domestically and elsewhere, and a smaller fiscal policy gap. The latter reflected the narrowing of the wide cross-country differences in the magnitude of pandemic-related fiscal policy support compared with the previous year. The current account deficit is expected to rise toward 1 percent of GDP in the medium term.</i></p> <p><b>Potential Policy Responses:</b> While Mexico's external position at present is broadly in balance, further structural reforms to address investment obstacles are critical to boost growth and exports in the medium and long term and to maintain external sustainability. The reforms should include tackling economic informality and governance gaps, private sector participation in energy, and reforming Pemex's business strategy and governance. The floating exchange rate should continue to serve as a shock absorber, with FX interventions used only to prevent disorderly market conditions. The IMF's Flexible Credit Line continues to provide an added buffer against global tail risks.</p>							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> Mexico's NIIP is projected to improve from –41 percent of GDP in 2021 to about –40 percent of GDP over the medium term, driven mainly by the decline in foreign liabilities. Foreign assets in 2021 were mostly direct investment (18 percent of GDP) and international reserves (16 percent of GDP). Foreign liabilities were mostly direct investment (49 percent of GDP) and portfolio investment (39 percent of GDP). Gross public external debt was estimated at 23 percent of GDP at the end of 2021, of which roughly one-quarter was comprised of holdings of local currency government bonds.</p> <p><b>Assessment.</b> While the NIIP is sustainable and a relatively high share of the local currency denomination of foreign public liabilities reduces FX risks, the large gross foreign portfolio liabilities could be a source of vulnerability in case of global financial volatility. Vulnerabilities from exchange rate volatility are moderate, as most Mexican firms with FX debt have natural hedges and actively manage their FX exposures.</p>						
	2021 (% GDP)	NIIP: –41	Gross Assets: 58	Debt Assets: 19	Gross Liab.: 99	Debt Liab.: 38	
<b>Current Account</b>	<p><b>Background.</b> In 2021, the CA balance moved to a deficit of 0.4 percent of GDP after posting a surplus of 2.4 percent of GDP in 2020, reflecting the recovery of import demand, including from the restocking of intermediate goods, with economic recovery. An increase in investment and a decline in saving contributed roughly equally to the change in the CA balance in 2021. The private sector saving-investment balance declined by 3.1 percentage points of GDP, more than offsetting the improvement in the public sector balance of 0.7 percentage point. In 2022, the current account deficit is expected to widen with higher global commodity prices, given Mexico's net commodity importer status. Other direct trade effects of the war in Ukraine are expected to be insignificant, given the limited trade linkages with Russia and other countries in eastern Europe. In addition, the domestic fuel price ceiling and the associated fuel subsidies will weaken the substitution and income effects of higher oil prices and amplify their impact on the CA balance. Taking these factors into consideration, the 2022 CA deficit is projected to increase to 0.5 percent of GDP, with considerable forecast uncertainty, given risks from the COVID-19 pandemic and the war in Ukraine. Over the medium term, the CA balance is projected to move to a deficit of about 1 percent of GDP.</p> <p><b>Assessment.</b> The EBA model estimates a cyclically adjusted CA norm of –1.2 percent of GDP in 2021. This implies a CA gap of –0.2 percent of GDP, with a range from –1.2 to 0.8 percent of GDP. The contribution from the overall policy gap is estimated at 1.3 percent of GDP, driven by the fiscal gap (1.2 percent). The latter reflects the relatively more accommodative fiscal stances of trading partners. IMF staff adjustments were made to account for the transitory impact of the COVID-19 pandemic on travel services (0.1 percent of GDP), the transport balance (0.6 percent of GDP), the household consumption composition shift (–0.3 percent of GDP), trade in medical products (0.1 percent of GDP), and remittances (–0.3 percent of GDP). Including these adjustments, the IMF staff assesses the midpoint CA gap at –0.2 percent of GDP, with a range of –1.2 to 0.8 percent of GDP.</p>						
	2021 (% GDP)	CA: –0.4	Cycl. Adj. CA: –1.5	EBA Norm: –1.2	EBA Gap: –0.2	COVID-19 Adj.: 0.1	Other Adj.: 0
<b>Real Exchange Rate</b>	<p><b>Background.</b> In 2021, the peso fluctuated in a narrow range of about 20 to 21 pesos per US dollar. The average REER in 2021 appreciated by about 6 percent compared with the 2020 average, mostly driven by a nominal appreciation. As of May 2022, the REER had appreciated by 4 percent compared with its 2021 average.</p> <p><b>Assessment.</b> The IMF staff CA gap implies a REER gap of 0.5 percent of GDP (applying a semielasticity of 0.33). The EBA REER level and index models estimate an overvaluation of 7.7 percent and an undervaluation of 9.1 percent, respectively, in 2021. The IMF staff's overall assessment, based on the CA gap, is a REER gap in the range of –2.6 to 3.5 percent, with a midpoint of 0.5 percent.</p>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<p><b>Background.</b> In 2021, Mexico recorded a small amount of net financial account inflows. Net portfolio outflows increased compared with the previous year on account of both higher purchases of foreign assets by residents and larger sales of Mexican assets by nonresidents. The outflows were offset by a turnaround in other investment flows and continued strong net FDI inflows.</p> <p><b>Assessment.</b> The long maturity of sovereign debt and the relatively high share of local-currency-denominated debt reduce the exposure of government finances to FX depreciation and refinancing risks. The banking sector is resilient, and FX risks of nonfinancial corporate debt are generally covered by natural and financial hedges. However, the strong presence of foreign investors leaves Mexico exposed to capital flow reversals and risk premium increases.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> The central bank remains committed to a free-floating exchange rate and uses discretionary FX intervention to prevent disorderly market conditions. At the end of 2021, gross international reserves were US\$208 billion (16 percent of GDP), up from US\$199 billion at the end of 2020, largely owing to the IMF's general SDR allocation. In 2021, no FX intervention was conducted.</p> <p><b>Assessment.</b> At 131 percent of the ARA metric and 254 percent of short-term debt (at remaining maturity), the level of foreign reserves at the end of 2021 remains adequate. The IMF staff recommends that the authorities continue to maintain reserves at an adequate level over the medium term. The Flexible Credit Line arrangement continues to provide an additional buffer.</p>						



**Table 3.18. The Netherlands: Economy Assessment**

<b>Overall Assessment:</b> <i>The external position in 2021 was stronger than the level implied by medium-term fundamentals and desirable policies.</i> The Netherlands' status as a base for multinational corporations and as a trading hub and financial center makes the external assessment particularly challenging. In the medium term, the current account surplus is expected to shrink moderately as population aging, pension reform, and some fiscal loosening reduce domestic saving.							
<b>Potential Policy Responses:</b> The continued use of ample fiscal buffers for health care and economic support during repeated waves of the COVID-19 pandemic has been appropriate. The repercussions from the war in Ukraine, particularly on commodity markets and refugee flows, are likely to call for additional government expenditure, facilitated by the EU Stability and Growth Pact escape clause activation. Beyond crisis-related spending, fostering investment in physical and human capital as well as facilitating access to finance, particularly for SMEs, should take priority to nurture robust potential growth, thereby also contributing to external rebalancing. Thus, structural investment and reform plans by the new government to allay housing market shortages, reinforce the education system, and advance the climate transition and digitalization are welcome.							
<b>Foreign Asset and Liability Position and Trajectory</b>	<b>Background.</b> The NIIP of The Netherlands reached 93.8 percent of GDP in 2021, reflecting gross assets and liabilities of 1,119.8 and 1,026.1 percent of GDP, respectively, compared to a nearly balanced NIIP at the end of 2009. The largest component of the NIIP comes from the net FDI stock—about €1,057 billion (122.8 percent of GDP) in 2021. According to the latest Coordinated Direct Investment Survey, the inward and outward FDI positions of The Netherlands were second only to those of the United States at the end of 2020, also reflecting its role as the seat for several large multinational corporations and its importance as a financial center, with the largest gross bilateral stocks accounted for by the United States (US\$1.98 trillion), the United Kingdom (US\$1.23 trillion), and Luxembourg (US\$0.77 trillion). Reflecting a persistent CA surplus, the NIIP tends to increase as a ratio of GDP over time in the absence of large valuation effects. The relocation of Shell's headquarters to the United Kingdom may dampen NIIP fluctuations going forward by substituting portfolio investment liabilities (Shell's foreign shareholders) with less volatile FDI liabilities (Shell's ownership of its Dutch operations). <b>Assessment.</b> The Netherlands' safe haven status and its sizable foreign assets limit risks from its large foreign liabilities.						
2021 (% GDP)	NIIP: 93.8	Gross Assets: 1,119.9	Debt Assets: 254.1	Gross Liab.: 1,026.1	Debt Liab.: 285.7		
<b>Current Account</b>	<b>Background.</b> In 2021, the CA surplus rebounded to 9 percent of GDP (9.2 percent cyclically adjusted). The traditionally sizable goods and services surplus expanded to 10.3 percent of GDP as the economies of key trading partners, concentrated in the EU, recovered from the pandemic. The primary income balance improved to -0.4 percent of GDP, mainly reflecting higher net FDI income, while the secondary income deficit contracted to 0.8 percent of GDP due to lower current transfers abroad. Regarding saving and investment, household net lending has turned positive since the global financial crisis, partly reflecting substantial mandatory contributions to second-pillar occupational pension funds. Furthermore, The Netherlands' role as a trading hub and financial center also contributes to a structurally strong headline external position. In particular, multinationals based in The Netherlands are keeping nonfinancial corporate net lending high and have sustained substantial net FDI outflows since the early 2000s by investing abroad. In 2022, the CA surplus is projected to shrink to 8.8 percent of GDP. Shell's relocation to London is estimated to account for about 0.2 percentage point of the decline. Moreover, energy market disruptions related to the war in Ukraine are expected to contribute to a moderate worsening of The Netherlands' modest energy trade deficit. <b>Assessment.</b> The EBA CA model estimates a CA norm of 5.1 percent of GDP and a CA gap of 4.1 percent of GDP in 2021. A large part of the CA gap (2.2 percent of GDP) is attributable to an unexplained residual, reflecting high gross savings of multinationals based in The Netherlands and, as suggested by the EBA's complementary pension tool, a second-pillar retirement scheme with large coverage, robust replacement ratios, and strict pre-funding requirements. Measurement errors or biases in official statistics may also contribute to an overstatement of the net accumulation of wealth that is attributed to Dutch residents, an issue of particular relevance for a country where the foreign ownership of publicly listed corporations has remained consistently above 85 percent. An IMF staff adjustment of -1.7 percent of GDP to offset this bias is calculated with the help of granular data provided by the Dutch central bank. Another -0.4 percent of GDP adjustment is applied to correct for the (temporary) effects of the COVID-19 pandemic, mainly reflecting shifts of household consumption patterns toward goods in 2021, while changes in travel and transport balances and the trade in medical goods played only marginal roles. Taking these factors into consideration, and against a norm in a range of 4.6 to 5.6 percent of GDP, the IMF staff assesses a CA gap of 1.5 to 2.5 percent of GDP.						
2021 (% GDP)	CA: 9.0	Cycl. Adj. CA: 9.2	EBA Norm: 5.1	EBA Gap: 4.1	COVID-19 Adj.: -0.4	Other Adj.: -1.7	Staff Gap: 2.0
<b>Real Exchange Rate</b>	<b>Background.</b> The annual average CPI-based REER appreciated by 0.2 percent in 2021, with part of the rise in the euro NEER offset by inflation in The Netherlands staying below that of its trading partners. The average ULC-based REER appreciated by 1.7 percent. As in 2020, assessing shifts in competitiveness from REER changes continues to be hampered by distortions from the COVID-19 pandemic affecting consumer prices and ULCs across different countries. As of May 2022, the CPI-based REER was 1.7 percent below its 2021 average. <b>Assessment.</b> Assuming a semielasticity of 0.6, the IMF staff CA gap of 2.0 percent of GDP implies a REER undervaluation of about 3.3 percent. EBA REER model estimates for 2021 range from an overvaluation of 6 percent (level model) to 21.9 percent (index model), largely reflecting unexplained residuals. Consistent with the staff CA gap, the IMF staff assesses the REER as undervalued by about 2.5 to 4.1 percent, with a midpoint of 3.3 percent.						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<b>Background.</b> A respective 25 and 27 percent of gross foreign assets and liabilities are attributable to special-purpose entities, financial vehicles with marginal operational footprints in The Netherlands that contribute to substantial yet hard-to-interpret capital flow volatility. A notable part of capital outflows represents the channeling of corporate profits by multinationals abroad as FDI. <b>Assessment.</b> The strong external position limits vulnerabilities to capital outflows. The financial account deficit is primarily the flip side of a CA recording sustained—and structural—surpluses.						
<b>FX Intervention and Reserves Level</b>	<b>Background.</b> The euro has the status of a global reserve currency. <b>Assessment.</b> Reserves held by euro area economies are typically low relative to standard metrics, but the currency is free floating.						

**Table 3.19. Poland: Economy Assessment**

<p><b>Overall Assessment:</b> <i>The external position in 2021 was moderately stronger than the level implied by medium-term fundamentals and desirable policies. The course of the pandemic and spillovers from the Ukraine war are the main near-term risks, and uncertainty remains high. In the context of a domestic-demand-led economic expansion, the use of the Next Generation EU grants, and a projected increase in defense-related government expenditures, the CA deficit is expected to converge to 2 percent of GDP in the medium term.</i></p> <p><b>Policy Responses:</b> In the short term, targeted fiscal support to mitigate the effects of high energy prices and potential new pandemic waves, and support for refugees from the Ukraine war are warranted. In the medium term, policies should boost investment by (1) deploying the Next Generation EU grants to tackle infrastructure gaps, digitalization, and climate change and (2) using public policies to encourage corporate investment and productivity, including through initiatives to increase the availability of clean energy and supply of skilled labor and reducing disincentives to allocate credit to the private sector by redesigning the bank asset tax.</p>							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> The NIIP strengthened to –38 percent of GDP in 2021, from –46 percent in 2020. Gross assets and liabilities reached about 55.5 and 93.4 percent of GDP, respectively. The stock of net FDI (equity and debt), equivalent to 38 percent of gross external liabilities, remains diversified across sectors and source countries. While gross external debt in 2021 remained sizable at 54 percent of GDP, 30 percent of the debt was intercompany lending, and 72 percent of the debt was of long maturity. In 2021, short-term debt (excluding intercompany debt) amounted to 17 percent of total debt (9 percent of GDP) and consisted mostly of liabilities issued by banks (currency and deposits) and the nonfinancial private sector (trade credit). Automatic debt dynamics, helped by Next Generation EU grants, along with GDP growth, are projected to reduce the negative NIIP in the medium term.</p> <p><b>Assessment.</b> While sizable external debt is a vulnerability, rollover risk is mitigated by the large share of long-term debt and intercompany lending that tends to be automatically rolled over. The NIIP has improved markedly in recent years, both in size (as a percent of GDP) and structure, indicating less reliance on portfolio and short-term financing and more on FDI, a more stable source of financing. Adequate reserves reduce residual rollover risk from short-term debt (gross reserves stood at about 162 percent of short-term debt in 2021).</p>						
	2021 (% GDP)	NIIP: –38	Gross Assets: 55.5	Reserve Assets: 25	Gross Liab.: 93.4	Gross External Debt: 54	
<b>Current Account</b>	<p><b>Background.</b> The CA moved from large deficits toward surplus between 2008 and 2020. Poland's CA balance swung to a deficit of 0.6 percent of GDP in 2021, from a (revised) surplus of 2.9 percent in 2020. The main drivers of the 2021 external balance were (1) lower exports due to global supply-chain disruptions, (2) higher import growth due to higher energy prices and recovering domestic demand, and (3) the normalization of the primary income deficit. In the medium term, in the context of a domestic-demand-led economic expansion, the use of the Next Generation EU grants, and a projected increase in defense-related government expenditures, the CA deficit is expected to reach 2 percent of GDP.</p> <p><b>Assessment.</b> The EBA CA model estimates a cyclically adjusted CA of –0.3 percent of GDP and a CA norm of –2.4 percent of GDP, with a standard error of 0.4 percent of GDP. An adjustment of –0.6 percent of GDP to the cyclically adjusted CA balance has been made for transitory pandemic-related factors. This COVID-19 adjustment consists of +0.3 percentage points to reflect the contraction in travel services net exports, +0.2 percentage points to reflect net exports of medical supplies triggered by the health emergency, and –1.1 percentage points to reflect shifts in household consumption composition from services toward consumer goods. The resulting IMF staff CA gap of 1.4 (±0.4) percent of GDP includes identified policy gaps of 2.7 percent of GDP and an unexplained residual of –0.6 percent of GDP.</p>						
	2021 (% GDP)	CA: –0.6	Cycl. Adj. CA: –0.3	EBA Norm: –2.4	EBA Gap: 2.1	COVID-19 Adj.: –0.6	Other Adj.: 0
<b>Real Exchange Rate</b>	<p><b>Background.</b> The annual averages of the NEER and REER depreciated by 2.1 percent and 0.4 percent, respectively, compared with the 2020 averages. Unlike during the global financial crisis, movements in the NEER and REER during the pandemic have been muted. In nominal terms, the average annual exchange rate in 2021 appreciated by 1 percent against the US dollar and depreciated by 2.7 percent against the euro compared with the 2020 average. Over the same period, inflation in Poland was only slightly higher than in its trading partners. As of May 2022, the REER was 0.2 percent below the 2021 average.</p> <p><b>Assessment.</b> The EBA REER index and level models estimate a REER gap of –1 and –20.2 percent, respectively. Consistent with the IMF staff CA gap, the IMF staff assesses the REER as undervalued in 2021 in the range of –4.4 to –2.5 percent, with a midpoint of –3.5 percent (using an estimated elasticity of 0.41).</p>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<p><b>Background.</b> The capital account, dominated by inflows of EU funds, has averaged about 2 percent of GDP over the past 10 years. The capital account surplus declined to 1.6 percent of GDP in 2021 from 2.3 percent in 2020. Over the medium term, it is projected to gradually decline to 1 percent of GDP, with its trajectory mainly supported by Next Generation EU inflows and other EU transfers. As the profitability of foreign companies normalizes, FDI inflows are projected to strengthen and financial flows to revert to historical norms. Financial account inflows in 2021 amounted to 2.1 percent of GDP. Foreign holdings of domestic government securities have declined significantly since 2016 and by the end of 2021 represented 15.2 percent of the total.</p> <p><b>Assessment.</b> The capital account is projected to remain a strong source of support for investment, reflecting EU cooperation frameworks. The foreign holdings of government debt are not negligible at 4.8 percent of GDP and could pose some volatility risk, especially if Poland is viewed by some investors as a proxy for the broader region. However, the diversified foreign investor base is a mitigating factor, and the central bank has the tools to manage bouts in volatility.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> FX reserves increased by about US\$12 billion, to US\$166 billion by the end of 2021, with the IMF's SDR allocation in August 2021 contributing an increase of US\$5.6 billion in reserve assets. Net reserves, which net out the central bank's repo operations (part of its reserve management strategy) and government FX deposits, stood at about US\$151 billion by the end of 2021, reflecting in part the central bank's conversion of a portion of EU funds received by the government to zloty. This is consistent with the central bank's strategy of building an adequate precautionary reserve buffer. The zloty is free floating.</p> <p><b>Assessment.</b> At about 141.4 percent of the IMF's reserve adequacy metric, Poland's level of gross reserves is adequate to guard against external shocks and disorderly market conditions.</p>						

**Table 3.20. Russia: Economy Assessment**

<b>Overall Assessment:</b> <i>The external position in 2021 was stronger than the level implied by medium-term fundamentals and desirable policies.</i> This assessment is based on data and information before the war in Ukraine, and it does not include the effects of sanctions imposed on Russia, Russia's remedial actions in response to sanctions, and the related international spillovers. This year, the CA surplus is projected to double to 11.9 percent of GDP due to highly favorable terms of trade and a sharp decline in imports. The range of uncertainty around the projections, however, is very large.							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> The NIIP declined to US\$ 483.4 billion or 27.2 percent of GDP at the end of 2021, from a peak of 34.9 percent of GDP in 2020, but remained well above its 2018 level (23 percent of GDP) and the near-balance position in 2010. Over 2018–21, gross assets increased from 81 to 93 percent of GDP, though liabilities also increased from 59 to 65 percent of GDP, with external debt at the end of 2021 at 27 percent of GDP. As of the third quarter of 2021, slightly more than a quarter of the external debt was in domestic currency, and there were no obvious maturity mismatches between the gross asset and liability positions. The share of nonresidents' holdings of domestic government debt fell from 32.2 percent at the end of 2019 to 17.8 percent in February 2022.</p> <p><b>Assessment.</b> Before the war, the projected CA surpluses helped maintain Russia's positive NIIP, lowering risks to external stability, while the sizable official external assets, accumulated since the introduction of the new fiscal rule, provided an important buffer against oil revenue fluctuations and enhanced Russia's ability to smooth exchange rate fluctuations. It should be noted that as a result of sanctions, a significant share of reserves (that is, foreign assets) is now frozen.</p>						
2021 (% GDP)	NIIP: 27.2	Gross Assets: 93	Res. Assets: 35.5	Gross Liab.: 65	Debt Liab.: 27		
<b>Current Account</b>	<p><b>Background.</b> In line with the sharp increase in oil and gas prices and demand, and the sharp increase in other commodity prices, the CA surplus increased to US\$122 billion (6.9 percent of GDP) in 2021 from US\$36 billion (2.4 percent of GDP) in 2020. The increase from 2020 was driven mostly by the increase in the gross national savings (from 25.3 to 29.3 percent of GDP), supported by the return to the fiscal rule, while gross national investment remained broadly unchanged (from 23.5 to 22.5 percent of GDP). In 2022, the current account reached a surplus of US\$110 billion in the year to May, more than three times the surplus in January–May last year. The reasons for the large increase include highly favorable terms of trade, export volumes that at least until April have remained resilient despite sanctions, and a sharp decline in imports. As of June 30, the 2022 surplus is projected at US\$265 billion (about 12 percent of GDP), much higher than the US\$120 billion surplus in 2021. The range of uncertainty around the projection is very large however, including through the possibility of further sanctions.</p> <p><b>Assessment.</b> The EBA CA model estimates a norm of 4.4 percent of GDP for 2021 and a cyclically adjusted CA surplus of 7.1 percent of GDP. After a COVID-19 adjustment of –0.6 percent of GDP, reflecting a temporary adjustment for tourism service imports (–0.8 percent of GDP) and higher transport costs (0.1 percent of GDP), the IMF staff assesses the CA gap at 2.1 percent of GDP, with a range from 1.2 to 3 percent of GDP. Identified policies contributed 1.8 percent of GDP to the gap. About a fifth of the total policy gap is due to fiscal policy, reflecting larger consolidation needs in the rest of the world compared with Russia.</p>						
2021 (% GDP)	CA: 6.9	Cycl. Adj. CA: 7.1	EBA Norm: 4.4	EBA Gap: 2.6	COVID-19 Adj.: –0.6	Other Adj.: 0	Staff Gap: 2.1
<b>Real Exchange Rate</b>	<p><b>Background.</b> The average REER depreciated by 1.1 percent in 2021 and by 13.2 percent over 2017–21. Since the Russian invasion of Ukraine, the ruble has been very volatile, first depreciating by some 50 percent against the dollar amid a selloff in Russian assets, but later retracing all its losses and now standing well above its pre-war value, as the current account balance has increased while capital flow measures have limited outflows. As of May 2022, the REER was 38 percent above the 2021 average.</p> <p><b>Assessment.</b> The IMF staff CA gap implies a REER undervaluation of 10.6 percent in 2021 (applying an estimated elasticity of 0.19). The EBA REER index and level model estimates point to a REER undervaluation of 11.2 and 33.8 percent, respectively. Consistent with the IMF staff CA gap, the IMF staff assesses the REER as undervalued in 2021 in the range of 6 to 15.2 percent, with a midpoint of 10.6 percent.</p>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<p><b>Background.</b> Reflecting the impact of the pandemic, Russia experienced a period of high volatility accompanied by moderate outflows by both the banking and nonbanking private sectors in 2020 and in early 2021. Through 2021, the volatility abated in line with the strengthening recovery, though moderate capital outflows continued, reflecting the accumulation of foreign assets by the nonbanking private sector and some further bank deleveraging. Since the beginning of the war in Ukraine, the central bank of Russia first increased the interest rate to 20 percent, but later lowered it to 9.5 percent, and broad capital flow measures have been introduced to stave off capital outflows.</p> <p><b>Assessment.</b> In recent years, large FX reserves and the floating exchange rate regime have provided substantial buffers to help absorb shocks. Following the sanctions, Russia has introduced, and later relaxed, broad capital flow measures, including inter alia a ban on selling securities by nonresidents, a ban on FX lending to nonresidents, a limit on residents placing FX in foreign bank accounts, a requirement to obtain permission to lend rubles and sell securities and real estate to nonresidents (residents of the sanctioning countries), and restrictions on the ability of nonresidents to transfer money abroad.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> Before the war, interventions were limited, and reserve accumulation was driven mostly by the fiscal rule and oil prices above the fiscal reference level, except in the acute phase of the pandemic in 2020, when the central bank engaged in some reserve sales and halted previously ongoing schedules of FX purchases. In 2021, the central bank resumed the FX purchases under the fiscal rule (US\$63.5 billion), which boosted international reserves further to US\$632.2 billion by the end of 2021 from US\$596.8 billion at the end of 2020. Reserves fell by US\$24.2 billion from the end of 2021 to US\$606.4 billion by the end of March 2022 as the central bank sold foreign currency to support the ruble.</p> <p><b>Assessment.</b> Before the war, international reserves in 2021 were equivalent to 339 percent of the IMF's reserve adequacy metric. Considering Russia's vulnerability to oil price shocks, an additional commodity buffer of US\$77 billion is appropriate, translating into a ratio of reserves to the buffer-augmented ARA metric of 239 percent. While considerably above the adequacy range of 100 to 150 percent, the level of reserves was assessed as appropriate, considering Russia's exposure to other external shocks. It should be noted that, as a result of sanctions, a significant share of international reserves has been frozen, complicating any assessment of reserve adequacy.</p>						

**Table 3.21. Saudi Arabia: Economy Assessment**

<p><b>Overall Assessment:</b> <i>The external position in 2021 was broadly in line with medium-term fundamentals and desirable policies.</i> The external balance sheet remains strong. Reserves remain adequate considering standard IMF metrics. Under the current fiscal balance path, the central government's non-oil primary balance would be on an improving trend while the net financial asset position would turn positive in 2024, earlier than expected. The pegged exchange rate continues to provide Saudi Arabia with a credible policy anchor. Given the close link between the fiscal and external balance and the structure of the economy, external adjustment will be driven primarily by fiscal policy.</p> <p><b>Potential Policy Responses:</b> Continued fiscal consolidation will help align the CA with its norm, including by delinking spending decisions from international oil price fluctuations. This should be supported by continued implementation of important structural fiscal reforms that have been initiated over the past few years, including the VAT rate increase, broad-based improvement of public financial management, and energy price reform. The authorities have announced their intention to continue with most of those policies while pursuing ambitious structural reforms to help diversify the economy and boost the non-oil tradable sector, which will be necessary to keep the external position in balance.</p>							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> Net external assets are estimated at 73.5 percent of GDP at the end of 2021, down from 85.2 percent of GDP in 2020 and down from 105.4 percent in 2015. Only broad categories are available on the composition of external assets. Portfolio and other investments, reserves, and FDI respectively account for 51 percent, 37 percent, and 12 percent of total external assets.</p> <p><b>Assessment.</b> The external balance sheet remains very strong. Substantial accumulated assets represent both protection against vulnerabilities from oil price volatility and saving of exhaustible resource revenues for future generations.</p>						
	2021 (% GDP)	NIIP: 73.5	Gross Assets: 150.3	Res. Assets: 54.6	Gross Liab.: 76.8	Debt Liab.: 34.4	
<b>Current Account</b>	<p><b>Background.</b> The CA balance registered a surplus of 5.3 percent of GDP in 2021, compared to a deficit of 3.2 percent in 2020 (which itself followed a surplus of 4.8 percent of GDP in 2019). The trade balance is estimated to have improved by 9.6 percent of GDP as the price and volume of oil exports increased. For the projections, oil production is assumed to follow the OPEC+ Agreement. Oil prices are assumed to be US\$105.9 a barrel in 2022. The terms of trade are estimated to have improved by 48.4 percent. The CA is expected to register a large surplus in 2022 (17.2 percent of GDP) as oil revenues further increase in part due to higher oil price projections linked to the war in Ukraine (the terms of trade are projected to improve by 37 percent).</p> <p><b>Assessment.</b> Saudi Arabia's reliance on oil further complicates the application of standard external assessment methodologies, given the wide swings of oil prices in 2020 and 2021. The EBA-Lite methodology estimates a CA gap of -1.0 percent of GDP using the CA regression approach. An upward adjuster is applied to the CA to account for the temporary impact of the COVID-19 crisis of 1.1 percent of GDP regarding travel services trade (0.87 percent of GDP), transportation (0.05 percent of GDP), and a shift of consumption towards tradable goods (0.19 percent of GDP). The Consumption Allocation Rules suggest a CA gap of 4.3 percent of GDP for constant real annuity rules and 0.1 percent of GDP for constant real per capita annuity allocation rules. The Investment Needs Model suggests a CA gap of 5.2 percent of GDP. IMF staff assess a CA gap of -1.0 percent of GDP, with a range from -2.8 to 0.8 percent of GDP in 2021.<sup>1</sup></p>						
	2021 (% GDP)	CA: 5.3	Cycl. Adj. CA: 5.4	EBA Norm: —	EBA Gap: —	COVID-19 Adj.: 1.1	Other Adj.: —
<b>Real Exchange Rate</b>	<p><b>Background.</b> The riyal has been pegged to the US dollar at a rate of 3.75 since 1986. The REER depreciated by 1.9 percent in 2021 and was 4 percent above its 10-year average. The REER depreciation was driven by the decline of the US dollar versus trading partner currencies, with the inflation differential remaining contained. As of May 2022, the REER was 4.1 percent above the 2021 average.</p> <p><b>Assessment.</b> Exchange rate movements have a limited impact on competitiveness in the short run, as most exports are oil or oil-related products and there is limited substitutability between imports and domestically produced products, which in turn have significant imported labor and intermediate input content. Consistent with the IMF staff CA gap and based on an elasticity of 0.2, the IMF staff assesses the REER to be overvalued by 4.1 percent, with a range of -4.9 and 13.1 percent.</p>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<p><b>Background.</b> Net financial outflows continued in 2021 as the PIF and other entities invested abroad. The equity market saw inflows as oil prices recovered and prospects regarding COVID-19 improved towards the end of 2021.</p> <p><b>Assessment.</b> Analysis of the financial account is complicated by the lack of detailed information on the nature of the financial flows. The strong reserves position limits risks and vulnerabilities to capital flows.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> Total reserve assets declined to US\$453.7 billion at the end of 2020, down from US\$499.6 billion by the end of 2019, and from US\$732.4 billion in 2014. This trend was largely driven by the 2014–16 oil price decline and subsequent oil price shocks until the COVID-19 pandemic in 2020, as well as transfers from SAMA to the Public Investment Fund in 2020. While total reserves increased during 2021, reaching US\$455.4 billion, net foreign assets declined from US\$449.2 billion to US\$438.2 billion (52.6 percent of GDP, 22 months of imports, and 254 percent of the ARA metric), largely due to an increase in foreign liabilities. Going forward, reserves are expected to increase significantly in the wake of rising oil export revenues.<sup>2</sup></p> <p><b>Assessment.</b> Reserves play a dual role: they are savings for both precautionary motives and for future generations. Reserves are adequate for precautionary purposes (measured by the IMF's metrics). Nevertheless, fiscal prudence is needed over the medium term to strengthen the CA and increase savings for future generations.</p>						

**Table 3.22. Singapore: Economy Assessment**

<b>Overall Assessment:</b> <i>The external position in 2021 was substantially stronger than the level implied by medium-term fundamentals and desirable policies.</i> The assessment is subject to a wide range of uncertainty, reflecting Singapore's very open economy and status as a global trading and financial center. In the near term, the war in Ukraine is expected to narrow the CA surplus due to a related negative terms-of-trade shock for Singapore. Over the medium term, the CA surplus is projected to narrow gradually alongside an increase in household consumption as the share of the prime working-age population actively saving for retirement declines, capital-related imports recover, and public spending increases.							
<b>Potential Policy Responses:</b> The planned implementation of major green infrastructure projects should help reduce external imbalances in the near term. Over the medium term, Singapore's economy will be undergoing structural transformation in light of a rapidly aging population and a transition to a green and digital economy. Higher public investment addressing these issues, including spending on health care, green and other physical infrastructure, and human capital, would help reduce external imbalances over the medium term by lowering net public saving.							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> The NIIP stood at 256.4 percent of GDP in 2021, down from 280.8 percent of GDP in 2020 but above the average level of 231.1 percent of GDP over 2016–20. Gross assets and liabilities are high, reflecting Singapore's status as a financial center. About half of foreign liabilities are in FDI, and about a third are in the form of currency and deposits. The CA surplus has been a main driver since the global financial crisis, but valuation effects were material in some years. CA and growth projections imply that the NIIP will rise over the medium term. The large, positive NIIP in part reflects the accumulation of assets for old-age consumption, which is expected to be gradually unwound over the long term.</p> <p><b>Assessment.</b> Large gross non-FDI liabilities (477.9 percent of GDP in 2021)—predominantly cross-border deposit-taking by foreign bank branches—present some risks, but these are mitigated by large gross asset positions, banks' large short-term external assets, and the authorities' close monitoring of banks' liquidity risk profiles. Singapore has large official reserves and other official liquid assets.</p>						
2021 (% GDP)	NIIP: 256.4	Gross Assets: 1,240	Res. Assets: 105.3	Gross Liab.: 983.6	Debt Liab.: 383.9		
<b>Current Account</b>	<p><b>Background.</b> The CA surplus was 18.1 percent of GDP in 2021, up from 16.8 percent in 2020. This reflects larger surpluses in both the goods and services balances. The CA balance has been higher than the average of 16.7 percent since 2016 and significantly lower than the post-global-financial-crisis peak of 22.9 percent in 2010. Singapore's large CA balance reflects a strong goods balance and a small surplus in the services balance that is partly offset by a deficit in the income account balance.<sup>1</sup> Structural factors and policies that boost savings, such as Singapore's status as a financial center, consecutive fiscal surpluses in most years, and the rapid pace of aging—combined with a mandatory defined-contribution pension program (with assets amounting to about 94.8 percent of GDP in 2021)—are the main drivers of Singapore's strong external position. The CA surplus is projected to narrow over the medium term on the back of increased infrastructure and social spending. In 2021, public saving increased—although it remained in negative territory as the fiscal deficit narrowed—and private saving increased as well.</p> <p><b>Assessment.</b> Guided by the EBA framework, the IMF staff assesses the 2021 CA gap to be in the range of 3.4 to 7 percent of GDP, with a midpoint of 5.2 percent.<sup>2</sup> The identified policy gaps remained close to zero in 2021, reflecting a less expansionary fiscal policy adopted in that year compared with the rest of the world and low but efficient public health care expenditure.</p>						
2021 (% GDP)	CA: 18.1	Cycl. Adj. CA: 18.8	EBA Norm: —	EBA Gap: —	COVID-19 Adj.: -1.4	Other Adj.: —	Staff Gap: 5.2
<b>Real Exchange Rate</b>	<p><b>Background.</b> The REER depreciated by 0.3 percent in 2021, reflecting the depreciation of the NEER by 0.4 percent. This followed a depreciation of the REER by 2.3 percent and an appreciation of the NEER by 0.2 percent, both cumulative, between 2018 and 2020. As of May 2022, the REER had appreciated by 4.1 percent relative to the 2021 average.</p> <p><b>Assessment.</b> Consistent with the staff CA gap, the IMF staff assesses the REER as undervalued in the range of 6.8 to 14 percent, with a midpoint of 10.4 percent, in 2021 (applying an estimated elasticity of 0.5).<sup>3</sup></p>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<p><b>Background.</b> Singapore has an open capital account. As a trade and financial center in Asia, Singapore can be significantly affected by changes in market sentiment. Increased risk aversion in the region, for instance, may lead to inflows to Singapore given its status as a regional safe haven, whereas global stress may lead to outflows. The financial account balance reflects in part reinvestment abroad of income from official foreign assets, as well as sizable net inward FDI and smaller but more volatile net bank-related flows. In 2021, the capital and financial account switched to outflows of 2.1 percent of GDP from temporary inflows of 4.6 percent in 2020 (outflows ranged from 9.5 to 18 percent over 2016–20).</p> <p><b>Assessment.</b> The financial account is likely to remain in deficit as long as the trade surplus remains large.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> With the NEER as the intermediate monetary policy target, intervention is undertaken to achieve inflation and output objectives. With Singapore being a financial center, prudential motives call for a larger NIIP buffer. Official reserves held by the Monetary Authority of Singapore (MAS) reached US\$417.9 billion (105.3 percent of GDP) in 2021. Aggregate data on FX intervention operations have been published since April 2020.</p> <p><b>Assessment.</b> In addition to FX reserves held by the MAS, Singapore also has access to other official foreign assets managed by Temasek and the Government of Singapore Investment Corporation.<sup>4</sup> The current level of official external assets appears adequate, even after considering prudential motives, and there is no clear case for further accumulation for precautionary purposes.</p>						

**Table 3.23. South Africa: Economy Assessment**

<b>Overall Assessment:</b> <i>The external position in 2021 was moderately weaker than the level implied by medium-term fundamentals and desirable policies. The exceptional CA surplus in 2021 (3.7 percent of GDP) is explained by the sharp increase in commodity prices and a number of pandemic-related factors, and is expected to be temporary. If the war in Ukraine subsides and commodity prices normalize, the CA is expected to return to its structural deficit.</i>							
<b>Potential Policy Responses:</b> Tackling external imbalances will require a combination of bold implementation of structural reforms and gradual but substantial fiscal consolidation while providing space for infrastructure and social spending to help reduce poverty and inequality. Reform efforts should focus on improving governance, the efficiency of key product markets (to promote private sector participation), and the functioning of labor markets. These reforms are expected to help attract less volatile and longer-term capital inflows, such as FDI, and to boost exports. Seizing opportunities to accumulate international reserves, should they arise, would strengthen the country's ability to deal with shocks.							
<b>Foreign Asset and Liability Position and Trajectory</b>	<b>Background.</b> With large gross external assets and liabilities (132 and 107 percent of GDP, respectively, in the fourth quarter of 2021), South Africa is highly integrated into international capital markets. The NIIP improved markedly from 7.8 percent of GDP in 2019 to 25 percent of GDP in the fourth quarter of 2021, mainly due to nonresident capital outflows and valuation adjustments from depreciation of the rand, as valuation effects have a larger impact on South Africa's foreign assets than on its foreign liabilities, including for the banking sector. The NIIP is expected to moderate over the medium term as the CA balance is projected to return to a deficit in 2023 and beyond. Gross external debt rose from 47.8 percent of GDP in 2019 to 50.8 percent of GDP in 2020 (as GDP contracted) and then declined to 38.3 percent of GDP by the fourth quarter of 2021 on the back of the GDP rebound and the rand/US dollar appreciation. Short-term external debt (on a residual maturity basis) was about 10 percent of GDP at the end of 2021. <b>Assessment.</b> Risks from large gross external liabilities are mitigated by a large external asset position and the liability composition (mostly in equities; external debt is mostly in rand).						
2021 (% GDP)	NIIP: 25.0	Gross Assets: 132	Debt Assets: 18.0	Gross Liab.: 107	Debt Liab.: 38.3		
<b>Current Account</b>	<b>Background.</b> The CA balance turned into a surplus for the first time in nearly two decades in 2020, reaching 2 percent of GDP, due to pandemic-related factors. The CA surplus further increased to 3.7 percent of GDP in 2021. Continued buoyancy in terms of trade and commodity exports more than offset imports from the recovery in domestic demand and a weaker income and services balance, as dividend payments picked up from 2020 and tourism remained subdued. In addition, private investment remained anemic in 2021. The CA balance is projected to remain positive in 2022 at 1.5 percent of GDP, as the war in Ukraine has led to a further increase in commodity prices that more than offsets a higher oil import bill. The CA deficit will gradually widen to about 2 percent of GDP over the medium term as the trade balance deteriorates. <b>Assessment.</b> The IMF staff estimates a CA gap in the range of –2.4 to –1 percent of GDP in 2021. The IMF staff's cyclically adjusted CA is estimated at 0.2 percent of GDP in 2021, accounting for COVID-19–related adjustors of –2.7 percent of GDP to take account of the unique impact of the pandemic on gold and other mineral exports, travel services (including tourism), medical spending imports, and still lower dividend payments (compared with pre-pandemic levels), <sup>1</sup> as well as the statistical treatment of transfers and income accounts. <sup>2</sup> The adjusted CA norm (2 percent of GDP) for 2021 is obtained by subtracting 0.6 percentage point from the EBA CA norm (2.6 percent of GDP) to reflect lower life expectancy relative to other countries in the regression sample. <sup>3</sup>						
2021 (% GDP)	CA: 3.6	Cycl. Adj. CA: 1.3	EBA Norm: 2.6	EBA Gap: –1.3	COVID-19 Adj.: –2.7	Other Adj.: 2.2	Staff Gap: –1.7
<b>Real Exchange Rate</b>	<b>Background.</b> After depreciating during 2019–20, the CPI-based REER further depreciated by 4.5 percent in 2021, mainly driven by the nominal depreciation in the last months of 2021 from a worsening external environment. As of May 2022, the REER was 1.5 percent below the 2021 average. <b>Assessment.</b> The IMF staff CA gap implies an overvalued REER with a midpoint of 7.3 percent for 2021 (applying an estimated elasticity of 0.23). The two REER-based regressions point to overvaluation in a range of 1.2 percent (index approach) to 15.9 percent (level approach). Based on the CA approach, the IMF staff assesses the REER to be overvalued by 7.3 percent, with a range between 4.3 and 10.3 percent.						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<b>Background.</b> Net FDI increased significantly in 2021 (from 1.5 percent of GDP in 2020 to 9.7 percent in 2021), while net portfolio investment recorded substantially larger outflows (–13 percent of GDP). These significant flows in 2021 can largely be attributed to Prosus N.V. acquiring about 45 percent of Naspers Ltd N ordinary shares from existing Naspers Ltd shareholders (direct investment inflows) and to both resident and nonresident investors exchanging Naspers Ltd N ordinary shares for Prosus N.V. ordinary shares (portfolio investment outflows). Gross external financing needs stood at 6.4 percent of GDP in 2021. <b>Assessment.</b> In 2021, COVID-19–related financial market volatility in emerging markets persisted despite overall favorable market sentiment and a search for yield. This followed large capital outflows and asset sell-offs during the pandemic in spring 2020 and the corresponding significant rand depreciation. Despite the projected CA surplus in 2022, risks from large reliance on non-FDI inflows for external financing and sizable nonresident holdings of local financial assets are mitigated by a flexible exchange rate, relatively small currency mismatches in the economy, large equity liability composition of the NIIP, and a large domestic institutional investor base. The latter tends to reduce asset price volatility during periods of market stress. The South African authorities obtained US\$4.3 billion (100 percent of quota) under the IMF's Rapid Financing Instrument in July 2020.						
<b>FX Intervention and Reserves Level</b>	<b>Background.</b> South Africa's exchange rate regime is classified as floating. Central bank intervention in the FX market is rare. In 2021, international reserves were about 13.8 percent of GDP, 214.7 percent of gross external financing needs, and 5.6 months of imports. Reserves stand below the IMF's composite adequacy metric (80.8 percent of the metric without considering existing CFM measures and 89.3 percent of the metric after considering them). <b>Assessment.</b> If conditions allow, reserve accumulation would be desirable over the medium term to strengthen the external liquidity buffer, subject to maintaining the primacy of the inflation objective. South Africa received US\$4.2 billion as part of the IMF's SDR allocation in August 2021.						

**Table 3.24. Spain: Economy Assessment**

<p><b>Overall Assessment:</b> <i>The external position in 2021 is broadly in line with the level implied by medium-term fundamentals and desirable policies.</i> The IMF staff assesses Spain's CA norm to be relatively high due to external sustainability risks from a large negative NIIP. Even though the NIIP improved in 2021, strengthening it further will require sustaining a relatively high CA surplus over the coming years. In the baseline, the CA is expected to recover and reach 1.5 percent of GDP in the medium term, supported by a full resumption of foreign tourism flows and the resolution of global supply bottlenecks. However, there are significant downside risks associated with the impact of the war in Ukraine on trading partners' growth and energy prices.</p> <p><b>Potential Policy Responses:</b> Keeping the CA balance in line with its norm will require a combination of fiscal consolidation efforts and higher private saving. The latter could be achieved through productivity gains, which will require continued wage flexibility, addressing labor market duality, and actions to enhance education outcomes and encourage innovation. The recovery plan that is currently being implemented foresees investments and reforms in these areas, as well as specific measures to diversify and improve the quality of tourism services.</p>							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> The NIIP improved to <math>-70.4</math> percent of GDP at the end of 2021, reversing the decline that occurred in 2020. This increase reflected a net increase in financial assets and significant positive valuation effects. Gross liabilities—of which nearly 70 percent correspond to external debt—declined to 283.1 percent of GDP at the end of 2021 including due to negative valuation effects. The negative NIIP is largely attributed to the general government and the central bank, with TARGET2 liabilities amounting to 42.6 percent of GDP at the end of 2021.</p> <p><b>Assessment.</b> Despite its projected decline, the large negative NIIP comes with external vulnerabilities, including from large gross financing needs and potentially adverse valuation effects, depending on the pace of tightening of global financial conditions and policy responses globally. Mitigating factors are the favorable maturity structure of outstanding sovereign debt (averaging almost eight years), the limited share of debt denominated in foreign currency (9.5 percent of total external debt), and current ECB measures that keep the cost of debt low.</p>						
	2021 (% GDP)	NIIP: $-70.4$	Gross Assets: 212.8	Debt Assets: 96.3	Gross Liab.: 283.1	Debt Liab.: 173.2	
<b>Current Account</b>	<p><b>Background.</b> Following a significant decline in 2020, the CA surplus increased slightly in 2021 (from 0.8 to 0.9 percent of GDP), supported by an improvement in the services surplus, most notably from tourism, which was partially offset by a widening of the goods deficit. Higher public savings were enough to offset the rise in public investment and the drawdown of excess private savings generated during the pandemic. Despite limited direct trade and financial linkages with Russia, Spain has been negatively impacted by the war in Ukraine via higher energy prices, trading partners' reduced growth, and some erosion of confidence. In the first quarter of 2022, the trade balance deteriorated due to a sharp increase in imports associated with high energy prices, which was only partially offset by strong growth of services exports. The CA is projected to gradually recover in the medium term with a full resumption of foreign tourism flows and the resolution of global supply bottlenecks, which are expected to offset the increase in imports driven by stronger domestic demand, including due to investments funded by Next Generation EU funds.</p> <p><b>Assessment.</b> The 2021 cyclically adjusted CA balance is <math>-0.1</math> percent of GDP. However, this mainly reflects the pandemic's transitory impact due to shocks not captured by the EBA model, which amount to 1.6 percent for travel services (including tourism), 0.2 percent for transport, 0.3 percent for medical goods, and <math>-0.4</math> percent for the global shift of household consumption from services to consumer goods. Adjusting for these effects, the 2021 cyclically adjusted CA balance is 1.6 percent of GDP, which is larger than the norm suggested by the EBA CA model. However, given external sustainability considerations, including potentially adverse NIIP valuation effects, the IMF staff assesses the CA norm to be 1.7 percent of GDP, with a range of 1 to 2.4 percent of GDP. This yields a CA gap range of <math>-0.8</math> to 0.6 percent of GDP, with a midpoint of <math>-0.1</math> percent of GDP.<sup>1</sup></p>						
	2021 (% GDP)	CA: 0.9	Cycl. Adj. CA: $-0.1$	EBA Norm: 0.0	EBA Gap: $-0.1$	COVID-19 Adj.: 1.7	Other Adj.: $-1.7$
<b>Real Exchange Rate</b>	<p><b>Background.</b> In 2021, the CPI-based REER appreciated by 0.9 percent and the ULC-based REER depreciated by 1.7 percent relative to 2020. Both indicators show at least a partial reversal of the significant appreciation from euro entry in 1999–2008. As of May 2022, the REER was 1.5 percent below the 2021 average.</p> <p><b>Assessment.</b> The EBA REER models estimate an overvaluation of 8.8 percent (index) to 26.4 percent (level) for 2021. Based on the IMF staff CA gap range and using an elasticity of 0.26, the IMF staff assesses the REER gap range to be <math>-2.3</math> to 3 percent, with a midpoint of 0.4 percent.<sup>2</sup></p>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<p><b>Background.</b> The financial account balance increased from 1.6 to 2.4 percent of GDP in 2021. Outflows by the Bank of Spain partially offset net inflows by the other resident sectors, particularly in portfolio investment. The capital account surplus increased due to the flows associated with Next Generation EU funds.</p> <p><b>Assessment.</b> Large external financing needs leave Spain vulnerable to sustained market volatility, although the ECB's policies to maintain favorable liquidity conditions and monetary accommodation remain a mitigating factor.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> The euro has the status of a global reserve currency.</p> <p><b>Assessment.</b> Reserves held by the euro area are typically low relative to standard metrics, but the currency is free floating.</p>						

**Table 3.25. Sweden: Economy Assessment**

<b>Overall Assessment:</b> <i>The external position in 2021 remains stronger than the level implied by medium-term fundamentals and desirable policies, despite a decrease in the CA by 0.6 percentage point to 5.5 percent of GDP.</i> While Sweden has limited direct exposure to Russia, second-round effects from main trading partners (notably Germany) could weigh on economic activity and the current account in 2022. Over the medium term, the CA surplus is expected to decline further to its long-term average, as domestic and global fiscal policies normalize and structural reforms are undertaken.							
<b>Potential Policy Responses:</b> There is scope for greener and growth-enhancing private and public investments to facilitate structural transformation of the economy. Once the recovery is well underway, past imbalances and policy distortions will need to be addressed through implementation of reforms that raise productive investment and thereby potential output. Policies to lower household debt would safeguard the economy from a severe consumption shock following a crisis.							
<b>Foreign Asset and Liability Position and Trajectory</b>	<b>Background.</b> The NIIP is estimated to have increased by 1.3 percentage points to reach 16.8 percent of GDP in 2021. The increase is lower than the CA balance due to valuation effects. It is expected to rise further in the medium term, reflecting the outlook for continued CA surpluses. However, these projections are subject to uncertainty as IIP data include large errors and omissions that have averaged –2.2 percent of GDP over the past 10 years.						
	<b>Assessment.</b> Gross liabilities increased to 279.5 percent of GDP in 2021, with a bit more than half being gross external debt (173 percent of GDP). Other financial institutions, which are mostly pension funds, hold the bulk of net foreign assets (82 percent of GDP), followed by social security funds (24 percent of GDP), households (20 percent of GDP), and the central bank (7 percent of GDP), while nonfinancial corporations (70 percent of GDP), monetary financial institutions (39 percent of GDP), and the government (6 percent of GDP) are net external debtors. Although rollovers of external debt (which include banks' covered bonds) pose some vulnerability, risks are moderated by the banks' ample liquidity and large capital buffers.						
2021 (% GDP)	NIIP: 16.8	Gross Assets: 296.3	Debt Assets: 84.9	Gross Liab.: 279.5	Debt Liab.: 173		
<b>Current Account</b>	<b>Background.</b> The CA surplus decreased to 5.5 percent of GDP in 2021, compared with 2020 (6.1 percent of GDP), driven mainly by a decline in primary income from investments and stronger growth of imports than exports as the recovery boosted domestic demand, leading to a negative contribution of net exports to growth since 2017. Although demand for tourism services imports picked up in 2021, it is still below pre-pandemic levels. These still-lower-than-usual imports of tourism services are estimated to have kept the CA surplus higher by about 0.3 percentage point (see the COVID-19 adjustor). While Sweden has limited direct exposure to Russia (exports and imports are less than 0.4 percent of GDP each), second-round effects from main trading partners (notably Germany) could weigh on economic activity and the current account in 2022. Over the medium term, the CA is projected to return to its long-term average of 3.5 percent of GDP as domestic and global policies normalize and structural reforms are undertaken.						
	<b>Assessment.</b> The cyclically adjusted CA is estimated at 5.3 percent of GDP in 2021, 4.1 percentage points above the cyclically adjusted EBA norm of 1.2 percent of GDP. However, the estimated EBA norm for Sweden is low and has been below the actual CA outcome for the past two decades, suggesting that factors not captured by the model, such as Sweden's mandatory contributions to fully funded pension schemes and an older labor force (with a high share of workers age 65 or older), may also be driving Sweden's saving-investment balances. Taking into account temporary COVID-19 adjustments for travel (–0.4 percent of GDP), transport (–0.1 percent of GDP), medical imports (+0.1 percent of GDP), and household consumption (0 percent of GDP), which were affected by the COVID-19 crisis, the IMF staff assesses the CA gap at 3.6 percent of GDP in 2021, with an estimated range of 3.2 to 4 percent of GDP. Policies that would explain this gap make up 0.2 percentage point, with fiscal policy, which was not as expansionary as in the rest of the world, accounting for 1 percent and partially offset by gaps in health (–0.1 percent), reserves (–0.1 percent), and credit (–0.6 percent). Complementary EBA tools suggest that Sweden's labor market regulation, which is more flexible than average, along with its pension system, could explain about 1.5 percentage points of the gap.						
2021 (% GDP)	CA: 5.5	Cycl. Adj. CA: 5.3	EBA Norm: 1.2	EBA Gap: 4.1	COVID-19 Adj.: –0.5	Other Adj.: —	Staff Gap: 3.6
<b>Real Exchange Rate</b>	<b>Background.</b> The krona appreciated by 3.6 percentage points in real effective terms (ULC-based) in 2021 relative to its average level in 2020, partly reflecting financial inflows and a stronger economic rebound than in main trading partners (real GDP growth increased from –2.8 percent in 2020 to 4.8 percent in 2021). As of May 2022, the REER was 6.3 percent below the 2021 average.						
	<b>Assessment.</b> The IMF staff CA gap implies a REER gap of –10.7 percent in 2021 (applying an estimated elasticity of 0.34), with a range between –9.5 and –11.8 percent (using the model's standard error of ±0.4 percent of GDP). The REER index and level models suggest a gap of –11.1 percent and –14.8 percent, respectively, for 2021. The ULC-based REER index using Organisation for Economic Co-operation and Development data in 2021 was 4.4 percent below its 29-year average (since the krona was floated in 1993). Because this indicator has fluctuated around a broadly stable level since the currency was floated, it provides a useful indication of valuation, which the IMF staff prefers to use. Overall, the IMF staff assesses the krona to be valued between +0.6 and –9.4 percent, with a midpoint of –4.4 percent as guided by the ULC-based REER index and its standard deviation. <sup>1</sup> This REER gap may continue to decline further once the situation, including monetary policy, normalizes.						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<b>Background.</b> The financial account declined by almost half in 2021, to 2.2 percent of GDP (from 3.7 percent in 2020), driven by a reversal in other investments (from 2.2 to –3.9 percent of GDP) and FDI (which decreased from 0.9 to –1.1 percent of GDP), while portfolio investments more than tripled from 2.2 to 7.5 percent of GDP.						
	<b>Assessment.</b> Given their size, interconnectedness, and funding model, Sweden's large banks are vulnerable to liquidity risks stemming from global wholesale markets. However, banks have improved their structural liquidity positions in recent years. Also, the authorities have strengthened regulation by introducing liquidity coverage ratio requirements in foreign and domestic currency in addition to the overall liquidity coverage ratio. This created substantial buffers before the COVID-19 crisis and, together with the swift and strong policy response that provided support until recently, eased liquidity and funding pressures for banks in 2020 and 2021.						
<b>FX Intervention and Reserves Level</b>	<b>Background.</b> The exchange rate is free floating. Foreign currency reserves increased by US\$4.5 billion to stand at US\$62 billion in December 2021, which is equivalent to 21 percent of the short-term external debt of monetary and financial institutions (primarily banks), about 10 percent of GDP, and 2.8 months of imports. The increase in reserves reflects the increase in the general SDR allocation that became effective in August 2021. There were no FX interventions in 2021.						
	<b>Assessment.</b> In view of the high dependence of Swedish banks on wholesale funding in foreign currency and the disruptions in such funding that have occurred at times of international financial distress, Sweden should maintain adequate foreign reserves. A US\$60 billion swap facility was agreed upon with the US Federal Reserve to address risks on dollar funding related to the COVID-19 crisis. The swap facility was extended three times before expiring by the end of 2021, and although it was not used, it provided an important backstop function.						



**Table 3.26. Switzerland: Economy Assessment**

<b>Overall Assessment:</b> <i>Switzerland's external position in 2021 was assessed as broadly in line with the level implied by medium-term fundamentals and desirable policies. However, complex measurement issues and data lags complicate the assessment.<sup>1</sup> The current account is expected to remain in a large, surplus position (about 7 percent of GDP) in the medium term, with relatively limited exposure to oil and gas from Russia.</i>							
<b>Potential Policy Responses:</b> <i>To maintain a broadly balanced external position, fiscal policy should remain broadly balanced in structural terms, in line with the authorities' debt-brake rule framework, accommodating additional spending related to the war in Ukraine (for example, accommodation of refugees) and continuing COVID-19 support to vulnerable households/firms where needed. The required offset of extraordinary COVID-19-related spending via future fiscal surpluses should be extended to avoid excessive headwinds to sustained recovery. With risks of persistently higher inflation rising, the Swiss National Bank (SNB) should closely monitor inflation developments and prospects, including at the international level, and stand ready to adjust FX market operations and policy interest rates if needed. Inflation gaps versus the euro area and the United States suggest possible room for franc appreciation to ease inflation pressures. If significant downside risks materialize (for example, large safe haven inflows or a deep and/or sustained downturn), the authorities should consider targeted FX interventions to mitigate disruptive volatility and allow full operation of the structural-balance fiscal rule and/or temporary discretionary fiscal stimulus. Macroprudential policies should focus on containing real estate imbalances and reducing financial sector risks. Medium-term policies should be geared toward ensuring balanced domestic and external contributions to growth while improving the public-private mix in financial outflows, thereby easing pressures on the franc. Although the impact on Switzerland's external position from the war in Ukraine will likely be moderate in the medium term, efforts to promote green transition and energy security should continue.</i>							
<b>Foreign Asset and Liability Position and Trajectory</b>	<b>Background.</b> Switzerland is a major financial center with a large, positive NIIP of 89.8 percent of GDP and large gross foreign asset and liability positions of 753.1 percent and 663.3 percent of GDP, respectively, as of the end of 2021. The NIIP reflects both a history of large CA surpluses and valuation changes. <sup>2</sup> Valuation changes reflect fluctuations of exchange rates and prices of securities and precious metals that interact with differences among assets and liabilities in terms of currencies and instruments. <sup>3</sup> Compared with 2020, the NIIP declined in 2021 by 18.5 percentage points of GDP, mainly driven by negative valuation effects due to price changes. Projections of the NIIP in 2022 and beyond are complicated by heightened uncertainty: because of the large gross positions and compositional differences among assets and liabilities, even modest changes in exchange rates, asset prices, and returns may have a material effect on the NIIP. <b>Assessment.</b> Switzerland's large gross liability position and the volatility of financial flows and investment returns present some risk, but this is mitigated by the large gross asset position and the CHF denomination of about two-thirds of external liabilities.						
2021 (% GDP)	NIIP: 89.8	Gross Assets: 753.1	Reserve Assets: 136.5	Gross Liab.: 663.3	Debt Liab.: 205.6		
<b>Current Account</b>	<b>Background.</b> Switzerland's CA surpluses averaged 7.2 percent of GDP during 2011–20. <sup>4</sup> The CA surplus increased from 2.8 percent in 2020 to 9.3 percent of GDP in 2021, reflecting reversal of some COVID-19-linked shocks (for example, watch exports, precious metals trade), continued strong pharmaceutical sector performance, and a surge in the surplus of merchanting trade, likely related to the sharp rise of commodity prices. In 2022, the CA surplus is expected to moderate to 6.7 percent of GDP, slightly below the medium-term average. <b>Assessment.</b> The EBA CA norm of 6.8 percent of GDP for 2021 is higher than the previous year's norm. Based on a cyclically adjusted CA surplus of 9.9 percent and the norm, the overall EBA-estimated CA gap equaled +3.1 percent of GDP in 2021. <sup>5</sup> Domestic policy gaps accounted for –0.9 percentage points and included excessive private sector credit (–1.8 percentage points) and fiscal underspending (0.2 percentage point). Policy gaps in the rest of the world contributed +0.9 percentage points. The CA gap was reduced to –0.9 percent of GDP (±0.8 percentage points) due to adjustments related to (1) specific factors relevant for Switzerland that are not treated appropriately in the income account, namely valuation losses on fixed-income securities arising from inflation (–3.3) and retained earnings on portfolio equity investment (–0.1); and (2) transitory impacts of the COVID-19 pandemic (–0.6). <sup>6</sup>						
2021 (% GDP)	CA: 9.3	Cycl. Adj. CA: 9.9	EBA Norm: 6.8	EBA Gap: 3.1	COVID-19 Adj.: –0.6	Other Adj.: –3.4	Staff Gap: –0.9
<b>Real Exchange Rate</b>	<b>Background.</b> Appreciation pressure on the Swiss franc eased in 2021 with recovery of the global economy and the expectation that major central banks, including the US Federal Reserve, might hike policy rates to tackle high inflation. Relative to 2020, the average NEER stayed virtually unchanged, while the CPI- and producer-price-index (PPI)-based REERs depreciated by 2.4 and 8.9 percent, respectively. <sup>7</sup> In the first quarter of 2022, while the average NEER appreciated by 2.7 percent, the PPI-based REER depreciated by 9.6 percent. As of May 2022, the CPI-based REER was 2.7 percent below the 2021 average. From a long-term perspective, the NEER has appreciated by 38 percent since 2010, while the CPI- and PPI-based REERs have appreciated by 6 percent and depreciated by 9 percent, respectively (reflecting lower domestic inflation). <b>Assessment.</b> The IMF staff CA gap implies REER overvaluation of 1.9 percent in 2021 (applying an elasticity of 0.47). The EBA REER index and level models suggest that the average REER in 2021 was overvalued by 10.5 and 16.8 percent, respectively, with policy gaps accounting for a small amount of the total gap. This finding largely reflects a “reversion to trend” property of the empirical model in the context of prior rapid appreciation episodes. However, due to measurement issues, the results may not fully capture a secular improvement in productivity, especially in knowledge-based sectors. Consistent with the IMF staff CA gap, the IMF staff assesses the REER gap in 2021 to be in the range of +0.2 to +3.6 percent (overvalued), with a midpoint of +1.9 percent.						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<b>Background.</b> Net financial outflows totaled 3.7 percent of GDP in 2021, including private inflows of 2.3 percent of GDP and an increase in SNB reserve assets of 6 percent of GDP. During 2009–20, net private inflows averaged 2.9 percent of GDP, while the average annual increase in SNB reserves was 10.5 percent of GDP. <b>Assessment.</b> Financial flows are large and volatile, reflecting Switzerland's status as a financial center and safe haven. From a long-term perspective, sizable net private financial outflows prior to the global financial crisis have declined and, on average, turned into net capital inflows, adding to appreciation pressures.						
<b>FX Intervention and Reserves Level</b>	<b>Background.</b> Official reserve assets (including gold) amounted to US\$1.11 trillion (136.5 percent of GDP) at the end of 2021, up US\$26 billion from the end of 2020 (including valuation changes). The SNB purchased CHF 21 billion of FX (net) through FX interventions in 2021, down from CHF 110 billion in 2020. <b>Assessment.</b> Reserves are large relative to GDP, but more moderate in comparison with short-term foreign liabilities. The high level of reserves also reflects monetary operations aimed at avoiding persistent undershooting of inflation as a result of FX inflow surges and given the limited scope for significant easing via other monetary policy tools. The supply of domestic assets for purchase is limited, and the marginal interest rate on bank deposits at the SNB of –0.75 percent is already the lowest in the world. The SNB's initiation of quarterly publication of (net) FX intervention information in 2020 was an important step to enhance transparency.						

**Table 3.27. Thailand: Economy Assessment**

<p><b>Overall Assessment:</b> <i>The external position in 2021 was moderately stronger than the level implied by medium-term fundamentals and desirable policies.</i> The CA balance turned negative due to a collapse in the tourism-driven services balance and a surge in shipping costs due to the COVID-19 shock. While both goods exports and imports bounced back, the sharp rise in oil prices led to a slight deterioration of the trade balance. The CA balance is expected to narrow to –0.8 percent of GDP in 2022 as tourism receipts recover and return to a surplus of around 3 percent of GDP in the medium term.</p> <p><b>Potential Policy Responses:</b> A more gradual consolidation of pandemic era policy stimulus alongside structural reforms should support domestic demand and bring the CA balance more in line with medium-term fundamentals and desirable policies. Public expenditures should be focused on targeted social transfers to mitigate the effects of the pandemic on the most vulnerable, as well as infrastructure investment to support a green recovery and reorientation of affected sectors, while undertaking revenue mobilization reform to keep the deficit and debt sustainable. Efforts to reform and expand social safety nets, notably the fragmented pension schemes, should continue, and measures to address widespread informality should help reduce precautionary savings and support consumption.</p>						
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> Thailand's NIIP weakened in 2021 to 9.5 percent of GDP (from 11.5 percent in 2020). Gross assets declined from 122 to 120 percent of GDP (48 percent of GDP being reserve assets) while gross liabilities remained stable at around 110 percent of GDP, dominated by direct (about half) and portfolio (a quarter) investment. Net direct investment assets increased by 3 percentage points of GDP, while portfolio and net other investment assets declined by 1 and 2 percentage points of GDP, respectively.</p> <p><b>Assessment.</b> The NIIP is projected to remain in a small creditor position over the medium term given current account surpluses. External debt remained stable at 39 percent of GDP, of which short-term debt (on a remaining maturity basis) amounts to 14 percent of GDP. External debt stability and liquidity risks are limited.</p>					
	2021 (% GDP)	NIIP: 9.5	Gross Assets: 120.1	Debt Assets: 23.3	Gross Liab.: 110.6	Debt Liab.: 39.0
<b>Current Account</b>	<p><b>Background.</b> Thailand's CA balance declined from 4.2 percent of GDP in 2020 to –2.2 percent of GDP in 2021, reflecting the impact of the pandemic. The services account collapsed as international tourist arrivals fell to around 1 percent of their pre-pandemic level and shipping costs surged due to supply-chain disruptions caused by the pandemic. Goods exports bounced back with a recovery in global demand, and goods imports (particularly raw material and intermediate goods) increased as demand for intermediate inputs increased with rising exports. Fuel imports also increased markedly with the rapid rise in oil prices. Overall, the trade balance weakened by 0.3 percent of GDP. Despite the negative impact from the increase in food and oil prices due to the war in Ukraine, the CA balance in 2022 is projected to improve to –0.8 percent of GDP as tourism strengthens.</p> <p><b>Assessment.</b> The EBA CA model estimates a cyclically adjusted CA of –2.8 percent of GDP and a CA norm of 1.4 percent of GDP for 2021. The CA gap of –4.2 percent of GDP consists of an identified policy gap of –1.2 percent of GDP and an unexplained residual of –3 percent of GDP, which partly reflects the unique nature of the COVID–19 shock as well as structural factors not captured by the EBA model. In this regard, adjustors of 4.4 percent and 1.9 percent of GDP, respectively to account for the large shocks to the travel and transport sectors are applied, as those shocks are not accounted for by the standard EBA cyclical adjustment.<sup>1</sup> Further adjustments are also applied to reflect the global shift in private spending composition from services towards consumer goods and the related increase in consumer goods exports from Thailand (–0.9 percent of GDP) and net exports of medical supplies triggered by the pandemic (0.1 percent of GDP). Overall, the IMF staff assesses the CA gap to be in the 0.7 to 2.1 percent of GDP range, with a midpoint of 1.4 percent of GDP. This CA gap is expected to narrow over the medium term as domestic demand recovers and steps are taken to reform the social protection system.</p>					
	2021 (% GDP)	CA: –2.2	Cycl. Adj. CA: –2.8	EBA Norm: 1.4	EBA Gap: –4.2	COVID-19 Adj.: 5.6
<b>Real Exchange Rate</b>	<p><b>Background.</b> The baht has been on a gradual real appreciation trend since the mid-2000s, despite occasional bouts of volatility. However, in 2021, owing to both the tightening of global financial conditions as recovery in advanced economies gained a stronghold and still weak prospects in Thailand, the REER depreciated by 7.6 percent by the end of the year relative to its 2020 average. As of May 2022, the REER was 0.6 percent above the 2021 average.</p> <p><b>Assessment.</b> Using an elasticity of 0.44 and based on the IMF staff CA gap, the IMF staff assesses the REER to be undervalued in the 1.6 to 4.8 percent range, with a midpoint of 3.2 percent. The EBA index REER gap in 2021 is estimated at 6 percent, and the EBA level REER gap is estimated at –2.8 percent.</p>					
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<p><b>Background.</b> In 2021, the capital and financial account balance strengthened to –0.4 percent of GDP from –2.4 percent in 2020, driven by the recovery in inward direct investment (from –1 percent in 2020 to 2.2 percent of GDP in 2021). Other net investments declined from 4.9 to 3.2 percent of GDP.</p> <p><b>Assessment.</b> Since 2013, Thailand has experienced episodes of volatility reflecting external financial conditions, political uncertainty, and, most recently, the COVID-19 shock. Nevertheless, Thailand has been able to weather such episodes well, given strong external buffers and fundamentals. IMF staff welcome the Bank of Thailand's removal of the limits on nonresident baht accounts for qualifying nonresident firms to facilitate baht liquidity management, and IMF staff recommend additional phasing out of the remaining capital flow management (CFMs) measures on nonresident baht accounts. A comprehensive package of macroeconomic, financial, and structural policies should be pursued to address volatile capital flows, complemented with gradual and prudent financial account liberalization.</p>					
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> The exchange rate regime is classified as (de jure and de facto) floating. International reserves (including the net forward position) declined slightly from 57.3 percent in 2020 to 55.2 percent of GDP in 2021, which is more than three times the short-term debt and 12 months of imports, and over 200 percent of the IMF's standard reserve adequacy metric. The exchange rate has been allowed to adjust in response to the COVID-19 shock, with some FX sales in outflow episodes.</p> <p><b>Assessment.</b> While official intervention data are not published, estimates suggest two-sided intervention for the year. Reserves are higher than the range of the IMF's reserve adequacy metrics and there continues to be no need to build up reserves for precautionary purposes. The exchange rate should move flexibly to act as a shock absorber, with FX intervention limited to tackling disorderly market conditions.</p>					

**Table 3.28. Türkiye: Economy Assessment**

<p><b>Overall Assessment:</b> <i>The external position in 2021 was broadly in line with the level implied by medium-term fundamentals and desirable policies. The CA deficit narrowed as exports (including tourism revenues) rebounded, while imports were contained by official restrictions on gold imports. Türkiye's negative NIIP position, while remaining large, narrowed significantly as a result of a steep decline in the value of FDI liabilities. The REER is estimated to have remained undervalued, as the non-energy CA continues to adjust, although significant uncertainties remain surrounding the scale of that undervaluation. Monetary conditions sharply eased, leading to a sharp depreciation of the lira—reversing some of the reserve gains made earlier in the year—and rising inflation. Türkiye's vulnerability to shocks remains high amid still-elevated gross external financing needs. Over the medium term, the CA deficit is projected to narrow as the REER undervaluation feeds through and as commodity price pressures ease.</i></p> <p><b>Potential Policy Responses:</b> While Türkiye's external position is assessed to be broadly in line with fundamentals and desirable policies, strengthening the policy framework would help underpin external sustainability going forward. Tighter monetary policy would help lower inflation and anchor inflation expectations and would help strengthen policy credibility. Credit growth should be monitored carefully. A broadly neutral fiscal stance, with a focus on targeted measures that protect the most vulnerable, should be accompanied by a credible medium-term fiscal plan. This overall tightening of the policy stance and the rebuilding of policy credibility would help contain demand and reduce imports, thus improving the CA. It would also help sustain capital inflows, support de-dollarization, and allow for a needed buildup of reserves over time, paving the way for the relaxation of gold import restrictions and CFM measures.</p>							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> Türkiye's NIIP averaged –44 percent of GDP over 2017–21, declining to –53 percent in 2020. The NIIP increased to –31 percent of GDP in 2021, driven largely by a marked decrease in FDI equity liabilities (overall liabilities fell from 89 to 65 percent of GDP) due to a decline in the stock market in dollar terms. External debt decreased from 60 to 56 percent of GDP. Almost 70 percent of external debt is held by the private sector, while less than a third is short term (on a remaining maturity basis). Debt is expected to remain sustainable over the medium term.</p> <p><b>Assessment.</b> The size and composition of gross external liabilities, coupled with low reserves, increase Türkiye's vulnerability to liquidity shocks, sudden shifts in investor sentiment, and any global upswing in interest rates. While the FX exposure of nonfinancial corporations is high, it has improved in recent years, and the short-term net FX position is positive, providing some liquidity buffer. The NIIP is projected to remain at about –30 percent of GDP through 2027.</p>						
2021 (% GDP)	NIIP: –31.4	Gross Assets: 35.7	Debt Assets: 16.4	Gross Liab.: 67.1	Debt Liab.: 48.9		
<b>Current Account</b>	<p><b>Background.</b> The CA deficit narrowed from 4.9 percent of GDP in 2020 to 1.7 percent of GDP in 2021. The improvement was driven by an increase in goods exports (+4.5 percent of GDP) and net services (+1.5 percent of GDP) due to tourism, while the overall increase in goods imports (+2.8 percent of GDP) was driven by oil imports (+2.3 percent of GDP) and contained by the decline in gold imports (–2.8 percent of GDP) following new regulations. Higher commodity prices resulting from the war in Ukraine are expected to widen the CA deficit in 2022.</p> <p><b>Assessment.</b> The EBA CA model norm for Türkiye is estimated at –0.8 percent of GDP, with a standard error of ±0.6 percent of GDP. The actual CA deficit of 1.7 percent of GDP in 2021 narrows to 0.6 percent of GDP after cyclical and terms-of-trade adjustment. Adjusting for temporary pandemic-related shocks (travel, 0.8 percent of GDP; transport, –0.5 percent; household consumption shift, –0.4 percent; medical, –0.1 percent) results in a 0 percent of GDP gap. Reflecting uncertainty around this assessment, the IMF staff assesses a CA gap in the range of –0.6 to 0.6 percent of GDP, with a midpoint of 0.</p>						
2021 (% GDP)	CA: –1.7	Cycl. Adj. CA: –0.6	EBA Norm: –0.8	EBA Gap: 0.2	COVID-19 Adj.: –0.2	Other Adj.: 0.0	Staff Gap: 0.0
<b>Real Exchange Rate</b>	<p><b>Background.</b> The REER remained undervalued in 2021, having depreciated by an annual average of 9.4 percent over 2017–21. The average REER depreciated by 9 percent in 2021, with an average nominal depreciation against the US dollar of 27 percent. As of May 2022, the REER was 1.4 percent below the 2021 average.</p> <p><b>Assessment.</b> Any assessment of the lira currency valuation is fraught with uncertainty. The IMF staff estimate of the CA gap implies a REER gap of 0 percent in 2021 (applying an estimated elasticity of 0.26). However, the EBA REER index and level approaches suggest the REER was undervalued in 2021 by 41.1 and 50.5 percent, respectively. Giving more weight to the EBA REER approaches as the non-energy CA continues to adjust, the IMF staff assesses the lira to be undervalued by about 20 to 25 percent in 2021, with large uncertainties surrounding these estimates.</p>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<p><b>Background.</b> Net capital inflows rebounded in 2021 from US\$8 billion to US\$28 billion. This was mainly on account of one-off flows, including US\$6.4 billion from Türkiye's SDR allocation, large positive errors and omissions of US\$10 billion, and increases in bilateral swap line agreements. Positive net inflows were also driven by FDI, while net portfolio inflows weakened further over the year. Two CFM measures remain, albeit each with some modifications: (1) limits to bank swaps and other derivative transactions with foreign counterparties (introduced in August 2018) and (2) export surrender/repatriation requirements (introduced in 2018). In early 2022, among others, a new requirement for exporters to convert 25 percent of their export earnings within 180 days was introduced, which was later increased to 40 percent.</p> <p><b>Assessment.</b> While net capital inflows rebounded in 2021, much of these were either one-off transactions or of unknown origin. With annual gross external financing needs projected at about 25 percent of GDP on average over 2022–27 (22 percent of GDP in 2021), Türkiye remains vulnerable to adverse shifts in global investor sentiment. CFM measures should be phased out as conditions improve to increase market liquidity and support de-dollarization.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> The de jure exchange rate is classified as free floating. After declining due to significant central bank intervention in 2020, gross reserves increased from US\$93.5 billion at the end of 2020 to US\$109.5 billion by the end of 2021, with one reason being the US\$6.4 billion SDR allocation from the IMF. Central bank FX intervention increased toward the end of 2021 as the currency came under pressure. Net international reserves dropped further to US\$10.8 billion by the end of 2021.<sup>1</sup></p> <p><b>Assessment.</b> Gross reserves increased from 77 to 91.2 percent of the IMF's ARA metric during 2021, still below the floor of the recommended 100 to 150 percent range and covering 89 percent of short-term external debt (at remaining maturity). In addition, the quality of reserves remains an issue, with non-SDR-basket currencies continuing to account for a large share of the central bank's FX reserves. Steady reserve accumulation over the medium term is needed given Türkiye's large external liabilities, dependence on short-term and portfolio funding, and large domestic FX deposits.</p>						

**Table 3.29. United Kingdom: Economy Assessment**

<p><b>Overall Assessment:</b> <i>The external position in 2021 was broadly in line with the level implied by medium-term fundamentals and desirable policies.</i> The CA deficit was stable in 2021, reflecting continued high public borrowing to combat economic fallout from the COVID-19 crisis, offset by private saving. The war in Ukraine and continued global supply disruptions could further increase inflation in the UK, weaken exports, and worsen the CA in the near term. Over the medium term, the CA deficit would narrow as exports gradually recover. The uncertainty around this assessment remains significant, reflecting pandemic-related factors, measurement issues, the evolving impact on growth and trade and capital flows of the new EU-UK Trade and Cooperation Agreement, and continuing outstanding issues between the EU and UK on financial services.</p> <p><b>Potential Policy Responses:</b> Gradual fiscal consolidation, while maintaining sufficient targeted fiscal support to lower-income quintiles to cushion the impact of the escalating cost of living, should help balance rising public saving with slowly recovering private investment net of saving, and preserve a CA gap close to zero. In the medium term, implementing structural reforms to boost the UK's productivity in the tradables sector and international competitiveness (including via upgrading the labor skill base to support labor reallocation to fast-growing sectors) would help balance a need for rising public investment in support of the climate transition.</p>							
<b>Foreign Asset and Liability Position and Trajectory</b>	<p><b>Background.</b> The NIIP declined to –32 percent of GDP in 2021 from –22.5 percent of GDP in 2020. A negative valuation effect led to a larger deterioration of the NIIP than the CA deficit.<sup>1</sup> Other investment (212 percent of GDP in assets and 200 percent in liabilities) and portfolio investment (134 percent of GDP in assets and 171 percent in liabilities) constitute a large part of gross assets and liabilities. The United States, other European countries, and Japan account for about 75 percent of total UK external assets and liabilities, and external liabilities have a larger share denominated in pounds than do external assets.<sup>2</sup> The IMF staff projects the NIIP to be broadly stable over the medium term, although large and volatile valuation effects make these estimates particularly uncertain.</p> <p><b>Assessment.</b> Since 2000, valuation gains have offset more than half of the effect of CA flows on the NIIP (largely driven by the unrecorded impact of inflation differentials and retained earnings bias on portfolio investment and depreciation of the pound since the 2016 Brexit decision). Fluctuations in large gross stock positions could be a potential source of vulnerability (including derivatives—both gross assets and gross liabilities exceed 500 percent of GDP). However, the UK's net liability position in domestic currency and exchange rate flexibility would offer some insurance against external crises.</p>						
	2021 (% GDP)	NIIP: –32	Gross Assets: 533	Debt Assets: 278	Gross Liab.: 565	Debt Liab.: 317	
<b>Current Account</b>	<p><b>Background.</b> The CA deficit remained at about 2.6 percent of GDP in 2021. The lower trade balance due to strong domestic demand was offset by a higher income balance. Gross saving and investment both increased marginally. At the same time, private saving declined, offsetting lower public borrowing.</p> <p><b>Assessment.</b> The EBA CA model estimates a norm of –0.7 percent of GDP and a CA gap of –1.3 percent of GDP. Adjustments to the EBA estimates are warranted to account for the COVID-19 crisis, totaling 0.3 percent of GDP. These include a decline in net imports of travel services (including tourism) during the pandemic (–0.4 percent of GDP), an increase in transport balances (0.3 percent of GDP), an increase in imports due to shifts in the composition of household consumption (0.2 percent of GDP), and imports of medical goods (0.1 percent of GDP). The post-Brexit adjustment (–0.1 percent of GDP) affected the CA temporarily and may not be adequately captured in the cyclical components of the CA, warranting an adjustment (the opposite of the pre-Brexit stockpiling adjustment applied for 2020).<sup>3</sup> In addition, the unrecorded impact of inflation differentials (0.6 percent of GDP) and the retained earnings bias on portfolio equity assets (0.3 percent of GDP) also contribute to an underestimation of the underlying CA.<sup>4</sup> Overall, the IMF staff assesses the CA gap in the range of –1.1 to 0.9 percent of GDP, with a midpoint of –0.1 percent of GDP.</p>						
	2021 (% GDP)	CA: –2.6	Cycl. Adj. CA: –2	EBA Norm: –0.7	EBA Gap: –1.3	COVID-19 Adj.: 0.3	Other Adj.: 0.9
<b>Real Exchange Rate</b>	<p><b>Background.</b> The pound appreciated in real effective terms in 2021 by 3.8 percent relative to its average level in 2020, driven entirely by nominal appreciation, partly reflecting dissipation of previously high uncertainty over post-Brexit arrangements with the EU. Overall, the pound has depreciated since mid-2016 by about 3.4 percent. This depreciation reflects an unwinding of past overvaluation as well as market expectations of more restricted access to the EU market under post-Brexit trade arrangements. As of the end of May 2022, the REER had depreciated by 1.4 percent compared to the 2021 average.</p> <p><b>Assessment.</b> The IMF staff CA gap implies a REER gap of 0.5 percent in 2021 (applying an estimated elasticity of 0.24). EBA REER level and index approaches suggest a gap of 5.6 and –7.5 percent, respectively, for 2021. Consistent with the staff CA gap, the IMF staff assesses the REER gap to be 0.5 percent, in a range of –3.6 to 4.6 percent.</p>						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<p><b>Background.</b> Given the United Kingdom's role as an international financial center, portfolio investment and other investment are the key components of the financial account. In net terms, the CA was financed in 2021 by net portfolio investment of 5.4 percent of GDP, while other investment and net FDI declined by 0.8 and 1 percent of GDP, respectively. Access to finance has remained favorable during the COVID-19 crisis, aided by the Bank of England's support to the financial sector.</p> <p><b>Assessment.</b> Large fluctuations in capital flows are inherent in countries with a large financial sector. This volatility is a potential source of vulnerability, although it is mitigated by sound financial regulation and supervision and a strong financial sector. An additional risk is that FDI and portfolio investment inflows may decelerate, driven by the change in the trade relationship with the EU and the shift of some financial services to the EU.</p>						
<b>FX Intervention and Reserves Level</b>	<p><b>Background.</b> The pound has the status of a global reserve currency. The share of global reserves in sterling has not changed materially since 2015, at about 4.5 percent.</p> <p><b>Assessment.</b> Reserves held by the United Kingdom are typically low relative to standard metrics, and the currency is free floating.</p>						

**Table 3.30. United States: Economy Assessment**

<b>Overall Assessment:</b> <i>The external position in 2021 was moderately weaker than the level implied by medium-term fundamentals and desirable policies.</i> The decline in the trade balance, led by the increase in imports of goods, widened the CA deficit to 3.6 percent of GDP. Although uncertainty and terms-of-trade changes caused by the war in Ukraine may affect the near term, the CA deficit is projected to decline below 2 percent of GDP over the medium term based on an increase in public saving due to gradual fiscal consolidation, reflected in a lower trade deficit.							
<b>Potential Policy Responses:</b> Over the medium term, suggested fiscal consolidation aimed at a medium-term general government structural primary deficit of about 1 percent of GDP should broadly stabilize the debt-to-GDP ratio and address the CA gap. Structural policies to increase competitiveness include upgrading infrastructure; enhancing the schooling, training, and mobility of workers; supporting the working poor; and implementing policies to increase growth in the labor force (including skill-based immigration reform). Tariff barriers should be rolled back, and trade and investment disagreements with other countries should be resolved in a manner that supports an open, stable, and transparent global trading system.							
<b>Foreign Asset and Liability Position and Trajectory</b>	<b>Background.</b> The NIIP, which averaged about –46 percent of GDP during 2016–19, strengthened slightly from –67.1 percent of GDP in 2020 to –79 percent of GDP in 2021. Under the IMF staff’s baseline scenario, the NIIP is projected to remain broadly unchanged through the medium term on the back of developments in portfolio assets and liabilities as the CA balance reverts to its pre-COVID-19 average. <b>Assessment.</b> Financial stability risks could surface in the form of an unexpected decline in foreign demand for US fixed-income securities, which is a main component of the country’s external liabilities. This risk, which could materialize, for example, as a result of a failure to reestablish fiscal sustainability, remains moderate given the dominant status of the US dollar as a reserve currency. About 60 percent of US assets are in the form of FDI and portfolio equity claims.						
2021 (% GDP)	NIIP: –79	Gross Assets: 153	Debt Assets: 17.7	Gross Liab.: 232	Debt Liab.: 56.0		
<b>Current Account</b>	<b>Background.</b> The US CA deficit increased from 2.9 percent of GDP in 2020 to 3.6 percent in 2021 (from 2.7 to 3.2 percent in cyclically adjusted terms), compared with a deficit of 2.1 percent of GDP in 2016. On the trade side, its evolution since 2016 is explained mostly by deterioration in the non-oil and income balances. In 2021, the trade balance declined moderately from 2020 (–3.2 versus –3.7 percent of GDP), mostly due to the changes in imports of goods, while the income account remained unchanged. Both national saving and investment increased as a percentage of GDP from 2016 to 2021 (with a massive increase in public dissaving due to the pandemic), resulting in the stated increase in the CA deficit. The CA deficit is expected to decline slightly below 2 percent of GDP over the medium term. <b>Assessment.</b> The EBA model estimates a cyclically adjusted CA balance of –3.2 percent of GDP and a cyclically adjusted CA norm of –1.3 percent of GDP. The EBA model CA gap is –1.9 percent of GDP for 2021, reflecting policy gaps (–1.1 percent of GDP, half of which, –0.7 percent, corresponds to fiscal policy) and an unidentified residual (about –0.8 percent of GDP) that may reflect structural factors not included in the model. On balance, the IMF staff assesses the 2021 cyclically adjusted CA to be 1.1 percent of GDP lower than the level implied by medium-term fundamentals and desirable policies, with a range between –1.7 and –0.5 percent of GDP. This assessment includes an IMF staff adjustor of 0.8 percent of GDP to account for the effects of COVID-19 on the travel (0.2 percent of GDP), transport (0.1 percent of GDP), and medical (0.1 percent of GDP) balances, as well as the shift in the composition of household consumption (0.4 percent of GDP). The estimated standard error of the CA norm is 0.6 percent of GDP.						
2021 (% GDP)	CA: –3.6	Cycl. Adj. CA: –3.2	EBA Norm: –1.3	EBA Gap: –1.9	COVID-19 Adj.: 0.8	Other Adj.: 0.0	Staff Gap: –1.1
<b>Real Exchange Rate</b>	<b>Background.</b> After appreciating by 1.6 percent in 2020, the REER depreciated by 3.8 percent in 2021. The depreciation in 2021 brought the REER to the average level that prevailed in 2016. As of May 2022, the REER was 8.6 percent above the 2021 average. <b>Assessment.</b> Indirect estimates of the REER (based on the IMF staff’s current account assessment) imply that the exchange rate was overvalued by 8.7 percent in 2021 (applying the estimated elasticity of 0.12). The EBA REER index model suggests an overvaluation of 1.6 percent, and the EBA REER level model suggests an overvaluation of 8.9 percent. Considering all the estimates and their uncertainties, the IMF staff assesses the 2021 midpoint REER overvaluation to be 8.7 percent, with a range of 3.8 to 13.6 percent, where the range is obtained from the CA account standard error and the corresponding CA elasticity.						
<b>Capital and Financial Accounts: Flows and Policy Measures</b>	<b>Background.</b> The financial account balance was about –3.1 percent of GDP in 2021, compared with –3.5 percent of GDP in 2020. This was due to a decrease in net direct investment from 0.5 to 0.2 percent GDP, with the changes in portfolio investment (–2.3 to –10 percent) and other investments (–1.3 to –2.5 percent) broadly canceling each other out. <b>Assessment.</b> The United States has an open capital account. Vulnerabilities are limited by the dollar’s status as a reserve currency, with foreign demand for US Treasury securities supported by the status of the dollar as a reserve currency and, possibly, by safe haven flows.						
<b>FX Intervention and Reserves Level</b>	<b>Assessment.</b> The dollar has the status of a global reserve currency. Reserves held by the United States are typically low relative to standard metrics. The currency is free floating.						

## Technical Endnotes by Economy

### Argentina

<sup>1</sup>A band of  $\pm 1$  percent of GDP (two standard errors of the CA norm) is applied to account for the elevated country-specific uncertainty in the context of external vulnerabilities.

<sup>2</sup>This includes the effect of the SDR allocation of US\$4.3 billion in 2021.

<sup>3</sup>Based on the program definition of net international reserves. See <https://www.imf.org/en/Publications/CR/Issues/2022/03/25/Argentina-Staff-Report-for-2022-Article-IV-Consultation-and-request-for-an-Extended-515742>.

<sup>4</sup>To smooth the temporary effect of the sharp reductions in short-term debt and of a collapse in the valuation of debt portfolio investments in the wake of the sovereign debt restructuring, the adjusted measure uses a four-year average.

### Belgium

<sup>1</sup>Methodological and source data changes led to major revisions of the 2015–20 CA, distorting comparison with previous assessments.

### Brazil

<sup>1</sup>Under operation since the first decade of the 2000s, Repetro was a Brazilian special tax regime that generated exports of oil-related products, mainly oil platforms, in accounting terms only without equipment crossing borders. Since 2018, when the tax benefits were delinked from exports, the oil enterprises reimported platforms and other equipment, again in accounting terms only. The term of Repetro ended on December 31, 2020, as established by Normative Instruction RFB 176, generating a lagged temporary increase in imports in 2021.

### Canada

<sup>1</sup>The estimates of the temporary impact of the COVID-19 crisis on travel, transport, household consumption composition, and trade in medical products are  $-0.4$ ,  $0.1$ ,  $0.2$ , and  $0.2$  percent of GDP, respectively, with a net impact of  $0.1$  percent of GDP.

<sup>2</sup>The statistical treatment of retained earnings on portfolio equity and inflation is estimated to generate a downward bias in the income balance of the current account of the order of  $0.7$  and  $0.8$  percent of GDP, respectively, totaling  $1.5$  percent of GDP.

<sup>3</sup>The semielasticity of the CA with respect to the REER is set to  $0.25$ .

### China

<sup>1</sup>See “IMF 2021 Taxonomy of Capital Flow Management Measures” for a list of China’s existing CFMs and related policy advice.

### Euro Area

<sup>1</sup>The export and import elasticities are taken as the average of estimates of export and import equations inspired by the Consultative Group on Exchange Rate Issues (CGER) using various types of REERs relevant for the euro area (with an autoregressive distributed lag (2,2,2) model on quarterly data 2000–19). The trade balance elasticity is calculated using the share of exports and imports for extra-euro-area trade in GDP.

### France

<sup>1</sup>The adjustor is derived by estimating the loss for aeronautics net exports in value-added terms during 2021 (that is, the difference between domestic value added of exports and non-reexported imports using data on global value chains). The final adjustor reflects only the temporary component of the total loss and deducts the extent of loss that is expected to persist through the medium term.

### Hong Kong SAR

<sup>1</sup>Hong Kong SAR is not in the EBA sample as it is an outlier along many dimensions of EBA analysis. Thus, one possibility—though with obvious drawbacks—is to use EBA-estimated coefficients and apply them to Hong Kong SAR. Following this approach, the CA norm in 2021 is estimated to be  $20.6$  percent of GDP, implying a CA gap of  $-9.4$  percent of GDP, which is almost entirely explained by the model residuals. The EBA CA gap is overstated, as it does not properly reflect the measurement issues that are relevant for Hong Kong SAR, for which three adjustments are made. First, an adjustment of  $4.7$  to  $6.7$  percentage points, with a midpoint of  $5.7$  percentage points, is made to the EBA’s implied contribution of the NIIP position. This is because the positive NIIP contribution in the EBA captures average income effects that are less relevant for Hong Kong SAR, since the income balance relative to its NIIP is systematically lower than that of other peer economies due to a persistently higher share of debt instruments on the asset side than on the liability side. Second, the opening of the Precious Metals Depository has resulted in a decline of  $4$  to  $4\frac{1}{2}$  percentage points, with a midpoint of  $4\frac{1}{4}$  percentage points, in the gold trade balance that does not reflect changes in wealth, but rather the increased physical settlement of gold futures contracts. Third, mainland China’s increased onshoring has led to a decline in logistics and trading activities in Hong Kong SAR ( $1$  to  $1\frac{1}{2}$  percentage points, with a midpoint of  $1\frac{1}{4}$  percentage points), which did not result in lower consumption because it is viewed as temporary and to be replaced with increased provision of high-value-added services as Hong Kong SAR’s own economy rebalances in response to mainland China’s demand. See “People’s Republic of China—Hong Kong Special Administrative Region: Selected Issues” (IMF Country Report 17/12) for more details.

<sup>2</sup>The range is calculated by applying the average semielasticities of Hong Kong SAR and similar economies.

<sup>3</sup>The financial linkages with mainland China have deepened in recent years with the increase in cross-border bank lending, capital market financing, and the internationalization of the renminbi. As of the end of 2021, banking system claims on mainland China nonbank entities amounted to HK\$6.7 trillion, or about 234 percent of GDP, down by about 4 percentage points from the end of 2020.

### Indonesia

<sup>1</sup>The 2021 assessment includes an adjustment for travel services (including tourism), transport, the global shift in the composition of household consumption from services toward consumer goods, and medical equipment. As Indonesia is among the few outlier countries regarding adult mortality rates, the demographic indicators are adjusted to account for the younger average prime age and workforce exit age (this results in an adjustor of  $-0.4$  percentage point to the CA norm).

<sup>2</sup>A range of  $\pm 0.5$  percent is added to reflect the fact that the EBA regression estimates are subject to uncertainty (the standard error of the EBA norm for Indonesia is 0.5 percent).

<sup>3</sup>The semielasticity of the CA-to-GDP ratio with respect to the REER is estimated to be 0.14 for Indonesia.

### Japan

<sup>1</sup>In line with IMF staff policy advice, Japan would require continued accommodative monetary and financial policies in order to achieve the 2 percent inflation target and facilitate productive investment. Consistent with this advice, the IMF staff recommends allowing the estimated credit-to-GDP gap to decline gradually over the medium term from its currently estimated level of 18.9 percent of GDP with a corresponding policy setting ( $P^*$ ) for the credit-to-GDP gap in five years of 9 percent of GDP. This decline in the credit gap over five years is similar to the reduction envisaged in the *2021 External Sector Report*.

### Malaysia

<sup>1</sup>On December 2, 2016, the Financial Markets Committee announced a package of measures aimed at facilitating onshore FX risk management and enhancing the depth and liquidity of onshore financial markets. Two of these measures were classified as CFM measures under the IMF's institutional view on capital flows. In addition, the authorities' strengthened enforcement of regulations on resident banks' noninvolvement in offshore ringgit transactions was considered enhanced enforcement of an existing CFM measure. Over the course of 2017–19, additional measures were announced to help deepen the onshore financial market and facilitate currency risk management.

### Saudi Arabia

<sup>1</sup>EBA models do not include Saudi Arabia. Staff considered three approaches in the EBA-Lite methodology, including two that incorporate the special intertemporal considerations that are dominant in economies in which exports of nonrenewable resources are a very high share of output and exports. Using the CA regression approach, the cyclically adjusted CA norm is estimated at 7.5 percent of GDP (slightly higher than the CA norm of 6.5 percent of GDP in 2020). The Consumption Allocation Rules assume that the sustainability of the CA trajectory requires that the net present value (NPV) of all future oil and financial/investment income (wealth) be equal to the NPV of imports of goods and services net of non-oil exports. Estimated CA norms from the Consumption Allocation Rules were 1.0 percent of GDP and 5.3 percent of GDP for the constant real annuity and constant real per capita annuity allocation rules, respectively. The Investment Needs Model takes account of the possibility that it might be desirable to allocate part of the resource wealth to finance investment, which was not explicitly considered by the consumption-based model and produced a CA gap of 5.2 percent over the medium term. The reliance of the consumption and investment models on projected oil prices beyond the medium-term macro framework subjects the results to a high degree of uncertainty. The CA gap in 2021 of  $-1.0$  percent of GDP represents the staff's overall assessment which is anchored on the CA-regression based approach. The range for the gap is calculated using the estimates from Norway, a comparable oil-rich economy in the EBA sample.

<sup>2</sup>Total reserves include gold at national valuation.

### Singapore

<sup>1</sup>Singapore has a negative income balance despite its large positive NIIP position, reflecting lower rates of return on its foreign assets relative to returns on its foreign liabilities, possibly due to the fact that the composition of Singapore's assets is tilted toward safer assets with lower returns.

<sup>2</sup>Nonstandard factors make a quantitative assessment of Singapore's external position difficult and subject to significant uncertainty. Singapore is not included in the EBA sample because it is an outlier along several dimensions. One possibility, though with drawbacks, is to use EBA estimated coefficients and apply them to Singapore. Following that approach, the CA norm is estimated to be about 14.8 percent of GDP in 2021 (including the multilateral consistency adjustor). However, using this approach understates the CA gap. In order to account for Singapore's specificities, several adjustments are needed. First, a downward adjustment of 1.2 percentage points is made to the EBA's implied contribution of public health expenditures to the norm to account for the fact that Singapore's health expenditure is appropriate given its high efficiency, even though its desirable and current public health expenditure is significantly lower than in other EBA countries. Second, the EBA model does not

include the impact of the COVID-19 shock on the CA, so a total –1.4 percent of GDP adjustment is applied to account for this transitory impact, including (1) a travel adjustor of –1.3 percent of GDP, (2) a transport adjustor of 0.7 percent of GDP, (3) a household consumption shift adjustor of –0.8 percent of GDP, and (4) a medical goods adjustor of 0 percent of GDP. Third, a downward adjustment of 3.7 percentage points to the norm is made to better account for the effect of net foreign assets (NFA) composition and component-specific return differentials on the CA. Fourth, notwithstanding possible partial double counting with the NFA components adjustor, a downward adjustment of –2.4 percentage points of GDP is applied to the underlying CA to account for measurement biases due to inflation and portfolio equity retained earnings (–4.9 and +2.5 percent of GDP, respectively). Adjusting for these factors, the CA gap estimated by the IMF staff is about 5.2 percent of GDP, to which the fiscal gap contributes about 0.6 percent of GDP, the credit gap about –0.5 percent of GDP, public health spending about –0.1 percent of GDP, and reserves about 0.0 percent of GDP.

<sup>3</sup>We apply the maximum range of  $\pm 1.8$  percent in the EBA sample for the CA gap, reflecting the uncertainty around Singapore's assessment.

<sup>4</sup>The reserves-to-GDP ratio is also larger than in most other financial centers, but this may reflect in part that most other financial centers are in reserve-currency countries or currency unions. External assets managed by the government's investment corporation and wealth fund (Government of Singapore Investment Corporation and Temasek) amount to at least 100 percent of GDP.

### South Africa

<sup>1</sup>The South Africa-specific COVID-19 adjustors for 2021 of –2.7 percent of GDP are composed of adjustments for travel services (including tourism exports) (0.9 percent of GDP), medical spending imports (–0.3 percent of GDP), transportation (0.2 percent of GDP), consumption shift to tradable goods (–0.2 percent of GDP), gold and other mineral exports (–2.8 percent of GDP), and an improved income balance (–0.5 percent of GDP). The gold and other mineral exports adjustor reflects the temporary surge in mineral export prices and volumes and the importance for South Africa of some mineral exports (for instance, rhodium and palladium), which are not included in the IMF EBA model (terms-of-trade adjustment).

<sup>2</sup>Net current transfers related to the Southern African Customs Union (SACU) in 2021 are assessed to have a net negative impact on the CA, are not accounted for in the regression model, and warrant an adjustment to the cyclically adjusted CA by 0.7 percent of GDP. In addition, measurement issues pertaining to the income balance are likely to contribute to an understatement of the CA by 0.9 percent of GDP in 2021 overall.

<sup>3</sup>Because South Africa is among the few countries with relatively high adult mortality rates, the demographic indicators are adjusted to account for the younger average prime age and exit age from the workforce. This results in an adjustor of –0.6 percent of GDP to the model-based CA norm for 2021.

### Spain

<sup>1</sup>The EBA model suggests a cyclically adjusted CA norm of 0 percent of GDP, with a standard error of 0.7 percent of GDP. However, given external risks from a large and negative NIIP, the IMF staff's assessment puts more weight on external sustainability and is guided by the objective of raising the NIIP to at least –50 percent over the medium term. Under current policies, the NIIP is projected to reach this target, though with high uncertainty as zero valuation effects are assumed. Allowing for a safety margin, the IMF staff therefore considers a CA norm of 1.7 percent of GDP, with a range of 1 to 2.4 percent of GDP.

<sup>2</sup>The REER gap midpoint is obtained from the IMF staff-assessed CA gap and an estimated semielasticity of the CA to the REER of 0.26. The range of the REER gap is  $\pm 2.7$  percent, which is obtained from Spain's estimated standard error of the EBA CA norm (0.7 percent of GDP) and the aforementioned CA-to-REER semielasticity.

### Sweden

<sup>1</sup>The upper and lower range is derived by subtracting the standard deviation of the ULC-based REER index (which is 5 percent) from the average outcome, which is the midpoint.

### Switzerland

<sup>1</sup>Due to large revisions to historical balance of payments (BOP) and international investment position (IIP) data, particular caution is needed when comparing external sector assessments for different periods. For example, in the December 2021 BOP release (after the publication of the 2021 *External Sector Report*), net incurrence of direct investment liabilities in 2020 was revised from CHF 129 billion in the March 2021 BOP release (prior to the publication of the 2021 *External Sector Report*) to CHF 245 billion, contributing to a large downward adjustment to the end-of-2020 direct investment foreign liabilities in the IIP. See also the 2021 *External Sector Report* for details on major BOP and IIP revisions in 2020.

<sup>2</sup>Other stock-flow adjustments include changes in statistical sources, such as changes in the number of entities surveyed and items covered, although their quantitative importance is not known.

<sup>3</sup>As a result, an appreciation (depreciation) of the Swiss franc has a negative (positive) effect on the NIIP, whereas a symmetric percentage increase in share prices in Switzerland and abroad would reduce the NIIP.



<sup>4</sup>At the time of the previous assessment, this average was 8.2 percent of GDP. The change was due to revisions to historical balance of payments data.

<sup>5</sup>Part of the positive EBA CA gap may reflect institutional pension features in Switzerland, such as replacement and coverage rates, rather than other economic policy gaps.

<sup>6</sup>The underlying CA is adjusted for Switzerland-specific factors in the income account: (1) retained earnings on portfolio equity investment that are not recorded in the income balance of the CA (or the portfolio equity retained earnings bias) under the sixth edition of the IMF *Balance of Payments and International Investment Position Manual* (BPM6) and (2) recording of nominal interest on fixed-income securities under the *Balance of Payments Manual* framework, which compensates for expected valuation losses (due to inflation and/or nominal exchange rate movements), even though this stream compensates for the (anticipated) erosion in the real value of debt assets and liabilities. The portfolio equity retained earnings bias was estimated using the “stock method” and “flow method,” as explained in “The Measurement of External Accounts” (IMF Working Paper 19/132), and it is similar in size to estimates based on the Swiss National Bank’s pilot BPM7 data. In addition, the CA balance is adjusted for transitory impacts of the COVID-19 pandemic on trade in goods and services, including adjustors for (1) travel services (0 percentage point); (2) transport (–0.1 percentage point); (3) household consumption composition shift (–0.5 percentage point); and (4) medical products (0 percentage point). Adjusting for these COVID-19–related effects, the underlying CA would need to be reduced by about 0.6 percent of GDP.

<sup>7</sup>Prices of energy products, especially gas prices, were a main driver underlying the producer price index (PPI) inflation differentials between Switzerland and other advanced economies, such as the euro area and the United States. If core PPIs excluding energy products were used, the depreciation of the PPI-based franc REER in 2021 and early 2022 would be smaller.

### Thailand

<sup>1</sup>For Thailand, the change in the transport services balance between 2020 and 2021 was –2.8 percent of GDP. In the staff’s view, this change is too large relative to Thailand’s net imports of global transportation services. Using an average of percentage change in transport balances of comparable countries, the staff estimates the impact of high freight costs on Thailand’s transport service balance and current account to be a worsening of around

65 percent (1.93 percent of GDP). Therefore, staff proposes a transportation adjustor of 1.93 percent.

### Türkiye

<sup>1</sup>Net international reserves are defined as gross international reserves minus the central bank’s FX liabilities to banks, including the Reserve Option Mechanism.

### United Kingdom

<sup>1</sup>The official NIIP data may understate the true position— estimates of FDI stocks at market values imply a much higher NIIP. Market value estimates of FDI assets assume their valuations move in line with those of equity market indices in the United Kingdom and abroad. These estimates are highly uncertain, as actual FDI market values could evolve differently across different equity markets.

<sup>2</sup>Estimates in Bénétrix and others (2019) suggest that, in 2017, about 90 percent of external assets were denominated in foreign currency compared with 60 percent for external liabilities.

<sup>3</sup>The post-Brexit adjustment (–0.1 percent of GDP) represents an offset of the 0.1 percent of GDP adjustment for the stockpiling that occurred before Brexit, which generated an adjustor applied in the 2020 external sector assessment.

<sup>4</sup>The total COVID-19–related adjustment includes adjustors for travel services balance, transport balance, compositional change of consumption, and medical goods imports.

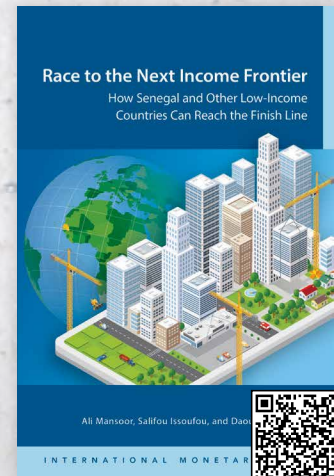
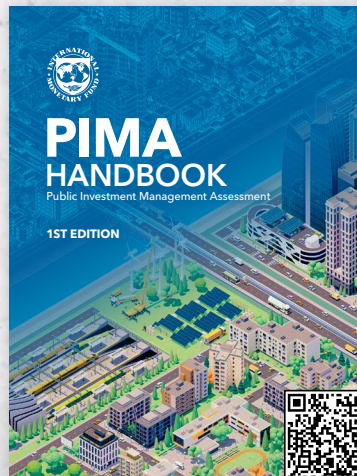
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