INTERNATIONAL MONETARY FUND

EXTERNAL SECTOR REPORT

External Rebalancing in Turbulent Times

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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 of the world's largest economies representing more than 90 percent of global GDP, which include current accounts, real exchange rates, external balance sheets, capital flows, and international reserves. 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 2022, external developments through the COVID-19 pandemic and Russia's invasion of Ukraine, and policy priorities for reducing excess imbalances over the medium term. Chapter 2, "External Sector Implications of the Global Dollar Cycle," analyzes cross-border spillovers from US dollar appreciations. It finds large negative spillovers on emerging markets, accompanied by increased current account balances. More flexible exchange rates and better anchored inflation expectations can mitigate the negative spillovers. Chapter 3, "2022 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 methodology, external sector data as of May 31, 2023, and IMF staff projections in the April 2023 *World Economic Outlook*.

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) and several functional departments (Fiscal Affairs; Statistics; Strategy, Policy, and Review; Monetary and Capital Markets; and Research): Ali Jawad Al-Eyd, Rudolfs Bems, Maria Borga, Emine Boz, Nigel Chalk, Jiaqian Chen, Mariana Colacelli, Borys Cotto, Christopher Erceg, Kevin Fletcher, Kenneth Henry Kang, Purva Khera, Nir Klein, Vitaliy Kramarenko, Jaewoo Lee (Chair), Amine Mati, Paulo Medas, Paolo Mauro, Papa M. Bagnick N'Diaye, Marcos Poplawski Ribeiro, Lev Ratnovski, Umang Rawat, Christian Saborowski, Rani Salgado, Mika Saito, Carlos Sánchez-Muñoz, Martin Sommer, and Anita Tuladhar.

Rudolfs Bems, Jiaqian Chen, and Giovanni Ganelli led the preparation of the report, which draws on contributions from Cian Allen, Lukas Boer, Camila Casas, Allan Dizioli, Luciana Juvenal, Racha Moussa, Cyril Rebillard, and Robert Zymek. Important input was provided by country teams as well as David Florián Hoyle, Adam Jakubik, Parisa Kamali, Robin Koepke, Svitlana Maslova, Dimitre Milkov, Faezeh Raei, Marco Rodriguez Waldo, Silvia Sgherri, and Hui Tong. Excellent research and editorial assistance were provided by Mariela Caycho Arce, Anna Konopatskaya, Jane Haizel, Abreshmi Nowar, Jair Rodriguez, Xiaohan Shao, and Emelie Stewart.

Cheryl Toksoz from the Communications Department led the editorial team for the report, with production and editorial support from Absolute Services 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 13, 2023. 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

Global current account balances (defined as the sum of absolute values of current account deficits and surpluses) increased for the third consecutive year in 2022 and are projected to narrow in 2023. This widening over the three years reflects several factors, including the unequal impact of the COVID-19 crisis in 2020–21 and the increase in commodity prices fueled by the economic recovery in 2021 and later by supply concerns following Russia's invasion of Ukraine in 2022. The absence of widespread sudden stops during the pandemic has enabled deficit economies to avoid an abrupt contraction of their current account deficits.

Currency markets exhibited significant fluctuations in 2022, driven by changes in the terms of trade and monetary tightening. The US dollar appreciated by about 8 percent in real effective terms, reaching its strongest level since 2002. Emerging market and developing economies with preexisting vulnerabilities such as high inflation and misaligned external positions experienced greater depreciation pressures, while commodity-exporting economies benefited from the increase in commodity prices. Historically, US dollar appreciations have had large negative cross-border spillovers, disproportionately affecting emerging markets, and have increased current account balances, as the investment rate falls (see Chapter 2).

The uphill capital flows from emerging market and developing economies to advanced economies reemerged in 2022. The net flows of capital from emerging market and developing economies were mostly driven by China and commodity-exporting economies, which have funded some large current account deficits in advanced economies. In contrast to past episodes, however, an accumulation of official foreign exchange reserves played a limited role in net capital outflows from emerging market and developing economies. Meanwhile, net creditor and debtor positions remained at historically high levels.

Over the medium term, global current account balances are expected to narrow as the impacts of the pandemic and Russia's war in Ukraine recede. However, several risks surround this outlook, including a renewed increase in commodity prices, a slower-than-expected recovery in China, or a slower fiscal consolidation in economies with current account deficits. While the impact of geoeconomic fragmentation on global current account balances is unclear, it would unambiguously reduce global welfare.

The excess global current account balances (defined as the sum of absolute values of current account surpluses and deficits in excess of their norms) have remained unchanged since 2021, after being on a declining trend for several years. While the widening of global current account balances is not necessarily a negative development, excess global current account balances can fuel trade tensions and protectionist measures or increase the risk of disruptive currency and capital flow movements. Narrowing excess global current account balances would reduce the risk of financial crisis and improve welfare.

Policy efforts, in both excess surplus and deficit economies, are required to promote external rebalancing. Where excess current account deficits in 2022 partly reflected larger-than-desired fiscal deficits, fiscal consolidation will help stabilize debt-to-GDP ratios and close current account gaps. In economies where excess current account surpluses persist, higher fiscal spending in targeted areas will help them to meet their goals in climate, digital, and energy security, while reducing their excess surpluses. Economies with lingering competitiveness challenges will need to address structural bottlenecks. Multilateral cooperation will help counter risks of geoeconomic fragmentation, including efforts to strengthen the current rule-based trading system, and facilitate the green transition. Successfully completing the 16th General Review of Quota would ensure that the IMF is adequately resourced to serve as an anchor of the global financial safety net.

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 13, 2023.*

Executive Directors broadly agreed with the findings of the 2023 External Sector Report (ESR) and its policy recommendations. They noted that global current account balances widened for the third consecutive year in 2022. Directors observed that the trend decline in excess current account balances had stalled and that currency markets exhibited significant fluctuations, driven by changes in the terms of trade and monetary tightening. Concurrently, stocks of foreign assets and liabilities remained at historically high levels in 2022.

Directors observed that elevated commodity prices, amid supply concerns following Russia's invasion of Ukraine, significantly contributed to the widening of global balances in 2022. They noted that the pandemic has continued to unevenly affect current account balances, albeit to a lesser extent relative to prior years, as travel services remained subdued and high transportation costs persisted in some economies. Directors observed that the US dollar appreciated substantially, reflecting a rapid tightening of monetary policy and more favorable terms of trade. They noted that emerging market and developing economies with preexisting vulnerabilities experienced greater depreciation pressures, while commodity exporting economies benefited from the higher commodity prices.

Directors generally welcomed the analysis of the external sector implications of the global dollar cycle. They highlighted that, in contrast to the historical trend, the recent strong dollar episode was accompanied by surging commodity prices. Directors noted that US dollar appreciations have increased current account balances and have had large negative cross-border spillovers, disproportionally affecting emerging markets. They underscored that more flexible exchange rates and more anchored inflation expectations can mitigate negative spillovers to emerging market economies.

Directors observed that capital has moved from emerging market and developing economies to advanced economies in 2022, in the context of increased risk aversion triggered by the war in Ukraine and tighter monetary policy in advanced economies. They noted that the net flows of capital from emerging market and developing economies, mostly driven by China and commodity-exporting economies, have funded large current account deficits in some advanced economies.

Directors noted that global current account balances are expected to narrow over the medium term as the impact of pandemic and Russia's war in Ukraine recede. They cautioned that significant risks surround this outlook, including tightening global financial conditions, renewed increase in commodity prices, or slower fiscal consolidation in economies with current account deficits.

Directors reiterated that excess global current account balances, which remained unchanged since 2021, can fuel trade tensions and protectionist measures or increase the risk of disruptive currency and capital flow movements. They consequently encouraged both excess surplus and deficit economies to take steps to promote external rebalancing.

Directors underscored that cooperation is key to addressing the complex challenges facing the global economy and preserving the benefits of global integration and multilateralism. Noting that geoeconomic fragmentation would unambiguously reduce global welfare, Directors highlighted that coordinated policy efforts will be needed to counter the related risks, including by strengthening the current rules-based trading system. Moreover, Directors noted that while industrial policy could be pursued to address well-established market failures, they should not introduce distortions and should be consistent with international agreements and WTO rules. Directors stressed

that ensuring an adequate global financial safety net, with the Fund at its core, remains critical at a time of heightened vulnerabilities in emerging markets with high external liabilities. In this regard, Directors underscored the importance of successfully completing the 16th General Review of Quotas.

Directors underscored 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 critical infrastructure and well-targeted social spending will be critical to supporting external rebalancing. Directors stressed that economies with lingering competitiveness challenges will need to address structural challenges to promote green, digital, and inclusive growth while boosting productivity. In economies where excess current account surpluses persist, prioritizing reforms that encourage investment and discourage excessive private saving, while also pursuing domestic objectives, is warranted.

Directors reiterated the need to ensure transparency, consistency, and evenhandedness of external assessments across countries. They stressed the importance of continued caution in interpreting and communicating the assessment results. Directors encouraged further exploration of possible improvements to enhance the EBA methodologies, given model limitations, and continued efforts to ensure consistency across work streams. They called for greater analysis of vulnerabilities associated with large external stock positions.

CHAPTER 1

EXTERNAL POSITIONS AND POLICIES

Recovery, War, and Policy Shocks

Global current account balances widened further in a third consecutive year in 2022 (Figure 1.1). One prominent contributor to the widening in 2022 was Russia's invasion of Ukraine, which elevated commodity prices amid supply concerns. The uneven recovery from the COVID-19 pandemic—across countries and sectors—and the rapid tightening of US monetary policy also contributed to the widening of global balances, offsetting the impact from unwinding of pandemic-induced fiscal measures. Concurrently, the US dollar appreciated substantially, and the uphill capital flow—capital flowing from faster-growing emerging market and developing economies (EMDEs) to slower-growing advanced economies—reappeared.

China's reopening and the US banking sector turmoil were the new forces that could have important implications on global balances in early 2023. The reopening of the Chinese economy led to a temporary rebound in exports in the first quarter of 2023 as supply chain conditions improved, contributing to a widening of global trade balances. The unexpected failures of two large regional banks in the United States and a systemically important global bank in Europe have had limited impact on cross border capital flows and currency volatility so far, owing to forceful policy actions undertaken to reassure markets and shore up the banking sector. However, as banking sector turmoil has tightened credit conditions and curtailed lending, market participants now expect a shallower monetary policy path in the United States, which has provided some support to EMDE currencies.

The widening of global current account balances is expected to reverse in 2023, as the impacts of the pandemic and Russia's war in Ukraine recede. Policy actions will also help narrow excess global balances—those beyond what can be explained by medium-term fundamentals and desirable policies—albeit gradually and over the medium term (see 2022 *External Sector Report,* Box 1.2). However, there is a high degree of uncertainty surrounding this outlook. Risks include a renewed increase in commodity prices and a slower-than-expected pace of China's recovery or of fiscal consolidation in economies with current account deficits. In addition, a severe tightening of global financial conditions could trigger broad-based capital outflows from vulnerable EMDEs, and further geoeconomic fragmentation could potentially lead to large welfare losses, including through its effects on trade barriers and foreign direct investment.

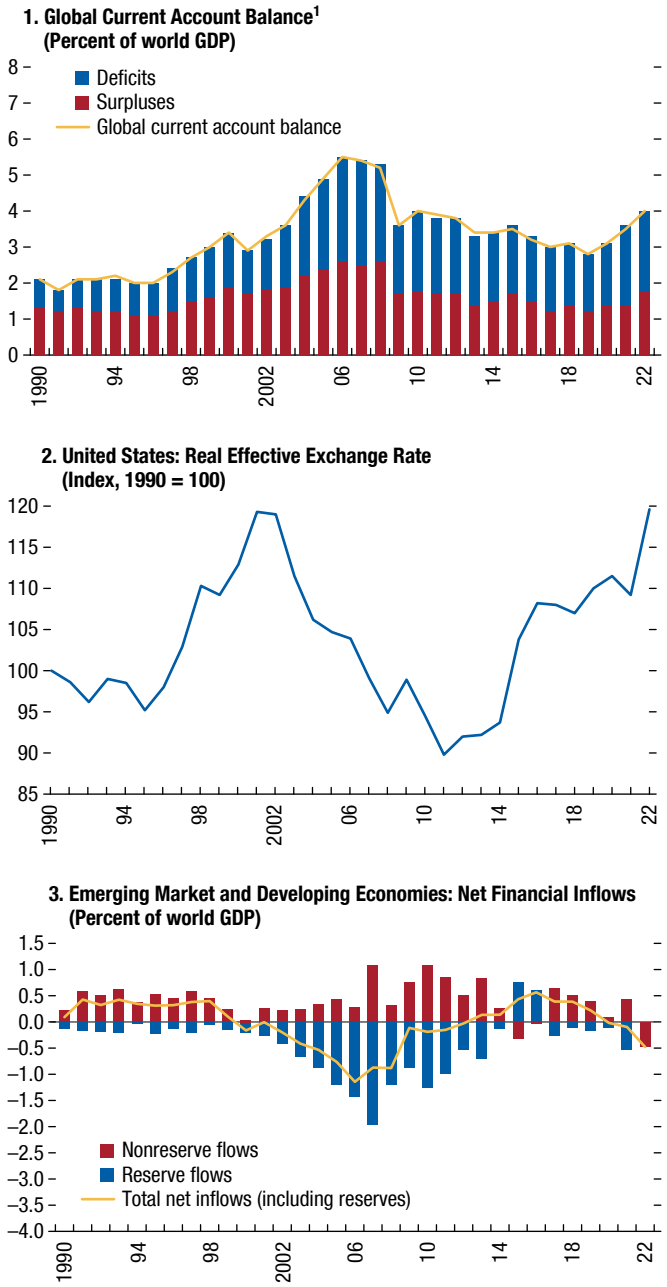
The authors of this chapter are Cian Allen, Lukas Boer, Camila Casas, Jiaqian Chen (co-lead), Giovanni Ganelli (co-lead), Luciana Juvenal, and Cyril Rebillard, in collaboration with Robert Zymek, under the guidance of Jaewoo Lee. Jair Rodriguez, Xiaohan Shao, and Abreshmi Nowar provided excellent research support.

Recent Developments in Current Account Balances

Elevated Commodity Prices and the War in Ukraine

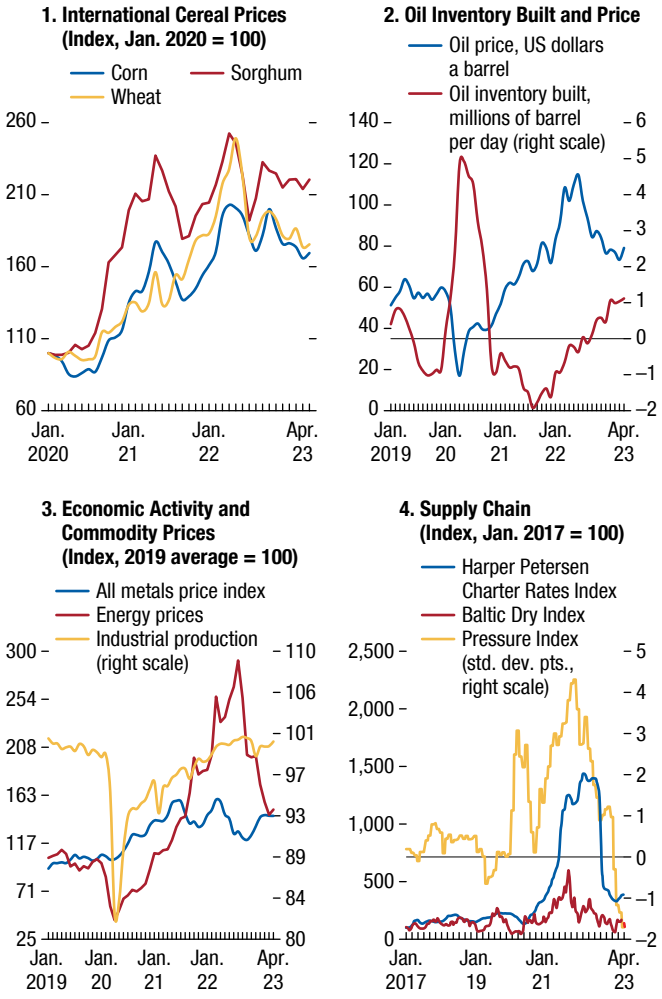
Commodity prices increased in 2022, enlarging the differences in current account balances between commodity importers and exporters (Figures 1.2 and 1.3). In the aftermath of Russia's invasion of Ukraine, commodity prices soared amid concerns about a shortfall in global supplies from Russia and Ukraine and trade disruptions caused by the war itself. Oil prices then started falling from their peak in mid-2022, as demand growth from major economies, such as China, slowed and trade diversion enabled a steady supply of Russian crude oil to the global market. European gas prices had risen to a stratospheric level amid supply disruptions but declined, owing to substitution efforts and an exceptionally mild winter that reduced demand. Food prices also began to fall around the same period as supply and demand reacted to higher prices, including through the reopening of the Black Sea corridor, increased wheat production in Europe and India, and lower demand for price-elastic items. Despite the decline since mid-year, average commodity prices in 2022 were higher than those in 2021 and well above their pre-pandemic levels.

Figure 1.1. Global Current Account Balances, REER, and Capital Flows, 1990–2022



Sources: IMF, Information Notice System; IMF, April 2023 *World Economic Outlook*; and IMF staff calculations.
Note: REER = real effective exchange rate.
[1]Global current account balance is defined as the sum of absolute values of current account balances.

Figure 1.2. The COVID-19 Crisis and the War in Ukraine

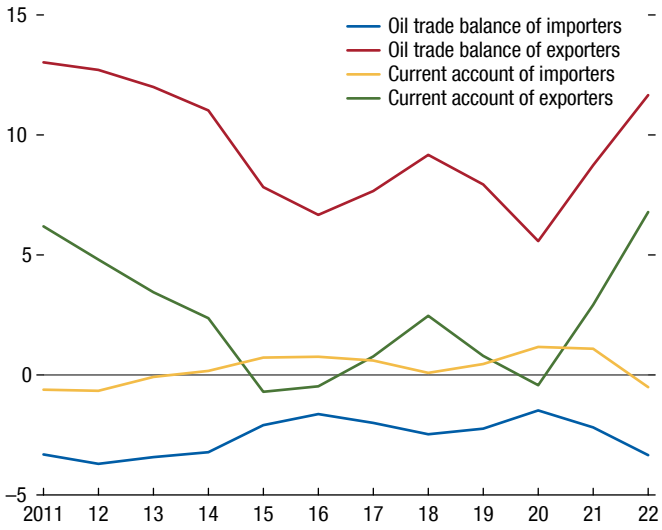


Sources: CEIC Global Economic Data; Haver Analytics; IMF, Primary Commodity Price System; Joint Organisations Data Initiative; and US Energy Information Administration.
Note: In panel 2, oil inventory built is calculated as the six-month moving average of total world petroleum production minus total world petroleum consumption, and oil price refers to crude oil (petroleum), West Texas Intermediate 40 American Petroleum Institute (API), in US dollars a barrel.

An Uneven Recovery from the COVID-19 Pandemic

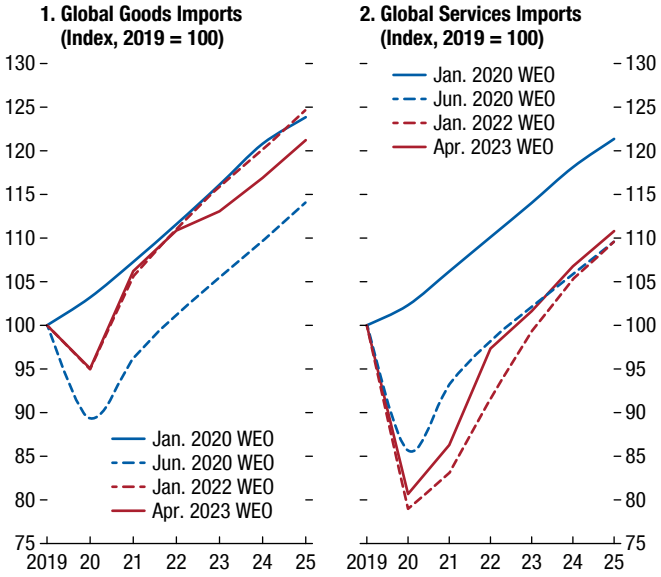
As health conditions improve across the globe, the impact of some critical pandemic factors on current account balances has been waning. These factors include medical trade, as demand for medical products and personal protective equipment has declined. The impact on trade balances from a shift in household consumption away from services toward goods appears to have approached a new normal, as the services trade balance is projected to expand at its pre-pandemic

Figure 1.3. Movements in Oil Trade Balance and Current Account for Oil Exporters and Importers
(Average of balances in percent of GDP)



Sources: IMF, April 2023 *World Economic Outlook*; and IMF staff calculations.
Note: Countries are defined as exporters or importers by their oil trade balance in 2021. Figure includes External Balance Assessment countries: Hong Kong SAR, Saudi Arabia, and Singapore. Importer countries are 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, the United Kingdom, the United States, and Uruguay. Exporter countries are Brazil, Canada, Colombia, Malaysia, Norway, Russia, and Saudi Arabia.

Figure 1.4. Trade in Goods and Services Compared with Pre-Pandemic Trends



Sources: IMF, April 2023 *World Economic Outlook* (WEO); and IMF staff calculations.
Note: Global imports are in volumes.

growth rate, though remaining below its pre-pandemic level (Figure 1.4).[1]

Nonetheless, the emergence of especially contagious, but less lethal, COVID-19 variants continued to materially affect some economies' external balances in 2022 (Figure 1.5). The resulting travel shock is estimated to have materially lowered the travel services and current account balances of a few tourism-exporting countries such as Thailand. While shipping costs abated in the second half of 2022, the yearly average remained high compared with the historical average (Figure 1.2, panel 4). As a result, they continued to increase the current account balances of economies with large presences of shipping companies (for example, France).

[1]Given those developments in pandemic-related factors, the medical and consumption shift adjustors have been discontinued for 2022, while the transportation and travel adjustors have continued to be applied in the 2023 *External Sector Report*.

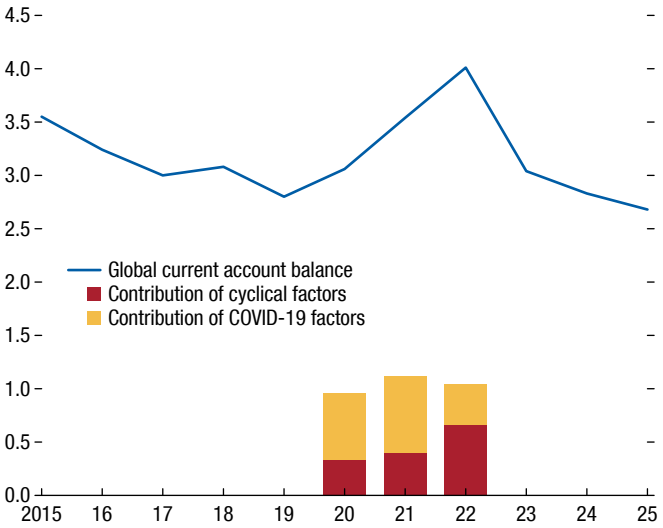
Contribution of Cyclical Factors

Cyclical factors played a more important role in the widening of the global balances in 2022 compared with previous years (Figure 1.5). The contribution of cyclical factors to the global balances reflected the (temporary part of) elevated commodity prices, which pushed the terms of trade for commodity-exporting and -importing countries in opposite directions. It also reflects the impact from output gaps as economies were in different phases of recovery: weak domestic demand led to a stronger current account balance, via factors including lower investment, and vice versa for economies with stronger domestic demand.

Policy Actions

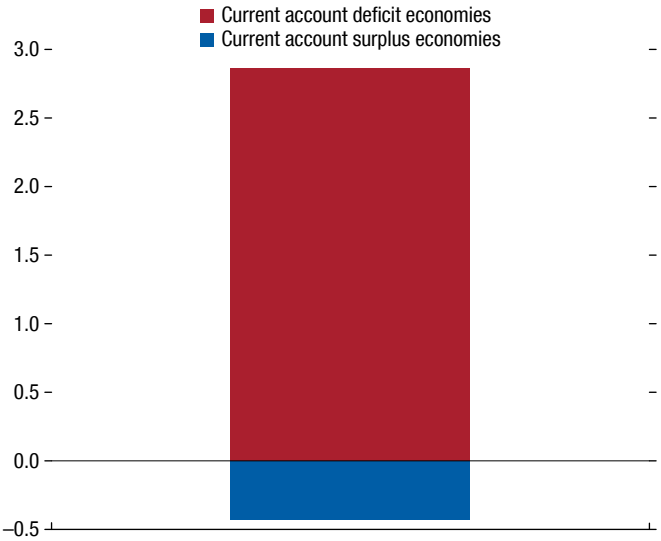
Fiscal policies in 2022 likely moderated the increase in global current account balances. On average, economies with current account deficits consolidated their fiscal policies in 2022 relative to 2021, while economies with current account surpluses loosened their stances (Figure 1.6). Among deficit countries, Canada, Türkiye, the United Kingdom, and the United States reduced their (cyclically adjusted) fiscal

Figure 1.5. Global Current Account Balances, with the Contributions from Cyclical and COVID-19 Factors
(Percent of world GDP)



Sources: CEIC Data, Global Database; IMF, Primary Commodity Price System; Refinitiv Datastream; UN, Comtrade; UN Conference on Trade and Development; and IMF staff calculations.
Note: Global current account balance is the sum of absolute values of current account; COVID-19 factors are the sum of absolute values of transportation and travel COVID-19 adjustors for *External Sector Report* countries only; and cyclical factors are the sum of absolute values of the contribution of cyclical factors to current accounts of *External Sector Report* countries only. Data from 2023 onward are projections, based on the April 2023 *World Economic Outlook*.

Figure 1.6. Average Fiscal Policy Changes, 2021–22
(Percentage points)



Sources: IMF, April 2023 *World Economic Outlook*; and IMF staff calculations.
Note: Figure shows the GDP-weighted average change in fiscal stance, measured as cyclically adjusted general government overall balance as percent of potential GDP. An increase (decrease) denotes tighter (looser) fiscal policy relative to 2021. Economies are grouped according to current account balances in 2021.

deficits; among surplus economies, China, Japan, Korea, and The Netherlands increased theirs. However, the strengthening of the US dollar widened the US current account deficit.

Government and household saving in advanced economies moved in opposite directions, while corporate saving remained above pre-pandemic levels (Figure 1.7). Despite the budgetary support deployed (about 1.3 percent of GDP in the case of the European Union) to help households and firms weather the energy crisis, public sector saving improved in 2022 relative to 2021 in many economies, mostly reflecting the unwinding of temporary support measures deployed during the pandemic. Against this background, household saving declined, notably in the United States, where the saving rate fell below pre-pandemic levels. On the other hand, since mid-2020, corporate saving has remained high in the United States and several other advanced economies compared with pre-pandemic levels.

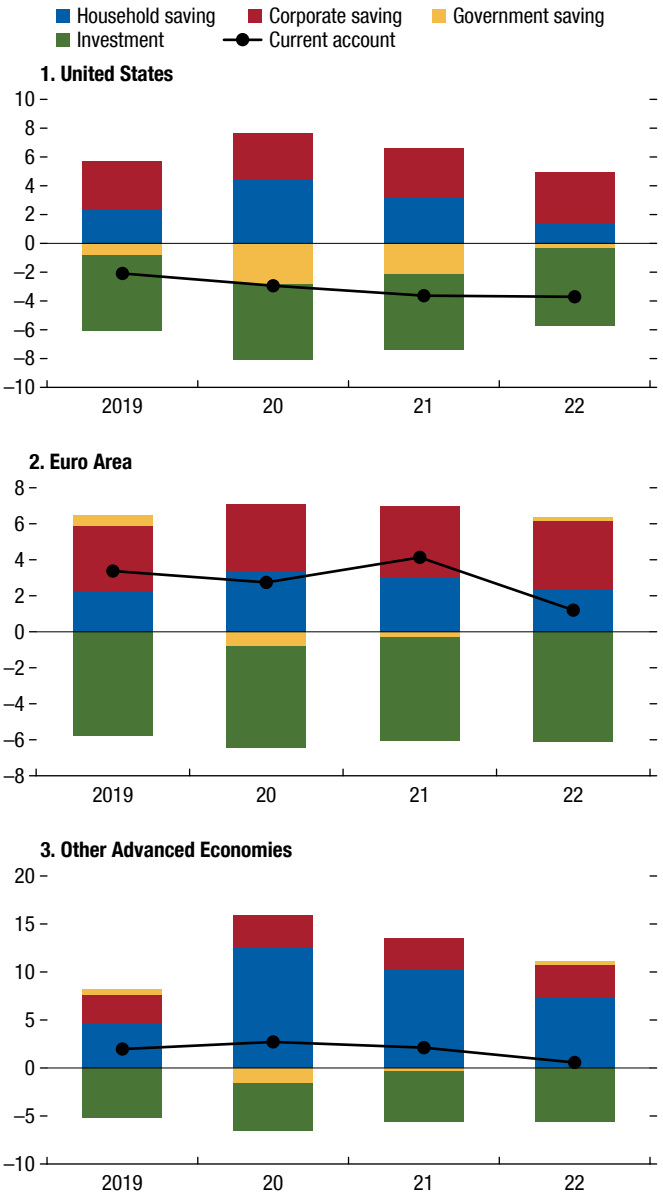
In the early months of 2023, trade data suggest that global trade balances widened compared with their levels at the end of 2022, driven by the reopening of China offsetting the impact from falling commodity prices. China's exports temporarily improved in the first quarter of the year against the backdrop of relaxed testing and quarantine requirements and normalization of supply chains; imports also increased from the previous quarter, but less than exports, reflecting subdued imports of intermediate goods amid growth led by private consumption that is less import intensive. The improvement in China's trade surplus has so far more than offset the narrowing of the surplus in commodity-exporting economies, but China's trade surplus is expected to shrink with a significant anticipated pickup in tourism travel in the remainder of 2023.

Currencies, Financial Flows, and Balance Sheets

Exchange Rates

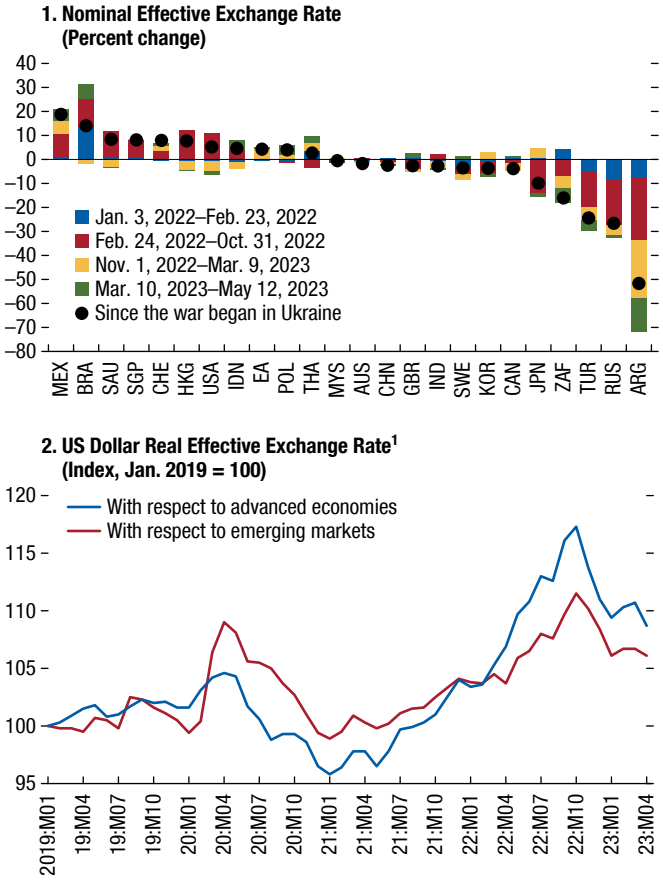
In the past year and a half, the currency market has experienced significant fluctuations (Figure 1.8, panel 1). The US dollar, in real effective terms, was

Figure 1.7. Current Account Decomposition
(Percent of GDP)



Sources: IMF, April 2023 *World Economic Outlook*; and IMF staff calculations.
Note: Investment is displayed as a negative value. Euro area countries comprise Austria, Belgium, Finland, France, Germany, Ireland, Italy, The Netherlands, Portugal, and Spain. Other advanced economies comprise Australia, Canada, Czech Republic, Denmark, Slovenia, Sweden, and the United Kingdom.

Figure 1.8. Currency Movements



Sources: Federal Reserve Board; and IMF staff calculations.
Note: EA = euro area. Data labels in the figure use International Organization for Standardization (ISO) country code.
[1]Constructed as a weighted average of the foreign exchange value of the US dollar against the currencies of a group of major US trading partners that are advanced economies and emerging market economies. An increase in the real effective exchange rate index corresponds to an appreciation of the US dollar.

about 7 percent stronger in April 2023 compared with its 2021 average, while some EMDE currencies have weakened considerably. Between 2022 and March 2023, the US dollar appreciated more with respect to advanced economy currencies, on average, than with respect to EMDE currencies (Figure 1.8, panel 2), in part due to less favorable terms of trade in advanced economies relative to those in EMDEs.[2]

- By October 2022, in real effective terms, the US dollar had appreciated by about 14 percent relative to its 2021 average, reflecting economic fundamentals such as rapid tightening of monetary policy in the United States, as well as more favorable terms of trade. However, it has since depreciated by about

[2]As discussed in Chapter 2, historically there has been a strong negative link between the US dollar and commodity prices. However, the 2021–22 US dollar appreciation coincided with a significant upswing in commodity prices, linked to recovery from the COVID-19 pandemic and Russia's war in Ukraine.

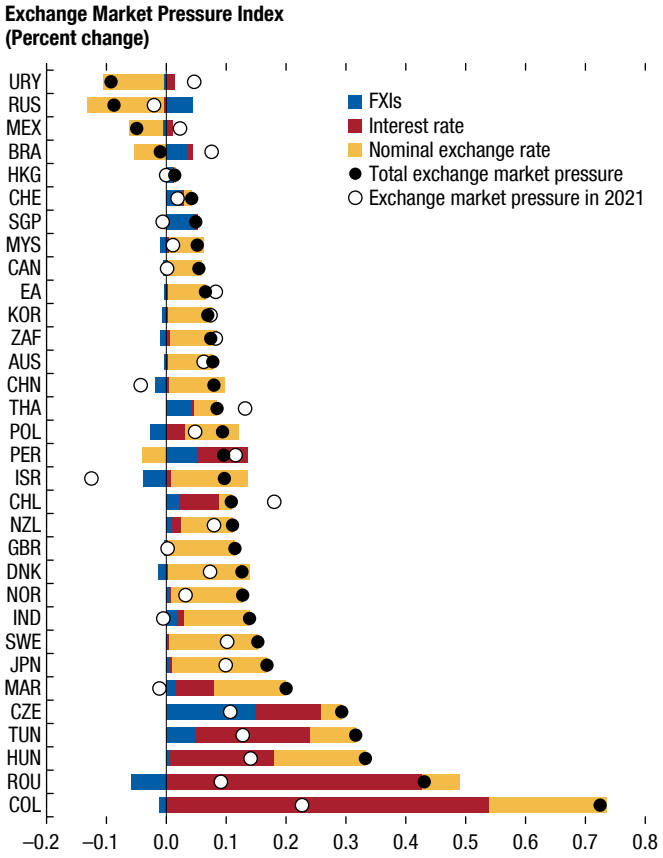
6 percent on a real trade-weighted basis, reflecting a change in expectations of US monetary policy and improved risk sentiment. Despite this, the dollar remains stronger than it has been since 2000.

- By contrast, as of April 2023, other major currencies have either remained broadly unchanged (such as the euro and the pound sterling) or depreciated, including the Japanese yen by 15.3 percent and the renminbi by 7.6 percent, in real effective terms compared with their 2021 averages. The depreciations were driven by interest rate differentials, high energy prices and different speeds of economic recovery.
- In EMDEs, currency movements have been more heterogeneous. While currencies in some economies, such as Brazil and Mexico, appreciated in nominal effective terms in 2022 and early 2023, those in other economies—including Argentina, South Africa, and Türkiye—depreciated significantly. The monetary tightening in advanced economies has put depreciation pressure on all EMDE currencies; however, country-specific factors such as earlier monetary tightening (than in advanced economies), preexisting vulnerabilities (such as lower perceived institutional quality), and commodity exposure have led to these different currency movements. The Russian ruble appreciated significantly in the second quarter of 2022 under restrictions on imports and capital outflows, but it has since depreciated against the US dollar, largely owing to weaker terms of trade and a sharp increase in parallel imports.

The widespread depreciation pressure of 2022 was evident in a more comprehensive measure of market pressure. The realized change in exchange rates may only be a partial measure of external pressure, as economies can resort to foreign exchange intervention or interest rate changes to cushion such pressure. Figure 1.9 plots the Exchange Market Pressure Index and its components for 2022, incorporating both realized exchange rate movement and policy intervention (purchases and sales of foreign exchange reserves and policy rate changes) by central banks.[3]

[3]The Exchange Market Pressure Index is based on Goldberg and Krogstrup (2023). It is defined as the weighted and scaled sums of exchange rate depreciation, foreign exchange intervention, and policy rate changes. It combines pressures observed in exchange rate adjustments with model-based estimates of incipient pressures that are absorbed by foreign exchange interventions and policy rate adjustments.

Figure 1.9. Exchange Market Pressure and Its Components

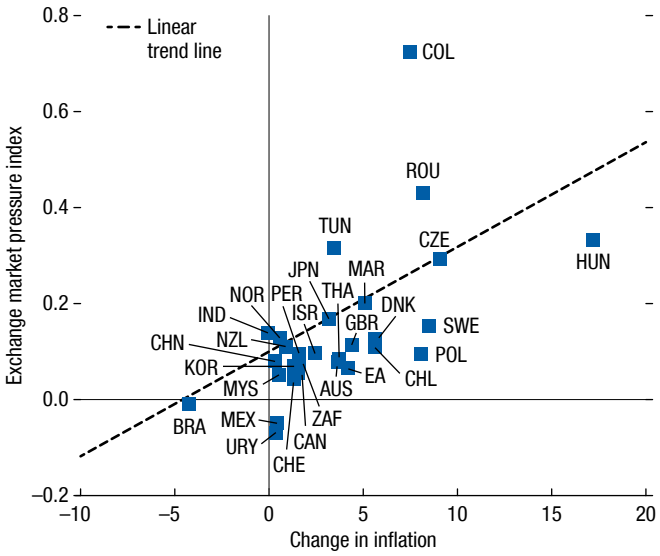


Sources: Adler and others (2021); Goldberg and Krogstrup (2023); IMF, *International Financial Statistics*; and IMF staff calculations.
Note: Positive values correspond to exchange market pressure that would depreciate the nominal exchange rate. A country's total exchange market pressure in 2022 is the sum of scaled and weighted observed foreign exchange interventions (FXIs), short-term interest rate changes, and nominal exchange rate movements. Values of FXIs and interest rate changes are expressed in terms of counterfactual exchange rate adjustments that would have occurred if no FXI or policy rate changes had been conducted. FXIs are spot interventions from an updated data set of Adler and others (2021). EA = euro area. Data labels in the figure use International Organization for Standardization (ISO) country codes.

In 2022, many economies let their currencies adjust fully (for example, Australia, Sweden), whereas many others undertook foreign exchange intervention (for example, Czech Republic, Singapore) or raised the policy rate (for example, Colombia, Romania), dampening depreciation pressures as a consequence.[4] Compared with those in 2021, external pressures in 2022 were much larger, with many economies hiking interest rates and offsetting depreciation pressures.

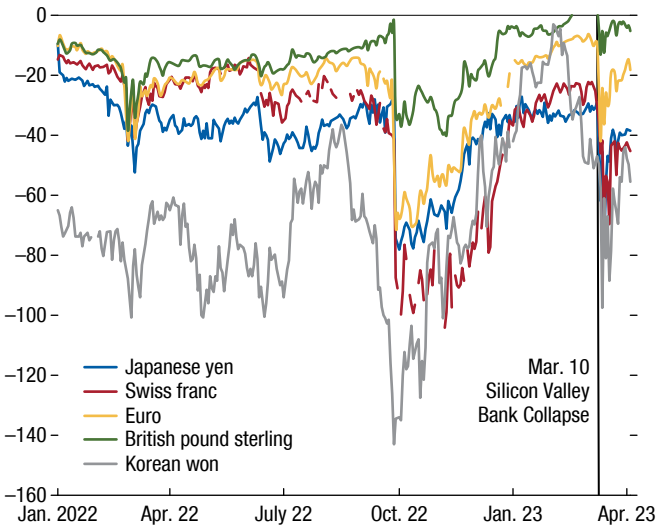
[4]Singapore uses foreign exchange intervention as a monetary instrument.

Figure 1.10. Exchange Market Pressure and Inflation, 2022
(Percent)



Sources: Goldberg and Krogstrup (2023); and IMF staff calculations.
Note: Figure plots the cumulative Exchange Market Pressure Index for 2022 and the change in inflation between 2021 and 2022. Russia is excluded. If policy rate changes are excluded from the Exchange Market Pressure Index, the correlation goes from 0.6 to 0.5. EA = euro area. Data labels in the figure use International Organization for Standardization (ISO) country codes.

Figure 1.11. Cross-Currency Basis Swap against US Dollar
(Basis points)



Source: Bloomberg Finance L.P.

Over the year, countries with larger increases in inflation tended to experience more external pressure (Figure 1.10).[5]

The March 2023 turmoil in the banking sector had only limited impact on currency volatility, thanks to the forceful policy responses. In particular, after a brief period of tightening, international dollar funding conditions eased, with the cross-currency basis of advanced economy currencies with respect to the US dollar narrowing back to pre-March levels (Figure 1.11).

Global Financial Flows

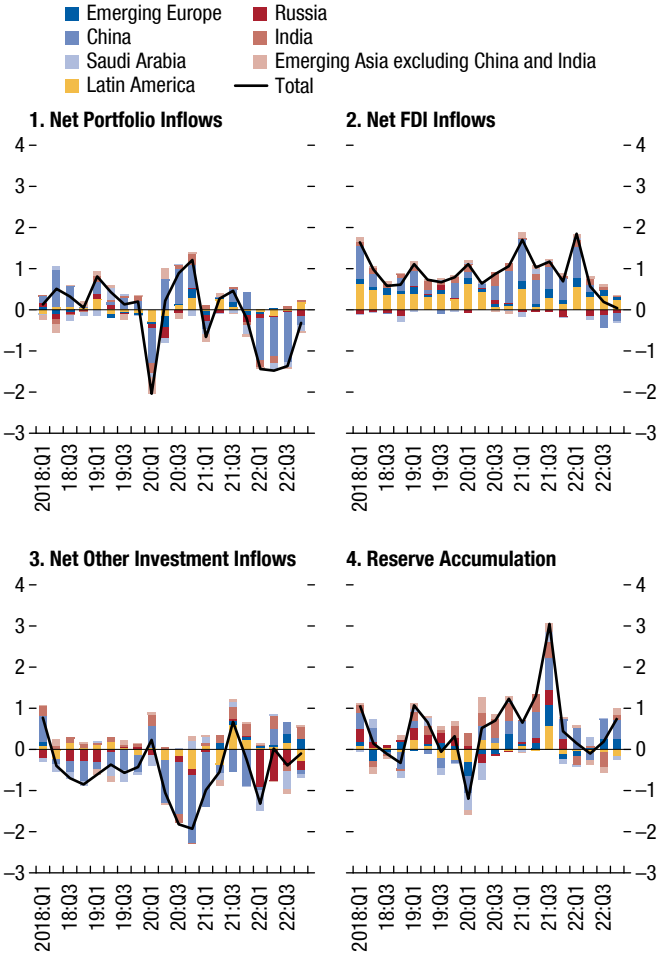
In 2022, uphill capital flows from EMDEs to advanced economies reemerged. This resembles a pattern of capital flowing from lower-income to higher-income economies that occurred in the lead-up to the global financial crisis (Figure 1.1; see also the 2021 *External Sector Report* Online Annex 1.2).[6] However, in 2022, net capital outflows from EMDEs, and particularly from China, took place not via an accumulation of official foreign exchange reserves, but via other types of flows. Consistent with this pattern, private holdings of US assets increased (Box 1.1). This net flow of capital from EMDEs, as a whole, is expected to diminish in 2023.

Turning to subcomponents of the financial account (Figure 1.12), a large share of overall net outflows from EMDEs has been through net portfolio flows, which declined substantially in 2022. This decline likely reflects monetary tightening in advanced economies. Other investment inflows, and in particular global cross border bank flows to EMDEs, have also declined since 2021. The bulk of the decline was inflows into China, which has experienced higher funding costs amid dollar strength. Net foreign direct investment (FDI) inflows, which remained relatively stable in 2020 and 2021, also fell in 2022.

[5]Nonetheless, the Exchange Market Pressure Index does not capture the effect of capital flow management measures that were used by some economies as part of the policy mix.

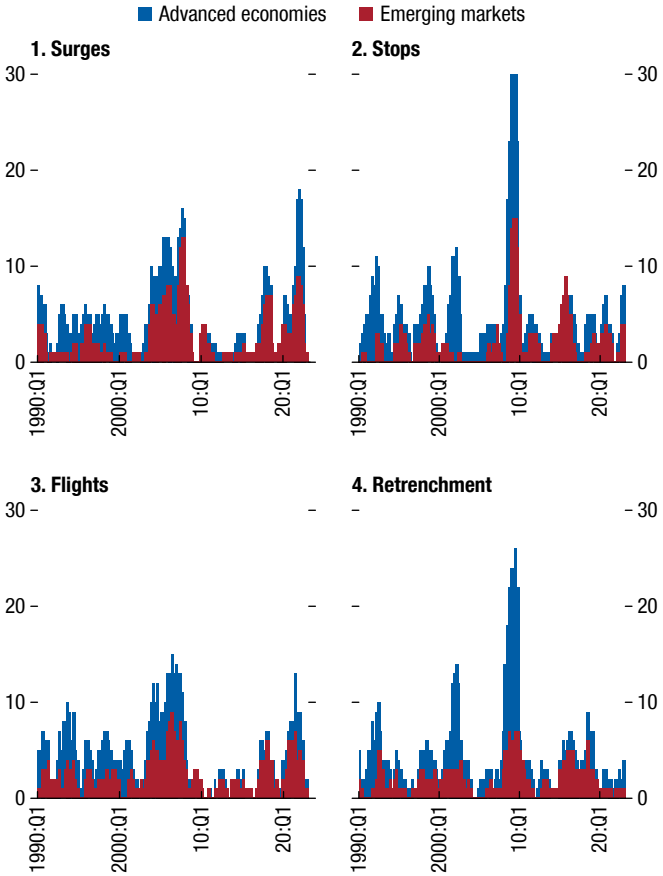
[6]Standard economic models suggest that capital is expected to flow from slower-growing, capital-abundant richer economies to faster-growing capital-scarce ones in search of higher returns (see Boz, Cubeddu, and Obstfeld 2017). This is commonly referred to as a downhill flow of capital, whereas the reverse is called uphill (Gourinchas and Jeanne 2013; Lucas 1990; Prasad, Rajan, and Subramanian 2007).

Figure 1.12. Capital Flows to Emerging Market and Developing Economies
(Percent of country group GDP)



Sources: IMF, *International Financial Statistics*; Institute of International Finance; and IMF staff calculations.
Note: 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 1–3, positive numbers represent net inflows of capital. FDI = foreign direct investment.

Figure 1.13. Incidence of Extreme Capital Flows: Number of Surges, Stops, Flights, and Retrenchments



Sources: IMF, *Balance of Payments*; and IMF, *International Financial Statistics*.
Note: Capital flows are defined as gross inflows and outflows (excluding reserves). Episodes are based on flows in billions of US dollars. Sample is External Balance Assessment countries. Last observation is fourth quarter of 2022. A *surge* is a sharp increase in gross capital inflows from foreign investors, a *stop* is a sharp decrease in gross capital inflows from those investors, a *flight* is a sharp increase in gross capital outflows from domestic investors, and a *retrenchment* is a sharp decrease in gross capital outflows from domestic investors.

Finally, reserves accumulation slowed from a large accumulation in 2021 and had turned into a net sale of reserves in the second quarter of 2022 (see also Annex Table 1.1.1).

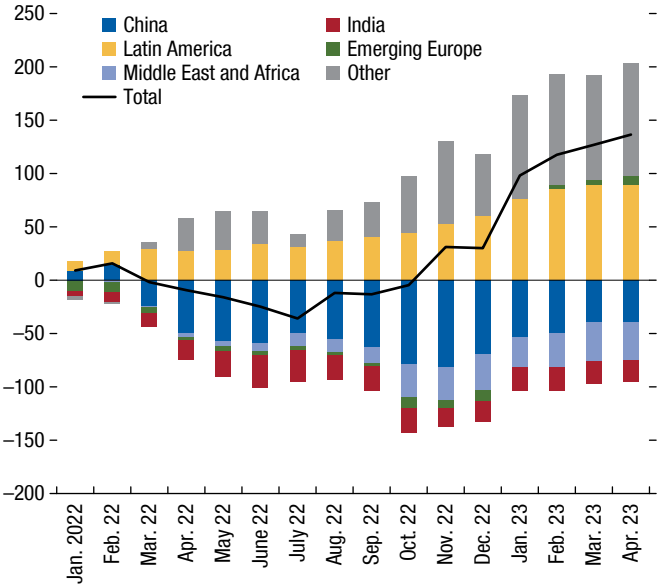
While China accounted for a large share of the net capital outflows from EMDEs, the phenomenon was broad based across other EMDEs. These outflows potentially reflect several global factors at work, such as increased risk aversion triggered by the war in Ukraine and tightening of monetary policy in advanced economies. In another notable development, the level of US-dollar-denominated credit in cross-border banking flows declined, especially in the second half of 2022 (BIS 2023).

The return of uphill capital flows follows an increase in the volatility of capital flows since the beginning of the pandemic. Figure 1.13 illustrates the occurrence of extreme capital flow movements by foreigners and domestic investors in and out of

individual economies.[7] The results suggest that after a period of relative stability, characterized by "ripples" rather than "waves" (Forbes and Warnock 2021), the frequency of extreme capital flow movements has increased since the onset of the pandemic, with a notable rebound in gross flows from both foreign (*surges)* and domestic (*flights*) investors occurring during the recovery from the pandemic in 2021, likely fueled by mounting optimism in financial markets. The COVID-19 crisis did not lead to many sudden stops, as policymakers reacted forcefully to maintain investor confidence.[8]

After a year of net outflows in 2022, short-run net capital inflows to EMDEs resumed in the first few months of 2023. While global financial tightening was the key driver of net outflows in 2022, easing financial conditions (see the April 2023 *Global Financial Stability Report*) brought net inflows back into EMDEs in early 2023, helped by the reopening of China and a shallower expected monetary policy rate path in the United States. In particular, there was a strong rebound in nonresident—and mostly debt—flows to EMDEs (Figure 1.14). The banking sector turmoil in March 2023, while so far having had a limited impact on short-term capital flows, calls for caution and raises the risk of a potential risk-off episode, with decreasing inflows to EMDEs.

Figure 1.14. Cumulative High-Frequency Portfolio Flows to EMDEs January 2022–April 2023
(Billions of US dollars)



Sources: Institute of International Finance; and IMF staff calculations.

International Balance Sheets and the Global Financial Safety Net

Creditor and debtor stock positions remained elevated in 2022, reflecting the offsetting effects of widening current account balances, the dollar's strength—which caused valuation gains in countries with long positions in the dollar (Box 1.2)—and declining asset prices (Figure 1.15). The largest debtor economy remains the United States, though its net international investment position improved from –18.1 percent of world GDP in 2021 to –16.4 percent in 2022. Other large debtor economies include the euro area (excluding Germany and The Netherlands), while the largest creditor economies remain, in descending order, Japan, Germany, and China. Financial centers play an outsized role in global balance sheets, representing 36 percent of global holdings but only 7 percent of global GDP (see also Box 1.1).[9] Stock positions remain even more elevated in gross terms (Figure 1.16).

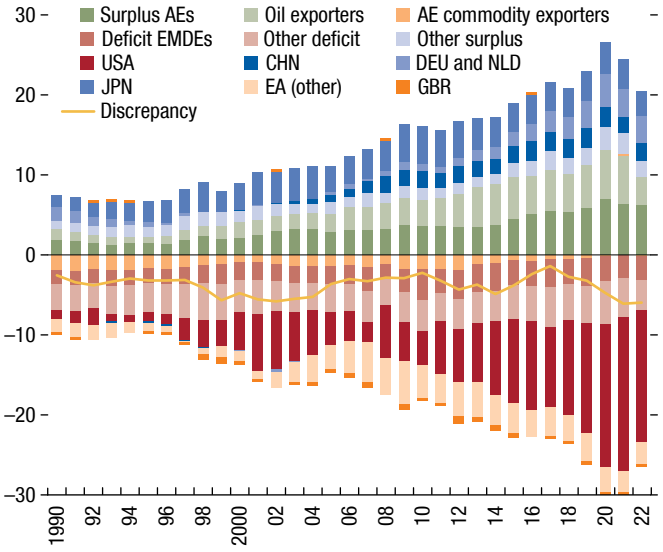
Valuation changes, which induce wealth transfer across countries, were more muted in 2022 compared with 2021 for all *External Sector Report* (ESR) economies. In 2022, creditor economies tended to have more valuation losses, while debtors tended to experience more valuation gains (Figure 1.17), dampening global stock imbalances. For instance, in the United States, declining asset prices led to (positive) valuation gains in its external balance sheet, more than offsetting the

[7] *Capital flow episodes* are defined based on Forbes and Warnock (2012, 2021), a definition that is also used in David and Gonçalves (2021). They are events in which the year-over-year changes in four-quarter flows are more than two standard deviations away from the historical average (based on 20 quarters) during at least one quarter of the event. The event lasts for all consecutive quarters for which the change in annual capital flows is more than one standard deviation away from the historical average. A *surge* is a sharp increase in gross capital inflows by foreigners; a *stop* is a sharp decrease in gross capital inflows by foreigners; a *flight* is a sharp increase in gross capital outflows by domestic investors; and a *retrenchment* is a sharp decrease in gross capital outflows by domestic investors.

[8] Typically, global current account balances tend to widen when many economies recover from a sudden stop. This pattern was not observed in the 2022 widening of global balances, reflecting the absence of widespread sudden stops in EMDEs during the pandemic.

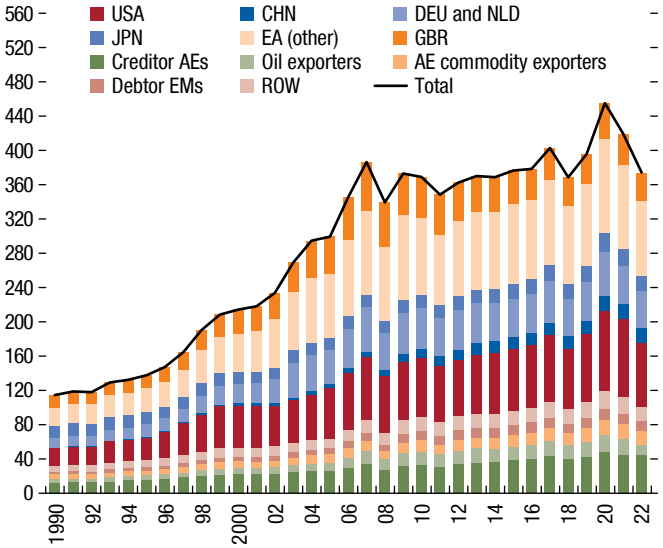
[9] The list of financial centers is based on Lane and Milesi-Ferretti (2018), along with data availability.

Figure 1.15. Net International Investment Positions, 1990–2022
(Percent of world GDP)



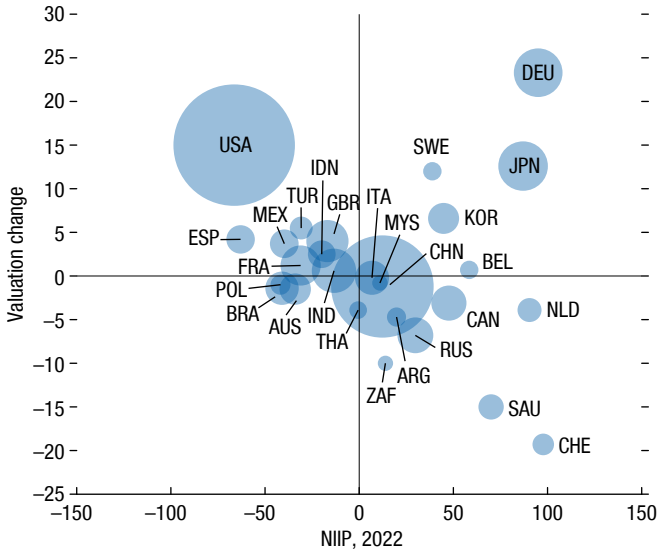
Sources: External Wealth of Nations database; IMF, *April 2023 World Economic Outlook*; and IMF staff calculations.
Note: Advanced economy (AE) commodity exporters comprise Australia, Canada, and New Zealand; creditor AEs comprise Hong Kong SAR, Korea, Singapore, Sweden, Switzerland, and Taiwan Province of China; deficit emerging market and developing economies (EMDEs) comprise Brazil, Chile, India, Indonesia, Mexico, Peru, South Africa, and Türkiye; oil exporters comprise those classified as such in the *World Economic Outlook* definition plus Norway. EA = euro area. Data labels in the figure use International Organization for Standardization (ISO) country codes.

Figure 1.16. Sum of Cross-Border Assets and Liabilities
(Percent of world GDP)



Sources: External Wealth of Nations database; IMF, April 2023 *World Economic Outlook*; and IMF staff calculations.
Note: AEs = advanced economies; EA = euro area; EMs = emerging markets; ROW = rest of the world. Data labels in the figure use International Organization for Standardization (ISO) country codes.

Figure 1.17. International Investment Position Valuation Change and Net International Investment Position, 2022
(Percent of GDP)



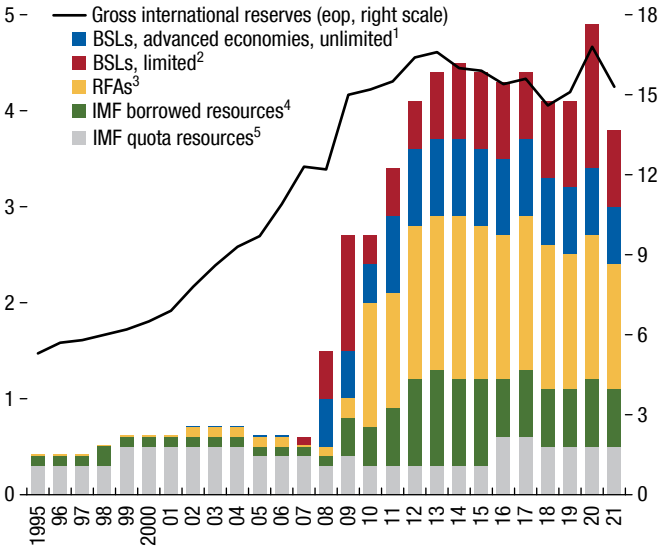
Sources: IMF, April 2023 *World Economic Outlook*; and IMF staff calculations.
Note: Valuation changes are calculated as the difference between changes in net international investment position (NIIP) and current account. For some countries, NIIPs are still projections. Bubble sizes are proportional to 2022 GDP in US dollars. Hong Kong SAR and Singapore are excluded because of the size of their NIIPs. Data labels in the figure use International Organization for Standardization (ISO) country codes.

deterioration due to its current account deficit.[10] Historically, the stabilizing role of valuation changes has primarily reflected the response of asset prices, rather than exchange rates (Adler and Garcia-Macia 2018).

The global financial safety net (GFSN) was critical in softening dollar funding strains during the COVID-19 crisis, with the Federal Reserve's bilateral swap lines playing a key role in stabilizing global financial markets and capital flows to EMDEs. Its goal is to provide countries with insurance against (financial) shocks, as well as financing and incentives for sound macro-economic policies (Aiyar and others 2023). The GFSN is composed of four main layers (Figure 1.18): gross international reserves, central banks' bilateral swap lines (BSLs, limited and unlimited), Regional Financing Arrangements (RFAs), and the IMF (borrowed and quota resources). As of the end of 2021, it represented a combined firepower of about 19 percent of global

[10]Declining domestic asset prices tend to improve the net international investment position, as nonresidents hold some of these assets, leading to a decline in foreign liabilities.

Figure 1.18. The Evolution of Global Financial Safety Net, 1995–2021
(Percent of world GDP)



Sources: Central bank websites; Perks and others (2021); RFA annual reports; and IMF staff estimates.
Note: BSLs = bilateral swap lines; eop = end of period; RFAs = regional financing arrangements. Two-way arrangements are counted only once.
[1]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, Jung, and Paternò (2016).
[2]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.
[3]Based on explicit lending capacity or limit (where available), committed resources, or estimated lending capacity based on country access limits and paid-in capital.
[4]After prudential balances.
[5]Quota for countries in the financial transaction plan after deducting prudential balance.

GDP. More recently, in March 2023, the Federal Reserve announced the enhancement of dollar funding swap lines between itself and five other major advanced economy central banks, helping limit financial strains following the collapse of Silicon Valley Bank.

Assessment of External Positions in 2022

This report presents individual assessments of external positions for 30 of the world's largest economies, which represent 87.5 percent of global GDP.[11] The IMF staff's assessment of external positions is a multilaterally consistent analysis of current accounts and real exchange rates. Annex Tables 1.1.2 and 1.1.3 summarize the IMF staff–assessed current account and real effective exchange rate gaps and external sector assessments for these economies.

Primer on Methodology

The primary numerical inputs for the IMF staff's assessments come from the models in the External Balance Assessment (EBA) methodology.[12] The models produce medium-term current account and real exchange rate benchmarks (or norms) that are consistent with country fundamentals and desired policies (Figure 1.19).[13] The norms are compared with realized current account and real exchange rate levels (after adjusting for cyclical and other short-term factors) to derive gaps, a measure of excess external balances. Positive and negative gaps offset one another, ensuring that the model results are multilaterally consistent—that is, that excess deficits are consistent with excess surpluses. The model inputs are then combined with other external indicators (such as net international investment positions, capital flows, foreign exchange reserves, and competitiveness indicators), analytically grounded adjustments, and country-specific insights to reach a holistic IMF staff assessment of external sectors.

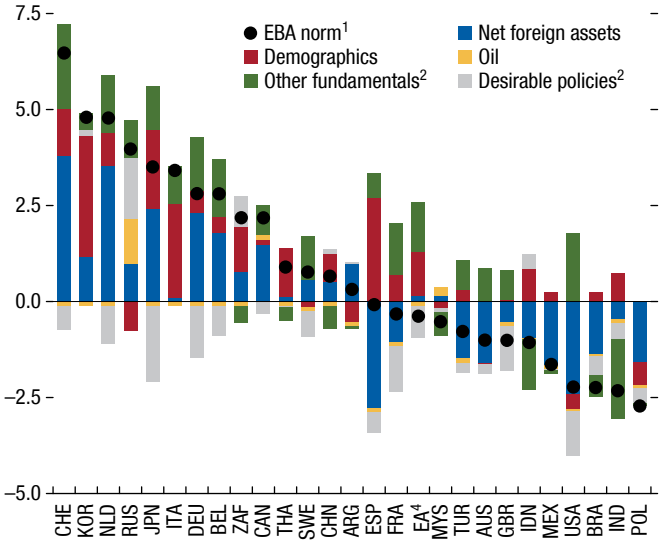
IMF staff judgment plays a critical role in the assessments, as the models may not capture all relevant country characteristics and potential policy distortions. Specifically for 2022, the EBA model estimates have been adjusted to strip out lingering but temporary effects of the COVID-19 pandemic on current accounts. These effects include remaining travel restrictions and transportation cost shocks, which were prevalent in some economies. Reflecting the dwindling effect of COVID-19-related shocks,

[11]Although the ESR presents assessments for 30 systemic economies, the IMF staff conduct an assessment of the external sector of all members as part of bilateral surveillance.

[12]See Allen and others (2023) for details on the current vintage of the EBA methodology. A detailed description of the external assessment process can also be found in an IMF blog entry, "Assessing Global Imbalances: The Nuts and Bolts" (Obstfeld 2017).

[13]The EBA current account norms reflect fundamental features affecting economies' saving and investment decisions. Advanced economies with higher incomes, older populations, and lower growth prospects tend to have positive norms, while most EMDEs, which tend to be younger and are expected to import capital to invest and exploit their higher growth potential, have negative norms. Norms also depend on desirable medium-term policies—that is, policies deemed appropriate by IMF staff once cyclical factors are accounted for. For instance, economies for which the staff recommends a relatively loose fiscal policy will have lower norms than those that are evaluated as needing fiscal consolidation.

Figure 1.19. External Balance Assessment Current Account Norms, 2022
(Percent of GDP)



Source: IMF, External Balance Assessment estimates.
Note: Figure excludes Hong Kong SAR, Saudi Arabia, and Singapore, as they are not included in the EBA regression model. EA = euro area; EBA = External Balance Assessment. Data labels use International Organization for Standardization (ISO) country codes.
[1]The EBA current account norm is multilaterally consistent and cyclically adjusted.
[2]Other fundamentals include output per worker, expected GDP growth, and *International Country Risk Guide* (ICRG).
[3]Desirable policies include desirable credit gap, desirable fiscal balance, desirable foreign exchange intervention, desirable health, and constant and multilaterally consistent adjustment.
[4]The current account norm is corrected for reporting discrepancies in intra-area transactions, since the current account of the entire euro area is about 2.0 percent of GDP less than the sum of the individual 11 countries' balances (for which no such correction is available).

these factors explained a significantly lower share of current account balances in 2022 than in the previous two years (Figure 1.5). Adjustments for country-specific factors, such as measurement issues, demographics, and net international investment position considerations, have also been included. Annex Table 1.1.3 reports the overall set of IMF staff adjustments to reflect both COVID-19-related factors and other country-specific factors.

Assessment Results for 2022

External positions compared with the levels consistent with medium-term fundamentals and desirable policies in 2022 were as follows:

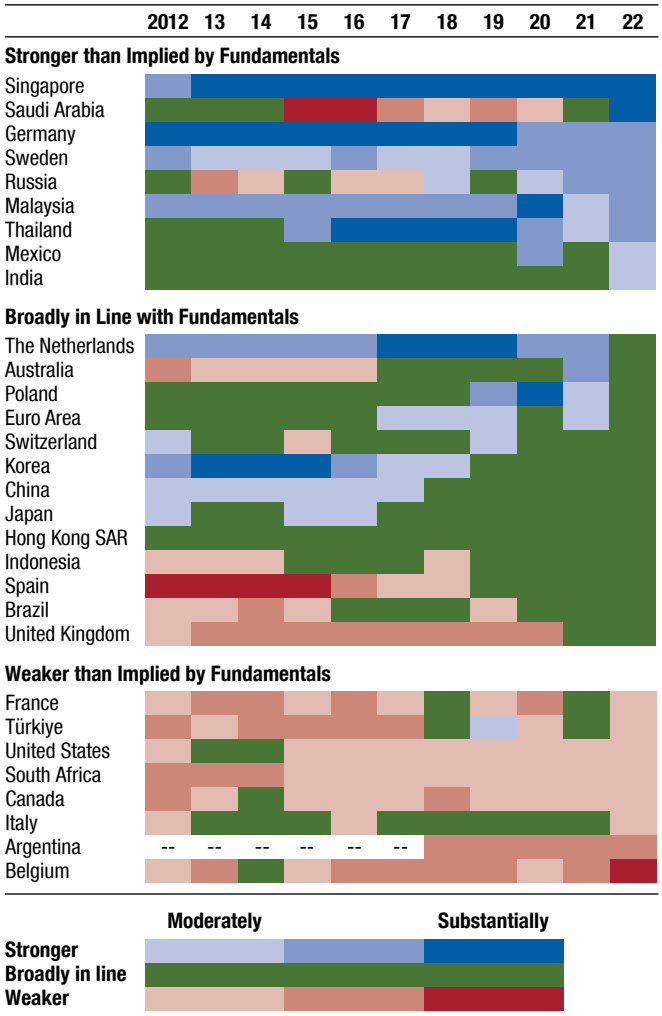
- *Moderately stronger, stronger, or substantially stronger than the level consistent with medium-term fundamentals and desirable policies:* The nine economies with such positions were Germany, Malaysia, Russia, Singapore, Sweden, and Thailand, along with India, Mexico, and Saudi Arabia, which entered the category in 2022.
- *Moderately weaker, weaker, or substantially weaker than the level consistent with medium-term fundamentals and desirable policies:* The eight economies with such positions were Argentina, Belgium, Canada, South Africa, and the United States, along with France, Italy, and Türkiye, which entered the category in 2022, driven by decreases in their current account balances that resulted in negative current account gaps.
- *Broadly in line with the level consistent with medium-term fundamentals and desirable policies:* The 13 economies with such positions were Brazil, China, Hong Kong Special Administrative Region, Indonesia, Japan, Korea, Spain, Switzerland, and the United Kingdom, along with Australia, The Netherlands, Poland, and the euro area, which entered this category in 2022 after being assessed as being on the stronger side in 2021.[14]

Compared with those for 2021, assessments for 2022 changed for nearly half of the 30 ESR economies (Figure 1.20). The assessments have moved farther away from the "broadly in line" category for nearly a third of the ESR economies. The majority of assessment changes has been driven by lower current account balances in 2022, as in the case of Australia and the euro area. In a notable contrast, the large increase in Saudi Arabia's current account balance moved its assessment to a substantially stronger position. There are also economies for which the current account gaps widened (such as China, Korea, and the United Kingdom) or narrowed (such as Germany, Japan, and Switzerland), but the changes were not large enough to move them into a different category. At the aggregate level, the sum of the absolute values of IMF staff–assessed current account gaps remained unchanged with respect to 2021 at 0.9 percent of ESR economy GDP in 2022.

Compared in terms of the sum of absolute values, headline current account balances changed more

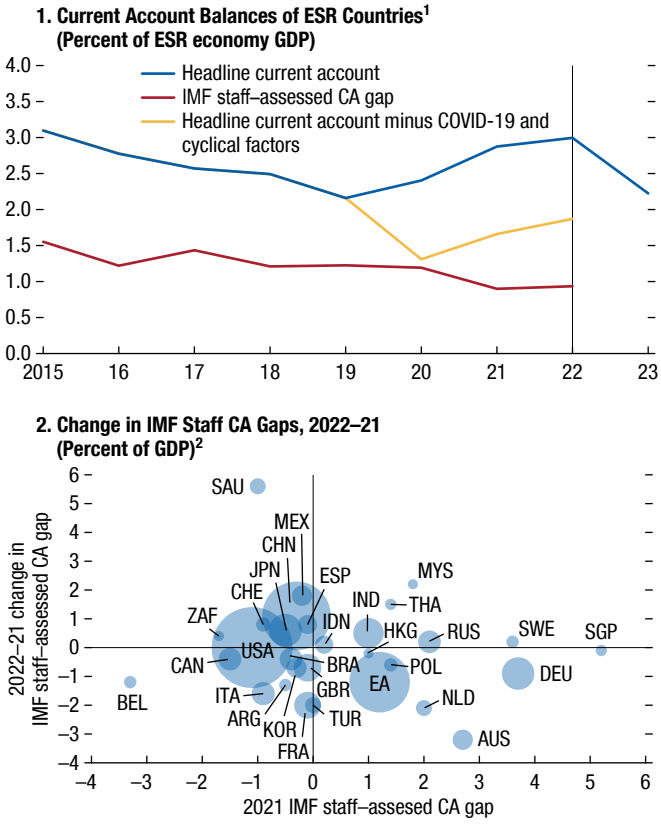
[14]Some economies may have small gaps and thus be assessed to be broadly in line with fundamentals and desirable policies, if the identified policy gaps offset each other or are offset by the model's residual. This is the case, for instance, in regard to China, Indonesia, and The Netherlands, whose IMF staff–assessed current account gap reflects offsetting policy gaps and factors outside the model, including structural distortions in China.

Figure 1.20. Evolution of External Sector Assessments, 2012–22



Source: IMF staff assessments.
Note: Grouping and ordering are based on economies' excess imbalance during 2022. Coverage of Argentina in the *External Sector Report* started in 2018.

Figure 1.21. Evolution of Headline Current Account Balances and IMF Staff Gaps



Source: IMF staff calculations.
Note: CA = current account; EA = euro area; ESR = *External Sector Report*. Data labels in the figure use International Organization for Standardization (ISO) country codes.
[1]The headline CA for 2023 is a projection.
[2]Bubble sizes are proportional to 2022 GDP in US dollars.

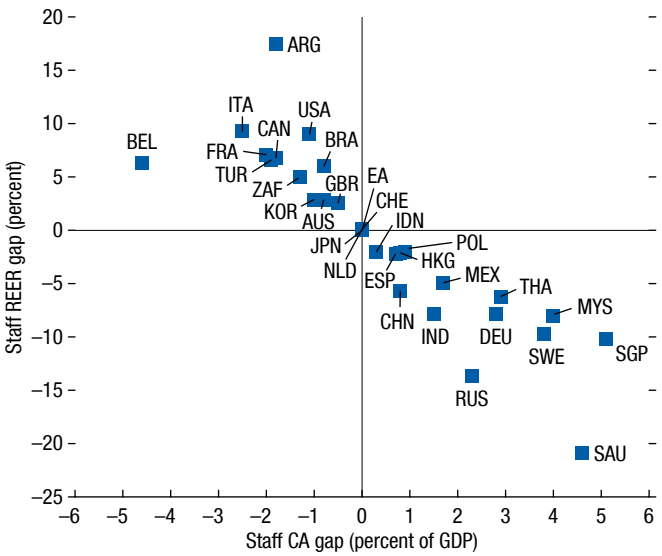
than IMF staff–assessed current account gaps, with the former driven by sizable cyclical factors and an increase in current account norms. For the ESR sample, the sum of the absolute values of current account balances (akin to the global current account balance of Figure 1.5) increased by 0.2 percentage point to about 3 percent of ESR GDP (Figure 1.21). Cyclical factors, in particular, large commodity price fluctuations, played a major role in the large headline current account fluctuations.[15] The summed absolute values of current account norms also widened to 1.6 percent of GDP in 2022, from 1.4 percent of GDP in 2021.

Most of the excess balances in 2022 (measured by the sum of absolute values of IMF staff–assessed current account gaps) pertained to advanced economies. The largest contributors to lower-than-warranted current account balances (that is, negative current account gaps) as a share of ESR economy GDP were, in descending order, the United States, France, and Italy. The largest contributors to larger-than-warranted current account balances as a share of ESR economy GDP were (again, in descending order) Germany, Russia, and Saudi Arabia.

IMF staff–assessed real effective exchange rate gaps and current account gaps for 2022 were generally consistent. Economies with estimated excess current account surpluses (deficits) were assessed to have had

[15]Gaps are constructed once cyclical and short-term factors are factored in and incorporate staff adjustments for temporary factors, and therefore are less volatile.

Figure 1.22. IMF Staff Current Account and Real Effective Exchange Rate Gaps



Source: IMF staff assessments.
Note: Real effective exchange rate (REER) gap is based on 2022 *External Sector Report*. CA = current account; EA = euro area. Data labels in the figure use International Organization for Standardization (ISO) country codes.

an undervalued (overvalued) real effective exchange rate (Figure 1.22; Annex Table 1.1.4).

Outlook for Current Account Balances and Risks

Outlook

Global current account balances are projected to narrow in 2023 while changes in individual current account balances exhibit substantial heterogeneity across economies (Table 1.1). China, the United States, and commodity-exporting countries, notably Norway and Saudi Arabia, are expected to contribute to narrowing global balances by about 0.5 percentage point of world GDP (more than half of the projected narrowing in global balances), reflecting an increase in public saving in the United States,[16] robust recovery in domestic demand and overseas travel in China, and falling commodity prices. In contrast, Germany and Japan (along with Korea) are expected to contribute to a widening of global balances by about 0.1 percentage point. In Germany, the surplus is projected to increase, with the change driven by lower liquefied natural gas prices and stronger demand from Asia, while Japan's current account surplus is also projected to increase mainly driven by lower commodity prices and inbound tourism.

The narrowing of global current account balances is expected to continue over the medium term, as the impact of COVID-19 wanes and current account gaps close. The impact of the COVID-19 pandemic is expected to dissipate as the pandemic moves into the rear view mirror, and the impact from output gaps is expected to recede with the closing of output gaps over the medium term. Commodity prices are expected to fall, as demand and supply adjust to previously high prices and the global economy slows, thereby reducing the terms-of-trade gaps for commodity importers and exporters. Nonetheless, current accounts in some surplus economies, such as Japan and Korea, are expected to widen over the medium term, driven by fundamental factors such as demographics in Korea and high rate of return on Japan's net foreign assets.

Creditor and debtor stock positions are also expected to narrow moderately over the medium term. They reached historically high levels in 2022 (Table 1.2); however, over the medium term, they are expected to moderate slightly as current account balances gradually narrow. In a few debtor countries (for example, Spain), the net foreign asset position is expected to improve, driven by sustained projected trade surpluses and positive returns on its net foreign assets (Online Annex 1.1). Nonetheless, in some economies, gross external liabilities remain large from a historical perspective, posing risks of external stress materializing (see Chapter 2 of the 2020 *External Sector Report*).

Risks Surrounding the Outlook

There are uncertainties around several key assumptions on which the short- and medium-term outlook rests, including falling commodity prices, no further escalation of geopolitical tensions, and contained financial sector turmoil.

Severe tightening of global financial conditions: The prospects of continued tightening of monetary policies in major economies pose a challenge to the global financial system (see Chapter 1 of the April 2023 *Global Financial Stability Report*). In a severe global financial stress scenario, broad-based capital

[16]Household saving in the United States is expected to remain broadly unchanged in 2023 compared with that in 2022, as households have mostly unwound the savings accumulated from one-off fiscal stimulus during 2020–21.

Table 1.1. Selected Economies: Current Account Balance, 2020–23

	Billions of US Dollars				Percent of World GDP				Percent of GDP			
	2020	2021	2022	2023 Projection	2020	2021	2022	2023 Projection	2020	2021	2022	2023 Projection
Advanced Economies												
Australia	30	50	20	24	0.04	0.05	0.02	0.02	2.2	3.0	1.2	1.4
Belgium	6	3	–20	–17	0.01	0.00	–0.02	–0.02	1.1	0.4	–3.5	–2.7
Canada	–35	–5	–7	–29	–0.04	–0.01	–0.01	–0.03	–2.2	–0.3	–0.3	–1.4
France	–47	11	–58	–36	–0.06	0.01	–0.06	–0.03	–1.8	0.4	–2.1	–1.2
Germany	274	330	171	201	0.32	0.34	0.17	0.19	7.1	7.7	4.2	4.7
Hong Kong SAR	24	44	38	31	0.03	0.05	0.04	0.03	7.0	11.8	10.5	8.0
Italy	73	64	–24	16	0.09	0.07	–0.02	0.02	3.9	3.0	–1.2	0.7
Japan	148	197	89	132	0.17	0.21	0.09	0.13	2.9	3.9	2.1	3.0
Korea	76	85	30	37	0.09	0.09	0.03	0.04	4.6	4.7	1.8	2.2
The Netherlands	47	74	43	68	0.06	0.08	0.04	0.06	5.1	7.3	4.4	6.3
Singapore	57	76	90	80	0.07	0.08	0.09	0.08	16.5	18.0	19.3	15.5
Spain	8	14	8	13	0.01	0.01	0.01	0.01	0.6	1.0	0.6	0.9
Sweden	32	41	25	23	0.04	0.04	0.02	0.02	5.9	6.5	4.3	3.9
Switzerland	3	70	81	68	0.00	0.07	0.08	0.06	0.4	8.8	10.1	7.8
United Kingdom	–87	–47	–116	–165	–0.10	–0.05	–0.12	–0.16	–3.2	–1.5	–3.8	–5.2
United States	–620	–846	–944	–729	–0.73	–0.88	–0.94	–0.70	–2.9	–3.6	–3.7	–2.7
Emerging Market and Developing Economies												
Argentina	3	7	–4	6	0.00	0.01	0.00	0.01	0.8	1.4	–0.6	1.0
Brazil	–28	–46	–57	–48	–0.03	–0.05	–0.06	–0.05	–1.9	–2.8	–3.0	–2.3
China	249	353	402	272	0.29	0.37	0.40	0.26	1.7	2.0	2.2	1.4
India[1]	24	–39	–68	–67	0.03	–0.04	–0.07	–0.06	0.9	–1.2	–2.0	–1.8
Indonesia	–4	4	13	–4	–0.01	0.00	0.01	0.00	–0.4	0.3	1.0	–0.3
Malaysia	14	14	13	12	0.02	0.01	0.01	0.01	4.2	3.8	3.1	2.6
Mexico	23	–8	–18	–17	0.03	–0.01	–0.02	–0.02	2.1	–0.6	–1.3	–1.0
Poland	15	–9	–21	–18	0.02	–0.01	–0.02	–0.02	2.5	–1.4	–3.0	–2.4
Russia	35	122	233	75	0.04	0.13	0.23	0.07	2.4	6.7	10.4	3.6
Saudi Arabia	–23	44	151	66	–0.03	0.05	0.15	0.06	–3.1	5.1	13.6	6.2
South Africa	7	15	–2	–9	0.01	0.02	0.00	–0.01	2.0	3.7	–0.5	–2.3
Thailand	21	–11	–17	7	0.02	–0.01	–0.02	0.01	4.2	–2.1	–3.2	1.2
Türkiye	–32	–7	–48	–41	–0.04	–0.01	–0.05	–0.04	–4.4	–0.9	–5.3	–4.0
Memorandum item:[2]												
Euro Area	209	338	–141	83	0.2	0.4	–0.1	0.1	1.6	2.3	–1.0	0.6
Global Current Account Balance	2,594	3,435	3,941	3,188	3.1	3.6	3.9	3.0	. . .	. . .	. . .	. . .
Statistical Discrepancy	280	808	333	194	0.3	0.8	0.3	0.2	. . .	. . .	. . .	. . .
Overall Surpluses	1,437	2,126	2,133	1,679	1.7	2.2	2.1	1.6	. . .	. . .	. . .	. . .
Of which: Advanced Economies	961	1,381	994	1,044	1.1	1.4	1.0	1.0	. . .	. . .	. . .	. . .
Overall Deficits	–1,157	–1,318	–1,800	–1,485	–1.4	–1.4	–1.8	–1.4	. . .	. . .	. . .	. . .
Of which: Advanced Economies	–839	–941	–1,248	–1,040	–1.0	–1.0	–1.2	–1.0	. . .	. . .	. . .	. . .

Sources: IMF, April 2023 *World Economic Outlook*; and IMF staff calculations.

Note: ". . ." indicates that data are not available or not applicable; SAR = Special Administrative Region.

[1]For India, data are presented on a fiscal year basis.

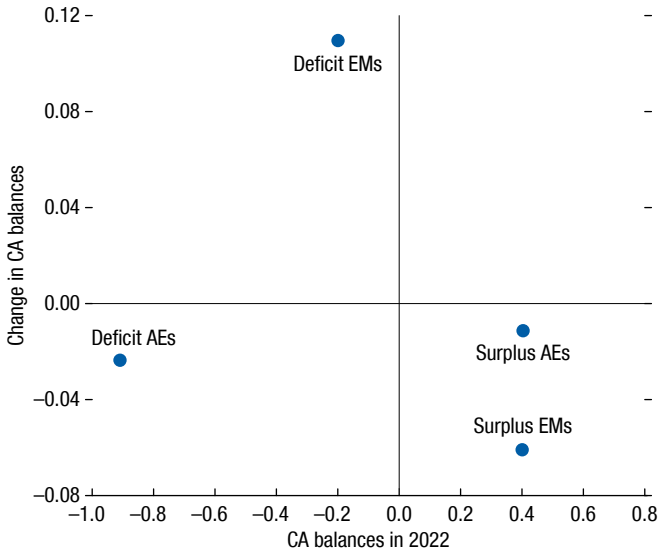
[2]The global current account balance is the sum of absolute deficits and surpluses. Overall surpluses and deficits (and the "of which" advanced economies) include non–*External Sector Report* economies.

Table 1.2. Selected Economies: Net International Investment Position, 2019–22

	Billions of US Dollars				Percent of World GDP				Percent of GDP			
	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022
Advanced Economies												
Australia	–654	–744	–554	–579	–0.8	–0.9	–0.6	–0.6	–47.2	–54.7	–33.7	–34.0
Belgium	217	258	380	314	0.2	0.3	0.4	0.3	40.4	49.2	64.0	54.0
Canada	473	745	1,017	617	0.5	0.9	1.1	0.6	26.7	43.3	52.1	30.1
France	–667	–863	–949	–657	–0.8	–1.0	–1.0	–0.7	–24.4	–32.7	–32.1	–23.6
Germany	2,260	2,658	2,984	2,894	2.6	3.1	3.1	2.9	58.1	68.4	70.0	71.0
Hong Kong SAR	1,579	2,122	2,118	1,754	1.8	2.5	2.2	1.8	434.9	615.2	574.0	486.0
Italy	–23	27	164	78	0.0	0.0	0.2	0.1	–1.2	1.4	7.8	3.9
Japan	3,271	3,417	3,809	3,184	3.8	4.0	4.0	3.2	63.9	67.7	76.1	75.2
Korea	518	487	660	771	0.6	0.6	0.7	0.8	31.4	29.6	36.4	46.3
The Netherlands	729	900	797	707	0.8	1.1	0.8	0.7	89.6	113.0	93.2	75.1
Singapore	845	969	945	822	1.0	1.1	1.0	0.8	224.3	278.3	223.0	176.1
Spain	–1,020	–1,165	–975	–850	–1.2	–1.4	–1.0	–0.8	–73.7	–85.7	–71.5	–60.5
Sweden	72	60	152	233	0.1	0.1	0.2	0.2	13.5	10.9	23.8	39.8
Switzerland	668	881	864	753	0.8	1.0	0.9	0.8	92.5	119.2	108.0	93.3
United Kingdom	–306	–493	–478	–335	–0.4	–0.6	–0.5	–0.3	–10.7	–18.2	–15.3	–10.9
United States	–11,653	–14,707	–17,346	–16,476	–13.4	–17.4	–18.1	–16.4	–54.5	–69.8	–74.4	–64.7
Emerging Market and Developing Economies												
Argentina	113	122	122	116	0.1	0.1	0.1	0.1	25.0	31.3	25.1	18.4
Brazil	–786	–552	–606	–777	–0.9	–0.7	–0.6	–0.8	–41.9	–37.4	–36.7	–40.4
China	2,300	2,287	2,186	2,531	2.6	2.7	2.3	2.5	16.0	15.4	12.3	14.0
India	–375	–355	–362	–376	–0.4	–0.4	–0.4	–0.4	–13.2	–13.3	–11.5	–11.1
Indonesia	–338	–280	–278	–252	–0.4	–0.3	–0.3	–0.3	–30.2	–26.3	–23.4	–19.1
Malaysia	–9	20	21	14	0.0	0.0	0.0	0.0	–2.6	5.9	5.5	3.5
Mexico	–629	–549	–558	–593	–0.7	–0.6	–0.6	–0.6	–49.6	–50.3	–43.8	–42.0
Poland	–294	–273	–256	–234	–0.3	–0.3	–0.3	–0.2	–49.3	–45.5	–37.6	–34.0
Russia	359	517	485	762	0.4	0.6	0.5	0.8	21.2	34.7	26.4	34.4
Saudi Arabia	671	599	618	682	0.8	0.7	0.6	0.7	80.0	81.6	71.2	61.5
South Africa	31	112	110	70	0.0	0.1	0.1	0.1	8.0	33.3	26.3	17.2
Thailand	–23	39	33	–16	0.0	0.0	0.0	0.0	–4.2	7.8	6.6	–3.0
Türkiye	–309	–384	–253	–279	–0.4	–0.5	–0.3	–0.3	–40.7	–53.3	–30.9	–30.8
Memorandum item:												
Euro Area	–566	–433	62	283	–0.7	–0.5	0.1	0.3	–4.2	–3.3	0.4	2.0
Statistical Discrepancy	–3,599	–4,706	–5,355	–5,197	–4.1	–5.6	–5.6	–5.2	. . .	. . .	. . .	. . .
Overall Creditors[1]	17,367	19,634	21,125	20,004	20.0	23.2	22.0	20.0	. . .	. . .	. . .	. . .
Of which: Advanced Economies	13,532	15,602	17,184	15,392	15.5	18.4	17.9	15.4	. . .	. . .	. . .	. . .
Overall Debtors[1]	–20,966	–24,340	–26,481	–25,200	–24.1	–28.7	–27.6	–25.2	. . .	. . .	. . .	. . .
Of which: Advanced Economies	–15,945	–19,696	–21,877	–20,413	–18.3	–23.3	–22.8	–20.4	. . .	. . .	. . .	. . .

Sources: IMF, April 2023 *World Economic Outlook*; US Bureau of Economic Analysis; and IMF staff calculations.
Note: ". . ." indicates that data are not available or not applicable; SAR = Special Administrative Region.
[1]Overall creditors and debtors (and the "of which" advanced economies) include non–*External Sector Report* economies.

Figure 1.23. Change in 2023 Current Account Balances
(Percent of baseline world GDP)



Sources: IMF, April 2023 *World Economic Outlook*; and IMF staff estimates from G20 Model simulations.
Note: AEs = advanced economies; CA = current account; EMs = emerging market economies.

outflows from EMDEs could occur, causing currency depreciation and sharp swings in risk premiums exacerbating the economic vulnerabilities of countries with high levels of dollar-denominated external debt, and dampening global trade (see Chapter 2). The IMF staff estimates capital flows at risk at the 5 percent level to be 2.7 percent of GDP and the probability of outflows to be about 31 percent in May. In the severe downside scenario presented in the April 2023 *World Economic Outlook*, in which the overall supply of credit, equity prices, and confidence all weaken, while the US dollar strengthens due to higher risk aversion, the IMF's simulation implies a narrowing of global balances (Figure 1.23) and a 10 percent depreciation of EMDE currencies on impact.

Adjustments to Japan's yield curve control policy: A departure from yield curve control could have profound spillovers to international financial markets, given the large presence of Japanese investors in overseas markets. Portfolio rebalancing by Japanese investors would put downward pressure on foreign asset prices, with a larger effect likely in countries with greater presence of Japanese investors, such as Australia, Ireland, and The Netherlands. Some emerging markets such as Indonesia and Malaysia could face material capital outflows and exchange rate adjustments (see the April 2023 *Global Financial Stability Report*). To the extent EMDE currencies—many of which carry current account deficits—depreciate with falling risk appetite, this would likely contribute to narrowing global balances.

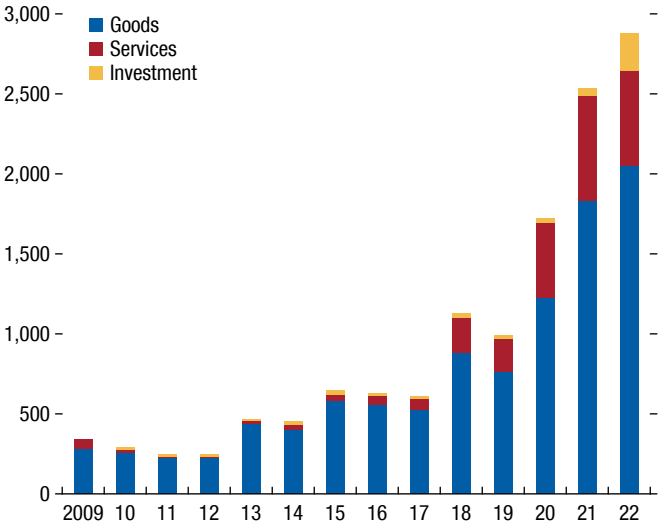
Rising commodity prices: Another surge in commodity prices can be triggered by renewed supply disruptions, due, for example, to an escalation of the war in Ukraine, fallouts from extreme climate events (such as El Niño), or demand increases in the event economic growth is stronger or more resilient than expected in major economies. This surge could widen global current account balances in 2023 beyond the baseline projection and delay the adjustment in subsequent years. A prolonged elevation in oil and gas prices would increase vulnerabilities in commodity-importing EMDEs, which in turn could result in significant capital outflows, sizable fluctuations in exchange rates, greater borrowing costs, and increased fiscal pressures. The implication of these side effects for global balances is ambiguous.

Faltering growth in China: A weaker-than-expected recovery in China would affect its trading partners directly, the largest of which are located in Asia and the Pacific. The slowdown would also have global repercussions beyond China's major trading partners by affecting commodities for which China accounts for a large share of global demand. Lower growth in China would likely expand global balances by reducing its imports.

Fiscal policy path: Additional fiscal spending financed by borrowing in economies with current account deficits or higher-than-expected fiscal consolidation in surplus economies could slow the expected narrowing of global balances. However, failures to implement a credible fiscal consolidation strategy in economies with high debt and elevated levels of risk premiums could add pressures to financing their current account deficits, thereby resulting in a narrowing of global balances.

Climate change: If climate change worsens, including due to lack of progress on mitigation policies, natural disasters could become more widespread and potentially affect large countries in the long term, with a possible effect on global balances. Moreover, global balances could widen due to unbalanced implementation of climate mitigation policies (see Chapter 2 of the 2022 *External Sector Report*).

Figure 1.24. Number of Trade Restrictions, 2009–22



Sources: Global Trade Alert; and IMF staff calculations.
Note: Data as of April 26, 2023.

Geoeconomic fragmentation further hampering global trade and other international flows: The risk of geoeconomic fragmentation has been aggravated by the US–China trade tensions and the war in Ukraine. Trade barriers have been rising (Figure 1.24), and in the extreme, the world economy could splinter into geoeconomic blocs. Geoeconomic fragmentation could affect the currency composition of foreign exchange reserves, reduce capital flows, complicate provision of the global safety net, and lead to a reorganization of the international monetary system (Aiyar and others 2023). The impact on global current account balances would depend on the specific scenario: while further increase in trade costs across country blocs would likely contribute to reducing global balances (Box 1.3), trade costs within each bloc could fall and contribute to increasing global balances. Moreover, the risk of extreme fragmentation could increase the incentive for self-insurance and potentially increase global balances if countries with current account surpluses increase savings more than those with deficits. In any case, further geoeconomic fragmentation would unambiguously lead to lower welfare, including through its effect on FDIs, the diffusion of technology, and flows of labor, goods, and capital (Aiyar and others 2023; Chapter 4 of the April 2023 *World Economic Outlook*; Chapter 4 of the April 2023 *Global Financial Stability Report*).

Further fragmentation would also weaken international policy coordination on vital global public goods, such as climate change mitigation and pandemic resilience (see Chapter 2 of the 2022 *External Sector Report*).

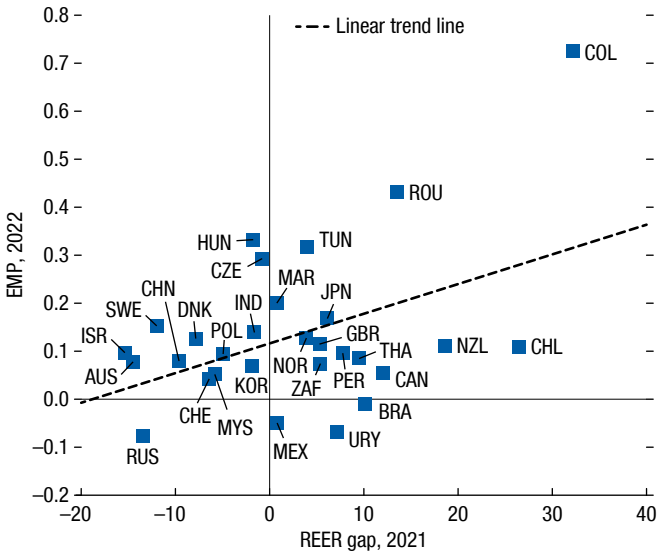
Policy Priorities for Promoting External Rebalancing

While current account surpluses and deficits are not necessarily an undesirable phenomenon to the extent that they reflect differences in countries' fundamentals and desirable medium-term policies, excess current account balances should be reduced. Excess balances reflect an inefficient allocation of resources and frictions in domestic economies, leading to welfare losses in societies. Economies with excessively large current account deficits and negative net international investment positions are associated with larger real effective exchange rate gaps and subject to greater exchange market pressures and risks of sudden stops (Figure 1.25), the risk of which has likely risen—other things equal—for ESR economies that have moved farther away from the "broadly in line" category in 2022 while debtor stock position remained elevated. Moreover, excess balances could have real or perceived distributional effects, raising discontent with globalization and fueling trade tensions. Therefore, correcting excess balances can improve welfare and reduce the risk of disruptive capital flow reversals.

Promoting external rebalancing requires both excess current account surplus and deficit economies to act collectively. As the April 2023 *World Economic Outlook* emphasizes, policymakers will need to tread a narrow path toward restoring financial sector stability, normalizing fiscal policy, and avoiding recession while also durably reducing inflation and achieving sustainable and inclusive growth. In addition to being consistent with these objectives, the policy priorities set out in the April 2023 *World Economic Outlook,* including efforts to normalize fiscal policy and steadily increase policy rates, would also help to facilitate trade, rebalance excess external positions, and contain risks to external balances.

In the event of global financial distress, EMDEs should let their currencies adjust to help their economies absorb external shocks. However, in specific cases in which shocks are large and countries face vulnerabilities from shallow foreign exchange markets, sizable balance sheet mismatches, or poorly anchored inflation

Figure 1.25. Exchange Market Pressure and REER Gaps
(Percent)



Sources: Goldberg and Krogstrup (2023); and IMF staff calculations.
Note: CA = current account; EMP = exchange market pressure index. Real effective exchange rate (REER) gaps are current-account-implied REER gaps based on EBA CA gaps for 2021. The REER gaps shown in this figure can deviate from the CA-implied REER gap in the 2021 external sector assessment due to data updates and country-specific adjustors. Data labels in the figure use International Organization for Standardization (ISO) country codes.

expectations, temporary foreign exchange interventions may be appropriate. Capital flow management measures on outflows may be used if disruptive outflows lead to (imminent) crisis circumstances, but these measures should not substitute for needed macroeconomic policy adjustment.

Coordinated policy efforts will help deal with a host of complex challenges facing the world. Over the last three decades, the sharp growth in global trade has gone hand in hand with billions of people moving out of poverty. With the world at increasing risk of geoeconomic fragmentation, it is therefore of paramount importance to preserve the benefits of global integration and multilateralism. To achieve this, the current rule-based trading system must be strengthened to adapt to a changing world. Advancing multilateral trade rules may require focusing on reforms with high impact in which preferences of countries are broadly aligned. The package agreed upon at the 12th Ministerial Conference of the World Trade Organization (WTO) in June 2022 is a step in this direction. Fully restoring the WTO dispute settlement system and implementing new WTO-based agreements would further strengthen the rule-based system. Policies to preserve global economic integration would also mitigate the risks related to fragmentation of FDI and other capital flows along geoeconomic fault lines (see Chapter 4 of the April 2023 *World Economic Outlook*). Supporting availability of climate financing is also important, given that green infrastructure investment in developing economies could mitigate the external sector impact of climate change mitigation and adaptation efforts (see Chapter 2 of the 2022 *External Sector Report*). Industrial policy could be pursued to address well-established market failures and if other policies are not available. However, industrial policy should not introduce distortions and should be consistent with international agreements and WTO rules, minimize adverse spillovers, and avoid creating barriers to technology transfer. They should also be, well-structured, cost-effective, transparent and accountable, while not undermining competition (Cherif and others 2022).

Maintaining liquidity in the global financial system, via, among other things, the GFSN, will be essential to helping economies manage risks related to the tightening of global financial conditions and financial system fragmentation due to geopolitical tensions. The GFSN has played a vital role in safeguarding the stability of the global economy. However, the coverage of the various layers of the GFSN is uneven, and global liquidity provision is limited (IMF 2016). To this end, the IMF is the only layer that provides universal coverage, where its lending programs help provide a safety net for countries hit by balance-of-payments shocks. To perform this function effectively, the IMF should remain representative of its global membership and adequately resourced to serve as an anchor of the GFSN, which crucially depends on the successful completion of the 16th General Review of Quotas.

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* should focus on policies that boost saving and competitiveness. Where current account deficits in 2022 partly reflected fiscal deficits above desirable levels (as in Italy and the United States), medium-term fiscal consolidation would help stabilize debt-to-GDP ratios and close current account gaps. However, fiscal consolidation should

be implemented in a growth-friendly way, while providing space for critical infrastructure investment and well-targeted social spending to help reduce poverty and inequality (for example, in Argentina and South Africa). Countries with competitiveness challenges also need to address structural bottlenecks through labor, product market, and other structural reforms to promote green, digital, and inclusive growth while boosting productivity.

- *Economies with stronger-than-warranted external positions* should prioritize policies aimed at promoting investment and diminishing excess saving to support external rebalancing while also pursuing domestic objectives. For example, in Germany, higher fiscal deficits than currently planned are likely to be required over the medium term to achieve domestic climate, digital, and energy security goals. In Sweden, higher investment in the green transition and the health sector, needed to attain the country's ambitious medium-term climate goals and prepare for demographic transition, would also lower the external balance. In some emerging markets (such as Malaysia and Thailand), efforts to reform and expand social safety nets and measures to address widespread informality should help reduce precautionary saving and support consumption, thus also helping with external rebalancing.
- *Economies with external positions broadly in line with fundamentals* should continue to address domestic imbalances to prevent excessive external imbalances. Some economies (such as China) should address offsetting policy distortions. Relevant policies include accelerating market-based structural reforms—including state-owned enterprise reform—to promote growth and shifting fiscal policy support toward strengthening social protection to reduce high household saving and stimulate private consumption. In countries with negative net international investment positions (such as Brazil and Spain), keeping current account balances in line with their norms will require a combination of fiscal consolidation efforts and higher private saving to provide room for investment in education and other reforms to encourage innovation and improve competitiveness. Reforms to boost productivity would also create space for investment needed to advance green transition and reduce dependence on foreign energy.

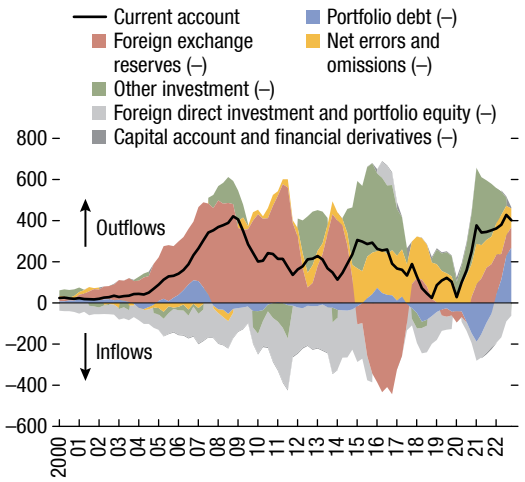
Box 1.1. The Financial Side of Global Imbalances

Russia's invasion of Ukraine has increased the risk of geoeconomic fragmentation and sparked a debate around its ramifications on the global economy and policy architecture (Aiyar and others 2023). This box aims to shed light on recent changes in the global constellation of current account imbalances, focusing on the financial recycling of large current account surpluses and the funding of the US current account deficit. The interdependence between large surplus and deficit economies remains largely intact, while (offshore) financial centers play increasingly important roles, making it more difficult to gauge the exposures between countries.

How Do Current Account Surpluses Flow Out?

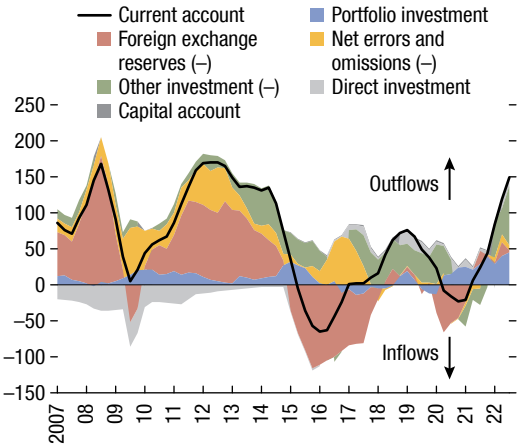
Since the global financial crisis (GFC), there appears to have been some changes in the conduits for recycling two large current account surpluses of China and Saudi Arabia (Figures 1.1.1 and 1.1.2). Accumulation of foreign exchange reserves has played a much smaller role than before the GFC. Instead, net portfolio investment (debt in China, equity in Saudi Arabia) and net other investment (bank loans in China, currency and deposits in China and Saudi Arabia) have become more important channels of recycling (that is, investing) the recent surpluses in these economies.[1] In Russia, net other investment is the main channel for financial outflows, with a notable portion of those outflows headed toward the euro area, with Belgium being a prime destination (Figure 1.1.3). Outside the euro area, Switzerland has been a recipient of a substantial share of Russia's investment since 2008 (Figure 1.1.4).

Figure 1.1.1. China: Current Account Surplus and Capital Flows, Four-Quarter Trailing Sums
(Billions of US dollars)



Sources: Refinitiv Datastream; and IMF staff calculations.
Note: Figure shows total cross-border total liabilities (amounts outstanding) of reporting banks in all currencies. Last observation: fourth quarter of 2022.

Figure 1.1.2. Saudi Arabia: Current Account Surplus and Capital Flows, Four-Quarter Trailing Sums
(Billions of US dollars)



Sources: Refinitiv Datastream; and IMF staff calculations.
Note: Figure shows total cross-border total liabilities (amounts outstanding) of reporting banks in all currencies. Last observation: third quarter of 2022.

Who Funds the US Current Account Deficit?

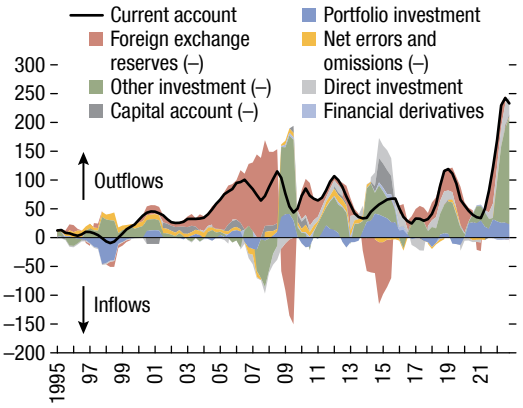
The US current account deficit, the largest deficit of all, is mainly financed via portfolio debt flows (Figure 1.1.5). However, it has recently been increasingly financed by other types of financial

This box was prepared by Cian Allen and Cyril Rebillard.

[1]In China, net errors and omissions account for part of the recycling of the surplus.

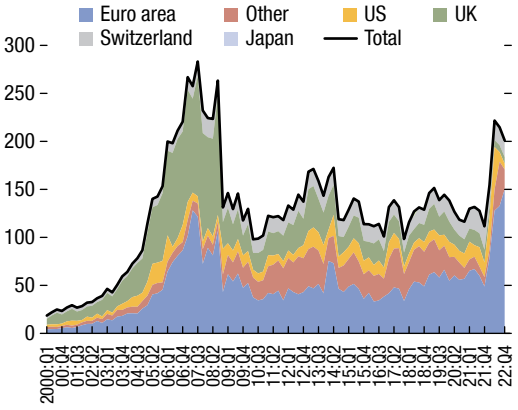
Box 1.1 *(continued)*

Figure 1.1.3. Russia: Current Account Surplus and Capital Flows, Four-Quarter Trailing Sums
(Billions of US dollars)



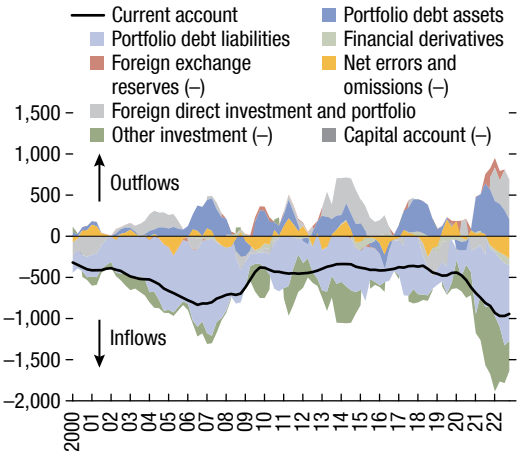
Sources: Refinitiv Datastream; and IMF staff calculations.
Note: Figure shows total cross-border total liabilities (amounts outstanding) of reporting banks in all currencies. Last observation: fourth quarter of 2022.

Figure 1.1.4. Bank for International Settlements Reporting Banks' Cross-Border Positions on Residents of Russia
(Billions of US dollars)



Sources: Bank for International Settlements locational banking statistics; and IMF staff calculations.
Note: Figure shows total cross-border total liabilities (amounts outstanding) of reporting banks in all currencies. Last observation: fourth quarter of 2022.

Figure 1.1.5. United States: Current Account Surplus and Capital Flows, Four-Quarter Trailing Sums
(Billions of US dollars)



Sources: Refinitiv Datastream; and IMF staff calculations.
Note: Figure shows total cross-border total liabilities (amounts outstanding) of reporting banks in all currencies. Last observation: fourth quarter of 2022.

flows, namely, net flows of other investment (mainly currency and deposits, as well as bank loans). Since early 2021, the net external purchase of US portfolio debt securities has shifted to US Treasury securities and away from corporate bonds, partly reflecting large financing needs related to pandemic stimulus measures (Figure 1.1.6).

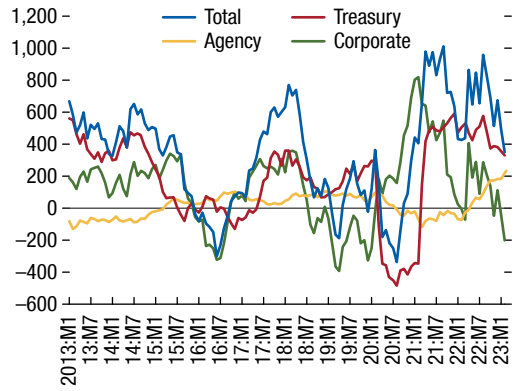
Geographically, the financing of the US current account deficit has become increasingly mediated by financial centers in recent years.[2] This contrasts with the pre-GFC period, when the US current account deficit was financed largely through reserve accumulation from surplus countries. Balance-of-payments data (Figure 1.1.7) show a declining role for China; however, to uncover the investment patterns by Russia and offshore financial centers, this box turns to information on holders of US government and

[2]This is in line with Lane and Milesi-Ferretti (2018), who emphasize the financial centers' role in intermediating foreign direct investment flows.

Box 1.1 *(continued)*

Figure 1.1.6. Net Foreign Purchases of US Securities

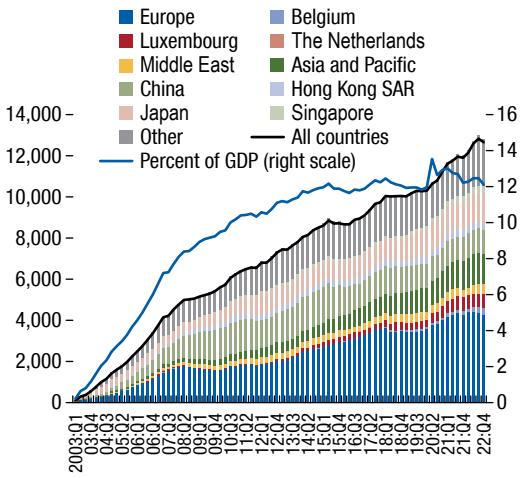
(Billions of US dollars, 12-month sum)



Sources: Federal Reserve; and IMF staff calculations.
Note: Estimated flows are essentially constructed using changes in foreign holdings of US Treasury securities adjusted for valuation effects as discussed in Bertaut and Judson (2014). Tabova and Warnock (2021) assess the different sources available for measuring foreign transactions in US Treasury securities and support the use of holdings-based estimates of flows. "Corporate" includes bonds and stocks.

Figure 1.1.7. US Incurrence of Portfolio Investment Liabilities

(Billions of US dollars, unless noted otherwise)



Sources: US Bureau of Economic Analysis; and IMF staff calculations.
Note: "Other" includes Canada, Latin America and other Western Hemisphere, Africa, and international organizations.

corporate securities compiled by the Federal Reserve (Figure 1.1.8)[3]:

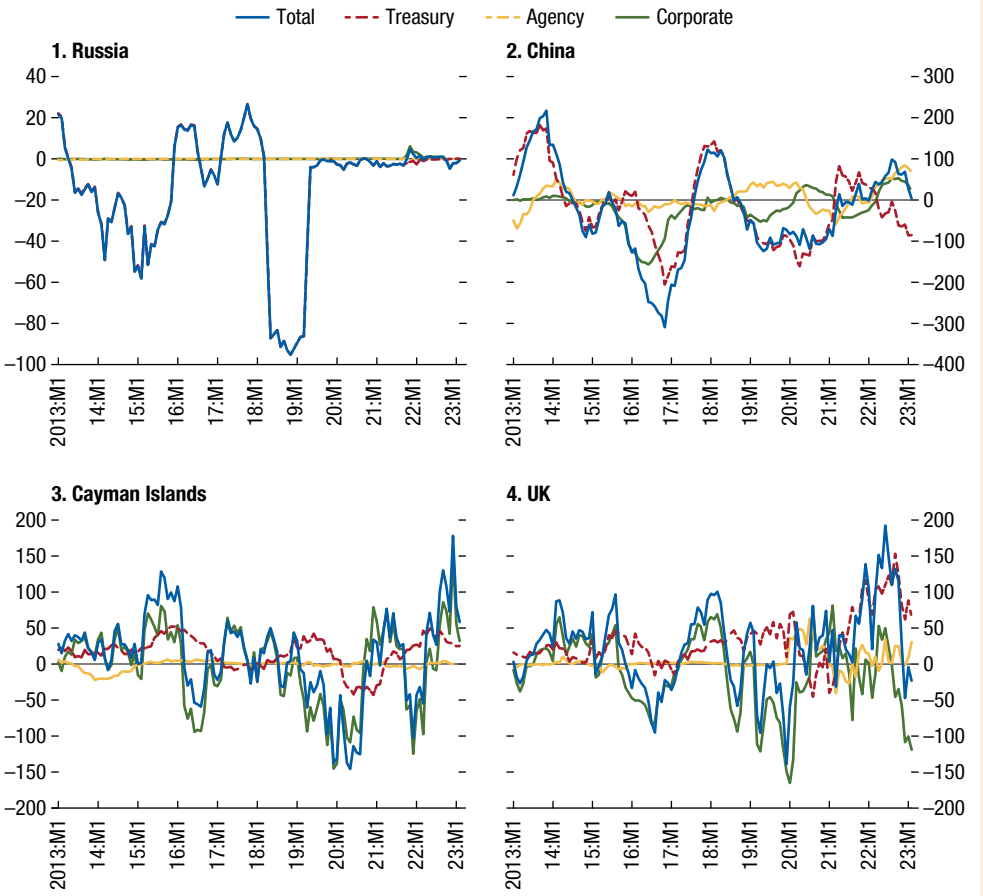
- In China, while the 2015–16 sale of US Treasuries coincided with exchange rate depreciation, the 2018–20 sale occurred with a modest net purchases of US government agency bonds. Since late-2021, the purchase of agency bonds has increased, broadly offsetting the decline in the purchase of Treasury securities.
- Russia has been divesting away from US Treasury bonds, especially since 2014, following the annexation of Crimea and subsequent US and international sanctions. Its divestment of US securities appears to have peaked about 2018, with no significant transactions since mid-2019. Instead, the share of gold in its reserves has increased since 2007, reaching 21 percent at the end of 2022.
- On the other hand, two countries have significantly increased their holdings of US securities and as a result accounted for the largest share of the external portfolio debt financing of US current account deficits in the recent period. They were the United Kingdom, with a total of about US$600 billion, comparable to the pre-GFC peak, although the composition is now more tilted toward US Treasuries and away from corporate bonds; and the Cayman Islands, with a total of about US$500 billion, also tilted toward US Treasuries. In light of the United Kingdom's current account deficit and the Cayman Islands' small size, both countries are likely to be only intermediaries providing financial and banking sector services.

Echoing the increased role of financial centers in financing the US current account deficit, the share of official holdings (among total holdings) of US Treasury securities has steadily decreased, from a peak of 76 percent in mid-2009 to about 50 percent at the end

[3]The patterns in these data can be distorted by "custodial bias," where a foreign holder of the US liability chooses to use a custodian in a different country. This can be an issue in major financial centers, such as Belgium, the Caribbean banking centers, Luxembourg, Switzerland, and the United Kingdom (see Bertaut and Judson 2014).

Box 1.1 *(continued)*

Figure 1.1.8. Net Foreign Purchases of US Securities
(Billions of US dollars, 12-month sum)



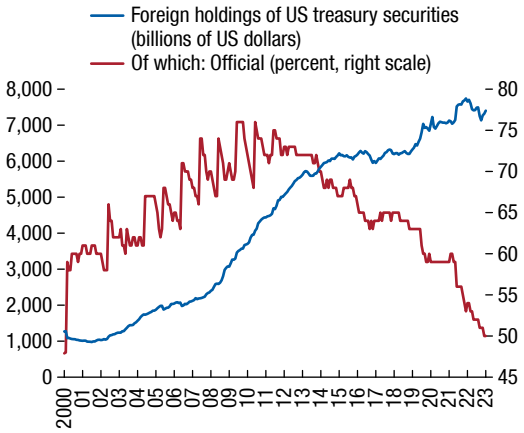
Sources: Federal Reserve, and IMF staff calculations.
Note: The estimated flows are essentially constructed using changes in foreign holdings of US Treasury securities adjusted for valuation effects as discussed in Bertaut and Judson (2014). Tabova and Warnock (2021) assess the different sources available for measuring foreign transactions in US Treasury securities and support the use of holdings-based estimates of flows. "Corporate" includes bonds and stocks.

of 2022, while the share of private holdings exceeded 40 percent at the end of 2022 (Figure 1.1.9). However, the currency composition of official foreign exchange reserves has remained largely stable in recent years, with the US dollar still accounting for about 60 percent of the total of (allocated) global reserves (Figure 1.1.10).

The interdependence between large surplus and deficit economies appears to be largely intact. At the same time, the role of financial centers has increased, as their rising share in financing the US current account deficit (Figure 1.1.8) or in China's overseas portfolio investment (Figure 1.1.11) shows.

Box 1.1 *(continued)*

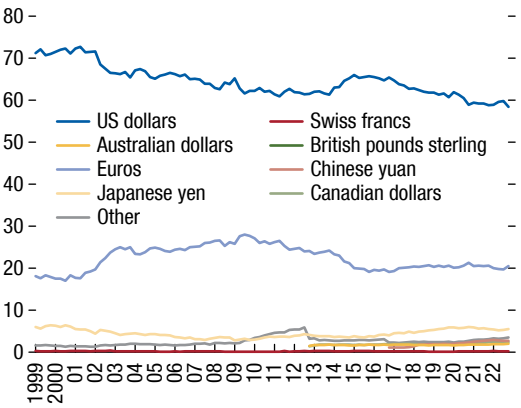
Figure 1.1.9. Total Foreign Holdings of US Treasury Securities



Sources: Refinitiv Datastream; and US Department of the Treasury, Treasury International Capital System.

Figure 1.1.10. Currency Composition of Official Foreign Exchange Reserves

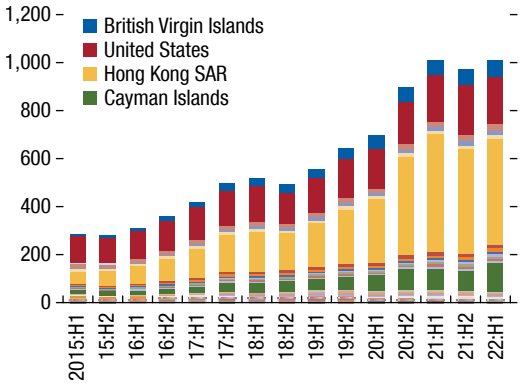
(Percent of allocated reserves)



Source: IMF, Currency Composition of Official Foreign Exchange Reserve (COFER).

Figure 1.1.11. China: Incurrence of Portfolio Investment Assets

(Billions of US dollars)



Source: IMF, Coordinated Portfolio Investment Survey.
Note: Legend only displays selected economies for clarity.

Box 1.2. Trends in Currency Exposures of External Balance Sheets

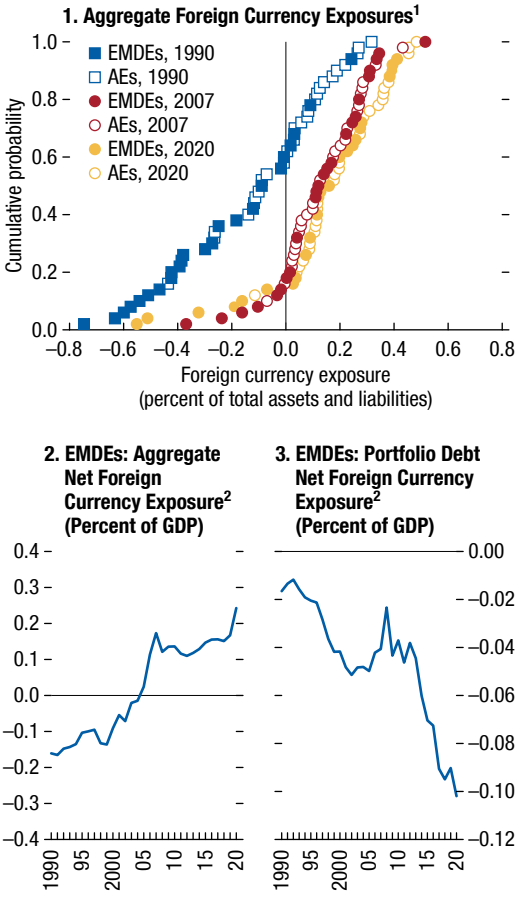
The vulnerability of economies to external shocks depends crucially on the currency composition of international investment positions. This box discusses findings on the currency breakdown of these positions for 50 major economies (building on Lane and Shambaugh 2010).[1]

Long foreign currency positions. Aggregate foreign currency exposures, which measure net foreign assets in foreign currency (as a percentage of total assets and liabilities), have improved significantly since 1990, particularly in emerging market and developing economies (EMDEs). In fact, most EMDEs have moved from a negative aggregate net position in foreign currency (indicated by negative *x*-axis values in Figure 1.2.1, panel 1) to a positive one, as evidenced by the rightward shift of the corresponding curve. This transition took place mainly before the global financial crisis and is largely attributable to the currency composition of other investments (mainly bank related) and a greater reliance on portfolio equity financing.

Currency-induced valuation effects. Positive net positions in foreign currency have reduced risks associated with depreciations in domestic currency, increasing the insurance role of national balance sheets in response to negative shocks to economies. In 1990, a 10 percent depreciation in domestic currency, all else equal, resulted in a median valuation loss of 1.6 percent of GDP for EMDEs. However, by 2020, this median effect had become positive, equivalent to 2.4 percent of GDP (as illustrated in Figure 1.2.1, panel 2). Advanced economies also experienced a similar trend, with a 10 percent depreciation leading to a median valuation gain of 0.5 percent of GDP in 1990 and a valuation gain of 9.2 percent of GDP in 2020. The proportion of EMDEs with net long positions in foreign currency increased significantly, from 17 percent in 1990 to 75 percent in 2020. However, 92 percent of EMDEs were short on foreign currency in portfolio debt in 2020, resulting in a median valuation loss of 1 percent of GDP in portfolio debt when there is a 10 percent depreciation in domestic currency (Figure 1.2.1, panel 3).

Risks. Aggregate positions may mask significant currency mismatches on the balance sheets of individual sectors, institutions, or more granular asset classes. For example, when debt and equity are examined separately, currency-driven valuation effects in debt and equity tend to offset each other for many economies. Nonetheless, the prevalence of short positions in foreign currency for debt among EMDEs keeps EMDEs with such positions vulnerable to depreciation pressures.

Figure 1.2.1. Cumulative Distribution of Foreign Currency Exposures



Source: Allen, Gautam, and Juvenal (2023).
Note: AEs = advanced economies; EMDEs = emerging market and developing economies.
[1]Aggregate foreign currency exposure is defined as total net foreign assets denominated in foreign currency as a share of total assets and liabilities.
[2]A 1 percent uniform shift in the value of the domestic currency against all foreign currencies leads to a median valuation change of *x* percent of GDP.

This box was prepared by Cian Allen and Luciana Juvenal.

[1]These economies are included in either the External Balance Assessment or the External Sector Report and taken together represent more than 85 percent of world GDP.

Box 1.3. Trade Costs and Current Account Imbalances

Quantitative studies surveyed in Aiyar and others (2023) suggest that geoeconomic fragmentation (GEF), a policy-driven reversal of integration often guided by strategic considerations, could result in sizable welfare losses for the global economy, by raising barriers to foreign direct investments, the diffusion of technology, and flows of labor, goods, and capital. This box focuses on the implications for current account imbalances of higher trade barriers, which are a conspicuous symptom of GEF.[1]

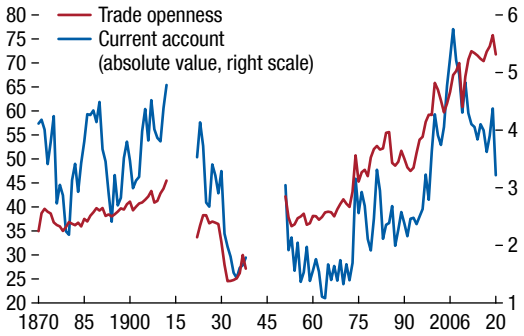
Historically, trade openness and the size of global current account balances have tended to move in lockstep: current account balances were large during the first globalization era in the late 19th and early 20th centuries, declined as global trade shrank during the interwar period, and surged again during the long rise in trade openness following the end of World War II (Figure 1.3.1). While several factors have likely contributed to this association, there appears to be a direct link between trade barriers and global balances.

Using a dynamic quantitative trade model based on Cuñat and Zymek (2023), this box analyzes the link between trade barriers and global trade balances. The model simulations show that trade barriers dampen the effect of shocks on trade balances and international risk sharing by magnifying the response of prices and the real interest rate to shocks. As an illustrative example, the simulations consider the impact of a one-time negative labor productivity shock in one country, which would bring about a need to run current account deficit through international borrowing.[2]

Figure 1.3.2 presents the simulation results. The decline in output triggers a trade and current account deficit on impact, which leads to a temporary rise in the price level (given home bias resulting from trade barriers). As the rise in prices is short-lived, expected inflation declines, which raises the real interest rate and dampens the incentives of consumers and firms to use the trade balance to smooth the effects of the transitory shock (blue lines in Figure 1.3.2). The response of the price level and real interest rate is larger the higher the country's trade barriers. Although the model is calibrated to a representative emerging market and developing economy (EMDE), the mechanism it illustrates is more general: by strengthening the response of prices and real rates to departures from balanced trade, higher trade barriers reduce current account imbalances (Obstfeld and Rogoff 2000; Eaton, Kortum, and Neiman 2016; Reyes-Heroles 2017). Empirical studies have provided support for this mechanism, documenting that countries with high overall trade barriers tend to have smaller current account imbalances (Obstfeld and Rogoff 2000; Joy and others 2018; Boz, Li, and Zhang 2019).

Higher trade costs would thus be expected to cause a decline in global imbalances. The red lines in Figure 1.3.2 show the response to the same productivity shock in a representative EMDE when the country's trade barriers with the rest of the world are raised in line with the baseline GEF scenario in Bolhuis, Chen, and Kett (2023). As the figure shows, relative to the baseline with lower trade costs, the trade and current account imbalances following the shock are smaller, while the initial decline in consumption is larger. Simulating the

Figure 1.3.1. Trade Openness and Current Account Balances since 1870
(Percent of GDP)



Sources: Jordà, Schularick, and Taylor (2017); and IMF staff calculations.
Note: Figure shows the average for trade openness (exports plus imports over GDP) and absolute-value current accounts for 18 economies: Australia, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

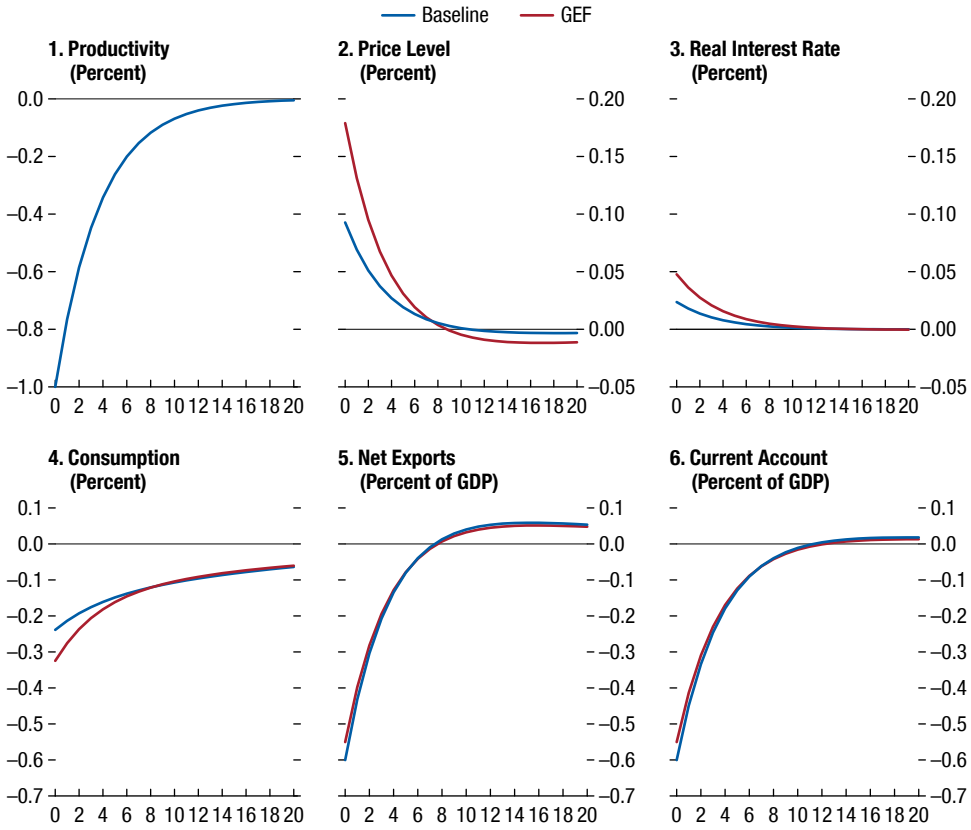
This box was prepared by Robert Zymek.

[1]This box considers global (and uniform) increases in trade costs, which is one aspect of GEF. But GEF could easily bring about asymmetric changes in trade costs: were the world to be divided into several blocs, trades costs across blocs would rise to very high levels, but trade costs within each bloc would fall significantly. GEF could also increase and alter frictions in international transactions of all stripes, including financial market transactions (see Aiyar and others 2023).

[2]For details on modeling assumptions and calibration, see Cuñat and Zymek (2023).

Box 1.3 *(continued)*

Figure 1.3.2. Effect of a Labor Productivity Shock on a Representative EMDE: Baseline and Higher Trade Cost



Source: Simulations based on Cuñat and Zymek (2023).
Note: One unit of time on the horizontal axes corresponds to one year. The "Baseline" simulation is calibrated to the trade openness of a representative country from the group of emerging market and developing economies (EMDEs). The "GEF" simulation is calibrated to the (diminished relative to "Baseline") trade openness resulting from a rise in trade barriers in line with the main geoeconomic fragmentation (GEF) scenario in Bolhuis, Chen, and Kett (2023). In the scenario, countries divide into a western and an eastern bloc based on their preexisting trade ties, with higher barriers between blocs leading to a 3–4 percent real income loss for EMDEs on average.

model for the size, frequency, and persistence of productivity shocks experienced by the typical EMDE, the average absolute value of the trade balance is found to be 10 percent lower after GEF, and the average absolute value of the current account balance is found to be 8 percent lower—a small but noticeable decline. The flip side of the reduction in trade and current account imbalances is a diminished capacity to smooth the impact of shocks on consumption. In the model simulations, the standard deviation of real aggregate consumption is 20 percent larger. Higher trade costs thus expose EMDEs to greater consumption volatility, even if the frequency and magnitude of domestic economic shocks remain unchanged.

Annex Table 1.1.1. Selected Economies: Foreign Reserves, 2019–22[1]

	Gross Official Reserves[2] (Billions of US Dollars)				Gross Official Reserves[2] (Percent of GDP)				IMF Staff–Estimated Change in Official Reserves[3] (Percent of GDP)				Gross Official Reserves, 2022 (Percent of ARA metric)[4]	FXI Data Publication
	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022		
Advanced Economies														
Australia	58	43	58	57	4.2	3.1	3.5	3.3	–0.1	–0.1	1.0	0.1	. . .	Yes, daily
Canada	85	90	107	107	4.9	5.5	5.3	5.0	0.0	0.1	1.0	0.0	. . .	Yes, monthly
Euro Area	914	1,078	1,196	1,185	6.8	8.2	8.2	8.4	0.1	0.1	1.1	0.2	. . .	Yes, quarterly
Hong Kong SAR	441	492	497	424	121.6	142.6	134.7	117.5	1.7	10.7	–0.3	–13.0	. . .	Yes, daily
Japan	1,322	1,391	1,406	1,228	25.8	27.5	28.1	29.0	0.5	–0.1	1.2	–0.5	. . .	Yes, monthly
Korea	409	443	463	423	24.8	27.0	25.6	25.4	0.1	0.9	0.4	–1.7	. . .	Yes, quarterly
Singapore	285	370	425	289	75.8	106.2	100.3	62.0	0.7	28.3	4.3	–27.9	. . .	Yes, semiannually
Sweden	56	58	62	68	10.4	10.6	9.7	11.5	–1.4	–0.1	0.9	1.3	. . .	Yes, weekly
Switzerland	855	1,083	1,110	924	118.4	146.6	138.8	111.0	2.3	16.8	7.4	1.3	. . .	Yes, quarterly
United Kingdom	174	180	194	176	6.1	6.7	6.2	5.7	–0.1	–0.1	0.9	0.1	. . .	Yes, monthly
United States	517	628	716	707	2.4	3.0	3.1	2.8	0.0	–0.1	0.6	0.0	. . .	Yes, quarterly
Emerging Market and Developing Economies														
Argentina	45	39	40	45	9.9	10.1	8.1	7.1	–8.3	–3.4	0.7	0.1	74	Yes, daily
Brazil	357	356	362	325	19.1	24.1	22.0	16.9	0.4	–2.4	–0.8	–1.2	136	Yes, daily
China	3,223	3,357	3,428	3,128	22.5	22.6	19.3	17.3	–0.1	0.2	1.1	0.6	110	No
India	463	590	638	567	16.3	22.1	20.3	16.8	2.5	3.8	1.6	–0.9	159	Yes, monthly
Indonesia	129	136	145	137	11.5	12.8	12.2	10.4	0.7	0.5	1.3	–0.1	118	No
Malaysia	104	108	117	115	28.4	31.9	31.3	28.1	2.5	0.9	2.4	1.5	110	No
Mexico	183	199	208	201	14.4	18.3	16.3	14.2	0.2	1.1	0.8	–0.1	119	Yes, monthly
Poland	128	154	166	167	21.5	25.7	24.4	24.2	1.7	3.1	2.8	1.9	157	No
Russia	555	597	632	582	32.7	40.1	34.4	26.3	3.9	–0.9	3.5	–2.2	300	Yes, quarterly
Saudi Arabia	515	473	474	478	61.4	64.4	54.6	43.2	0.4	–6.3	0.2	0.2	. . .	No
South Africa	55	55	58	61	14.2	16.3	13.7	14.9	0.4	–0.7	1.0	0.1	90	No
Thailand	224	258	246	217	41.2	51.6	48.7	40.4	2.7	1.3	–0.5	–0.8	203	No
Türkiye	106	94	110	129	13.9	13.0	13.4	14.2	–1.2	–10.8	2.7	0.7	95	No
Memorandum item:														
Aggregate[5]	11,204	12,272	12,857	11,737	12.8	14.5	13.3		0.2	0.3	0.9	-0.2	. . .	. . .
AEs	5,116	5,857	6,234	5,587	5.9	6.9	6.5		0.1	0.3	0.5	-0.2	. . .	. . .
EMDEs	6,088	6,416	6,623	6,150	7.0	7.6	6.9		0.1	0.0	0.4	0.0	. . .	. . .

Sources: IMF, Assessing Reserve Adequacy data set; IMF, *International Financial Statistics*; IMF, International Reserves and Foreign Currency Liquidity; IMF, April 2023 *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; SAR = Special Administrative Region.

[1]Sample includes *External Sector Report* economies excluding individual euro area economies. Euro area is reported as aggregate.

[2]Total reserves from *International Financial Statistics*; includes gold reserves valued at market prices.

[3]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.

[4]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 for selected EMDEs 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.

[5]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, 2022

		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)
Economy	Overall Assessment	Actual	Cycl. Adj.	Midpoint	Range	Midpoint	Range	Net	Liabilities	Assets		
Argentina	Weaker	–0.6	–0.8	–1.8	±1	17.5	±2.5	18	49	67	1.0	0.5
Australia	Broadly in line	1.2	–2.1	–0.5	±0.8	2.6	±4	–34	183	149	–1.9	0.8
Belgium	Substantially weaker	–3.5	–1.7	–4.6	±0.4	6.3	±0.6	54	365	419	2.6	0.4
Brazil	Broadly in line	–3.0	–3.3	–0.8	±0.5	6.0	±3.9	–40	90	49	–2.1	0.5
Canada	Moderately weaker	–0.3	–1.3	–1.8	±0.5	6.8	±1.7	30	235	265	2.3	0.5
China	Broadly in line	2.2	2.2	0.8	±0.6	–5.7	±4.7	14	37	51	0.8	0.6
Euro Area[1]	Broadly in line	–1.0	0.1	–0.1	±0.6	0.2	±1.8	2	249	251	0.1	0.6
France	Moderately weaker	–2.1	–1.5	–2.0	±0.5	7.1	±1.6	–24	326	302	–1.5	0.5
Germany	Stronger	4.2	5.3	2.8	±0.5	–7.8	±1.4	71	239	310	4.3	0.5
Hong Kong SAR	Broadly in line	10.5	10.3	0.6	±1.5	–1.4	±3.9	486	1,192	1,678	. . .	. . .
India	Moderately stronger	–2.0	–0.9	1.5	±0.7	–7.8	±3.6	–11	37	26	–1.2	0.7
Indonesia	Broadly in line	1.0	–1.5	0.3	±0.6	–2.0	±3.6	–19	53	34	–1.6	0.6
Italy	Weaker	–1.2	0.6	–2.5	±0.7	9.3	±2.7	4	171	174	0.3	0.7
Japan	Broadly in line	2.1	3.2	0.0	±1.1	0.0	±6.6	75	165	240	3.2	1.1
Korea	Broadly in line	1.8	4.2	–1.0	±0.9	2.9	±2.7	46	84	130	2.4	0.9
Malaysia	Stronger	3.1	2.4	4.0	±0.5	–8.0	±1	4	121	125	0.8	0.5
Mexico	Moderately stronger	–1.3	–0.4	1.7	±0.5	–4.9	±1.3	–42	94	52	–2.0	0.5
The Netherlands	Broadly in line	4.4	5.5	0.0	±0.6	0.1	±0.9	75	968	1,043	4.3	0.6
Poland	Broadly in line	–3.0	–1.8	0.9	±0.5	–2.0	±1	–34	91	57	–2.6	0.5
Russia	Stronger	10.4	6.7	2.3	±1.1	–13.6	±6.5	34	38	72	1.2	1.1
Saudi Arabia	Substantially stronger	13.6	12.5	4.7	±2.5	–21.6	±12.5	62	58	119	. . .	. . .
Singapore	Substantially stronger	19.3	21.8	5.1	±1.8	–10.2	±3.6	176	949	1,126	. . .	. . .
South Africa	Moderately weaker	–0.5	–1.4	–1.3	±0.7	5.0	±2.9	17	114	131	0.6	0.7
Spain	Broadly in line	0.6	1.4	0.7	±0.8	–2.2	±2.6	–61	259	199	–3.1	0.8
Sweden	Stronger	4.3	5.0	3.8	±0.4	–9.7	±5.7	40	285	325	2.1	0.4
Switzerland	Broadly in line	10.1	10.6	0.0	±0.8	0.1	±1.4	93	588	681	4.4	0.8
Thailand	Stronger	–3.2	–2.3	2.9	±0.7	–6.2	±1.6	–3	121	118	0.0	0.7
Türkiye	Moderately weaker	–5.3	–2.5	–1.9	±0.7	6.5	±2.5	–31	65	34	–1.9	0.7
United Kingdom	Broadly in line	–3.8	–2.2	–0.8	±1	2.9	±3.6	–11	574	563	–0.8	0.3
United States	Moderately weaker	–3.7	–3.5	–1.1	±0.7	9.0	±5.6	–65	176	112	–3.5	0.7

Sources: IMF, *International Financial Statistics*; IMF, April 2023 *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; SAR = Special Administrative Region; SE = standard error.
[1]The IMF staff–assessed euro area CA gap is calculated as the GDP-weighted average 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, 2022

(Percent of GDP)

Economy	Actual CA Balance [A]	Cycl. Adj. CA Balance [B]	EBA CA Norm [C]	EBA CA Gap[1] [D=B–C]	IMF Staff-Assessed CA Gap[2] [E=D+F]	IMF Staff Adjustments[3]				Comments on Non–COVID-19-related Adjustments
						Total [F=G+H-I]	COVID-19 [G]	Other CA [H]	Other Norm [I]	
Argentina	–0.6	–0.8	0.3	–1.2	–1.8	–0.6	0.1	0.0	0.7	NIIP/financing risk considerations
Australia	1.2	–2.1	–1.0	–1.1	–0.5	0.6	0.6	0.0	0.0	
Belgium	–3.5	–1.7	2.8	–4.5	–4.6	0.0	0.0	0.0	0.0	
Brazil	–3.0	–3.3	–2.2	–1.1	–0.8	0.3	0.3	0.0	0.0	
Canada	–0.3	–1.3	2.2	–3.4	–1.8	1.6	0.0	1.6	0.0	Measurement biases
China	2.2	2.2	0.7	1.5	0.8	–0.7	–0.7	0.0	0.0	
Euro Area[4]	–1.0	0.1	–0.3	0.5	–0.1	–0.5	0.1	–0.5	0.1	Country-specific adjustments
France	–2.1	–1.5	–0.3	–1.1	–2.0	–0.9	–0.9	0.0	0.0	
Germany	4.2	5.3	2.8	2.5	2.8	0.4	0.4	0.0	0.0	
India	–2.0	–0.9	–2.3	1.5	1.5	0.0	0.0	0.0	0.0	
Indonesia	1.0	–1.5	–1.1	–0.4	0.3	0.8	0.4	0.0	–0.4	High mortality rate, norm
Italy	–1.2	0.6	3.4	–2.9	–2.5	0.4	0.4	0.0	0.0	
Japan	2.1	3.2	3.5	–0.3	0.0	0.3	0.3	0.0	0.0	
Korea	1.8	4.2	4.8	–0.6	–1.0	–0.4	–0.4	0.0	0.0	
Malaysia	3.1	2.4	–0.5	2.9	4.0	1.1	1.1	0.0	0.0	
Mexico	–1.3	–0.4	–1.6	1.2	1.7	0.4	0.4	0.0	0.0	
The Netherlands	4.4	5.5	4.8	0.7	0.0	–0.7	–0.2	–0.5	0.0	Measurement biases
Poland	–3.0	–1.8	–2.7	1.0	0.9	–0.1	–0.1	0.0	0.0	
Russia	10.4	6.7	4.0	2.7	2.3	–0.4	–0.4	0.0	0.0	
South Africa	–0.5	–1.4	2.2	–3.6	–1.3	2.3	0.2	1.5	–0.6	SACU transfers and measurement biases (CA), demographics (high mortality risk, norm)
Spain	0.6	1.4	–0.1	1.5	0.7	–0.8	0.2	0.0	1.1	NIIP/financing risk considerations
Sweden	4.3	5.0	0.8	4.2	3.8	–0.3	–0.3	0.0	0.0	
Switzerland	10.1	10.6	6.5	4.1	0.0	–4.1	–0.1	–4.0	0.0	Measurement biases
Thailand	–3.2	–2.3	0.9	–3.2	2.9	6.1	6.1	0.0	0.0	
Türkiye	–5.3	–2.5	–0.8	–1.7	–1.9	–0.2	–0.2	0.0	0.0	
United Kingdom	–3.8	–2.2	–1.0	–1.2	–0.8	0.4	–0.3	0.7	0.0	Measurement biases
United States	–3.7	–3.5	–2.2	–1.2	–1.1	0.2	0.2	0.0	0.0	
Hong Kong SAR	10.5	10.3	. . .	. . .	0.6	. . .	0.9	. . .	. . .	
Singapore	19.3	21.8	. . .	. . .	5.1	. . .	–3.1	. . .	. . .	Measurement biases, NFA composition, health spending
Saudi Arabia	13.6	12.5	. . .	. . .	4.7	. . .	0.0	. . .	. . .	
Absolute sum of excess surpluses and deficits[5]	. . .	. . .	. . .	1.2	0.9	. . .	. . .	. . .	. . .	
Discrepancy [6]	. . .	. . .	. . .	. . .	–0.01	. . .	. . .	. . .	. . .	

Source: IMF staff estimates.

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

[1]Minor discrepancies between constituent figures and totals are due to rounding.

[2]Refers to the midpoint of the IMF staff–assessed CA gap.

[3]Total IMF staff adjustments include rounding in some cases. See Online Annex 1.1 for a description of COVID-19 adjustors. The last column explains country-specific adjustments to the CA and norm.

[4]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.

[5]Sum of absolute value of IMF staff–assessed CA gaps in percent of aggregate GDP for economies included in the ESR exercise.

[6]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, 2022

Economy	IMF Staff-Assessed REER Gap[1]	REER Gap Implied by IMF Staff-Assessed CA Gap[2]	EBA REER-Level Gap	EBA REER-Index Gap	CA/REER Elasticity[3]	REER (Percent Change)	
						Average 2022/ Average 2021	April 2023/ Average 2022
Argentina	17.5	15.2	10.8	25.0	0.12	21.0	1.4
Australia	2.6	2.6	23.4	–20.1	0.20	0.2	–1.5
Belgium	6.3	6.3	31.3	16.9	0.72	–0.4	0.8
Brazil	6.0	6.0	–14.4	–29.1	0.13	12.1	2.3
Canada	6.8	6.8	–10.5	1.9	0.27	–0.7	–4.3
China	–5.7	–5.7	12.7	16.1	0.14	–1.2	–6.5
Euro Area	0.2	0.2	8.0	7.6	0.35	–4.1	5.0
France	7.1	7.1	5.3	–4.8	0.28	–4.6	2.3
Germany	–7.8	–7.8	–9.5	6.7	0.37	–3.6	3.2
India	–7.8	–7.8	10.6	12.5	0.19	0.9	–2.8
Indonesia	–2.0	–2.0	–16.3	–2.7	0.16	2.5	0.4
Italy	9.3	9.3	15.4	12.3	0.27	–2.0	2.8
Japan	0.0	0.0	–31.4	–31.7	0.17	–13.7	–1.3
Korea	2.9	2.9	3.4	–1.9	0.34	–5.4	–1.4
Malaysia	–8.0	–8.0	–29.3	–25.2	0.50	–1.5	–1.2
Mexico	–4.9	–4.9	14.9	–3.8	0.34	5.3	12.9
The Netherlands	0.1	0.1	15.0	27.8	0.66	0.1	0.8
Poland	–2.0	–2.0	–19.0	2.7	0.43	1.4	8.9
Russia	–13.6	–13.6	–4.7	5.7	0.17	36.8	–7.1
South Africa	5.0	5.0	12.8	–3.5	0.25	–2.2	–9.1
Spain	–2.2	–2.2	29.2	10.6	0.31	–1.1	0.2
Sweden	–9.7	–10.3	–17.0	–15.9	0.37	–6.1	–0.8
Switzerland	0.1	0.1	17.6	11.9	0.55	0.3	2.1
Thailand	–6.2	–6.2	–2.6	6.7	0.47	–1.1	1.6
Türkiye	6.5	6.5	–56.7	–46.3	0.29	–8.5	6.9
United Kingdom	2.9	2.9	2.3	–8.4	0.28	–1.4	1.1
United States	9.0	9.0	22.8	10.7	0.12	9.5	–0.5
Hong Kong SAR	–1.4	–1.4	. . .	. . .	0.39	3.7	0.5
Singapore	–10.2	–10.2	. . .	. . .	0.50	6.0	6.1
Saudi Arabia	–21.6	–21.6	. . .	. . .	. . .	4.1	–0.2
Discrepancy[4]	0.9	. . .	. . .	. . .	. . .	. . .	. . .

Sources: IMF, Information Notice System; and IMF staff estimates.
Note: ". . ." indicates that data are not available or not applicable; CA = current account; EBA = External Balance Assessment; REER = real effective exchange rate.
[1]Refers to the midpoint of the IMF staff–assessed REER gap.
[2]Implied REER gap = –(IMF staff–assessed CA gap/CA-to-REER elasticity).
[3]CA-to-REER semielasticity used by IMF country teams.
[4]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, 2022

(Percent of GDP)

	EBA Gap				Fiscal Gap					Public Health Expenditure Gap					Private Credit Gap					Foreign Exchange Intervention and Capital Controls Gap						
						Domestic					Domestic					Domestic					Domestic						
Economy	Total[1]	Identified	Dom[2]	Residual	Total[1]	Dom[3]	Coeff	P	P*	Total[1]	Dom[3]	Coeff	P	P*	Total[1]	Dom[3]	Coeff	P	P*	Total[1]	Dom[3]	Coeff	FXI P	FXI P*	KC P	KC P*
Argentina	–1.2	–0.1	–0.9	–1.0	0.4	–0.7	0.3	–3.9	–1.5	0.0	0.0	–0.3	6.5	6.5	–0.1	0.3	–0.1	–3.5	0.0	–0.5	–0.5	0.6	0.1	3.0	0.7	0.3
Australia	–1.1	–0.1	–0.9	–1.0	0.1	–1.0	0.3	–3.4	0.0	–0.3	–0.3	–0.3	8.3	7.2	0.1	0.5	–0.1	–4.9	0.0	0.0	0.0	0.6	0.1	0.0	0.1	0.1
Belgium	–4.5	1.5	0.7	–6.0	0.0	–1.1	0.3	–4.8	–1.1	–0.2	–0.2	–0.3	8.6	7.9	1.7	2.1	–0.1	–21.5	0.0	0.0	0.0	0.6	0.2	0.0	0.1	0.1
Brazil	–1.1	–0.2	–1.0	–0.8	0.7	–0.5	0.3	–5.0	–3.5	0.2	0.2	–0.3	3.9	4.4	–0.8	–0.4	–0.1	3.8	0.0	–0.3	–0.3	0.6	–1.2	0.0	0.4	0.3
Canada	–3.4	1.0	0.2	–4.4	0.9	–0.2	0.3	–1.0	–0.4	–0.8	–0.8	–0.3	9.6	7.0	0.8	1.2	–0.1	–12.3	0.0	0.0	0.0	0.6	0.0	0.0	0.1	0.1
China	1.5	1.0	0.2	0.5	–0.4	–1.5	0.3	–6.8	–1.8	0.2	0.2	–0.3	3.3	4.0	0.9	1.3	–0.1	–13.1	0.0	0.3	0.3	0.6	0.5	0.0	0.8	0.3
Euro Area[4]	0.5	–0.2	–1.0	0.7	0.2	–0.9	0.3	–4.0	–0.9	–0.2	–0.2	–0.3	9.1	8.4	–0.2	0.2	–0.1	–2.1	–0.3	0.0	0.0	0.6	0.2	0.0	0.1	0.1
France	–1.1	–0.8	–1.6	–0.3	0.1	–1.0	0.3	–4.4	–1.1	–0.3	–0.3	–0.3	10.4	9.3	–0.6	–0.2	–0.1	2.3	0.0	0.0	0.0	0.6	0.1	0.0	0.1	0.1
Germany	2.5	–0.6	–1.4	3.1	0.7	–0.5	0.3	–2.8	–1.3	–0.4	–0.4	–0.3	11.0	9.6	–0.9	–0.5	–0.1	5.3	0.0	0.0	0.0	0.6	0.1	0.0	0.3	0.3
India	1.5	0.1	–0.6	1.3	0.0	–1.2	0.3	–9.6	–5.8	0.2	0.1	–0.3	1.3	1.8	0.4	0.8	–0.1	–8.7	0.0	–0.4	–0.5	0.6	–0.9	0.0	0.8	0.3
Indonesia	–0.4	1.1	0.3	–1.5	1.1	0.0	0.3	–2.2	–2.0	0.4	0.4	–0.3	1.6	3.0	–0.5	–0.1	–0.1	0.7	0.0	0.0	0.0	0.6	–0.1	0.0	0.5	0.3
Italy	–2.9	–1.0	–1.7	–1.9	–1.5	–2.6	0.3	–8.1	0.5	0.0	0.0	–0.3	6.8	6.8	0.5	0.9	–0.1	–9.0	0.0	0.0	0.0	0.6	0.2	0.0	0.0	0.0
Japan	–0.3	–2.0	–2.8	1.7	–1.0	–2.1	0.3	–7.8	–1.0	0.0	0.0	–0.3	9.1	9.1	–1.1	–0.7	–0.1	16.0	9.0	0.0	0.0	0.6	–0.5	0.0	0.1	0.1
Korea	–0.6	–0.6	–1.3	0.0	0.9	–0.3	0.3	–0.9	0.0	0.1	0.1	–0.3	5.6	5.8	–1.5	–1.1	–0.1	11.0	0.0	–0.1	–0.1	0.6	–1.7	0.0	0.1	0.1
Malaysia	2.9	0.6	–0.2	2.3	0.2	–0.9	0.3	–5.5	–2.5	0.6	0.6	–0.3	2.0	4.1	–0.8	–0.4	–0.1	4.5	0.0	0.5	0.5	0.6	1.5	0.0	0.6	0.3
Mexico	1.2	0.4	–0.3	0.8	0.6	–0.5	0.3	–4.3	–2.7	0.1	0.1	–0.3	3.4	3.6	–0.3	0.1	–0.1	–1.5	0.0	0.0	0.0	0.6	–0.1	0.0	0.4	0.3
The Netherlands	0.7	1.9	1.1	–1.2	0.8	–0.4	0.3	–2.1	–0.9	–0.2	–0.2	–0.3	9.4	8.8	1.3	1.7	–0.1	–17.5	0.0	0.0	0.0	0.6	0.9	0.0	0.0	0.0
Poland	1.0	1.9	1.2	–1.0	0.2	–0.9	0.3	–4.1	–1.0	0.3	0.3	–0.3	5.6	6.6	0.9	1.3	–0.1	–13.8	0.0	0.5	0.5	0.6	1.9	0.0	0.4	0.3
Russia	2.7	–0.8	–1.6	3.5	–0.8	–2.0	0.3	–2.0	4.4	0.3	0.3	–0.3	4.6	5.5	0.5	0.9	–0.1	–9.1	0.0	–0.7	–0.7	0.6	–2.2	0.0	0.5	0.3
South Africa	–3.6	–0.6	–1.3	–3.0	–0.1	–1.3	0.3	–5.5	–1.4	0.0	0.0	–0.3	4.0	4.1	0.0	0.4	–0.1	–4.6	0.0	–0.5	–0.5	0.6	0.1	3.0	0.6	0.3
Spain	1.5	–0.1	–0.8	1.6	0.5	–0.7	0.3	–4.2	–2.0	0.0	0.0	–0.3	6.5	6.5	–0.5	–0.1	–0.1	0.5	–1.0	0.0	0.0	0.6	0.0	0.0	0.2	0.2
Sweden	4.2	1.0	0.2	3.2	1.1	–0.1	0.3	0.1	0.3	–0.2	–0.2	–0.3	9.8	9.0	0.0	0.4	–0.1	–4.1	0.0	0.2	0.1	0.6	1.3	0.0	0.2	0.2
Switzerland	4.1	–0.2	–1.0	4.3	1.5	0.3	0.3	0.1	–1.0	–0.3	–0.3	–0.3	8.4	7.5	–1.6	–1.2	–0.1	12.4	0.0	0.2	0.2	0.6	1.3	0.0	0.2	0.2
Thailand	–3.2	–1.4	–2.2	–1.8	0.3	–0.9	0.3	–5.2	–2.3	0.1	0.1	–0.3	3.8	4.1	–1.5	–1.1	–0.1	12.0	0.0	–0.2	–0.3	0.6	–0.8	0.0	0.5	0.3
Türkiye	–1.7	1.5	0.7	–3.2	1.8	0.6	0.3	–2.3	–4.3	–0.4	–0.4	–0.3	5.0	3.6	0.2	0.6	–0.1	–6.0	0.0	0.0	0.0	0.6	0.7	1.2	0.4	0.3
United Kingdom	–1.2	1.2	0.5	–2.4	–0.3	–1.5	0.3	–7.2	–2.4	–0.6	–0.6	–0.3	9.9	7.9	2.1	2.5	–0.1	–26.4	0.0	0.0	0.0	0.6	0.1	0.0	0.1	0.1
United States	–1.2	–0.6	–1.4	–0.6	–0.1	–1.3	0.3	–5.8	–1.7	0.0	0.0	–0.3	8.4	8.4	–0.5	–0.1	–0.1	1.5	0.0	0.0	0.0	0.6	0.0	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; P = actual level; P* = desired level.

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

[2]Includes the contribution of domestic policy gaps to the identified gap. The total foreign policy gap contribution is constant and equal to 0.8 percent for all countries. Foreign contributions are estimated as follows (in percent of GDP): fiscal = 1.1; public health = 0.0; private credit = –0.4; foreign exchange intervention = 0.0.

[3]Total domestic contribution is equivalent to coefficient * (P – P*).

[4]The euro area EBA current account (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. 2022 Individual Economy Assessments: Summary of Policy Recommendations

Economy	Overall 2022 Assessment	Policy Recommendations
Argentina	Weaker	Implement growth-friendly fiscal consolidation, combined with tight monetary policy and a streamlined FX regime to strengthen the trade balance, rebuild international reserves, regain market access, and ensure debt sustainability; introduce reforms to boost export capacity and encourage FDI.
Australia	Broadly in line	Withdraw fiscal and monetary stimulus at an appropriate pace. Boost investment by executing planned infrastructure spending, streamlining product market regulation, and promoting R&D and innovation.
Belgium	Substantially weaker	Strengthen competitiveness by addressing structural challenges, including labor and product market reforms, to foster green, digital, and inclusive growth. Rebuild fiscal buffers through expenditure-led consolidation.
Brazil	Broadly in line	Raise national saving including by implementing medium-term fiscal consolidation. Reduce the cost of doing business by fostering a skilled labor force and implementing structural reforms to increase competitiveness.
Canada	Moderately weaker	Develop a medium-term fiscal consolidation plan; boost nonfuel exports through improved labor productivity, removal of nontariff trade barriers, promotion of FDI, and investment in R&D, physical capital, and green transformation.
China	Broadly in line	Accelerate structural reforms (by further opening domestic markets, ensuring competitive neutrality between SOEs and private firms), reduce wasteful and distorting industrial policy subsidies, reduce high household savings (by strengthening the social safety net), and promote green investment. Further increase ER flexibility to help the economy adjust to absorb shocks.
Euro Area	Broadly in line	Step up efforts to facilitate the green transition; ensure that policies to protect the vulnerable from elevated energy prices are well targeted; avoid a trade-distorting subsidy race; preserve the integrity of the European single market; see additional member country–specific recommendations on reducing internal and external imbalances.
France	Moderately weaker	Enhance productivity through structural reforms and sustain higher private investment to facilitate the green transition and digitalization, while rebuilding fiscal space once shock dissipates.
Germany	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.
Hong Kong SAR	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.
India	Moderately stronger	Raise infrastructure spending to reduce CA gap. Over the medium term, implement gradual fiscal consolidation, develop export infrastructure, negotiate free trade agreements, and liberalize investment regime. Structural reforms could deepen integration in global value chains and attract FDI. ER flexibility should act as the main shock absorber, with intervention limited to addressing disorderly market conditions
Indonesia	Broadly in line	Enhance productivity and facilitate post-COVID-19 sectoral adjustment by increasing infrastructure and social spending and strengthening the social safety net, reducing restrictions on inward FDI and trade, and improving labor market flexibility. Flexibility of the ER should continue to support external stability.
Italy	Weaker	Raise productivity and improve the business climate through structural reforms, including by upskilling the workforce and increasing the quality of infrastructure and the effectiveness of the judiciary and public administration. Reduce vulnerabilities associated with rollover of public debt by improving budget efficiency, containing pension spending, undertaking comprehensive and progressive tax reform, and fully implementing the National Recovery and Resilience Plan.
Japan	Broadly in line	Implement a more flexible monetary policy, bold structural reforms, and a credible and specific medium-term fiscal consolidation plan. Focus on reforms that support private demand, raise potential growth, and promote digital and green investment.
Korea	Broadly in line	Continue fiscal consolidation and monetary policy tightening to contain domestic demand and import growth in the near term. Over the medium term, reducing household debt and implementing policies to mitigate risks from geopolitical tensions would help maintain a sound external position. ER should remain market determined, with intervention limited to preventing disorderly market conditions.

(*Continued*)

Annex Table 1.1.6 *(continued)*

Economy	Overall 2022 Assessment	Policy Recommendations
Malaysia	Stronger	Strengthen the social safety net, including through a reorientation of fiscal spending that should target a gradual and growth friendly consolidation; implement structural policies to encourage private investment and boost productivity growth.
Mexico	Moderately stronger	Implement structural reforms to address investment obstacles, including tackling economic informality and governance gaps. Continue using floating ER as the main shock absorber, with FXI used only to prevent disorderly market conditions.
The Netherlands	Broadly in line	Support investment in physical and human capital to foster robust potential growth, including through structural investment and reform plans to safeguard energy security, allay housing market shortages, facilitate access to finance for SMEs, reinforce the education system, and advance the climate transition and digitalization.
Poland	Broadly in line	Reduce fiscal deficit while boosting public investment by deploying Next Generation EU grants to tackle infrastructure gaps, digitalization, and climate change; use structural policies to encourage corporate investment and productivity and incentivize credit allocation to the private sector.
Russia	Stronger	. . .
Saudi Arabia	Substantially stronger	Implement structural reforms with an accompanying investment program to help diversify the economy, lift productivity and align the external position in the medium term; avoid procyclical fiscal policy amid high hydrocarbon windfalls; minimize risks associated with industrial policies.
Singapore	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.
South Africa	Moderately weaker	Implement structural reforms and stronger fiscal consolidation under a credible medium-term framework, while providing space for critical infrastructure and social spending; improve governance, efficiency of key product markets (to promote private sector participation), and functioning of labor markets; seize opportunities to build up reserves.
Spain	Broadly in line	Implement fiscal consolidation. Improve productivity to increase private saving by enhancing education outcomes, encouraging innovation, and improve energy efficiency. Spain's recovery plan foresees investments and reforms in these areas.
Sweden	Stronger	Once inflation recedes, increase private and public investment in the green transition and the health sector.
Switzerland	Broadly in line	Fiscal policy should remain in line with debt-brake rule framework in the near term. As inflation pressures ease, small deficits should support necessary expenditures; consider targeted FXI to mitigate disruptive volatility.
Thailand	Stronger	Focus public spending on targeted social transfers as well as infrastructure investment to support a green recovery and reorientation of affected sectors. Continue the effort to reform and expand social safety nets; implement measures to address widespread informality.
Türkiye	Moderately weaker	Strengthen the policy framework to help underpin external sustainability. Implement a tighter monetary and fiscal policy stance, and rebuild policy credibility.
United Kingdom	Broadly in line	Implement gradual fiscal consolidation, while preserving the quality of key public services and protecting the vulnerable. Implement structural reforms to boost competitiveness, including via upgrading the labor skill base to support labor reallocation to fast-growing sectors, bolstering national savings to help finance investment, including in support of the climate transition.
United States	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 an open, stable, and transparent global trading system.

Source: 2022 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&D = research and development; SMEs = small and medium-sized enterprises; SOE = state-owned enterprise; VAT = value-added tax.

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CHAPTER 2

EXTERNAL SECTOR IMPLICATIONS OF THE GLOBAL DOLLAR CYCLE

US dollar appreciations can inflict sizable negative spillovers on emerging markets. Building on the methodology of Obstfeld and Zhou (2023), this chapter investigates implications of the "global dollar cycle" for the current account balance and other external sector indicators. It finds that negative real sector spillovers from US dollar appreciations fall disproportionately on emerging markets. In contrast, effects on advanced economies are small and short-lived. Current account balances increase in both country groups, with larger and more persistent effects on emerging markets, driven by a fall in investment. Emerging market commodity exporters historically experienced larger negative spillovers than commodity importers, reflecting a strong negative link between the US dollar and commodity prices. More flexible exchange rates and more anchored inflation expectations can mitigate negative spillovers to emerging markets.

Introduction

During the post–Bretton Woods era of flexible exchange rates, the US dollar has followed pronounced decade-long swings. The most recent sharp US dollar appreciation in 2021–22 is part of these oscillations. An extensive literature has studied determinants of US dollar fluctuations, including contributions from established macroeconomic factors and policies, albeit recognizing their limited explanatory power (see, for example, Frenkel 1976; Dornbusch 1976; Obstfeld and Rogoff 1996; Engel and West 2005; and Gourinchas and Rey 2007). More recent research has focused on the close association between the US dollar and global financial conditions, with appreciations accompanied by tightening financing constraints (see, for example, Rey 2013; and Miranda-Agrippino and Rey 2022).

Policymakers scrutinize strong US dollar episodes closely because of potential negative cross-border spillovers and ensuing policy challenges, especially in emerging markets. A large literature has highlighted the impact of global financial cycles on economic activity and policy trade-offs and studied the channels of transmission (see, for example, Rey 2013; Bruno and Shin 2015; and Kalemli-Özcan 2019). A more recent strand of this literature has put the US dollar at the center of global financial market booms and busts (see, for example, Druck, Magud, and Mariscal 2018; Shin 2020; Shousha 2022; Akinci and others 2022; Obstfeld and Zhou 2023; and Fukui, Nakamura, and Steinsson 2023). In particular, Obstfeld and Zhou (2023) find that the US dollar is closely related to global financial conditions even after established factors such as US monetary policy and US domestic financial conditions are controlled for, and they link the "global dollar cycle" to large negative spillovers to economic activity in emerging markets, through both financial and trade channels. Given the US dollar's dominant role in global finance, the global dollar cycle is a convenient barometer for studying the implications of booms and busts in global financial markets, capturing factors such as changes in investor risk appetite and preference for liquidity.

Building on Obstfeld and Zhou (2023), this chapter zooms in on the external sector implications of the global dollar cycle for a sample of emerging markets and small advanced economies. The chapter's external sector focus is motivated by the centrality of the current account for exchange rate–induced macroeconomic adjustment, capturing the propensity of countries to buffer or magnify the impact of US dollar fluctuations. The chapter addresses three questions pertaining to the global dollar cycle:

- Are there systematic external sector spillovers from the global dollar cycle?
- Do effects differ across countries, and if so, what explains the heterogeneity?
- What are the implications for global current account balances?[1]

The authors of the chapter are Cian Allen, Rudolfs Bems (lead), Lukas Boer, Allan Dizioli, and Racha Moussa, under the guidance of Jaewoo Lee. Abreshmi Nowar and Xiaohan Shao provided research support and Jane Haizel editorial assistance. The chapter also benefited from comments by Şebnem Kalemli-Özcan, internal seminar participants, and reviewers.

[1]Global current account balances are defined as the sum of absolute current account balances across all countries. It is a key metric in the *External Sector Report* that can signal increasing financial vulnerabilities and rising trade tensions (see Chapter 1).

To answer these questions, the chapter studies current account determinants, including the behavior of investment and saving, components of trade and capital flows, and foreign asset and liability positions. The chapter further examines the heterogeneous impact of US dollar fluctuations based on countries' policies and structural characteristics, which can shed light on the trade and financial channels of transmission. Given the lagged nature of the current account response, both short- and longer-term responses for variables of interest are examined. To benchmark findings, the chapter contrasts emerging markets with smaller advanced economies.

The chapter estimates cross-border spillovers with a state-dependent local projections (LP) methodology, following Obstfeld and Zhou (2023). To isolate the role of the global dollar cycle, the analysis simultaneously controls for other established factors influencing US dollar fluctuations, including monetary policy developments, broader US financial conditions, and economic activity trends in the rest of the world. Estimated impulse responses are allowed to vary by different characteristics of interest, with commodity exporter or importer status as a key exogenous structural feature.

Leveraging the close correlation between the global dollar cycle and uncovered interest parity (UIP) deviations, the chapter employs model-based simulations to shed light on its empirical findings. Analyzing global risk premium shocks in the Flexible System of Global Models (FSGM; Andrle and others 2015) helps disentangle some of the mechanisms behind the chapter's external sector findings. The model employed in this chapter also provides an interpretation for the link between the global dollar cycle and other key global variables studied, including commodity prices and global trade openness.

The chapter's main findings confirm that US dollar appreciations inflict negative spillovers on emerging markets and expand on this result along several dimensions:

- Negative spillovers from US dollar appreciations fall disproportionately on emerging markets when compared with smaller advanced economies.[2] Impacts on emerging markets are large in economic terms: a 10 percent US dollar appreciation decreases output by 1.9 percent after one year, and the negative effect dissipates only after 10 quarters. In contrast, the negative effects in advanced economies are considerably smaller in size and short-lived, peaking at 0.6 percent after one quarter.
- Current account balances, as a share of GDP, increase in both country groups, but the effect is again larger, peaking at 1 percent of GDP for a 10 percent appreciation in the US dollar, and more persistent for emerging markets. A depressed investment rate accompanying the negative spillovers is the main contributor to the current account increase. Exchange rate depreciation and accommodative monetary policy facilitate the external sector adjustment for advanced economies, while "fear of floating" and less accommodation limit the shock-absorbing contribution of exchange rates in emerging markets, where income compression dominates.
- Among structural characteristics, the chapter finds commodity exposure to be a key contributor to spillovers from US dollar appreciations. Commodity exporters exhibit larger negative spillovers owing to a pronounced deterioration in their terms of trade, reflecting a strong negative link between commodity prices and the US dollar, in which most commodities are invoiced. The opposite holds for commodity importers. The ensuing economic adjustment has contrasting implications for current account changes: sizable surpluses for commodity importers, in contrast to broad balance or even deficits for commodity exporters.
- Policies can mitigate negative spillovers to emerging markets from US dollar appreciations. In line with Obstfeld and Zhou (2023), the chapter finds that monetary policy credibility facilitates accommodative policy responses to a US dollar appreciation, including through reduced policy rates and real effective exchange rate (REER) depreciations. The result is a shallower initial negative spillover. Meanwhile, a more flexible exchange rate regime systematically speeds up economic recovery. These mitigating policies moderate current account increases.
- The chapter estimates that global current account balances decline significantly in response to US dollar appreciations, with a 10 percent appreciation associated with a decline in global current account balances by 0.4 percent of GDP after one year.

[2]The chapter uses terms such as "US dollar appreciation" and "upswing in the global dollar cycle" interchangeably to refer to an increase in the value of the US dollar against that of currencies in other major advanced economies.

The chapter's empirical strategy puts some limits on the interpretation of the global dollar cycle. The latter is estimated as a residual, potentially containing many endogenous factors that the chapter does not attempt to further disentangle. Instead, following established practices in macroeconomics, the focus is on the unexplained residuals, that is, the portion of US dollar fluctuations that cannot be attributed to established factors.[3] The chapter estimates these residuals and shows, with the help of model simulations, that global financial market shocks—distinct from other fundamentals such as interest rate differentials—could contribute to the global dollar cycle. However, the analysis does not preclude other interpretations, which could be made possible by further advances in analyzing the drivers of US dollar fluctuations.

Characterizing the Global Dollar Cycle

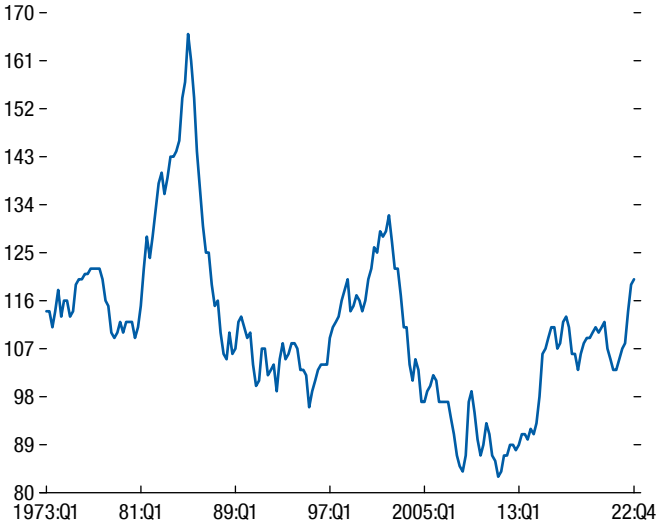
This section links fluctuations in a US dollar index[4] to contributing factors, distinguishing between established exchange rate determinants and a residual contribution from global financial factors. The latter contribution—the global dollar cycle—is then related to other financially motivated indicators, including UIP deviations and the global financial cycle.

The US dollar exhibits pronounced decade-long swings. There have been three distinct upswings since the 1970s (Figure 2.1). The sharp US dollar appreciation during 2021–22 constitutes the most recent of these "strong-dollar" episodes.[5] In the analysis of US dollar cycles, this chapter focuses on a trade-weighted index of the US dollar against currencies of major advanced economies, as such an index is plausibly more exogenous for a study of spillovers to emerging markets. However, a similar cyclical pattern emerges for broader specifications of the US dollar index.[6] A more direct link to exchange rate fluctuations motivates the focus on a nominal, as opposed to a real, index.

Established factors explain some of the cyclical pattern. To account for their roles in dollar movements, the chapter relates the US dollar index to short- and long-term interest rate developments in the US as well as differences with major advanced economies, which capture the effect of a broad set of conventional macroeconomic shocks and policies on the US dollar exchange rate. The aim is to account for established exchange rate determinants, such as a US monetary tightening episode or an increase in productivity that through interest rates lead to a US dollar appreciation. Quantitative easing or a change in public debt management policies, through its impact on short- and longer-term interest rates,

Figure 2.1. Nominal US Dollar Trade-Weighted Index against Major Advanced Economies
(Index, 100 = January 2006)

The US dollar exhibits pronounced decade-long swings, with the recent sharp appreciation constituting the most recent strong dollar episode.



Sources: Federal Reserve Bank of St. Louis, Federal Reserve Economic Data (FRED); and Haver Analytics.
Note: Series retrieved from Haver Analytics, based on the Nominal Advanced Foreign Economies US Dollar Index from FRED, using goods and services trade weights. Values before 2006 are constructed with services trade data estimates from the Federal Reserve Board. Index constructed as the trade-weighted average against the currencies of seven major advanced economies: Australia, Canada, euro area, Japan, Sweden, Switzerland, and the United Kingdom.

[3]The approach is analogous to that involving Solow residuals, which represent the portion of output fluctuations that cannot be attributed to established production factors and are commonly used to measure productivity.

[4]"US dollar index" in this chapter refers to a nominal US dollar trade-weighted index against currencies of major advanced economies. See Figure 2.1 for details.

[5]The chapter defines exchange rates, including bilateral, nominal effective, and real effective, in terms of foreign currency per US dollar, so that an increase represents an appreciation of the US dollar and a depreciation of the foreign currency (or a basket of currencies, in the case of an effective exchange rate).

[6]To boost the sample of advanced economies, those with weights in the US dollar index smaller than 4 percent in 2020 are included in the sample for spillover estimates. Results are robust to excluding such countries from the sample (Online Annex 2.3).

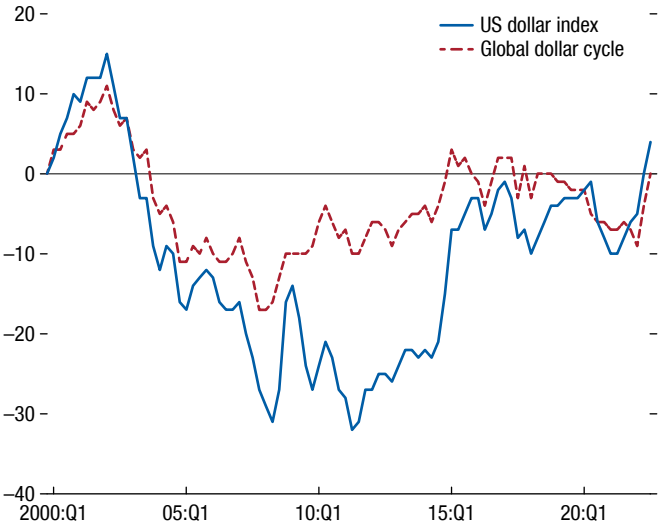
would also be accounted for. The specific explanatory variables used to capture interest rate developments are (1) policy rates, including shadow rates[7]; (2) differences between US policy rates and those of major advanced economies; and (3) an index for US financial conditions to capture longer-term interest rate developments. The estimation further controls for (4) a common component of economic activity in the rest of the world and (5) the lagged change in the US dollar index.[8] Established factors are found to exhibit expected relationships with the US dollar index. For example, a tightening of measured financial conditions is associated with a US dollar appreciation, as is an increase in the policy rate differential in the United States with respect to that in other advanced economies. With the US financial conditions index and the lagged change in the US dollar index making the largest contributions, established factors altogether explain about one-fifth of US dollar fluctuations (see Online Annex Table 2.2.1).

However, a significant unexplained residual in the estimation—labeled "global dollar cycle" in this chapter—remains. This unexplained residual accounts for the bulk of US dollar fluctuations over the last two decades (Figure 2.2). Its correlation with the US dollar index is 84 percent. Zooming in on recent years, the exchange rate movement attributable to established factors, represented in Figure 2.2 by the difference between the US dollar index and the residual global dollar cycle, closely traces exchange rate fluctuations during the 2020–21 pandemic-related downturn and recovery, but the global dollar cycle accounts for a sizable portion of the sharp US dollar appreciation in 2022. Extensive robustness tests, results of which are reported in Online Annex 2.4, show that the estimated role of the global dollar cycle is broadly unchanged under a wide variety of alternative specifications of explanatory variables, including alternative series for monetary policy shocks, alternative horizons for interest rates, and the addition of commodity market developments.[9]

Recent literature views this residual as reflecting global financial market forces. With the rise of financial globalization, the literature has focused on the role of global financial markets in driving and magnifying exchange rate fluctuations, as captured by, for example,

Figure 2.2. The US Dollar Index and the Global Dollar Cycle
(Index, 0 = 1999:Q4)

The global dollar cycle closely tracks movements in the US dollar trade-weighted index against the currencies of advanced economies.



Sources: Federal Reserve Bank of St. Louis, Federal Reserve Economic Data; Haver Analytics; and IMF staff calculations.
Note: Global dollar cycle constructed as cumulated residuals after established factors are controlled for (1) monetary policy, (2) policy rate differences with major advanced economies, (3) US financial conditions, and (4) an economic activity factor.

[7]Shadow rates used are the Wu-Xia shadow federal funds rate (Wu and Xia 2016) for the United States; the LJK Limited shadow rates for Australia, Canada, euro area, Japan, Switzerland, and the United Kingdom (Krippner 2015); and the shadow rate from De Rezende and Ristiniemi (2023) for Sweden.

[8]Online Annex 2.2 reports details on the empirical specification and regression results of this exercise.

[9]However, the analysis refrains from directly including commodity prices or the terms of trade as explanatory variables, as the global dollar cycle (as proxied by risk premium shocks) can be an important driver of commodity prices and, hence, the terms of trade. This channel is confirmed in the FSGM simulations. Furthermore, the focus on the US dollar index against currencies of major advanced economies weakens the applicability of the commonly held assumption that the terms of trade in a small open economy can be treated as exogenous. To account for commodity market developments, robustness tests instead consider global commodity supply shocks, proxied with oil supply shocks (Baumeister and Hamilton 2019), as an additional explanatory variable. Results in Online Annex 2.4 show that in historical data this variable has only a marginal explanatory power. However, this finding does not preclude the possibility that commodity price surges in 2021–22, linked to recovery from the COVID-19 pandemic and Russia's war in Ukraine, have contributed to the strong US dollar.

the portfolio-balance approach to capital flows and exchange rates (see, for example, Gabaix and Maggiori 2015) and renewed interest in the exchange rate disconnect puzzle (Itskhoki and Mukhin 2021). The literature also emphasizes the unique role of the US dollar in global financial markets, linked to safe-haven and liquidity considerations. Financial markets can be a key transmission channel through which conventional macroeconomic shocks and policies (such as monetary tightening) affect the exchange rate (see, for example, Miranda-Agrippino and Rey 2022; and Kalemli-Özcan 2019). Perhaps more important, financial markets can also be a source of financial shocks that trigger short- and longer-term exchange rate fluctuations. An example would be a decrease in investor risk appetite and resulting appreciation of a safe-haven currency, such as the US dollar.[10] A notable empirical challenge for studying the role of financial markets is that the underlying financial shocks that have an impact on the US dollar are not directly observable. The chapter addresses this issue by resorting to identification by exclusion, linking financial market forces to the residual not explained by established exchange rate determinants.

The global dollar cycle can be related to other financial indicators. The chapter examines several measures:

- An index of UIP deviations is found to be strongly positively correlated (69 percent) with the global dollar cycle.[11] During episodes of US dollar appreciations, investments in currencies of other major advanced economies carry excess returns relative to US dollar investments, stemming from decreased risk appetite for other advanced economies, and the opposite is true when the US dollar depreciates. A statistical decomposition reveals that most movements in UIP deviations are associated with the expected rate of exchange rate depreciation[12]; that is, US dollar appreciations coincide with *expected* dollar depreciations, while cross-border interest rate differentials vary relatively less.[13] Zooming in on UIP deviations of individual advanced economy currencies reveals comparable positive correlations for all currencies except the Japanese yen and Swiss franc, which could reflect safe-haven considerations.
- The global dollar cycle shows a strong negative correlation with the global financial cycle, emphasized by Bruno and Shin (2015) and Miranda-Agrippino and Rey (2022) (Table 2.1). The global financial cycle is the global common factor estimated from a worldwide cross-section of risky asset prices, covering equity, bonds, and commodities (Miranda-Agrippino, Nenova, and Rey 2020). Tightening of financial conditions, as captured by a downswing in the global financial cycle, accompanies an upswing in the global dollar cycle.

Table 2.1. Correlates of the Global Dollar Cycle

Comparison of the global dollar cycle with other global financial indicators reveals the strongest correlation with uncovered interest parity deviations and the global financial cycle.

Indicator	Correlation
Uncovered interest parity deviations from major advanced economy currencies	0.69*
Global financial cycle	–0.53*
Chicago Board Options Exchange Volatility Index (VIX)	0.04
Global uncertainty index	0.09

Sources: Consensus Economics; Davis (2016); Federal Reserve Board; Haver Analytics; Miranda-Agrippino, Nenova, and Rey (2020); Refinitiv Datastream; and IMF staff calculations.
Note: Quarterly correlations over 2000:Q1–22:Q4 depending on data availability (global financial cycle variable ends in 2019:Q2).
" * " indicates the correlation is significant at the 1 percent level.

[10]Examples of recent studies that examine financial market shocks include Itskhoki and Mukhin (2021); Devereux, Engel, and Wu (2023); and Lilley and others (2022).

[11]UIP is an arbitrage condition in international financial markets stating that the difference in interest rates between two countries will equal the expected relative change in the exchange rates over the corresponding horizon. Deviations from UIP indicate excess returns in one market, which in the case of US dollar fluctuations could stem from frictions in global financial markets. Online Annex 2.3 reports UIP deviations for individual currencies, along with index construction details. Bilateral deviations of advanced economies included in the US dollar index are aggregated using trade weights to arrive at a measure that can be directly compared with the global dollar cycle.

[12]UIP deviations, λ_t^i, for a foreign currency i against the US dollar, capturing excess returns on the foreign currency, can be statistically decomposed into changes in the interest rate differential between the yields on comparable assets (term in bold) and an expected exchange rate adjustment (bracketed term), expressed as

$$\lambda_t^i = \boldsymbol{i_t^i - i_t^{US}} - \left(\ln\left(E\left(S_{t+k}^{LC/\$}\right)\right) - \ln\left(S_t^{LC/\$}\right)\right),$$

where i_t^i is the interest rate in country i, ln denotes the natural logarithm, $S_t^{LC/\$}$ the nominal exchange rate expressed in terms of local currency per US dollar, and $E\left(S_{t+k}^{LC/\$}\right)$ the expectation of the exchange rate k periods out (the same horizon as the interest rate maturities).

[13]See Online Annex Figure 2.3.2. This is in contrast to UIP deviations in emerging markets, which are predominantly associated with changes in interest rates (Kalemli-Özcan 2019).

- The Chicago Board Options Exchange Volatility (VIX) Index—a measure of US stock price volatility and one of the components of the global financial cycle—has been explored by the literature (di Giovanni and others 2022; Obstfeld, Ostry, and Qureshi 2019) as an indicator of global risk sentiment, but does not correlate significantly with the global dollar cycle for the period of investigation, although a somewhat stronger correlation is present for subperiods. This is due to an already low correlation of 0.2 between the VIX and the US dollar index during our sample period and the fact that the VIX is one among a large set of factors of the US financial conditions index for which the global dollar cycle controls.
- Finally, the global uncertainty index from Davis (2016), which is another news-based indicator of global financial distress, shows only a weak positive correlation with the global dollar cycle.

Overall, the correlation is the strongest with UIP deviations and the global financial cycle.

The chapter interprets underlying global dollar cycle shocks through a prism of UIP deviations that exhibit the strongest correlation.[14] If UIP held, as is the case in standard macro models, the global dollar cycle would show no correlation with UIP deviations. Even when UIP does not hold, US dollar fluctuations need not be systematically related to UIP deviations. Risk premium considerations could be one underlying driver of the correlation. When risk appetite falls, the US dollar appreciates, as it is a relatively safe asset. But reduced risk appetite is expected to be temporary, so there is an expected depreciation of the dollar, which generates the correlation between UIP deviations and the global dollar cycle. Another explanation could be that, when faced with higher demand for US dollars, financial market intermediaries demand a higher expected return for supplying the dollars. Ultimate sources of financial-market-driven US dollar fluctuations remain an active area of research, beyond the scope of the current study. Nevertheless, the chapter will leverage the strong correlation between UIP deviations and the global dollar cycle through two concrete applications. First, simulated risk premium shocks—a candidate source of UIP deviations—in a general equilibrium model can help provide deeper understanding of the channels through which spillovers from the global dollar cycle to emerging markets operate. Second, constructed UIP deviations offer an alternative source of global financial market shocks whose spillovers to emerging markets can be estimated (see Online Annex Figure 2.4.5 for details). The chapter explores both avenues.

[14]The link between US dollar fluctuations and the global financial cycle has been explored in previous work (see, for example, Miranda-Agrippino and Rey 2022 for a survey) and does not have to be mutually exclusive with UIP deviations.

Empirical Analysis: Spillovers from the Global Dollar Cycle

This section examines the differential impact of US dollar appreciations on emerging market and advanced economies, explores the contribution of policies and structural features to negative spillovers to identify potential channels of transmission, and examines the impact of fluctuations in the US dollar index on global current account balances.

Empirical Framework

Following Obstfeld and Zhou (2023), the empirical analysis uses an LP framework (Jordà 2005) to examine the impact of US dollar fluctuations on real, external sector, and financial variables for a sample of countries included in the IMF's External Balance Assessment, subject to the availability of quarterly data. To limit the feedback from the External Balance Assessment sample economies to the US dollar, the analysis uses the first difference of a trade-weighted US dollar index against currencies of major advanced economies as the main regressor of interest and excludes from the sample countries with a weight in the index greater than 4 percent.[15] The empirical framework controls for the established global variables listed in the previous section, covering US policy rates and their differences with those of other advanced economies, US financial conditions, and an economic activity factor for the sample of spillover countries. Such controls further improve the exogeneity of US dollar fluctuations for the analysis of spillovers. In addition

[15]The sample consists of 15 advanced and 19 emerging market economies. It retains advanced economies with a weight in the index of less than 4 percent in 2020 (that is, Australia, Austria, Belgium, Finland, Greece, The Netherlands, Portugal, Spain, and Sweden) to boost the size of the advanced economy sample. The chapter's main findings regarding spillovers are robust to dropping from the sample all economies included in the US dollar index. Online Annex 2.2 reports details on the country sample.

to these global controls, the specification includes a set of lagged country-specific controls—GDP growth, the policy rate, and the bilateral exchange rate against the US dollar—as well as lags of the global control variables, the change in the US dollar index, and the dependent variable. Lastly, as the sample of countries includes potentially heterogeneous smaller advanced and emerging market economies, the empirical framework estimates state-dependent LP, following Ramey and Zubairy (2018), allowing for differential responses for sets of countries split by policy and structural characteristics.[16] Overall, this empirical specification makes it possible to interpret the estimated impulse responses as spillovers from the global dollar cycle discussed in the previous section.

Spillovers to Advanced and Emerging Market Economies

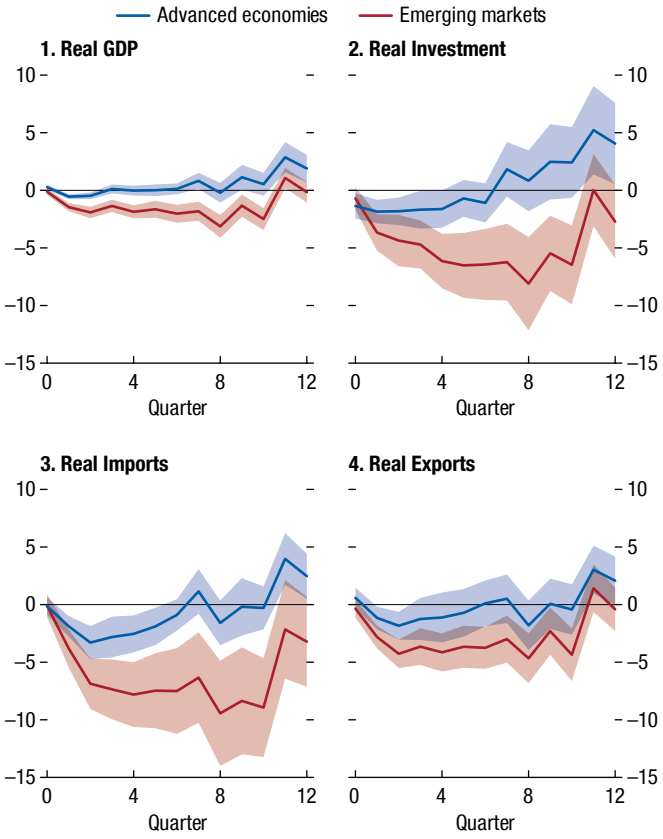
Negative spillovers from a US dollar appreciation are concentrated in emerging markets. Emerging markets experience a deeper and longer-lasting contraction than advanced economies (Figure 2.3, panel 1). An appreciation of the US dollar index by 10 percentage points is associated with a decline in real output by 1.9 percent in emerging markets and 0.5 percent in advanced economies 2 quarters after the initial appreciation. Output in advanced economies recovers 3 quarters after the appreciation, while emerging market output remains depressed 10 quarters out. An outsized decline in real investment in emerging markets drives the differential impact on output (Figure 2.3, panel 2). Trade volumes decline disproportionately more than economic activity for both country groups, with the magnitude of the decline in imports roughly double the decline in exports (Figure 2.3, panels 3 and 4). The chapter's estimated large negative real spillovers for emerging markets confirm the findings in Obstfeld and Zhou (2023) and are consistent with results of several other recent studies, including Druck, Magud, and Mariscal (2018), Shousha (2022), and Fukui, Nakamura, and Steinsson (2023).

In response to US dollar appreciations, the current account, as a share of GDP, increases in both emerging markets and smaller advanced economies. Mimicking output responses, the impact is larger and more persistent for emerging markets (Figure 2.4, panel 3). The impact is sizable in economic terms: a 10 percent appreciation in the US dollar increases the current account after five quarters by about 1 percent of GDP in emerging markets and 0.7 percent of GDP in advanced economies. Further analysis from the saving-investment perspective, linking the current account to changes in investment and saving rates, all expressed in percent of GDP, reveals that a decline in investment drives the current account increases around one year out in both country groups (Figure 2.4, panels 1 and 2). Investment is also the main driver of the divergent longer-term current account response, recovering strongly in advanced economies

[16]Online Annex 2.2 reports details of the regression specification.

Figure 2.3. Spillovers from a US Dollar Appreciation: Macro Aggregates
(Percent change)

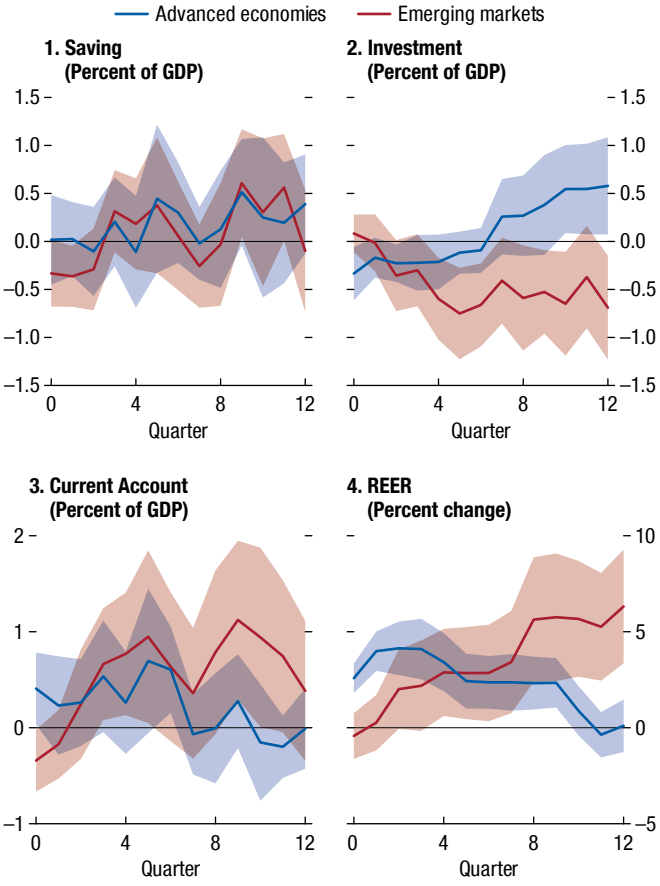
A US dollar appreciation affects emerging markets more adversely than advanced economies.



Source: IMF staff calculations.
Note: Impulse responses show a 10 percent appreciation in the nominal US dollar index with 90 percent confidence intervals. Macro aggregates are measured in national currencies at constant prices. Advanced economies exclude countries with weights in the US dollar index that are larger than 4 percent in 2020: Canada, France, Germany, Ireland, Italy, Japan, Switzerland, and the United Kingdom.

Figure 2.4. Spillovers from a US Dollar Appreciation: External Sector Variables

When the US dollar appreciates, the current account increases in both emerging market and advanced economies, but through distinct channels, as investment is persistently depressed in emerging markets but recovers quickly in advanced economies. Because of "fear of floating," in emerging markets income compression drives the fall in imports and the external adjustment, while in advanced economies depreciation in the real effective exchange rate (REER) and the resultant expenditure switching facilitates the adjustment.



Source: IMF staff calculations.
Note: Impulse responses show a 10 percent appreciation in the nominal US dollar index with 90 percent confidence intervals. An increase in the REER is a depreciation. Advanced economies exclude countries with weights in the US dollar index that are larger than 4 percent in 2020: Canada, France, Germany, Ireland, Italy, Japan, Switzerland, and the United Kingdom.

but remaining depressed for emerging markets. Meanwhile, saving does not reveal a clear systematic response or differences between the two country groups, except for a contemporaneous significant but short-lived drop in emerging markets.

Exchange rate depreciation facilitates external sector adjustment in advanced economies. For this country group, the REER depreciates persistently on impact, allowing the expenditure switching channel to contribute to the external sector adjustment (Figure 2.4, panel 4). Subsequent analysis of the role of exchange rate flexibility (see Online Annex Figure 2.4.2) further highlights the benefits stemming from the shock-absorbing role that the exchange rate plays in response to US dollar appreciations. By contrast, in emerging markets the REER does not respond to a US dollar appreciation on impact, consistent with well-documented fear of floating for this country group and depreciates only gradually over subsequent quarters.[17] In the absence of an exchange rate adjustment, income compression plays an outsized role, driving a large fall in imports.[18]

Net trade in goods and services contributes differently to external sector adjustment in advanced economies and emerging markets. Detailed gross and net trade flow responses reveal that in advanced economies, where (as noted) the REER depreciates on impact, the current account increase is driven mainly by an increase in the services trade balance and, in particular, a boost to service exports, as a share of GDP (see Online Annex Figure 2.4.1). In emerging markets, where (again, as noted) the REER does not adjust on impact, the current account increase is driven mainly by a fall in imports of goods, as a share of GDP, consistent with the income compression channel.[19]

Financial transmission channels magnify the adverse spillovers in emerging markets. Contemporaneously with the US dollar appreciation, capital inflows to emerging markets, both private and public, decline (see Figure 2.5, panels 1 and 2).[20] There is also evidence of systematic negative valuation effects impacting the net international investment position (NIIP) over the examined horizon, as NIIP does not increase despite

[17]Fear of floating here, as well as in subsequent estimation results, is applied in a more expansive manner to refer to all non-floating exchange rate regimes. However, this emerging market REER response is not driven by the sample's limited number of pegged exchange rate observations.

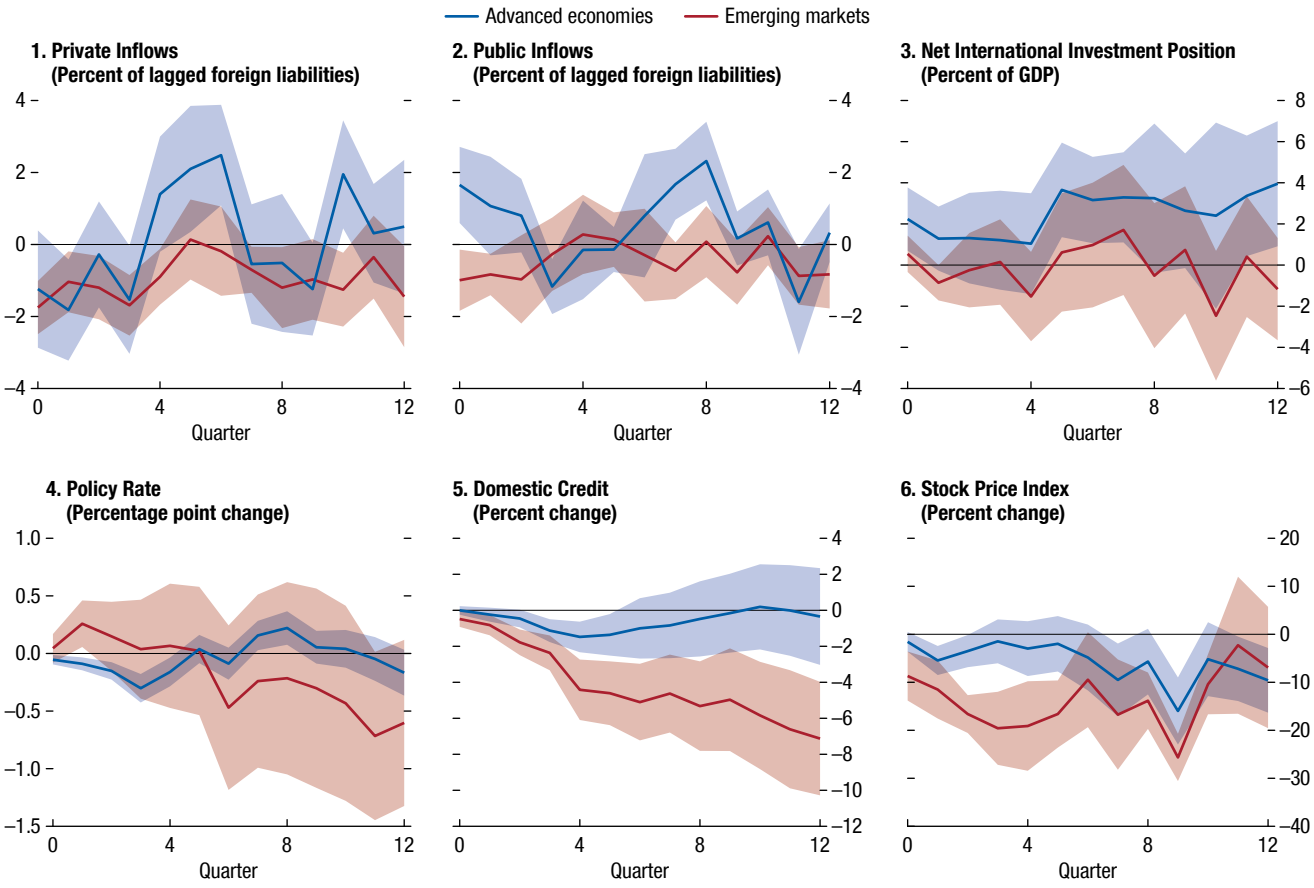
[18]The expenditure switching channel is further hindered by the US dollar invoicing in trade, which is more prevalent in emerging markets (see Online Annex Table 2.4.1 and Gopinath and others 2020).

[19]The fall in imports of goods is observed in all broad economic categories, including capital goods, intermediate consumption goods, and final consumption goods.

[20]Private and public inflows are normalized by lagged foreign liabilities to account for the differences in financial integration across countries.

Figure 2.5. Spillovers from a US Dollar Appreciation: Financial Variables

Advanced economies continue to borrow externally after US dollar appreciations and implement countercyclical monetary policy to mitigate negative spillovers. Neither of these channels operates in emerging markets.



Source: IMF staff calculations.
Note: Impulse responses show a 10 percent appreciation in the nominal US dollar index with 90 percent confidence intervals. Advanced economies exclude countries with weights in the US dollar index that are larger than 4 percent in 2020: Canada, France, Germany, Ireland, Italy, Japan, Switzerland, and the United Kingdom.

persistent current account surpluses (see Figure 2.5, panel 3). These findings contrast with advanced economies, where the NIIP increases, driven by both current account surpluses as well as an initial positive valuation effect stemming from the US dollar appreciation. Furthermore, public capital inflows to advanced economies increase, smoothing the impact of the global dollar cycle. In terms of domestic financial conditions and policies, in advanced economies US dollar appreciations are systematically associated with accommodative monetary policy, mitigating negative spillovers. Accordingly, the decline in domestic credit is shallow and short lived (see Figure 2.5, panels 4 and 5). In contrast, policy rate responses in emerging markets reveal no systematic pattern and are even procyclical on impact.[21] Domestic credit declines persistently, extending beyond the 12-quarter horizon. Stock prices decline by more in emerging markets than in advanced economies (see Figure 2.5, panel 6). These findings are broadly consistent with an extensive literature that has focused on financial transmission channels of global financial shocks to emerging markets (see, for example, Gourinchas 2018; di Giovanni and others 2022; and Kearns and Patel 2016).

[21]Using short-term interest rates instead of policy rates yields similar findings (De Leo, Gopinath, and Kalemli-Özcan 2023).

Table 2.2. Categorization of Countries by Policy Regimes and Structural Characteristics

Policies and Structural Features	Measure	Threshold
Exchange rate regime	The coarse classification from Ilzetzki, Reinhart, and Rogoff (2019)	Freely floating: 4; other regime: 1, 2, or 3
Monetary policy credibility	The country average of the measure in Bems and others (2021)	Median
US dollar liability exposure	The share of foreign liabilities in US dollars from Bénétrix and others (2019)	75th percentile
US dollar export invoicing	The country average of the share of exports invoiced in US dollars from Boz and others (2022)	75 percent of exports
Trade openness	(Exports + Imports)/GDP from the IMF's Balance of Payments Statistics	Median
Commodity exporter/importer	The country median trade balance in all commodities from UN Comtrade	5 percent of GDP

Sources: Bems and others (2021); Bénétrix and others (2019); Boz and others (2022); Ilzetzki, Reinhart, and Rogoff (2019); IMF, *Annual Report on Exchange Arrangements and Exchange Restrictions*; IMF, Balance of Payments Statistics; IMF, Global Data Source; UN, Comtrade; and IMF staff calculations.
Note: Coarse classification categories 5 and 6 are dropped. Countries with a coarse classification of 1, 2, or 3 that are anchored to a currency other than the US dollar that is freely floating against the US dollar are classified as freely floating. Classification into freely floating and other exchange rate regimes is extended through 2021 using the IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions* as a guide (see Online Annex Table 2.1.1 for details). The country average for the monetary policy credibility measure in Bems and others (2021) and the share of exports invoiced in US dollars from Boz and others (2022) is used for the whole sample period. The US dollar liability exposure classification is kept constant after 2017, given the end date of the measure in Bénétrix and others (2019). The classification of monetary policy credibility, US dollar export invoicing, and commodity exporter/importer do not vary over the sample period. The classification of exchange rate regime, US dollar liability exposure, and trade openness does vary across the sample period.

The Role of Policy Regimes and Structural Characteristics

To investigate why emerging markets experience larger negative spillovers than advanced economies, this section analyzes how US dollar appreciation differentially affects economies based on their policies and structural characteristics. For each factor considered, the analysis estimates state-dependent responses based on a sample split into two corresponding subgroups, mirroring the estimation procedure for the whole sample. The set of examined factors is motivated by the commonly studied policies at countries' disposal and structural characteristics impacted by US dollar fluctuations, including commodity prices and financial and trade exposures to the US dollar (see Table 2.2).

Identifying contributions to spillovers from individual country characteristics presents several challenges. First, the examined characteristics are closely correlated with the split of the sample between emerging market and advanced economies. The issue is most striking for the US dollar liability exposure and the extent of monetary policy anchoring, where, based on categorization in Table 2.2, all of the more exposed and less anchored countries are found among emerging markets. Hence, any identification of these characteristics' contribution to spillovers requires limiting the sample to emerging markets. This issue is a concern for the other examined characteristics as well, except commodity exporter status, which is more evenly distributed within the two country groups (Figure 2.6, panel 1). Second, many of the characteristics are closely correlated with one another, making it difficult to identify individual impacts on spillovers. An instructive example is the relation between exchange rate regimes and the extent of US dollar invoicing of exports; countries with floating exchange rate regimes disproportionately exhibit low shares of US dollar invoicing, while countries with less flexible exchange rate regimes exhibit high shares of US dollar invoicing (Figure 2.6, panel 2). Another important example in this regard relates to commodity-exporting status. Categorization results reveal that commodity-exporting countries are disproportionately associated with less flexible exchange rate regimes and lower trade openness, as well as higher shares of US dollar invoicing in exports and US dollar liabilities.[22]

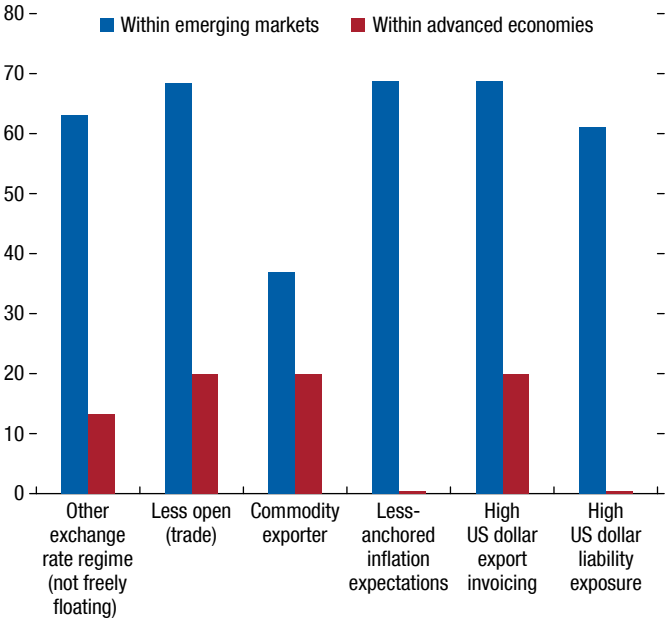
The chapter uses commodity exporter or importer status as a key exogenous structural feature. Using commodity exporter status avoids problems arising from the fact that most characteristics are endogenous, collinear, or both, which complicates identification. Moreover, this status is slow moving over the study's time frame and should arguably not respond to policies and other structural features. The contribution of other characteristics is then estimated, after the role of commodity exporter status is controlled for. Where overlap with the split in the sample between advanced and emerging market economies is severe, estimation is limited to the emerging market sample. Monetary policy credibility is found to be the least correlated

[22]Online Annex Table 2.4.1 details the country composition of each examined policy and structural feature.

Figure 2.6. Country Characteristics

Country characteristics are closely correlated with the split in the sample between advanced economies and emerging markets, complicating the identification of contributions to differential spillovers from a particular characteristic. Some country characteristics are closely correlated with each other, further complicating the identification of the role of an individual characteristic.

1. Share of a Category in a Characteristic by Country Group (Percent)



2. Sample Split Between Categories of Exchange Rate Regime and US Dollar Export Invoicing

	US dollar export invoicing below 75 percent of exports	US dollar export invoicing above 75 percent of exports
Other exchange rate regime		ARG; CHL; COL; ISR; IDN; IND; KOR; MYS; PAK; PHL; RUS; THA
Freely floating exchange rate regime	AUT; BEL; CZE; DNK; ESP; FIN; GRC; HUN; NLD; NOR; NZL; POL; PRT; ROU; SWE; TUR; ZAF	AUS; BRA

Sources: Bems and others (2021); Bénétrix and others (2019); Boz and others (2022); Ilzetzki, Reinhart, and Rogoff (2019); IMF, *Annual Report on Exchange Arrangements and Exchange Restrictions*; IMF, Balance of Payments Statistics; IMF, Global Data Source; UN, Comtrade; and IMF staff calculations.
Note: Advanced economies exclude countries with weights in the US dollar index that are larger than 4 percent in 2020: Canada, France, Germany, Ireland, Italy, Japan, Switzerland, and the United Kingdom. Countries that are not freely floating that are anchored to a currency other than the US dollar, that is freely floating against the US dollar, are classified as freely floating. Data labels in the figure use International Organization for Standardization (ISO) country codes. In panel 2, a country is in the freely floating exchange rate regime category if it spent any part of the sample period in that category.

with commodity-exporting or -importing status and is thus studied separately.[23]

Monetary policy anchoring mitigates negative spillovers from US dollar appreciations by facilitating accommodative policy responses. Emerging markets with more anchored inflation expectations exhibit a shallower initial decline in output. The difference between emerging markets with more and those with less anchored inflation expectations is statistically significant (Figure 2.7, panel 1). When inflation expectations are anchored, the REER depreciates, and the policy rate becomes more accommodative (Figure 2.7, panels 3 and 4). Credibility of monetary policy limits imported inflation (not shown) and thus creates room for these policy adjustments, which support investment rate in the aftermath of the US dollar appreciation (Figure 2.7, panel 2). In contrast, policy rates increase in emerging markets with less anchored monetary policy, though with only marginal statistical significance, and the REER appreciates, rather than depreciating on impact, thereby contributing to larger negative spillovers.

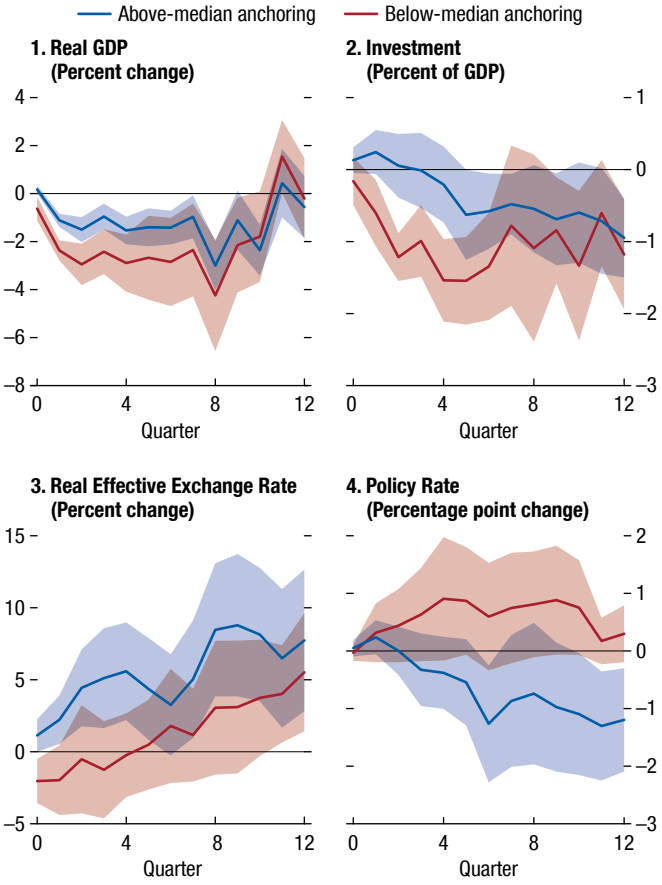
In response to US dollar appreciation, commodity exporters exhibit larger negative spillovers owing to concurrent deterioration in their terms of trade.[24] The magnitude of the terms-of-trade deterioration is sizable and persistent, with a 10 percent US dollar appreciation decreasing the terms of trade by 10 percent after five quarters (Figure 2.8, panel 2). On the flip side, the terms of trade improve for commodity importers. These contrasting terms-of-trade responses drive the difference in spillovers between the two country groups. Commodity exporters smooth the temporary

[23]Controlling for commodity-importing or -exporting status does not change the chapter's findings with respect to the role of monetary policy credibility for spillovers from US dollar appreciations.

[24]A country's terms of trade are defined as the ratio of its export prices to its import prices.

Figure 2.7. Spillovers from a US Dollar Appreciation by Degree of Anchoring of Inflation Expectations

In the aftermath of a US dollar appreciation, investment remains stable in countries with more anchored monetary policy, contributing to a shallower decline in output. More accommodative exchange rate and interest rate responses contribute to more muted negative spillovers.



Source: IMF staff calculations.
Note: Emerging markets sample only. Inflation expectations are anchored when the country average of the measure in Bems and others (2021) is above the sample median. Impulse responses show a 10 percent appreciation in the nominal US dollar index with 90 percent confidence intervals. An increase in the real effective exchange rate is a depreciation.

drop in income by reducing saving and decreasing trade balances (Figure 2.8, panels 4 and 8). For this country group, the current account does not increase in response to the US dollar appreciation (Figure 2.8, panel 3). Notably, there is no evidence that the REER depreciates disproportionately for commodity exporters to compensate for the fall in the price of commodity exports, consistent with fear of floating (Figure 2.8, panel 6). The same holds for the bilateral exchange rate against the US dollar (not shown). The results also reveal no evidence for accommodative monetary policy among commodity exporters (Figure 2.8, panel 7).[25] Overall, the strong negative link between the US dollar and commodity prices is an important cross-border transmission channel for the negative spillovers. The importance of this channel is further highlighted by the 2021–22 strong US dollar episode, which was accompanied by a commodity price surge, rather than a decrease, driven by the unique nature of the pandemic recovery and commodity supply disruptions stemming from Russia's war in Ukraine. An event study of this episode, presented in Box 2.1, reveals that the commodity price surge significantly muted, or even reversed, the negative spillovers from the US dollar appreciation for commodity-exporting countries.

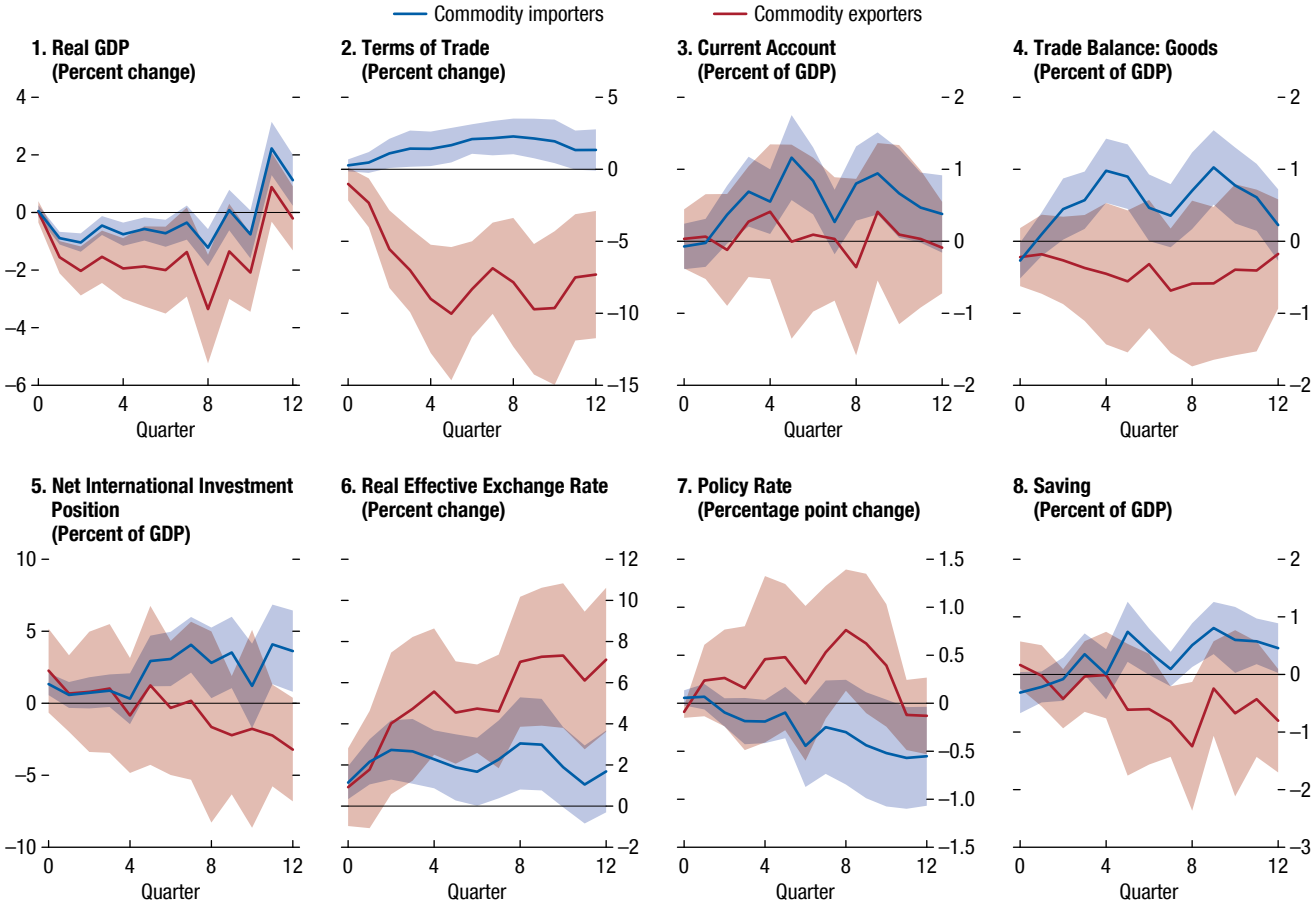
For commodity importers, the improvement in the terms of trade partially offsets the negative spillovers from a US dollar appreciation. The decline in output is shallower and the REER and monetary policy further buffer the impact of the negative shock. The current account increase is magnified, as the initial fall in investment (not shown) is accompanied by a significant increase in saving from the fifth quarter onward, leading to a gradual improvement in the NIIP (Figure 2.8, panel 5).

Among other examined country characteristics, exchange rate flexibility is found to significantly impact output spillovers, after the influence of commodity trade is accounted for. In support of the shock-absorbing properties of flexible exchange rates, emerging markets with freely floating exchange rate regimes exhibit systematically faster recoveries in output than emerging markets with less flexible exchange rates (see Online Annex 2.4 and Online Annex Figure 2.4.2). Current account balances in the latter country group show a larger increase, as both saving increases and investment falls. However, a floating exchange rate

[25]Within the advanced economy sample, accommodative policy responses mitigate negative spillovers from US dollar appreciations to commodity-exporting countries. A more detailed examination of commodity-exporting advanced economies shows more muted negative spillovers, present in the real investment response but absent from the response of output. In this case, the difference with emerging market commodity exporters can partly be explained with policies. Advanced economy commodity exporters exhibit more anchored inflation expectations. Accordingly, after US dollar appreciations and the accompanying fall in commodity prices, these economies allow the REER to depreciate significantly more than commodity importers. Advanced economy commodity exporters also pursue more accommodative monetary policy than commodity importers. Analysis of this subsample provides evidence on how accommodative policies can mitigate negative spillovers from US dollar appreciations.

Figure 2.8. Spillovers from a US Dollar Appreciation by Net Commodity Exporter Status

Commodity exporters are hard hit by a US dollar appreciation as a result of a concurrent deterioration in their terms of trade. On the flip side, the terms of trade improve in commodity importers, which helps counter the effect of the appreciation.



Source: IMF staff calculations.
Note: Full sample. A country is a commodity exporter if its median trade balance in commodities is larger than 5 percent of GDP (UN Comtrade). Impulse responses show a 10 percent appreciation in the nominal US dollar index with 90 percent confidence intervals. An increase in the real effective exchange rate is a depreciation.

regime might not be an option readily available to all countries. Emerging market economies with severe financial frictions and balance sheet vulnerabilities should resort to complementary policy tools, such as macroprudential measures and capital flow management measures, which can play a useful role in mitigating negative cross-border spillovers under limited exchange rate flexibility (see IMF 2020). For such emerging market economies, adopting flexible exchange rate regimes and benefiting from their shock-absorbing properties would have to wait until preexisting structural vulnerabilities are overcome, including by strengthening the domestic financial market and policy framework.

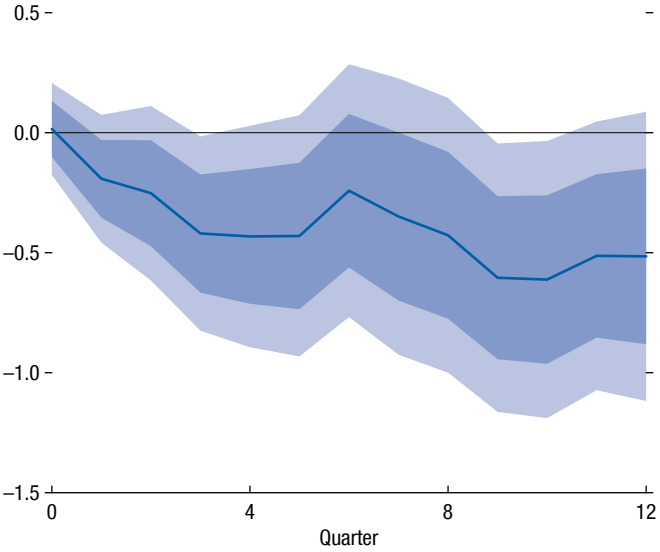
Finally, the focus of this section on commodity exporter or importer status and monetary policy credibility is motivated by concerns about identification of conditional impulse responses to US dollar fluctuations among sample countries of this chapter, which examines aggregate data. It should not be interpreted as evidence that other policies or structural features do not affect spillovers from US dollar fluctuations to emerging markets.

Implications for Global Balances

Beyond negative cross-border spillovers, US dollar appreciations are associated with a compression of global balances. To estimate the impact on global balances, a time-series LP exercise is applied, similar to the panel approach used in this section to estimate

Figure 2.9. Impact of a US Dollar Appreciation on Global Balances
(Percent of GDP)

An increase in the US dollar index leads to a sustained decrease in global balances.



Source: IMF staff calculations.
Note: Impulse responses show a 10 percent appreciation in the nominal US dollar index against advanced economies with 68 and 90 percent confidence intervals in a time series local projections exercise. Controls are the US shadow policy rate, policy rate differentials, the Federal Reserve Bank of Chicago's adjusted National Financial Conditions Index (ANFCI), the economic activity factor for the sample of emerging markets and smaller advanced economies, and lagged US GDP, all in changes and with four lags, including lags of the shock and the global balances variable.

cross-border spillovers.[26] Estimates suggest that a 10 percent appreciation of the US dollar is associated with a decrease in global balances of about 0.4 percentage points after one year (Figure 2.9). The magnitude of the decline is economically significant, as average global balances in the period examined stand at 3.5 percent of GDP, with a standard deviation of 0.7 percent of GDP. The decline in global balances is persistent, with a significant negative effect lasting for up to four years, but reversing thereafter. One possible channel through which a stronger US dollar may reduce global balances is falling commodity prices, as chronic current account surpluses of commodity exporters and deficits of importers are simultaneously reduced. The compression of global balances resulting from US dollar appreciations is also consistent with Gopinath and others (2020), who link a stronger US dollar with lower trade flows in the presence of dominant currency pricing. This effect can be further amplified when US dollar appreciation tightens collateral constraints for importers that borrow in US dollars (Casas, Meleshchuk, and Timmer 2022).

[26]Online Annex 2.2 reports details of the estimation and the sample. The measure of global balances relies on an extended country sample to account for global trends.

Model Simulations: FSGM

Many shocks hit the global economy continuously. The chapter's estimated cross-border spillovers from US dollar appreciations can result from a combination of shocks operating through different channels. This section uses a global general equilibrium model to examine one candidate structural shock—a change in global risk premiums—that may be driving the spillovers. By isolating a specific shock, the model can illuminate the main channels that drive the empirically estimated relationships.

Model Description

FSGM (Andrle and others 2015) is a semistructural multiregion general equilibrium model of the global economy. The framework combines both microfounded and reduced-form formulations of various economic sectors. The analysis presented in this chapter uses the G20MOD module of FSGM, which includes every Group of Twenty (G20) economy. Online Annex 2.5 presents further model details.

The following model features are particularly relevant for the chapter's analysis.

- *Monetary authorities and interest rates*: An interest rate reaction function represents the behavior of monetary authorities. The standard form is an inflation-forecast-based rule operating under a flexible exchange rate, with a higher weight on exchange rate deviations for emerging markets, consistent with fear of floating. The long-term (10-year) interest rate is based on the expectations theory of the term structure, plus a term premium. Interest rates on consumption, investment, government debt, and net foreign assets are weighted averages of the 1- and 10-year interest rates, reflecting their differing term structures and allowing for a meaningful role of the term premium.

- *UIP*: Deviations from UIP in the model are based on risk premiums.[27] Different borrowers (households, firms, government) in the model face varying interest rates depending on their time horizons and risk profiles. The UIP condition holds in the short term only for the sovereign, and only if the sovereign risk premium is set to zero. However, the calibrated model has a nonzero exogenous sovereign risk premium and a term premium on long-term bonds. More generally, a UIP equation holds when all risk premiums are accounted for. The model includes an endogenous corporate risk premium, which depends on the business cycle and on commodity prices. The sovereign risk premium affects all interest rates in the model, while the corporate risk premium affects only those for the private sector. Risk premiums vary across private sector borrowers because shocks affect the cost of financing differently or can apply to different borrowers.
- *Commodity exposure*: Data-driven calibration makes the FSGM particularly well suited to examining the differential impacts of economic disturbances on commodity exporters and importers. The FSGM incorporates three types of commodities: oil, food, and metals and their associated prices. The model is calibrated using countries' commodities production, consumption, and trade. Commodities are priced in the dominant currency: the US dollar.
- *External sector*: Foreign and domestic economic activity and the exchange rate determine exports and imports, with producer pricing assumed. Investment decisions of firms, saving decisions of households, and fiscal policy determine the current account and implied net-foreign-asset positions.

Simulation Setup and Model Results

The chapter's analysis of the global dollar cycle documents its strong association with UIP deviations, suggesting that economic disturbances driving UIP deviations contribute to the cycle. This section takes the UIP deviations as the primitive exogenous shock in the FSGM and studies their implications for cross-border spillovers and key global variables, drawing parallels with empirical findings of the previous section. There are different ways to introduce UIP deviations into the model. The one that most closely links to the chapter's empirical findings is a global (excluding the United States) disturbance to sovereign spreads, so that the direct effect of the disturbance is an increase in financing costs for firms and households.[28]

Figure 2.10 plots impulse responses for key variables of interest to this global persistent 1 percentage point shock to the sovereign premium, reported in the figure's panel 1. To facilitate comparison with the empirical findings, results for the G20 economies distinguish between an aggregated region of advanced economies, excluding the United States, and an aggregated region of emerging markets, with some results further distinguishing between emerging market commodity exporters and importers.

One of the direct effects of the sovereign premium shock is a US dollar appreciation. The shock increases the demand for US dollars by reducing risk-free returns on foreign bonds (short-term interest rates do not immediately change, and the risk premium increases) and creating an incentive to invest in US bonds absent changes in the policy rate (Figure 2.10, panel 2).[29] Another direct effect is an increase in financing costs, which leads to a reduction in domestic consumption, through the channel of intertemporal substitution, as it becomes more costly to borrow to smooth out consumption. The increase in financial costs also lowers investment, and the combined result is a fall in output in the rest of the world (see Figure 2.10, panel 3).[30] Thus, the modeled global risk premium shock generates

[27]At the normative level, there are two distinct approaches for modeling UIP deviations, with differing implications for policy, one based on risk premiums and the other on intermediary frictions. The former approach builds on nondiversifiable risk or reduced appetite for risk but does not feature price distortions. By contrast, the latter approach is based on market distortions, as intermediaries require rents to absorb risk (see, for example, Gabaix and Maggiori 2015), with a potential role for policy. The semistructural FSGM does not feature financial intermediaries, so that UIP deviations are a proxy for risk premiums.

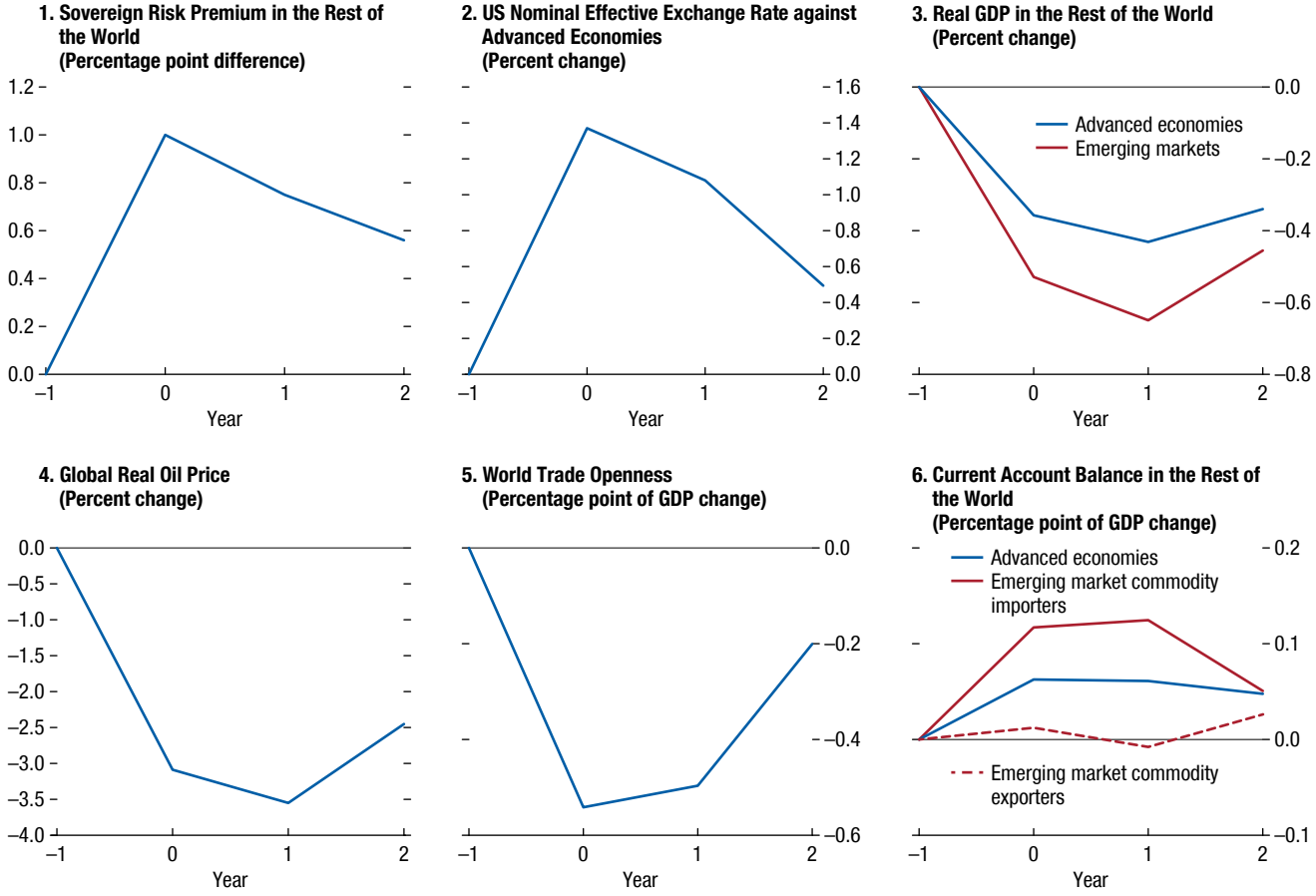
[28]Consistent with empirical literature (Kalemli-Özcan 2019) and findings in Online Annex 2.3, FSGM simulations show that exchange rate adjustment contributes more to UIP deviations in advanced economies than in emerging markets; as in the latter country group, the examined global risk premium shock endogenously triggers other mechanisms that increase the cost of capital, including through lower commodity prices tightening financing conditions.

[29]To facilitate comparison with the empirical findings, the figure reports US dollar index against currencies of other advanced economies, but the US dollar appreciation is broad based. Central banks in advanced economies react to the increase in financing cost by easing policy rates, which contributes to a further US dollar appreciation.

[30]Fiscal automatic stabilizers are allowed to operate and partially cushion the negative effects on activity.

Figure 2.10. Impulse Responses to a Global Risk Premium Shock in the Flexible System of Global Models

The Flexible System of Global Models' response to a global sovereign risk premium shock reveals that a US dollar appreciation is accompanied by (1) a fall in output in the rest of the world, with a more negative impact on emerging markets; (2) a fall in commodity prices; and (3) a contraction in trade openness, while (4) the current account increases in commodity-importing countries. These model results are consistent with empirical findings for spillovers from US dollar appreciations.



Source: IMF staff calculations.
Note: Emerging market commodity importers include China, India, South Africa, and Türkiye; emerging market commodity exporters include Argentina, Brazil, Indonesia, Mexico, Russia, and Saudi Arabia; emerging markets include both of these country groups; advanced economies exclude the United States. In panel 2, an increase equals appreciation.

the empirically observed negative real spillover, linking US dollar appreciations with falling foreign economic activity. The fall is larger in emerging markets mainly because of their more limited exchange rate flexibility (see Figure 2.4, panel 4).

Model simulations also generate a strong negative link between US dollar and commodity prices through the demand channel. As global demand declines, the demand for commodities is depressed and the real price of commodities falls (Figure 2.10, panel 4). For the simulated shock, a 1 percent appreciation in the US dollar is associated with a 2.3 percent decline in commodity prices at a one-year horizon. The more than proportional fall in the commodity price is magnified by the higher commodity intensity in the rest of the world, compared to the United States, and the pricing of commodities in terms of the appreciating US dollar.[31]

As countries invest less, there is a large worldwide drop in imports due to the high import propensity of investment goods. The combined effect of less trade in both commodities and investment goods lowers global trade openness (Figure 2.10, panel 5).

[31]The model decomposition of the quantitative results shows that the US dollar pricing channel accounts for about 10 percent of the overall fall in the commodity price after one year.

The commodity-induced terms-of-trade adjustment benefits commodity importers. As their import values temporarily fall, real income increases and households increase saving to smooth out consumption, representing an income effect. A substitution effect also operates, whereby the temporary fall in commodity prices, by lowering the consumption-based real interest rate households face, increases contemporaneous consumption, reducing saving. In the model calibration these two effects broadly offset one another, and the fall in investment is the main driver of the current account increase (Figure 2.10, panel 6). For commodity exporters, two opposing forces are at work. On the one hand, the rise in the cost of capital and resultant fall in investment increase the current account. On the other hand, falling commodity prices make commodity exporters temporarily worse off, as their export values decrease. This effect is buffered by reduced saving, which decreases the current account. In the model simulation, the investment response and the saving response broadly offset one another, leaving the current account unchanged. Overall, consistent with the empirical findings of the previous section, the current account increases only in commodity-importing countries, more so in emerging market commodity importers because of the larger fall in investment.

It is worth stressing that the model omits several potentially important factors. One relates to additional financial vulnerabilities stemming from balance sheet mismatches and a more nuanced modeling of the degree of central bank credibility, both of which are not captured by FSGM, and could potentially magnify the negative spillovers. Another important caveat relates to the modeling of spillovers. In some models (Georgiadis, Müller, and Schumann 2021), emerging market economies are directly exposed to a fraction of the shock imposed to the sovereign risk premium in an advanced economy. In the FSGM, this spillover is captured by an exogenous shock to financial conditions, representing a shortcut for incorporating financial spillovers not directly modeled but believed to be present in global risk-off episodes.

Conclusion

Negative spillovers from US dollar appreciations are more pronounced in emerging market economies, with larger declines in output that are longer lived compared with those in advanced economies. The current account as a share of GDP increases in both emerging market and advanced economies, with weak investment driving the increase, but the dynamics differ, with investment rebounding in advanced economies but remaining persistently negative in emerging markets. A depreciation in the REER facilitates adjustment in advanced economies. Consistent with fear of floating, the REER does not adjust on impact in emerging markets and depreciates only gradually. Financial channels contribute to the adverse spillovers in emerging markets through reduced capital inflows, both public and private, and a decline in domestic credit. More broadly, global current account balances decline in response to a US dollar appreciation, reflecting a broad-based contraction in trade, facilitated by a fall in commodity prices.

Commodity exporter status magnifies spillovers from a US dollar appreciation. Given the historically negative relationship between commodity prices and the US dollar index, a US dollar appreciation is accompanied by deteriorating terms of trade for commodity exporters. In the absence of a real exchange rate depreciation that could buffer both shocks, emerging market commodity exporters smooth the temporary drop in income through reduced saving and decreased current account balances. In contrast, commodity importers experience improved terms of trade, which partly offsets the negative spillovers from the US dollar appreciation. In 2021–22, in contrast to the historical evidence, the simultaneous strengthening of commodity prices and the US dollar mitigated the impact to the US dollar appreciation on the vulnerable emerging market commodity exporters.

Policies can mitigate negative spillovers from US dollar appreciation to emerging markets. More anchored inflation expectations mitigate the negative effect on real output through accommodative policy responses, as the real exchange rate depreciates and policy rates decrease. A more flexible exchange rate regime systematically speeds up economic recovery. Implementation of such policies should be supported by complementary factors. Flexible exchange regimes can be supported and facilitated by domestic financial market development that helps deepen foreign exchange markets and expand foreign exchange hedging options (IMF 2020). The anchoring of inflation expectations can be strengthened by a sustained longer-term commitment to improving fiscal and monetary frameworks, including through ensuring a well-balanced mix of fiscal and monetary policies, consolidating and

enhancing central bank independence, and continuing to strengthen the transparency and effectiveness of communications (see Chapter 3 of the October 2018 *World Economic Outlook*). More broadly, findings of this chapter highlight the importance of precautionary policy tools, such as global safety nets as well as Integrated Policy Framework-linked policy tools (IMF 2020), in addressing global financial market cycles and their spillovers. In emerging markets with severe financial frictions and balance sheet vulnerabilities, macroprudential and capital flow management measures could help mitigate negative cross-border spillovers under the global dollar cycle.

Beyond these policy recommendations for emerging markets to manage the spillovers from the global dollar cycle, an analysis of multilateral policy that could affect the global dollar cycle would require a deeper understanding of UIP deviations, which this chapter has uncovered as a key driver of the global dollar cycle. UIP deviations can be attributed to the market-wide risk appetite and variations in the risk premia demanded by global financial intermediaries, which in turn reflect intermediary frictions, including spillover from financial regulation in other segments of the financial system. One indirect contribution of the chapter is to bring attention to these issues that warrant further research and would enrich policy analysis. Concrete avenues for such research would include understanding the spillover of national and global regulation of financial intermediaries as well as examining sources of intrinsic fluctuations in the market-wide risk appetite.

Box 2.1. The 2021–22 Strong-Dollar Episode and Spillovers to Commodity Exporters

Historically, US dollar appreciations have been accompanied by significant declines in commodity prices, as captured by the negative comovement between the two variables.[1] The recent 2021–22 strong-dollar episode stands out in this context because of the marked surge in commodity prices, linked to recovery from the COVID-19 pandemic and to Russia's war in Ukraine.

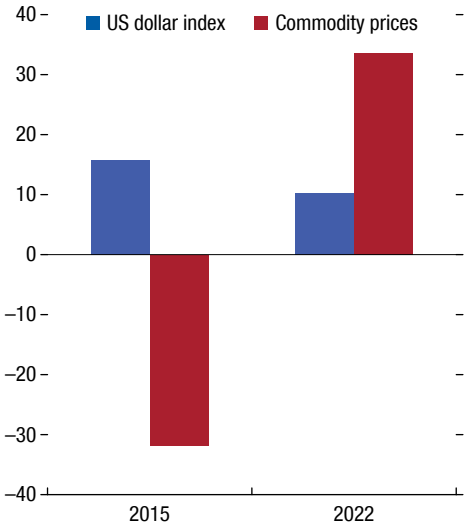
This box presents results of an event study contrasting the most recent US dollar appreciation with the only comparable year-over-year US dollar appreciation in the post-2000 period, which took place during 2014–15 (Figure 2.1.1):

- 2014–15 episode: The US dollar index appreciated by 16 percent, while commodity prices fell by 32 percent, in line with the historical relationship between the two variables (see Figure 2.1.1).[2]
- 2021–22 episode: The US dollar index appreciated by 10 percent, while commodity prices *increased* by 34 percent. A comparable simultaneous large and persistent positive comovement in the two variables has not been observed in recent decades.

How did cross-border real output spillovers from the US dollar appreciation differ for these two episodes? The study proxies output spillovers with real GDP forecast errors for each episode, constructed as actual GDP for 2015 and 2022 minus the GDP forecast prior to the US dollar appreciation (Figure 2.1.2).

Results reveal reversed spillovers to emerging market commodity exporters for the recent strong-dollar episode. In 2015, the US dollar appreciation was associated with systematic negative revisions to output for commodity exporters, more so for exporters with larger commodity trade surpluses (see Figure 2.1.2). Notably, the negative spillovers were driven entirely by emerging market commodity exporters, while there were no systematic negative GDP forecast errors for advanced commodity-exporting economies. These findings are broadly consistent with the outsized negative spillovers for emerging market commodity exporters, compounded by less flexible exchange rate regimes (see Figure 2.8).

Figure 2.1.1. US Dollar Index and Commodity Prices
(Percent change, year-over-year)



Sources: Federal Reserve Bank of St. Louis, Federal Reserve Economic Data (FRED); Haver Analytics; IMF, Global Data Source; and IMF staff calculations.
Note: Percent change is calculated using the year average for monthly data between 2015 (2022) and 2014 (2021).

In 2022, by contrast, the real GDP of emerging market commodity exporters was systematically revised upward following the US dollar appreciation, with the notable exception of Russia. Meanwhile, small downward revisions were observed for advanced commodity-exporting economies.

Findings of this event study suggest that emerging market vulnerabilities from the most recent US dollar appreciation episode require a nuanced interpretation. The accompanying surge in commodity prices—uncharacteristic by historical standards and triggered by unique circumstances—mitigated the impact of the US dollar appreciation on the more vulnerable commodity-exporting emerging markets during 2022. Instead, the negative spillovers fell disproportionately on emerging market commodity importers. However, the vulnerability of commodity importers was muted by their more limited exposure to commodities, when compared to commodity exporters (see *x*-axis range in Figure 2.1.2), and their more flexible exchange rate regimes. A return to the historically observed relationship between the US dollar and commodity prices could reverse the mitigating role that commodity prices played in 2022.

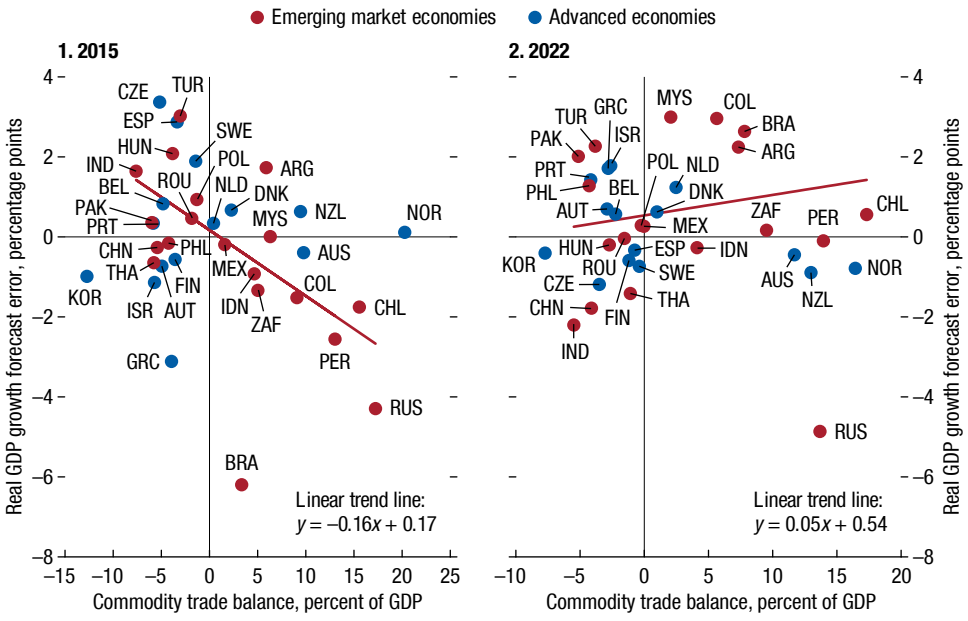
The authors of this box are Cian Allen, Rudolfs Bems, Lukas Boer, and Racha Moussa.

[1]The correlation between the US dollar index and commodity prices for the sample period is –0.38.

[2]Obstfeld (2022) reports a coefficient of –2.45 (standard error of 0.42, R^2 = 0.15) for a simple ordinary least squares regression of the oil-price change on dollar appreciation.

Box 2.1 *(continued)*

Figure 2.1.2. Real GDP Growth Revisions for Two Large US Dollar Appreciation Episodes



Sources: IMF, World Economic Outlook database; and IMF staff calculations.
Note: The forecast error for real GDP growth in 2015 is calculated as actual minus the IMF *World Economic Outlook* data for April 2014. The forecast error for real GDP growth in 2022 is calculated as the IMF *World Economic Outlook* data for April 2023 minus that for January 2022. Commodity trade balance is defined as the ratio of commodity exports to GDP minus the ratio of commodity imports to GDP. Trend line includes only emerging market economies. For 2015, the trend line excludes Brazil, and the coefficient is statistically significant at the 5 percent level. For 2022, the trend line excludes Russia. Data labels in the figure use International Organization for Standardization (ISO) country codes.

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CHAPTER 3

2022 INDIVIDUAL ECONOMY ASSESSMENTS

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.[1] 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.[2] 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 2022 assessments, similar to the previous year, additional adjustors to account for the lingering but temporary effects of the COVID-19 crisis on external positions were included (see Chapter 1, also the 2022 *External Sector Report* Online Annex 1.2). 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 and unit-labor-costs-based measures, 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 semi-elasticities 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 ±1 percent of GDP as well as REER gaps in a range that reflects the country-specific exchange rate semi-elasticity (for example, ±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.

[1]See Allen and others (2023) for a complete description of the EBA methodology and for a description of the most recent refinements.

[2]The individual economy assessments for 2022 are based on external sector data as of May 31, 2023, and IMF staff projections in the April 2023 *World Economic Outlook*.

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 Foreign Institutional Investor
REER	real effective exchange rate
Res.	residual
RQFII	Renminbi Qualified Foreign 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

Overall Assessment: *The external position in 2022 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.* It is critical to continue to implement prudent macroeconomic policies that strengthen the external CA and reserve coverage to secure external sustainability.

Potential Policy Responses: Growth-friendly fiscal consolidation, combined with tight monetary policy and a streamlined FX regime, remains essential to moderate domestic demand growth, strengthen the trade balance, rebuild international reserves, regain market access, and ensure fiscal and external debt sustainability. 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 and multiple currencies practices (MCP) and exchange restrictions should be eliminated.

Foreign Asset and Liability Position and Trajectory	**Background.** Argentina's external gross liabilities stood at 49.0 percent of GDP at the end of 2022, below the level of 50 percent of GDP at the end of 2017. That said, the NIIP remained positive, reaching 18.4 percent of GDP at end 2022 (up 16 percentage points since the end of 2017), driven by continued private capital outflows and deleveraging by firms, despite tight CFM measures. **Assessment.** In 2020, Argentina restructured $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 $34 billion during 2020–30. Additional relief was secured during 2021, as provincial governments restructured $13 billion of foreign-law FX debt obligations, with total cash flow savings estimated at about $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.						
2022 (% GDP)	NIIP: 18.4	Gross Assets: 67.5	Res. Assets: 7.1	Gross Liab.: 49.0	Debt Liab.: 31.8		
Current Account	**Background.** The CA reached a deficit of 0.6 percent of GDP in 2022, down from a surplus of 1.4 percent in 2021, on account of a strong expansion of goods import volumes and a widening services deficit. Terms of trade played a more minor role, as higher grain export prices largely offset higher import prices on energy and intermediate goods. The CA balance is projected to reach a surplus in 2023, despite drought conditions affecting agricultural exports, mainly on account of moderating domestic demand and imports, improving commodity terms of trade, and higher interest income on private Argentine assets abroad. In the medium term, the CA is expected to reach 1 percent of GDP, mainly on account of stronger energy and services trade balances. **Assessment.** The cyclically adjusted CA balance is estimated to have reached a deficit of 0.8 percent of GDP in 2022, compared with an EBA CA norm surplus of 0.3 percent of GDP. The estimated transitory impact of the COVID-19 crisis is –0.2 percent of GDP for travel services (including tourism) and 0.2 percent of GDP for the transport sector, with a narrow net impact of 0.1 percent of GDP on the cyclically adjusted CA. 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 to the norm of 0.7 percent of GDP. As such, the IMF staff assesses the CA gap to be –1.8 ± 1 percent of GDP.[1]						
2022 (% GDP)	CA: –0.6	Cycl. Adj. CA: –0.8	EBA Norm: 0.3	EBA Gap: –1.2	COVID-19 Adj.: 0.1	Other Adj.: – 0.7	Staff Gap: –1.8
Real Exchange Rate	**Background.** The average REER, after depreciating by more than 35 percent between 2017 and 2019, appreciated by about 6 percent during 2020–21 and is estimated to have appreciated by additional 20 percent during 2022. This appreciation largely reflects the fact that the rate crawl until recently has lagged headline inflation. As of April 2023, the REER was 1.4 percent above the 2022 average. **Assessment.** The IMF staff CA gap implies a REER gap of about 15 percent in 2022 (with an estimated elasticity of 0.12 applied). The EBA REER index model suggests a REER gap of 25 percent, while the EBA REER level model estimates a gap of 10.8 percent, with the estimate surrounded by significant uncertainty. Overall, the IMF staff assesses the 2022 REER gap to be in the range of 15 to 20 percent.						
Capital and Financial Accounts: Flows and Policy Measures	**Background.** Strict CFM and MCP measures were introduced in late 2019 to contain capital outflows. In the context of rising FX pressures (the gap between the parallel and official exchange rate remains around 90–100 percent) and challenges in accumulating reserves, these measures have been intensified during 2022, including through (1) incentives to encourage the liquidation of soy exports, (2) tax measures on tourism inflows and outflows to reduce the services deficit, and (3) financing requirements in regard to imports to limit short-term FX demand. **Assessment.** CFM and MCP measures have generally helped to contain capital outflows yet have introduced distortions that discourage trade and foreign investment. Importantly, these measures are not a substitute for sound macroeconomic policies. While CFMs are needed in the near term as imbalances are being addressed, import controls and MCP measures should be eliminated and a conditions-based easing is necessary, especially to encourage FDI.						
FX Intervention and Reserves Level	**Background.** Gross international reserves reached $44.6 billion in 2022, $5 billion higher relative to 2021, yet close to the levels at the end of 2019. Meanwhile, its net international reserves, after excluding swap lines with other central banks, reserve requirements on domestic dollar deposits, and deposit insurance, reached $8.8 billion. Despite CFM measures, reserve accumulation has been challenged by growing domestic demand and continued capital flight. **Assessment.** Gross international reserves are estimated to have stood at about 69 percent of the IMF's composite metric in 2022. 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 and the elimination of MCP measures. Given reserve scarcity, FX sales (in the official or parallel market) should be consistent with reserve accumulation goals, while taking into account variability arising from seasonal factors and temporary bouts of excessive volatility.						

Table 3.2. Australia: Economy Assessment

Overall Assessment: *The external position in 2022 was broadly in line with the level implied by medium-term fundamentals and desirable policies.* The CA surplus declined from 3 percent of GDP in 2021 to 1.2 percent of GDP in 2022, as a lower primary income balance and larger service imports offset the impact of higher prices for Australia's commodity exports. In the medium term, the CA is projected to return to a slight deficit as commodity prices decline, savings return to historical levels, and investment picks up.

Potential Policy Responses: Given Australia's strong economic recovery and elevated inflation, withdrawing fiscal and monetary stimulus at an appropriate pace is warranted. Closing the output gap will push the CA surplus higher, but private savings (elevated in part due to the previous pandemic-related fiscal stimulus) will likely offset this increase. Furthermore, policies that boost investment (executing planned infrastructure investment, streamlining product market regulation, and promoting investment in R&D and innovation) can also contribute to reducing the CA surplus. Australia's commitment to a floating exchange rate should help keep its external position in line with fundamentals.

Foreign Asset and Liability Position and Trajectory	**Background.** Australia's NIIP was broadly unchanged at –34 percent of GDP in 2022 (compared with –33.7 percent of GDP in 2021 and an average of –49 percent over 2017–21). While about 40 percent of Australia's gross liabilities are debt obligations, more than half of its debt liabilities are denominated in domestic currency, whereas its assets are largely denominated 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. **Assessment.** 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 being 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.					
2022 (% GDP)	NIIP: –34.0	Gross Assets: 148.5	Debt Assets: 36.3	Gross Liab.: 182.5	Debt Liab.: 76.1	
Current Account	**Background.** While Australia has historically run deficits, the CA balance has been in surplus since 2019. After peaking at 3 percent of GDP in 2021, the CA balance declined to 1.2 percent of GDP in 2022. The merchandise trade balance increased further, from 5.3 percent of GDP in 2021 to 6.6 percent of GDP in 2022, with high prices for Australian commodity exports, most notably thermal coal and liquefied natural gas (even as iron ore prices came off their 2021 highs), driving the increase. The higher merchandise trade balance was offset by a large primary income deficit of 4.5 percent of GDP, a 2.2 percent of GDP deterioration compared with 2021, with higher dividend payments on Australia's equity liabilities (including in the mining sector) driving the deterioration. The services balance also deteriorated, by 1.2 percent of GDP, owing to higher transport service costs and a return to lower tourism surpluses as tourism imports recovered. From a savings-investment perspective, a decline in the savings rate from pandemic-era highs drove the decline in surplus in 2022. While there is considerable uncertainty, the CA is expected to gradually return to a small deficit over the medium term as commodity prices decline, investment picks up, and savings decline further from still-elevated levels. **Assessment.** The EBA model estimates a cyclically adjusted CA balance of –2.1 percent of GDP compared with a CA norm of –1.0 percent of GDP, suggesting a model-based CA gap of –1.1 percent of GDP. However, in the IMF staff's view, a net adjustment of 0.6 percent of GDP to the cyclically adjusted primary balance is warranted to reflect temporary factors related to the COVID-19 shock, including changes to the transport services balances due to high shipping costs. With this adjustment taken into consideration, the IMF staff-adjusted CA gap is in the range of –1.3 to 0.3 percent of GDP, with a midpoint of –0.5 percent of GDP.					
2022 (% GDP)	CA: 1.2	Cycl. Adj. CA: –2.1	EBA Norm: –1.0	EBA Gap: –1.1	COVID-19 Adj.: 0.6	Other Adj.: 0.0	Staff Gap: –0.5
Real Exchange Rate	**Background.** As with most other currencies, the Australian dollar depreciated against the US dollar in 2022. However, Australia's average REER in 2022 was broadly at the same level as its 2021 average and about 1.8 percent higher than its five-year average. As of April 2023, the REER was 1.5 percent below the 2022 average. **Assessment.** The IMF staff CA gap implies a REER gap of 2.6 percent (with an estimated elasticity of 0.2 applied). The EBA REER level model points to an overvaluation of 23.4 percent, while the index model points to an undervaluation of 20.1 percent. Consistent with the CA gap, the IMF staff assesses the REER gap to be in the range of –1.3 to 6.6 percent, with a midpoint of 2.6 percent.						
Capital and Financial Accounts: Flows and Policy Measures	**Background.** The financial account recorded net cumulative outflows in 2022, reflecting the CA surplus. While Australia has historically had net FDI inflows, it experienced large net FDI outflows in 2022 (3.2 percent of GDP) driven by asset purchases abroad by Australian residents. Other investment outflows were also large (2.1 percent of GDP). Large net portfolio inflows (5 percent of GDP), reflecting inflows into Australian equities as well as debt securities, partly offset FDI and other investment outflows. Net derivative flows were small. **Assessment.** Vulnerabilities related to the financial account remain contained, supported by a credible commitment to a floating exchange rate.						
FX Intervention and Reserves Level	**Background.** 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 remained stable in 2022. **Assessment.** 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.						

Table 3.3. Belgium: Economy Assessment

Overall Assessment: *The external position in 2022 was substantially weaker than the level implied by medium-term fundamentals and desirable policies.* Belgium's CA balance deteriorated to –3.5 percent of GDP in 2022, as the goods balance swung to deficit, largely due to higher fuel imports, reflecting price surges, and lower vaccine exports. The outlook is highly uncertain, with the CA deficit remaining high in the near term before returning to a small deficit in the medium term with easing of energy price pressures and improving wage competitiveness.

Potential Policy Responses: Outlays on energy bill support and other expenses related to spillovers from Russia's war in Ukraine have delayed fiscal and external adjustments. Given the elevated fiscal deficit and public debt and aging-related spending pressures, policies in the near and medium terms should focus on rebuilding fiscal buffers through a credible, expenditure-led consolidation that also creates space to support green and digital transformation through higher investment. Policies should also focus on strengthening competitiveness through structural reforms, including reforms of the wage indexation system, social benefits, and the labor and product markets, as well as 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.

Foreign Asset and Liability Position and Trajectory

Background. The NIIP decreased to 54 percent of GDP in 2022 from 64 percent in 2021, as gross foreign assets went down 47 percentage points of GDP from 2021, while gross foreign liabilities declined by 36 percentage points of GDP. Net portfolio investment, the main component of the positive NIIP, declined to 36 percent of GDP (down 8 percentage points of GDP from 2021), largely on account of valuation changes reflecting poorly performing equity markets and sharply lower bond prices from a rise in interest rates. Net direct investment increased to 27 percent of GDP (up 5 percentage points of GDP), reflecting a larger decline in liabilities than in assets. Net other investment liabilities almost doubled to a high of 15.7 percent of GDP in 2022, as cessation of payouts to the Bank of Russia as a result of sanctions meant those payouts remained outstanding as interbank debt. Belgium's large creditor position is underpinned by sizable net household financial wealth. Gross foreign assets of the banking sector continued to decline, to 70 percent of GDP at the end of 2022, well below the pre–global financial crisis peak of more than 200 percent following a decade of consolidation and deleveraging. External public debt—mainly denominated in euros—also continued to decline in 2022, to 53 percent of GDP from 68 percent of GDP in 2021, a reversal following a sharp increase to 75 percent of GDP in 2020 due to financing needs related to the fiscal response to the pandemic and a decline in nominal GDP.

Assessment. Based on the projected CA deficit and growth paths, Belgium's NIIP-to-GDP ratio is expected to decline. The large and positive NIIP and its trajectory do not raise sustainability concerns. 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.

2022 (% GDP)	NIIP: 54	Gross Assets: 419	Debt Assets: 147	Gross Liab.: 365	Debt Liab.: 155

Current Account

Background. The CA balance averaged 0.3 percent of GDP over 2016–21 and has been declining since a 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.[1] In 2022, the CA balance swung to a deficit of 3.5 percent of GDP from a surplus of 0.4 percent of GDP in 2021, with a sharp deterioration in the trade balance driving the change. Net imports of fuels and related materials increased to 4.1 percent of GDP (€23 billion) in 2022, 1 percentage point higher than in 2021, reflecting surges in energy prices. Net exports of pharmaceutical products declined to 3.6 percent of GDP in 2022 (from 4.4 percent of GDP in 2021), reflecting a slowdown in shipment of coronavirus vaccines. Income and current transfers balances remained broadly stable at 1.5 percent and –1.2 percent of GDP, respectively, in 2022. The cyclically adjusted CA in 2022 is projected at –1.7 percent of GDP, with a cyclical contribution of –1.8 percent of GDP, largely due to the deterioration in the commodity terms of trade (–1.5 percent).

Assessment. EBA model estimates for 2022 yield a CA gap of –4.5 percent of GDP, based on a cyclically adjusted CA balance of –1.7 percent of GDP, relative to an estimated norm of 2.8 percent of GDP. Adjustment for transitory COVID-19 effects on the CA is 0 percent of GDP: –0.2 percent of GDP for travel services (including tourism) and 0.1 percent of GDP for transport. This is within a range estimated by the IMF staff for the CA gap between –5.0 and –4.1 percent of GDP, with a midpoint of –4.6 percent of GDP.

2022 (% GDP)	CA: –3.5	Cycl. Adj. CA: –1.7	EBA Norm: 2.8	EBA Gap: –4.5	COVID-19 Adj.: 0.0	Other Adj.: 0.0	Staff Gap: –4.6

Real Exchange Rate

Background. After a cumulative appreciation by 7 percent between the end of 2015 and the end of 2021, Belgium's CPI-based REER depreciated by 0.4 percent in 2022, with the decrease largely mirroring the depreciation of its NEER. In contrast, the ULC-based REER appreciated by 0.9 percent in 2022, or by 7.7 percent in December 2022 from its trough in February 2020, reflecting higher wage increases in Belgium. As of April 2023, the CPI-based REER was 0.8 percent above the 2022 average.

Assessment. Based on the IMF staff–assessed CA gap range, Belgium's REER is overvalued by 5.7 to 6.9 percent, with a midpoint of 6.3 percent (with an estimated elasticity of the CA balance to the REER of 0.72 applied). EBA model estimates point to a REER overvaluation of 16.9 percent based on the CPI-based REER index and 31.3 percent by the REER level models.

Capital and Financial Accounts: Flows and Policy Measures

Background. The balance-of-payments financial account was strongly negative in 2022, with flows of foreign liabilities exceeding flows of foreign assets by €19 billion: the portfolio investment balance was almost zero; the direct investment balance was €25 billion and was offset by a large negative balance in other investment of €45 billion stemming from a sharp rise in foreign debts of commercial banks to Russia. Short-term external debt increased marginally to 31 percent of gross external debt in 2022 (from an average of 27 percent in 2017–21). The capital account is open.

Assessment. Belgium remains exposed to financial market risks, but the structure of financial flows does not point to specific vulnerabilities. The large positive NIIP reduces the vulnerabilities associated with high external public debt.

FX Intervention and Reserves Level

Background. The euro has the status of a global reserve currency.

Assessment. Reserves held by the euro area are typically low relative to standard metrics, but the currency is free floating.

Table 3.4. Brazil: Economy Assessment

Overall Assessment: *The external position in 2022 was broadly in line with the level implied by medium-term fundamentals and desirable policies.* The CA deficit is expected to gradually narrow to about 2.3 percent of GDP in 2023 and remain broadly stable over the medium term as growth converges to its potential rate and net public savings improve. Risks to Brazil's external position over the medium term relate to uncertainties to global financial conditions and insufficient progress on domestic reforms.

Potential Policy Responses: Policies that would help keep the CA in line with its norm include efforts to raise national savings that are needed to provide room for a sustainable expansion in investment, including medium-term fiscal consolidation that should contribute to increase net public savings. Fostering a skilled labor force and implementing structural reforms to reduce the cost of doing business would also help strengthen competitiveness.

Foreign Asset and Liability Position and Trajectory	**Background.** Brazil's NIIP deteriorated to –40.4 percent of GDP at the end of 2022, from –36.7 percent of GDP in 2021, partly reflecting negative valuation effects on international reserves due to increases in the US interest rates. The NIIP is projected to be around –42 percent of GDP over the medium term, with FDI accounting for more than half of all liabilities. At the end of 2022, estimated external debt declined to 35.4 percent of GDP and 200 percent of exports, compared with 40.7 percent of GDP and 236 percent of exports in 2021. **Assessment.** Brazil's NIIP has been negative since the series was first published in 2001. Short-term gross external financing needs are moderate at 11 percent of GDP annually, but capital flows and the exchange rate are particularly sensitive to global financing conditions. The CA deficit required to stabilize the NIIP at –41 percent is 2.1 percent of GDP.				
2022 (% GDP)	NIIP: –40.4	Gross Assets: 49.2	Res Assets: 16.9	Gross Liab.: 89.6	Debt Liab.: 35.4

Current Account	**Background.** Despite a sizable trade surplus in goods of 2.3 percent of GDP, the CA deficit reached 3 percent of GDP in 2022, compared with 2.8 percent in 2021, reflecting higher deficits in transport services and primary income related to profits and dividends. Exports and imports were at record levels driven by high commodity prices. From a savings-investment perspective, the CA deficit reflects the savings-investment deficit of the public sector partially offset by the savings-investment surplus of the private sector. After falling in the second half of 2021, the terms of trade remained low in 2022 except for the commodity price spike following Russia's invasion of Ukraine. The CA deficit is expected to gradually narrow to about 2.3 percent of GDP this year and remain broadly stable over the medium term as growth converges to its potential rate. **Assessment.** In 2022, the cyclically adjusted CA balance was –3.3 percent of GDP. EBA estimates suggest a CA norm in 2022 of –2.2 percent of GDP. This implies a CA gap of –1.1 percent of GDP, with an estimated contribution of identified policy gaps of –0.2 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, offset by strong credit growth. After adjusting for the transitory impact of the COVID-19 crisis on travel services (–0.2 percent of GDP) and transport (0.5 percent of GDP), IMF staff estimate the CA gap in the range of –1.3 and –0.3 percent of GDP with a midpoint of –0.8 percent of GDP.						
2022 (% GDP)	CA: –3.0	Cycl. Adj. CA: –3.3	EBA Norm: –2.2	EBA Gap: –1.1	COVID-19 Adj.: 0.3	Other Adj.: 0.0	Staff Gap: –0.8

Real Exchange Rate	**Background.** After remaining broadly stable in 2021, the REER appreciated sharply (18.8 percent) in the first four months of 2022 before a gradual and partial reversal in the remainder of the year. As of April 2023, the REER had appreciated by 2.3 percent relative to the 2022 average. **Assessment.** The IMF staff CA gap implies a REER gap of 6.0 percent in 2022 (applying an estimated elasticity of 0.13). The REER index and level methodologies indicate a 29.1 percent and 14.4 percent undervaluation, respectively, for 2022. Consistent with the staff CA gap, staff assess the REER gap to be in the range of 2.1 to 9.9 percent, with a midpoint of 6.0 percent.
Capital and Financial Accounts: Flows and Policy Measures	**Background.** Brazil continues to attract sizable capital flows. Net FDI flows have continued to fully finance the CA deficit since 2015 (averaging 2.9 percent of GDP during 2015–22, while CA deficits averaged 2.6 percent) and substantially increased in 2022 to 3.2 percent of GDP, from 1.8 percent of GDP in 2021. Portfolio investment turned to net outflows of 0.2 percent of GDP with the narrowing of the interest differential between Brazil and competitor economies amid global and domestic monetary policy tightening. To improve currency convertibility, under Law No. 14286, the Central Bank of Brazil (BCB) has taken initial steps to simplify and modernize foreign exchange and capital regulation. **Assessment.** The composition of capital flows is expected to have a favorable risk profile over the medium term, with positive net FDI inflows (about 2 percent of GDP) outweighing negative portfolio outflows (about 0.1 percent of GDP). Nevertheless, uncertainties related to tighter global financial conditions and insufficient progress on reforms pose downside risks to capital flows.
FX Intervention and Reserves Level	**Background.** Brazil has a floating exchange rate. FX interventions in 2022 continued to rely on spot, repo, and FX swap markets to dampen excess exchange rate volatility. The outstanding stock of the FX swap, a non-deliverable future settled in local currency, rose from US$80 billion in 2021 to US$98.5 billion in 2022. International reserves fell markedly to US$325 billion at end-2022 (from US$362 billion at end-2021), mostly owing to valuation effects, but recovered to US$345 billion in May 2023. **Assessment.** The flexible exchange rate has been an important shock absorber. Reserves remain adequate relative to various criteria, including the IMF's reserve adequacy metric (136 percent as of end-2022) and serve as insurance against external shocks. Intervention should be limited to alleviating disorderly FX market conditions.

Table 3.5. Canada: Economy Assessment

Overall Assessment: *The external position in 2022 was moderately weaker than the level implied by medium-term fundamentals and desirable policies.* The CA balance remained marginally in deficit, with a decline in investment income and services more than offsetting the effect of stronger terms of trade—notably for energy products—on goods exports. With commodity prices expected to be softer on average in 2023, the CA deficit is expected to widen to 1.4 percent of GDP in 2023 and remain in deficit over the medium term as export prices decline further and domestic demand continues to recover.

Potential Policy Responses: Policies should aim to boost Canada's competitiveness in nonfuel goods exports and services exports and to diversify Canada's export markets. These policies should include (1) introducing measures to improve labor productivity, (2) removing nontariff trade barriers, (3) investing in R&D and physical capital, (4) investing in the green transformation, and (5) promoting FDI. A medium-term fiscal consolidation plan would also help stabilize debt and support external rebalancing.

Foreign Asset and Liability Position and Trajectory	**Background.** After swelling to 52.1 percent of GDP in 2021 with the boom in global equities during the pandemic, Canada's NIIP dropped sharply in 2022 as stock markets fell, registering 30.1 percent of GDP, broadly in line with the 2017–19 average. At the same time, its gross external debt decreased to 128.5 percent of GDP, of which about 51.1 percent of GDP is short-term debt. **Assessment.** Canada's foreign assets have a higher foreign currency component than do its liabilities, which provides a hedge against currency depreciation. The NIIP level and trajectory are sustainable.				
2022 (% GDP)	NIIP: 30.1	Gross Assets: 264.9	Debt Assets: 87.3	Gross Liab.: 234.7	Debt Liab.: 128.5

Current Account	**Background.** The estimated CA balance remained unchanged at –0.3 percent of GDP in 2022, reflecting the decline in investment income and services which offset the effect of a stronger trade balance. **Assessment.** The cyclically adjusted CA was –1.3 percent of GDP in 2022, as against the EBA's CA norm for Canada of 2.2 percent of GDP, implying a gap of –3.4 percent of GDP for 2022. Biases in measuring inflation and retained earnings explain part of this gap, however, while COVID-19 adjustors for travel (including tourism) and transportation are assessed to have been immaterial.[1] Taking these factors into account, the IMF staff assesses the CA gap to be in the range between –2.3 and –1.3 percent of GDP, with a midpoint of –1.8 percent of GDP.						
2022 (% GDP)	CA: –0.3	Cycl. Adj. CA: –1.3	EBA Norm: 2.2	EBA Gap: –3.4	COVID-19 Adj.: 0.0	Other Adj.: 1.6	Staff Gap: –1.8
Real Exchange Rate	**Background.** The average REER for 2022 was broadly unchanged from the 2021 average (just 0.1 percent stronger). As of April 2023, the REER was 4.3 percent below the 2022 average. **Assessment.** The EBA REER index model points to an overvaluation of 1.9 percent in 2022, while the REER level model suggests an undervaluation of 10.5 percent. Consistent with the staff CA gap, the IMF staff assesses the REER to be overvalued by between 5.1 and 8.5 percent, with a midpoint of 6.8 percent.[2]						
Capital and Financial Accounts: Flows and Policy Measures	**Background.** FDI saw net outflows of 1.3 percent of GDP in 2022 (comparable with levels in 2021 and 2020). Net portfolio inflows rose to 5.4 percent of GDP in 2022, up from 2.1 percent in 2021, while other investments moved from net inflows in 2021 of about 0.6 percent of GDP to net outflows of 3.4 percent of GDP in 2022. Errors and omissions were small, at 0.1 percent of GDP. **Assessment.** Canada has an open capital account. Vulnerabilities are limited by a credible commitment to a floating exchange rate.						
FX Intervention and Reserves Level	**Background.** Canada has a free-floating exchange rate regime and has not intervened in the FX market since September 1998 (except for participating in joint interventions with other central banks). Canada has limited reserves, but its central bank has standing swap arrangements with the US Federal Reserve and four other major central banks. (The Bank of Canada has not drawn on these swap lines.) **Assessment.** 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 arrangements, reduces the need for reserve holdings.						

Table 3.6. China: Economy Assessment

Overall Assessment: *The external position in 2022 was broadly in line with the level implied by medium-term fundamentals and desirable policies.* The CA surplus further widened to 2.2 percent of GDP in 2022 reflecting sluggish imports on the back of weak domestic demand, while the influence of transitory factors linked to the global COVID-19 crisis continued. The CA surplus is expected to narrow and return to its downward trend as COVID-related factors unwind and rebalancing toward private consumption resumes.

Potential Policy Responses: Policies to ensure that the external position remains broadly in line with fundamentals include (1) accelerating market-based structural reforms—a further opening up of domestic markets, ensuring competitive neutrality between state-owned and private firms, reducing wasteful and distorting industrial policy subsidies and increasing reliance on market forces to improve resource allocation, and promoting green investment—to boost potential growth, (2) shifting fiscal policy support toward strengthening social protection to reduce high household savings and rebalance toward private consumption, and (3) further increasing exchange rate flexibility to help the economy absorb external shocks.

Foreign Asset and Liability Position and Trajectory	**Background.** The NIIP increased to 14.0 percent of GDP in 2022, from 12.3 percent in 2021, although it remained significantly below the peak of 30.4 percent in 2008. The improvement largely reflected a higher CA surplus, although it was offset by a small valuation loss over the year. **Assessment.** The NIIP-to-GDP ratio is expected to remain positive, with a modest decline over the medium term in line with its narrowing CA surplus. Increasing portfolio investment, on the back of China's gradual financial opening, is expected to diversify its foreign assets and liabilities further. The NIIP is not a major source of risk, as its assets remain high—reflecting large foreign reserves ($3.3 trillion as of the end of 2022, 18.3 percent of GDP)—and its liabilities are mostly FDI related.						
2022 (% GDP)	NIIP: 14.0	Gross Assets: 51.1	Debt Assets: 15.4	Gross Liab.: 37.2	Debt Liab.: 13.0		
Current Account	**Background.** The CA surplus continued to increase to 2.2 percent of GDP in 2022, from 2.0 percent in 2021, reflecting a rising trade balance and underpinned by a wider savings-investment balance (excessive high household savings due to COVID-19 restrictions and precautionary motives). Although growth in merchandise exports slowed amid weak global demand and the unwinding of some pandemic-related exports (e.g., medical goods and consumer durable goods), growth in merchandise imports dropped notably on account of weak domestic demand, including a large decline in commodity imports arising from a real estate contraction that more than offset higher energy and commodity prices following the war in Ukraine. While the services deficit remained low because of still-subdued outbound tourism, the income balance deficit widened further, with the change driven by a higher investment income deficit owing to a faster drop in investment income receipts (reflecting falling asset prices in 2022) than in investment income payments (reflecting declining foreign investment profits). Over the medium term, the CA surplus is projected to narrow to below 0.5 percent of GDP as COVID-related factors unwind and the economy resumes rebalancing toward higher-quality and more consumption-driven growth. **Assessment.** The EBA CA model estimates the CA gap to be 1.5 percent of GDP. Considering that remaining pandemic-related temporary factors raised the CA surplus by 0.7 percent of GDP (with contributions of 0.5 and 0.2 percentage point from the impact on the travel services balance and the transport services balance, respectively), the CA gap is estimated to range from 0.1 to 1.4 percent of GDP, with a midpoint of 0.8 percent. EBA-identified policy gaps are estimated to be about 1.0 percent of GDP, driven by relatively low credit growth, and inadequate social safety nets, partly offset by a larger fiscal expansion than in other countries.						
2022 (% GDP)	CA: 2.2	Cycl. Adj. CA: 2.2	EBA Norm: 0.7	EBA Gap: 1.5	COVID-19 Adj.: –0.7	Other Adj.: 0.0	Staff Gap: 0.8
Real Exchange Rate	**Background.** The REER depreciated in 2022 by 1.2 percent from the 2021 average, with part of the NEER appreciation (3.8 percent) offset by relatively low inflation in China. This depreciation reversed the REER appreciation in 2020–21 (by 5 percent) after a depreciation of 7 percent during 2015–19. As of April 2023, the REER had depreciated by 6.5 percent from the 2022 average. **Assessment.** The IMF staff CA gap implies a REER gap of –5.7 percent (with an estimated elasticity of 0.14 applied). The EBA REER index regression estimates the REER gap in 2022 to have been 16.1 percent, and the EBA REER level regression estimates the REER gap to have been 12.7 percent. Consistent with the IMF staff CA gap, the IMF staff assesses the REER gap to be in the range of –10.4 to –1.1 percent, with a midpoint of –5.7 percent.						
Capital and Financial Accounts: Flows and Policy Measures	**Background.** Net capital outflows (including net errors and omissions) increased to $302 billion (1.7 percent of GDP) in 2022 from $165 billion (0.9 percent of GDP) in 2021. The authorities reimposed the risk reserve requirement of 20 percent on FX forwards (an outflow CFM measure) in September 2022 and raised the cross-border financing macroprudential adjustment parameter for financial institutions and enterprises from 1 to 1.25 (relaxation of an inflow CFM measure) in October 2022. The reserve requirement ratio for FX deposits was lowered twice, by 1 and 2 percent, respectively, in May and September 2022. As of March 2023, the total Qualified Domestic Institutional Investor quota stood at $162.7 billion.[1] **Assessment.** Substantial net outflow pressures resurfaced with the divergence of China's monetary policy from that in advanced economies. Over the medium term, further capital account opening is likely to create substantially larger two-way gross flows. The sequence of capital account opening consistent with exchange rate flexibility should carefully consider domestic financial stability, while addressing the faster pace of private sector accumulation of foreign assets with respect to nonresident accumulation of Chinese assets. CFM should not be used to actively manage the capital flow cycle or substitute for warranted macroeconomic adjustment and exchange rate flexibility. Over the medium term, China should gradually phase out CFM measures in a sequence consistent with greater exchange rate flexibility and other supporting reforms.						
FX Intervention and Reserves Level	**Background.** FX reserves declined (by $122.5 billion) and reached $3.1 trillion as of the end of 2022, with the decline mainly reflecting valuation effects and no sign of large FX intervention. **Assessment.** The level of reserves—68 percent of the IMF's standard composite metric at the end of 2022 (68 percent in 2021) and 110 percent of the metric adjusted for capital controls (109 percent in 2021)—is assessed to be adequate.						

Table 3.7. Euro Area: Economy Assessment

Overall Assessment: *The external position in 2022 was broadly in line with the level implied by medium-term fundamentals and desirable policies.* The CA balance decreased to –1.0 percent of GDP in 2022 from 2.3 percent of GDP in 2021, falling into deficit for the first time in more than a decade, largely on account of a sharp increase in energy import prices and the associated deterioration in the goods balance. Over the medium term, the euro area's CA balance is projected to recover gradually to positive territory but remain below its historical average, as energy prices are projected to remain elevated. National external imbalances are expected to remain sizable.

Potential Policy Responses: With energy prices projected to remain elevated over the medium term, policies aimed at protecting vulnerable households and firms should become increasingly targeted, while efforts to facilitate the green transition should be stepped up. Avoiding a trade-distorting subsidy race and other trade-distorting measures, which would undermine resource allocation and productivity, and preserving the integrity of the European single market are critical. Trade and investment disagreements with other countries should be resolved in a manner that supports an open, stable, and transparent global trading system. As historical policy gaps at the national level in the EU are projected to persist, countries with excess CA surpluses should increase investment, whereas countries with weak external positions should undertake reforms to raise productivity, reduce structural and youth unemployment, and commence growth-friendly fiscal consolidation. Euro area-wide initiatives to make the currency union more resilient (for example, completing the banking and capital markets unions and establishing a central fiscal capacity for macroeconomic stabilization) would deepen public and private sector risk sharing, supporting high-debt countries' external stability.

Foreign Asset and Liability Position and Trajectory

Background. After falling to –20.5 percent of GDP in 2009, the euro area's NIIP had risen substantially to 2.0 percent of GDP by the end of 2022, reflecting accumulated CA surpluses. Relative to 2021, the NIIP increased in 2022 by 1.7 percentage points of GDP, primarily reflecting valuation effects from the weaker euro. Gross portfolio investment assets and liabilities have both declined sharply, reflecting further valuation effects from higher interest rates and financial market repricing. Direct investment assets and liabilities have similarly declined, but more moderately. The gross values of derivative positions have increased, in line with higher financial market volatility. Gross foreign assets were 250.7 percent of GDP, and liabilities 248.7 percent of GDP, as of the end of 2022. Net external assets (including those with respect to other euro area member states) remain elevated in external creditor countries such as Germany, whereas net external liabilities remain high in countries such as Portugal and Spain.

Assessment. 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.

2022 (% GDP)	NIIP: 2.0	Gross Assets: 250.7	Debt Assets: 92.0	Gross Liab.: 248.7	Debt Liab.: 92.5

Current Account

Background. The CA balance for the euro area decreased to –1.0 percent of GDP in 2022 from 2.3 percent of GDP in 2021, largely on account of a sharp increase in energy import prices and an associated deterioration in the goods balance. The latter was also driven by a modest decline in the net export of nonenergy goods on the back of continued supply-chain disruptions and COVID-19 restrictions in China. The balances of services and secondary incomes remained broadly stable, but the primary income balance declined owing to lower investment income. The compression of the euro area CA was the strongest in the second and especially the third quarters, with the balance returning to surplus in the fourth quarter as energy prices and trade disruptions moderated. Although the surpluses are declining, large creditor countries, such as Germany and The Netherlands, continued to have sizable surpluses, reflecting high corporate and household saving and weak investment.

Assessment. The EBA model estimates a CA norm of –0.3 percent of GDP, against a cyclically adjusted CA of 0.1 percent of GDP. This implies a gap of 0.5 percent of GDP. IMF staff analysis indicates a CA norm that is higher by 0.1 percent of GDP than that estimated by the EBA model, reflecting policy commitments to reduce the large net external liability positions in Portugal and Spain. In addition, adjustments of –0.5 percent of GDP have been made to the underlying CA, reflecting CA measurement issues in Ireland and The Netherlands. The country-level adjustments for the transitory impact of the COVID-19 crisis on transportation and travel services (including tourism) have largely offset each other at the euro area level. With these factors and uncertainties in the estimates, including the cyclical adjustment, taken into consideration, the IMF staff assesses the CA gap to be –0.1 percent of GDP in 2021, with a range of –0.7 to 0.6 percent of GDP.

2022 (% GDP)	CA: –1.0	Cycl. Adj. CA: 0.1	EBA Norm: –0.3	EBA Gap: 0.5	COVID-19 Adj.: 0.1	Other Adj.: –0.6	Staff Gap: –0.1

Real Exchange Rate

Background. The euro area CPI-based REER appreciated by 4.5 percent between 2015 and 2021 following a depreciation of nearly 20 percent in the post–global financial crisis period. In 2022, the CPI-based REER depreciated by 3.0 percent compared with 2021, reflecting a nominal depreciation of 4.2 percent and somewhat stronger euro area inflation relative to that of its trading partners. The ULC-based REER depreciated by 5.3 percent. As of April 2023, the CPI-based REER was 5 percent above the 2022 average.

Assessment. Consistent with the IMF staff CA gap, the IMF staff assesses the euro area's REER gap to be 0.2 percent in 2022, with a range of –1.6 to 2.0 percent, based on the estimated CA-REER elasticity of 0.35.[1] 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 8 percent in Germany to an overvaluation of about 10 percent in Finland and Italy. The EBA REER index and level models suggest overvaluations of 7.6 percent and 8.0 percent, respectively.

Capital and Financial Accounts: Flows and Policy Measures

Background. The euro area experienced a capital account surplus of 1.0 percent of GDP and a financial account surplus of 0.1 percent of GDP in 2022, mirroring the CA deficit.

Assessment. Gross external indebtedness of euro area residents decreased by 11 percentage points of GDP in 2022 as lower external debt of governments, the Eurosystem, and the nonfinancial sector offset higher debt of deposit-taking institutions.

FX Intervention and Reserves Level

Background. The euro has the status of a global reserve currency.

Assessment. 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

Overall Assessment: *The external position in 2022 was moderately weaker than the level implied by medium-term fundamentals and desirable policies.* The CA balance moved to a deficit in 2022, with the change driven by a 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 deficit is expected to shrink as the effects of the war fade and fiscal consolidation and structural reforms to improve the economy's competitiveness are implemented.

Potential Policy Responses: In response to the recent energy crisis, France deployed significant fiscal resources to shield households from the impact of high energy prices. Attaining 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. While substantial prudential buffers mitigate financial sector risks, heightened market volatility and confidence risks call for enhanced vigilance.

Foreign Asset and Liability Position and Trajectory

Background. The NIIP stood at –23.6 percent of GDP in the fourth quarter of 2022, only slightly below the range observed during 2014–19 (between –16 and –23 percent of GDP). The NIIP had improved by 8.5 percent of GDP since the end of 2021, largely driven by an increase in portfolio and other investment. While the net position is moderately negative, gross positions are large. Gross assets stood at 302.2 percent of GDP in the fourth quarter of 2022, of which banks' non-FDI-related assets accounted for about 41 percent, reflecting their global activities. Gross liabilities fell to 325.8 percent of GDP in the fourth quarter of 2022, of which external debt was about 203 percent of GDP (58 percent accounted for by banks and 23 percent by the public sector). About three-quarters of France's external debt liabilities are denominated in domestic currency. The average TARGET2 balance in 2022 was about €75.9 billion.

Assessment. 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 (46 percent of GDP in the fourth quarter of 2022) and banks' gross financing needs: the stock of banks' short-term debt securities was €96 billion in the second quarter of 2022 (3.5 percent of GDP), and financial derivatives stood at about 40.5 percent of GDP.

2022 (% GDP)	NIIP: –23.6	Gross Assets: 302.2	Debt Assets: 173.2	Gross Liab.: 325.8	Debt Liab.: 202.7

Current Account

Background. The CA balance moved to a deficit of 2.1 percent of GDP in 2022 (from a surplus of 0.4 percent in 2021), driven by a large terms-of-trade shock and lower external demand. Temporary COVID-19 factors have gradually normalized, including the services balance (i.e., business and tourism travel) and aeronautics and automobile exports. The CA deficit is expected to shrink to about 1.2 percent of GDP in 2023, driven by an improvement in nuclear energy production, which would lead to higher exports to the rest of Europe, as well as by continued recovery in the aeronautics and automobile sectors, which would also boost exports. Over the medium term, the IMF staff projects that the CA deficit will shrink by 2028 as the effects from Russia's war in Ukraine fade and reforms to improve France's competitiveness start to pay off. Fiscal consolidation will help reduce the CA deficit over the medium term.

Assessment. The 2022 cyclically adjusted CA balance is estimated at –1.5 percent of GDP, compared with an EBA-estimated norm of –0.3 percent. The IMF staff estimates CA net adjustments related to COVID-19 at –0.9 percent of GDP, with the adjustments driven by transport (–1.1 percent of GDP) and exports of aeronautics (0.2 percent of GDP). On this basis, the IMF staff assesses that the CA gap in 2022 was between –2.5 and –1.6 percent of GDP (compared with –0.5 to 0 percent of GDP in 2021), with a midpoint of –2.0 percent of GDP. Despite an important domestic gap from looser fiscal policy of about –1.0 percent of GDP, the total fiscal policy gap was 0.1. Meanwhile, the main contributors to the overall policy gap of –0.8 percent of GDP were health expenditure and credit gaps.

2022 (% GDP)	CA: –2.1	Cycl. Adj. CA: –1.5	EBA Norm: –0.3	EBA Gap: –1.1	COVID-19 Adj.: –0.9	Other Adj.: 0.0	Staff Gap: –2.0

Real Exchange Rate

Background. Following an appreciation in 2020 of both the REER based on the ULC and that based on the CPI, the REER based on the ULC further appreciated by 1.3 percent in 2021, while that based on the CPI depreciated by 0.5 percent. In 2022, both REER measures depreciated. The ULC-based REER depreciated by 3 percent with respect to the 2021 average, while the CPI-based REER depreciated by 4.6 percent. From a longer-term perspective, although both REER measures depreciated by about 11–14 percent between 2008 and 2022, 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 April 2023, the CPI-based REER was 2.3 percent above the 2022 average.

Assessment. The IMF staff CA gap implies a REER gap of 7.1 percent in 2022 (with an estimated elasticity of 0.28 applied). The EBA REER index model points to a REER gap of –4.8 percent, while the EBA REER level model points to a REER gap of 5.3 percent. Consistent with the IMF staff CA gap, the IMF staff assesses the REER to be overvalued in the range of 5.5 to 8.7 percent, with a midpoint of 7.1 percent.

Capital and Financial Accounts: Flows and Policy Measures

Background. Inward and outward FDI normalized in 2021–22 after decreasing significantly between 2019 and 2020. These flows increased from 0.7 to 3.4 percent, and from 0.5 to 3.1 percent, of GDP, respectively, between 2020 and 2022. The financial account is open.

Assessment. France remains exposed to financial market risks owing to the large refinancing needs of the sovereign and banking sectors.

FX Intervention and Reserves Level

Background. The euro has the status of a global reserve currency.

Assessment. Reserves held by euro area economies are typically low relative to standard metrics, but the currency floats freely.

Table 3.9. Germany: Economy Assessment

Overall Assessment: *The external position in 2022 was stronger than the level implied by medium-term fundamentals and desirable policies.* This assessment accounts for temporary weakness in Germany's CA due to the surge in energy import prices (through the cyclical adjustment) and, to a lesser extent, to higher prices for transport service imports. In 2023, the CA is expected to strengthen as declines in wholesale liquefied natural gas prices are passed through to import prices and as demand from Asia recovers.

Potential Policy Responses: Policies aimed at promoting investment and diminishing excess saving would support external rebalancing and a further reduction of the CA balance toward its norm. Over the medium term, higher fiscal deficits than currently planned are likely to be required to achieve Germany's 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. Training to enhance employability of older workers with outdated skills could also extend working lives and reduce the need for excess saving.

Foreign Asset and Liability Position and Trajectory

Background. The NIIP reached 71 percent of GDP in 2022, compared with 70 percent in 2021. The NIIP increased in 2022 less than the year's CA balance, suggesting valuation losses over the year. These valuation losses likely reflect the falls in international bond and equity prices in a rising-interest-rate environment, which are partly offset by valuation gains from the depreciation of the euro. Germany's TARGET2 claims on the Eurosystem were €1.3 trillion at the end of 2022, the same as at the end of 2021. Between 2017 and 2022, the NIIP increased by some 27 percent of GDP, lifting the primary income balance going forward.

Assessment. Germany's exposure to the Eurosystem remains large, given the ECB's quantitative easing through 2022.

2022 (% GDP)	NIIP: 71	Gross Assets: 310	Debt Assets: 162	Gross Liab.: 239	Debt Liab.: 156

Current Account

Background. The CA surplus came in at 4.2 percent of GDP in 2022, compared with 7.7 percent in 2021 and 8.0 percent on average over 2017–19. The weakening of the CA in 2022 was driven mainly by a surge in energy import costs following Russia's invasion of Ukraine and an almost-complete recovery in travel imports after the pandemic also contributed. The goods trade balance fell significantly on energy import costs, despite some alleviation of supply bottlenecks at the end of the year, which boosted motor vehicle exports. In addition to travel imports, the services balance was also slightly weakened by an increase in transport services imports, linked to higher transport prices. The fall in the CA surplus reflected a weaker CA balance for Germany in respect to Asia, given weak demand from China in particular. The savings-investment surpluses of households and firms shrank, more than offsetting an increase in the government's savings-investment balance.

Assessment. The cyclically adjusted CA balance is estimated by the EBA model to be 5.3 percent of GDP in 2022. The adjusted CA balance is 0.4 percentage point higher, at 5.7 percent of GDP, which accounts for the temporary increase in transport services imports after the pandemic, while net travel services imports have recovered. The IMF staff assesses the CA norm to be between 2.3 and 3.3 percent of GDP, with a midpoint of 2.8 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 2022 was in the range of 2.3 to 3.3 percent of GDP, with a midpoint of 2.8 percent of GDP.

2022 (% GDP)	CA: 4.2	Cycl. Adj. CA: 5.3	EBA Norm: 2.8	EBA Gap: 2.5	COVID-19 Adj.: 0.4	Other Adj.: 0.0	Staff Gap: 2.8

Real Exchange Rate

Background. The REER based on consumer prices appreciated by 0.4 percent in 2022, driven by real appreciations against China and Japan. This relative stability masks substantial volatility during the year, with a depreciation of 3.9 percent in the 12 months to August, reflecting the largest 12-month terms-of-trade deterioration since German reunification, resulting from spiking energy import prices following Russia's invasion of Ukraine; this depreciation was followed by appreciation later in the year as energy import prices eased. Between December 2022 and February 2023, the REER based on consumer prices appreciated a further 0.2 percent. As of April 2023, the CPI-based REER was 3.2 percent above the 2022 average.

Assessment. The IMF staff CA gap implies a REER gap of –7.8 percent in 2022 (with an estimated elasticity of 0.37 applied). The EBA REER level and index models suggest an undervaluation of 9.5 percent and an overvaluation of 6.7 percent, respectively. Consistent with the staff CA gap, the staff assesses the REER to be undervalued, with a midpoint of 7.8 percent and a range of uncertainty of ±1.4 percent.

Capital and Financial Accounts: Flows and Policy Measures

Background. In 2022, Germany's CA surplus largely financed direct investment abroad by German residents. Strong worldwide corporate profits seem to have played a role, given that reinvested earnings accounted for a large portion of this direct investment. The drop in net foreign investment between 2021 and 2022, due to the fall in the CA surplus, was most evident in a reduction of portfolio investment abroad by German residents.

Assessment. Risks are limited, given Germany's safe haven status and the strength of its external position.

FX Intervention and Reserves Level

Background. The euro has the status of a global reserve currency.

Assessment. Reserves held by euro area economies are typically low relative to standard metrics. The currency floats freely.

Table 3.10. Hong Kong Special Administrative Region: Economy Assessment

Overall Assessment: *The external position in 2022 was broadly in line with the level implied by medium-term fundamentals and desirable policies.* The CA surplus (in percent of GDP) narrowed in 2022 as the goods balance turned into a deficit owing to weaker external demand and disruptions at the border with mainland China amid large COVID-19 outbreaks, partly offset by continued recovery in the services surplus. The CA surplus 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 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.

Potential Policy Responses: A gradual pace of fiscal consolidation in the near term to secure a balanced 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.

Foreign Asset and Liability Position and Trajectory	**Background.** The NIIP decreased to 486 percent of GDP in 2022 from 572 percent in 2021. This was driven by a significant decrease in gross assets (by 63 percentage points of GDP) and a large increase in gross liabilities (by 25 percentage points of GDP). Both gross assets and liabilities are high, reflecting Hong Kong Special Administrative Region's status as an international financial center. Valuation effects in 2022 were sizable, as the change in the NIIP (–88 percentage points of GDP) far exceeded the financial account balance (–10 percent of GDP). **Assessment.** Vulnerabilities are low given the positive and sizable NIIP and its favorable composition. FX reserves remain large (117 percent of GDP at the end of 2022), and direct investments account for a large share of gross assets and liabilities (36 and 51 percent, respectively), while only 12 percent of gross liabilities are portfolio investments.

2022 (% GDP)	NIIP: 486	Gross Assets: 1,678	Debt Assets: 596	Gross Liab.: 1,192	Debt Liab.: 420

Current Account	**Background.** The CA surplus narrowed to 10.5 percent of GDP in 2022 from 11.8 percent in 2021. The goods balance turned into a deficit driven by a sharp decline in exports due to declining external demand as well as customs delays and disruptions at the border with mainland China amid large COVID-19 outbreaks in both economies, leading to a decline in the overall trade surplus despite a continued recovery in the services surplus. The income balance remained broadly stable. The CA development in 2022 reversed a widening trend between 2015 and 2021, arising from a notable decline in private investment as the economy faced multiple domestic and external shocks including social unrest, China-US tensions, and the COVID-19 pandemic. The CA balance is projected to continue to gradually decline over the medium term with a recovery in domestic demand. **Assessment.** After adjusting for cyclical factors and factoring in the transitory impacts of the COVID-19 crisis on the CA in relation to travel services, including tourism, equivalent to 0.9 percent of GDP (the transport adjustor is 0 percent), the CA surplus is estimated to be 11.2 percent of GDP in 2022, which is within the IMF staff–assessed CA norm range of 9.1–12.1 percent of GDP (with a midpoint of 10.6 percent). The IMF staff-assessed CA gap range is hence between –0.9 and 2.1 percent of GDP, with a midpoint of 0.6 percent. Since Hong Kong Special Administrative Region is not in the EBA sample, the CA norm was estimated by applying EBA-estimated coefficients to Hong Kong Special Administrative Region and was adjusted for measurement issues related to the large valuation effects in the NIIP and the discrepancies between stocks and flows.[1]

2022 (% GDP)	CA: 10.5	Cycl. Adj. CA: 10.3	EBA Norm: —	EBA Gap: —	COVID-19 Adj.: 0.9	Other Adj.: —	Staff Gap: 0.6

Real Exchange Rate	**Background.** Under the currency board arrangement, REER dynamics are largely determined by U.S. dollar developments and inflation differentials between the United States and Hong Kong Special Administrative Region. The REER, which depreciated by about 5 percent in 2021, appreciated by 3.2 percent in 2022 compared with its 2021 average. As of April 2023, the REER was 0.5 percent above the 2022 average. **Assessment.** The IMF staff assesses the REER gap, based on the staff-assessed CA gap range, to be in the range of –5.3 to 2.4 percent, with a midpoint of –1.4 percent (based on the average CA-REER elasticity of about 0.4).[2]
Capital and Financial Accounts: Flows and Policy Measures	**Background.** As an international financial center, Hong Kong Special Administrative Region has an open capital account. Nonreserve financial flows recorded a large net outflow of $84 billion in 2022, up from net outflows of $49 billion in 2021, driven by other investment and portfolio investment outflows. The financial account is typically very volatile, reflecting financial conditions in Hong Kong Special Administrative Region and mainland China (transmitted through growing cross-border financial linkages),[3] shifting expectations of U.S. monetary policy, and related arbitraging in the FX and rates markets. **Assessment.** 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 in trade and tourism; credit exposures of the banking sector; and fundraising by Chinese firms in local financial markets. However, Hong Kong Special Administrative Region's banking system, with its high capital buffers and profitability, is assessed to be broadly resilient to macro-financial shocks.
FX Intervention and Reserves Level	**Background.** The Hong Kong dollar has continued to trade in a smooth and orderly manner within the Convertibility Zone during the COVID-19 crisis. As the Hong Kong dollar depreciated to the weak side of the Convertibility Undertaking several times in 2022, the Hong Kong Monetary Authority conducted FX operations as part of the currency board operations, selling $30.8 billion. Total reserve assets had decreased to 117 percent of GDP at the end of 2022 (or 1.7 times the monetary base) from 135 percent of GDP at the end of 2021. **Assessment.** 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 2022, Hong Kong Special Administrative Region still holds significant fiscal reserves (about 27.4 percent of GDP at the end of 2022), built up through strong fiscal discipline in previous years.

Table 3.11. India: Economy Assessment

Overall Assessment: *The external position in fiscal year 2022/23 (ending in March 2023) was moderately stronger than the level implied by medium-term fundamentals and desirable policies,* suggesting that the CA deficit was somewhat smaller than implied by India's level of per capita income, favorable growth prospects, demographic trends, and development needs. External vulnerabilities stem from weakening demand in some partner countries and volatile global financial conditions and commodity prices. In part reflecting buoyant services exports and declining oil prices, the CA deficit is projected to narrow in fiscal year 2023/24 before converging to its estimated norm over the medium term. The authorities have made some progress in external trade promotion and the liberalization of FDI and portfolio flows, but India's trade and capital account regimes remain relatively restricted.

Potential Policy Responses: In the near term, government's additional infrastructure spending will contribute to raising the CA deficit, thereby reducing the positive CA gap. To facilitate external rebalancing over the medium term, fiscal consolidation, 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 into 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.

Foreign Asset and Liability Position and Trajectory

Background. As of the end of 2022, India's NIIP had improved marginally to –11.1 percent of GDP from –11.5 percent of GDP at the end of 2021, reflecting both valuation changes and a base effect of fast nominal GDP growth offsetting the CA deficit. Gross foreign assets were 25.9 percent of GDP (declining from 30.2 percent of GDP at the end of 2021), while gross foreign liabilities shrank to 37.0 percent of GDP from 41.7 percent of GDP at the end of previous year. The bulk of assets were in the form of official reserves and FDI, whereas liabilities included mostly debt and FDI.

Assessment. With the CA deficit projected to narrow in 2023 and stabilize at a slightly higher level thereafter, the NIIP-to-GDP ratio is expected to remain broadly unchanged over the medium term, as robust nominal GDP expansion will offset the nominal NIIP decline resulting from projected CA deficits and valuation changes. India's external debt liabilities are low compared with those of its 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.

2022 (% GDP)	NIIP: –11.1	Gross Assets: 25.9	Debt Assets: 2.7	Gross Liab.: 37.0	Debt Liab.: 18.2

Current Account

Background. In fiscal year 2022/23, the CA deficit widened to 2.0 percent of GDP, from 1.2 percent of GDP in the previous year, in the context of a high fiscal deficit. As the pandemic restrictions were lifted, imports rebounded faster than exports on the back of pent-up domestic demand, rising private investments, and a surge in prices of oil and some other commodities after Russia's invasion of Ukraine. The CA deficit is projected to narrow to about 1.8 percent of GDP in fiscal year 2023/24 largely reflecting the expected decline in oil import costs. Over the medium term, the CA deficit is projected to converge to its norm of about 2.4 percent of GDP.

Assessment. The EBA cyclically adjusted CA balance stood at –0.9 percent of GDP in fiscal year 2022/23. The EBA CA regression estimates a norm of –2.3 percent of GDP, with a standard error of 0.7 percent, thus implying a CA gap of 1.5 percent of GDP. In the IMF staff's judgment, a CA deficit of up to 2½ percent of GDP is financeable in the medium term by a combination of steady FDI inflows, more volatile portfolio flows susceptible to changes in global risk appetite, and public and private external borrowings. Additional cyclical considerations factoring in the transitory impacts of the COVID-19 pandemic on travel and transport services are assessed to be near 0.[1] Thus, the IMF staff assesses the CA gap to be 1.5 percent of GDP, with a range of 0.8 to 2.1 percent of GDP. Positive policy contributions to the CA gap stem mostly from the domestic credit gap, while negative contributions come from changes in FX reserves and capital controls.

2022 (% GDP)	CA: –2.0	Cycl. Adj. CA: –0.9	EBA Norm: –2.3	EBA Gap: 1.5	COVID-19 Adj.: 0.0	Other Adj.: 0.0	Staff Gap: 1.5

Real Exchange Rate

Background. In the first half of 2022, widening CA deficit and portfolio investment outflows resulted in depreciation pressures on the rupee. These pressures abated and reversed when the CA deficit narrowed and investor sentiments improved in the second half of 2022 and early 2023. The average REER in 2022 appreciated by about 1 percent from its 2021 average. As of April 2023, the REER was 2.8 percent below the 2022 average.

Assessment. The IMF staff CA gap implies a REER gap of –7.8 percent (with an estimated elasticity of 0.19 applied). EBA REER index and level models suggest an overvaluation of 12.5 percent and 10.6 percent, respectively. Consistent with the staff CA gap, however, the IMF staff assesses the REER gap to be in the range of –11.4 to –4.2 percent, with a midpoint of –7.8 percent, for fiscal year 2022/23.

Capital and Financial Accounts: Flows and Policy Measures

Background. Net FDI inflows remained stable at about 1 percent of GDP. Volatile portfolio investments recorded small net outflows of about 0.2 percent of GDP (compared with net outflows of about 0.5 percent of GDP in the prior year), while other investments, reflecting mostly debt-creating inflows, moderated to 1.0 percent of GDP from about 2.2 percent of GDP in FY2021/22. During the year, the Indian authorities made further steps toward capital account liberalization by further increasing limits on external borrowing and widening the scope of government bonds available for foreign investors, which could help moderate the interest costs associated with financing the CA deficit.

Assessment. While FDI inflows covered a part of the CA deficit in FY2022/23, further 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. The expected inclusion of India in international bond indices could significantly increase foreign participation in India's bond market and support portfolio inflows to finance the CA deficit over the medium term.

FX Intervention and Reserves Level

Background. In the first half of 2022, official FX reserves decreased from historically high levels in 2021, reflecting a widening CA deficit, portfolio investment outflows, and valuation changes. The reserves increased in subsequent months as the CA deficit narrowed and investor confidence improved. During this time, the Reserve Bank of India's FX interventions aimed to smooth excessive market volatility and contributed to the rupee's exchange rate stability. Reserves stood at $562.7 billion at the end of 2022.

Assessment. Various criteria confirm that the official FX reserves are adequate for precautionary purposes. As of the end of 2022, they represented about 198 percent of short-term debt (on residual maturity), 159 percent of the IMF's composite metric, and about seven months of import coverage. In view of moderately strong external position and adequate reserves level, FX interventions should be limited to addressing disorderly market conditions.

Table 3.12. Indonesia: Economy Assessment

Overall Assessment: *The external position in 2022 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. Although external financing needs appear sustainable, a strong reliance on foreign portfolio investment exposes the economy to fluctuations in global financial conditions.

Potential Policy Responses: Maintaining external balance will require structural reforms to enhance productivity and facilitate post-COVID-19 sectoral adjustments. Reforms should include (1) higher infrastructure investment, (2) higher social spending to foster human capital development and strengthen the social safety net, (3) a reduction in restrictions on inward FDI and external trade, including to consider phasing out export restrictions and not extending the restrictions to other commodities, and (4) promotion of greater labor market flexibility. Flexibility of the exchange rate should continue to support external stability with the ongoing structural transformation of the Indonesian economy.

Foreign Asset and Liability Position and Trajectory

Background. At the end of 2022, Indonesia's NIIP stood at –19.1 percent of GDP, improving from –23.4 percent in 2021. The improvement was explained by a reduction of 6.4 percentage points in gross external liabilities, to 53.2 percent of GDP, reflecting reduced market values of Indonesian financial assets and substantial portfolio investment outflows, particularly in local currency government bonds. The decline in liabilities was partly offset by a decline of 2.2 percentage points in gross external assets to 34.1 percent of GDP, with more than half of the decline explained by reserve assets. Indonesia's gross external debt remained moderate at 30.1 percent of GDP at the end of 2022, declining from 34.9 percent of GDP at the end of 2021. At the end of 2022, 16.8 percent of external debt (or 5.1 percent of GDP) had a remaining maturity of less than one year.

Assessment. 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. Although the share of nonresident holdings of rupiah-denominated government bonds has declined substantially, the relatively large dependence on foreign portfolio investment makes Indonesia vulnerable to global financial volatility, higher global interest rates, and a stronger dollar. The NIIP as a percent of GDP is projected to stabilize at current levels in the medium term, with projected small CA deficits being offset by strong nominal GDP growth.

2022 (% GDP)	NIIP: –19.1	Gross Assets: 34.1	Res. Assets: 10.4	Gross Liab.: 53.2	Debt Liab.: 30.1

Current Account

Background. The CA surplus increased further in 2022 to 1.0 percent, from 0.3 percent in 2021. This increase was driven mainly by the non-oil and gas trade balance, reflecting supportive commodity prices, notably coal and palm oil. Strong import growth due to resilient domestic demand and higher oil prices mitigated the increase in the CA surplus. On the savings-investment side, the positive impact on national savings of higher commodity terms of trade and related higher government revenue was sufficient to offset lower private savings and investment. An expected downward correction in commodity prices in 2023 will lead to a small CA deficit from 2023 onward, although structural policies will help maintain the CA balance at levels close to the norm.

Assessment. The IMF staff estimates a CA gap of 0.3 percent of GDP for 2022, consistent with an estimated cyclically adjusted CA deficit of 1.5 percent of GDP, a staff-assessed norm of –1.1 percent of GDP, and adjustors for COVID-19 (0.4 percent of GDP, attributed to travel) and demographics.[1] Considering the uncertainty in the estimation of the norm, the CA gap for 2022 is in the range of –0.3 to 0.9 percent of GDP.[2]

2022 (% GDP)	CA: 1.0	Cycl. Adj. CA: –1.5	EBA Norm: –1.1	EBA Gap: –0.4	COVID-19 Adj.: 0.4	Other Adj.: 0.4	Staff Gap: 0.3

Real Exchange Rate

Background. The average REER appreciated by 3.3 percent in 2022 compared with the average level in 2021 (or 0.8 percent relative to the 2016–19 pre-COVID-19 average), despite the large depreciation of the rupiah relative to the dollar (10.3 percent). Stronger commodity prices supported the rupiah against currencies of other major trading partners. As of April 2023, the REER was 0.4 percent above the 2022 average.

Assessment. The IMF staff CA gap estimate of 0.3 percent of GDP implies a REER gap of –2.0 percent (with an estimated elasticity of 0.16 applied). The REER index and level models point to 2022 REER gaps of –2.7 percent and –16.3 percent, respectively. Consistent with the staff CA gap, the staff assesses the REER gap in the range of –5.6 to 1.6 percent, with a midpoint of –2.0 percent.[3]

Capital and Financial Accounts: Flows and Policy Measures

Background. 2022 marked the first year of negative net financial inflows since the GFC, amounting to –0.7 percent of GDP (after positive net financial inflows of 1.1 percent in 2021). This was driven mainly by local currency bond market outflows, partly offset by net equity inflows. The share of nonresident holdings of rupiah government bonds declined from 19 percent in 2021 to 14.4 percent in 2022, compared with a peak of 39 percent in 2019. These holdings accounted for almost 4 percent of GDP in 2022. Net FDI inflows declined to 1.1 percent of GDP in 2022, from 1.5 percent in 2021.

Assessment. The improvement in the CA in 2022 helped offset large portfolio investment outflows and ease the impact on the exchange rate. The broadly contained CA balance and strengthened policy frameworks, including exchange rate flexibility, have helped reduce capital flow volatility. But net and gross financial flows continue to be prone to periods of volatility. Continued strong policies, such as those focused on safeguarding the fiscal position, curbing inflation, advancing financial deepening, and easing obstacles to investment, would help sustain capital inflows in the medium term.

FX Intervention and Reserves Level

Background. Since mid-2013, Indonesia has had a more flexible exchange rate policy framework. Official foreign reserves declined to $137 billion in 2022, from $145 billion in 2021, reflecting FX intervention and some negative valuation effects from appreciation of the dollar.

Assessment. The current level of reserves (10.4 percent of GDP, 118 percent of the IMF's reserve adequacy metric, and 5.9 months of prospective imports) should provide a sufficient buffer against external shocks, with predetermined drains also manageable. Exchange rate flexibility should continue to help absorb shocks, with FX interventions limited to addressing disorderly market conditions triggered by external pressures or risks of de-anchoring inflation expectations.

Table 3.13. Italy: Economy Assessment

Overall Assessment: *The external position in 2022 was weaker than the level implied by medium-term fundamentals and desirable policies.* The degree of uncertainty for the 2022 CA gap assessment is heightened by the lack of clarity about the perceived persistence of the very large negative energy terms of trade shock. The current account balance declined, in large part due to a temporary increase in the gas import bill, that resulted in a decline in private sector saving net of investment while government saving net of investment remained broadly unchanged. Tax credits for the superbonus program promoted household investment, and while the government provided large energy-related transfers, households' saving net of investment dropped by about 4 percentage points of GDP as the saving rate normalized from its COVID-19-era high. While investment increased moderately in 2022, chronic weak productivity, rapid population aging, and uncertain medium-term growth prospects could dampen investment once tax credits and other fiscal programs under the National Recovery and Resilience Plan are completed.

Potential Policy Responses: Raising productivity and improving the business climate through structural reforms would encourage higher private investment and normalization of the household saving rate while implementing high-quality fiscal consolidation measures would ensure the fiscal primary balance returns firmly to surplus. In particular, upskilling the workforce and increasing the quality of infrastructure and the effectiveness of the judiciary and public administration would boost productivity to help counteract workforce aging. Vulnerabilities associated with rollover of public debt would be reduced by improving budget efficiency, containing pension spending, undertaking comprehensive and progressive tax reform, and fully implementing the National Recovery and Resilience Plan.

Foreign Asset and Liability Position and Trajectory	**Background.** Italy's NIIP declined to 3.9 percent of GDP at the end of 2022 on account of net valuation losses (3.2 percent of GDP) and the first CA deficit in a decade. Gross foreign assets and liabilities retreated to 174.3 and 170.5 percent of GDP, respectively, as losses on external equity positions outweighed dollar appreciation. Nevertheless, TARGET2 liabilities reached a record high of 36 percent of GDP. About half of gross external liabilities correspond to the general government and the Bank of Italy. Over the last decade, Italy has seen continuous financial outflows by the resident private sector to acquire foreign assets, while the Bank of Italy has become the main contributor to financial inflows. Steady accumulation of direct and portfolio investments in foreign equities and a net long dollar external position have contributed to the net valuation gains on Italy's NIIP during this period. **Assessment.** Further strengthening public balance sheets and undertaking structural reforms would lessen 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.				
2022 (% GDP)	NIIP: 3.9	Gross Assets: 174.3	Debt Assets: 41.3	Gross Liab.: 170.5	Debt Liab.: 92.2

Current Account	**Background.** Italy's CA has experienced gradual increases, averaging 3.0 percent of GDP during 2016–21. 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. In 2022, the CA dropped sharply, by 4.3 percentage points, to –1.2 percent of GDP, mainly on account of a 3.3 percent of GDP increase in the energy trade deficit as the terms of trade worsened by 8.5 percent, despite a continued recovery in exports of goods and services (on par with 2019 levels in real terms). The CA reduction was underpinned by a moderate increase in investment and a large decrease in total saving, with declines in private saving mostly in the household sector and roughly unchanged government saving. The effects of commodity price shocks on the current account began to unwind in late 2022. The medium-term CA balance is likely to be lower than the pre-pandemic position due to permanently higher energy price levels. **Assessment.** The cyclically adjusted CA is estimated at 0.6 percent of GDP for 2022, 2.9 percentage points below the EBA-estimated CA norm of 3.4 percent of GDP. An Italy-specific COVID-19 adjustor of 0.4 percent of GDP is applied to account for a temporary decline in travel (0.1 percent) and transport (0.3 percent) net receipts 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 –3.2 to –1.8 percent of GDP, with a midpoint of –2.5 percent of GDP. The fiscal policy gap (–1.5 percent of GDP) contributed substantially to the total policy gap (–1.0 percent of GDP), reflecting the sizable fiscal deficit in 2022.						
2022 (% GDP)	CA: –1.2	Cycl. Adj. CA: 0.6	EBA Norm: 3.4	EBA Gap: –2.9	COVID-19 Adj.: 0.4	Other Adj.: 0.0	Staff Gap: –2.5

Real Exchange Rate	**Background.** During 2016–21, the CPI-based REER depreciated by 0.4 percent, while the ULC-based REER depreciated by 1.8 percent. During 2022, the CPI-based REER further depreciated by 2 percent relative to the 2021 average, as a weakening euro more than compensated for Italy's relatively higher inflation than its trading partners. As of April 2023, the CPI-based REER appreciated by 2.8 percent relative to the 2022 average as the euro strengthened against a basket of currencies while energy inflation started to decline. **Assessment.** The IMF staff CA gap implies a REER gap of 9.3 percent in 2022 (with an estimated elasticity of 0.27 applied). The level and index CPI-based REER models suggest an overvaluation in 2022 of 15.4 percent and 12.3 percent, respectively, with an average of 13.9 percent. Based on the IMF staff CA gap, the staff assesses a REER gap to be in the range of 6.5 to 12.0 percent, with a midpoint of 9.3 percent.
Capital and Financial Accounts: Flows and Policy Measures	**Background.** The capital account balance remained unchanged at 0.0 percent of GDP in 2022. The financial account posted net inflows of 0.8 percent of GDP in 2022, reflecting residents' net acquisition of foreign liabilities. Large portfolio investment outflows were more than offset by inflows of other investment, including a nearly €60 billion increase in Italy's TARGET2 liabilities. **Assessment.** Central banks' monetary policy tightening has pushed up yields in the sovereign debt market. Large refinancing needs of the sovereign and the banking sector, elevated inflation, and exposures to geopolitical tensions and energy shocks suggest Italy remains vulnerable to market volatility.
FX Intervention and Reserves Level	**Background.** The euro has the status of a global reserve currency. Italy's reserves remained largely unchanged in 2022. **Assessment.** Reserves held by the euro area are typically low relative to standard metrics, but the currency is freely floating.

Table 3.14. Japan: Economy Assessment

Overall Assessment: *The external position in 2022 was broadly in line with the level implied by medium-term fundamentals and desirable policies.* The CA surplus declined to 2.1 percent of GDP in 2022 from 3.9 percent in 2021. The impact of higher prices on commodity imports largely offset improvement in Japan's exports (as supply disruptions faded) and a larger primary income surplus. Japan's CA surplus is expected to continue over the medium term, mainly driven by its primary income surplus, arising from a large positive NIIP and a high rate of return on net foreign assets.

Potential Policy Responses: More flexibility in monetary policy, accompanied by bold structural reforms and a credible and specific medium-term fiscal consolidation plan, is needed to maintain an external position consistent with medium-term fundamentals and desirable policies. These "desirable" policies will help avoid the risk of overheating the economy in the short-run and shift the drivers of the economy from an unsustainable public saving-investment position to one driven by the private sector over the medium term. Priority should be given to labor market and fiscal reforms that support private demand, raise potential growth, and promote digital and green investment. While fiscal consolidation will push the CA surplus higher, this would be offset by higher investment and a decrease in private savings from pandemic-era highs and due to demographic-related declines. Japan's global leadership role to promote more open, stable, and transparent trade policies in regional/multilateral trade agreements should be prioritized.

Foreign Asset and Liability Position and Trajectory

Background. Japan's NIIP stood at 75.2 percent of GDP at the end of 2022, broadly unchanged from its level in 2021 of 76.1 percent, but significantly higher than the pre-pandemic (2016–19) average of 61 percent. The increase in foreign assets related to outward FDI and foreign loans in 2022 has been offset by a decline in net portfolio outflows given global financial tightening. Japan holds the world's largest stock of net foreign assets, valued at $3.1 trillion at the end of 2022.

Assessment. Japan's foreign asset holdings are well diversified, both by geography and risk classes. At the end of 2022, gross foreign assets largely comprised portfolio investment accounting for about 40 percent of the total, followed by FDI with 21 percent. Of that portfolio investment, about 23 percent was yen denominated and 56.5 percent dollar denominated. In the event of yen appreciation against the dollar, the risk of negative valuation effects could materialize. Vulnerabilities associated with liabilities are contained, given that equity and direct investment account for about 30 percent of gross foreign liabilities. The NIIP is estimated to have generated a net annual investment income return of 8.7 percent in 2022, significantly larger than the pre-pandemic (2016–19) average of 6.2 percent, owing to a sharp depreciation of the yen. Japan's large positive NIIP is partly related to the asset accumulation for old-age consumption; a gradual decumulation of such assets is expected over the long term.

2022 (% GDP)	NIIP: 75.2	Gross Assets: 240.4	Debt Assets: 80.7	Gross Liab.: 165.2	Debt Liab.: 102.3

Current Account

Background. Japan's CA surplus reflects a sizable income balance, which reached a historic high at 6.4 percent of GDP in 2022, owing to its large net foreign asset position. The CA surplus declined to 2.1 percent of GDP in 2022 from 3.9 percent in 2021. The merchandise trade balance shifted from a surplus of 0.3 percent of GDP in 2021 to a deficit of 2.8 percent in 2022, driven by higher prices for commodity imports. Offshoring of production over the years has limited the positive impact of yen depreciation on exports, which may take time to materialize. The lower merchandise trade balance is estimated to have been offset by a 1.5 percent of GDP improvement in the primary income balance. In the medium term, the CA balance is projected to stabilize at a level close to 3.8 percent of GDP.

Assessment. The 2022 estimated cyclically adjusted CA is 3.2 percent of GDP, and the cyclically adjusted CA norm is 3.5 percent of GDP (with a range between 2.4 and 4.6 percent of GDP). After factoring in the transitory impacts of the COVID-19 crisis in relation to travel services including tourism, equivalent to 0.3 percent of GDP (transport adjustor is 0 percent), the 2022 CA gap midpoint is assessed at 0.0 percent of GDP, with a range between –1.1 and 1.1 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.[1] The unexplained residual of the assessment potentially reflects structural impediments and country-specific factors not included in the model, such as investment bottlenecks, including entrepreneurship entry barriers and corporate savings distortions.

2022 (% GDP)	CA: 2.1	Cycl. Adj. CA: 3.2	EBA Norm: 3.5	EBA Gap: –0.3	COVID-19 Adj.: 0.3	Other Adj.: 0.0	Staff Gap: 0.0

Real Exchange Rate

Background. The REER depreciated sharply in 2022 by close to 14 percent, following a depreciation of 8.7 percent in 2021. This reflects a sharp rise in inflation in Japan's major trading partners combined with the yen's nominal depreciation against major currencies as a result of widening interest rate differentials amid global monetary tightening. As of April 2023, the REER was 1.3 percent below the 2022 average.

Assessment. The IMF staff CA gap implies a REER gap of 0.0 percent in 2022 (with an estimated elasticity of 0.17 applied). The EBA REER level and index models deliver gaps of –31.4 and –31.7 percent, respectively, largely reflecting unexplained residuals. Consistent with the IMF staff CA gap, the REER gap is assessed to be in the range of –6.7 to 6.6 percent, with a midpoint of 0.0 percent.

Capital and Financial Accounts: Flows and Policy Measures

Background. The financial account recorded net outflows in 2022, mirroring the CA surplus, and declined to 1.9 percent of GDP in 2022 from 3.1 percent in 2021. Net FDI outflows at 3.1 percent of GDP are primarily driven by outward FDI flows to Asia, Europe, and North America. Net portfolio inflows recorded at 3.4 percent of GDP, lower than the 4 percent in 2021, reflect both lower demand for yen-denominated assets due to divergence in monetary policy as well as lower net portfolio outflows amid increased global financial volatility.

Assessment. Vulnerabilities are limited. Inward investment tends to be equity based, and the home bias of Japanese investors is strong. So far, outward spillovers from Japan's policies to financial conditions in other economies (interest rates, credit growth) are contained.

FX Intervention and Reserves Level

Background. Reflecting legacy accumulation, reserves stood at $1.4 trillion, or about 28 percent of GDP, at the end of 2021. They had declined to $1.2 trillion by the end of 2022 as FX intervention and valuation effects from rising foreign bond yields more than offset other factors that would support reserves, such as income gains from foreign bond holdings.

Assessment. The exchange rate is free floating. The authorities intervened to support the yen in September and October for the first time since 1998, with the size of the intervention equivalent to 5 percent of FX reserves at the end of August. FX interventions should be isolated and limited to addressing disorderly market conditions.

Table 3.15. Korea: Economy Assessment

Overall Assessment: *The external position in 2022 was broadly in line with the level implied by medium-term fundamentals and desirable policies.* The CA surplus narrowed in 2022, primarily due to cyclical factors, including relatively weak external demand in light of slowing growth of key trading partners, a global semiconductor down cycle, and high commodity prices. The surplus is projected to strengthen in 2023, supported by an expected normalization of the semiconductor cycle, recovery of demand in key trading partners, and lower commodity prices. In the medium term, the surplus is projected to increase further, as commodity prices stabilize and cyclical factors recede, while risks of geopolitical tensions and geoeconomic fragmentation, if they materialized, could impede trade and investment.

Potential Policy Responses: Continued fiscal consolidation and the tightening of monetary policy since mid-2021 are expected to contain domestic demand and import growth, supporting Korea's external position in the near term. Over the medium term, an increase in precautionary savings related to the fast aging of society, orderly deleveraging of household debt, and strong policies to mitigate risks arising from geopolitical tensions would help to maintain a sound external position. The exchange rate should remain market determined, with intervention limited to preventing disorderly market conditions.

Foreign Asset and Liability Position and Trajectory	**Background.** The NIIP has been positive since 2014 and stood at 46.3 percent of GDP in 2022, with gross liabilities at 83.9 percent of GDP, of which about 48 percent was gross external debt. The 2022 NIIP level marked an increase by about 8 percent of GDP compared with 2021, largely reflecting an increase of residents' outbound direct investment and a decrease in foreigners' portfolio investment. The NIIP is projected to rise further, to about 56 percent of GDP, in the medium term on the back of CA surpluses. **Assessment.** The positive NIIP is an important factor supporting external resilience. Foreign asset holdings are diversified, with about 35 percent in equity or debt securities. About 60 percent of foreign assets are denominated in dollars, implying that depreciation of the won can have large positive valuation effects in aggregate. The structure of liabilities further limits vulnerabilities, with direct investment and long-term loans together accounting for 55 percent of liabilities and 70 percent of liabilities denominated in Korean won.						
2022 (% GDP)	NIIP: 46.3	Gross Assets: 130.2	Debt Assets: 61.4	Gross Liab.: 83.9	Debt Liab.: 39.9		
Current Account	**Background.** The CA surplus was 1.8 percent of GDP in 2022, compared with 4.7 percent of GDP in 2021, relatively weak external demand from key trading partners, the semiconductor down cycle, and high commodity import prices. 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 increase gradually to 2.2 percent of GDP in 2023 and to about 3.5 percent of GDP over the medium term, supported by an expected gradual normalization in the semiconductor cycle starting in the second half of the year, economic recovery of key trading partners, and stabilizing commodity import prices. Risks related to geopolitical tensions, if materialized, could impede trade and investment. **Assessment.** The EBA model estimates the cyclically adjusted CA at 4.2 percent of GDP. The CA norm is estimated at 4.8 percent of GDP, with a standard error of 0.9 percent of GDP. After accounting for transitory factors arising from the COVID-19 shock in transportation (–0.3 percent of GDP) and travel services (–0.1 percent of GDP), the IMF staff estimates the 2022 CA gap midpoint at –1.0 percent of GDP, with a range of –1.9 to –0.1 percent of GDP. The contribution of the relative policy gap is –0.6 percent of GDP, reflecting the positive domestic credit gap, partly offset by a less expansionary fiscal stance compared to the rest of the world.						
2022 (% GDP)	CA: 1.8	Cycl. Adj. CA: 4.2	EBA Norm: 4.8	EBA Gap: –0.6	COVID-19 Adj.: –0.4	Other Adj.: 0.0	Staff Gap: –1.0
Real Exchange Rate	**Background.** The REER has been depreciating since 2019, reversing the sustained appreciation during 2013–18. In 2022, a marked depreciation through October was partly reversed by the end of the year, with an average depreciation of 5.4 percent from 2021. As of April 2023, the REER was 1.4 percent below the 2022 average. **Assessment.** The IMF staff CA gap implies a REER overvaluation of 2.9 percent (with an estimated elasticity of 0.34 applied). The EBA REER index model estimates a 1.9 percent undervaluation, while the EBA level model estimates a 3.4 percent overvaluation. Consistent with the staff CA gap, the staff assesses the REER gap to be in the range of 0.2 to 5.6 percent, with a midpoint of 2.9 percent.						
Capital and Financial Accounts: Flows and Policy Measures	**Background.** Net capital outflows increased to 4.0 percent of GDP in 2022 from 3.5 percent of GDP in 2021, while they had been trending down from the peak at 6.2 percent of GDP in 2016. Net FDI and portfolio outflows made up the bulk of the 2022 financial account (2.9 percent and 1.5 percent of GDP, respectively), whereas other investment recorded net inflows (0.9 percent of GDP). Net FDI outflows increased from 2.4 percent of GDP in 2021 to 2.9 percent of GDP in 2022, driven by rising outbound direct investment, while inbound FDI moderated. Net portfolio outflows increased from 1.1 percent of GDP in 2021 to 1.5 percent of GDP in 2022, reflecting foreigners' continued equity sales and sharply decreased debt security purchases following a surge in 2021, partly offset by decreased outbound portfolio investment. **Assessment.** The present configuration of net and gross capital flows appears sustainable over the medium term: while capital outflows were mainly driven by residents' outbound direct and portfolio investment, reflecting the CA surplus and rising NIIP, inbound portfolio investment remained positive. In recent years, including in the context of Russia's invasion of Ukraine and the Federal Reserve's interest rate hike cycle, Korea has demonstrated ample capacity to absorb short-term capital flow volatility.						
FX Intervention and Reserves Level	**Background.** Korea has a floating exchange rate. Based on IMF staff estimates and published data, FX intervention since 2015 is estimated to have been two-sided. FX intervention data released by the Bank of Korea show net sales of $45.9 billion (2.8 percent of GDP) in 2022, mostly conducted in the second and third quarters of the year during periods of heightened exchange rate volatility. As of the end of 2022, reserves stood at $423 billion (25 percent of GDP). **Assessment.** Intervention has been limited to preventing disorderly market conditions. As of the end of 2022, FX reserves were about 25 percent of GDP, 2.5 times short-term debt, 6.2 months of imports, or 14 percent of M2. As such, reserves provided significant buffers against external shocks and disorderly market conditions.						

Table 3.16. Malaysia: Economy Assessment

Overall Assessment: *The external position in 2022 was stronger than the level implied by medium-term fundamentals and desirable policies.* The CA surplus, after strengthening due to pandemic-related exports, narrowed in 2022 because of a rebound in domestic demand, inventory accumulation by firms to mitigate the risk of future supply-chain disruptions, and a widening primary income deficit. Over the medium term, the CA surplus is projected to widen as pandemic-related travel restrictions are lifted, leading to an improvement in the services balance, and as imports moderate.

Potential Policy Responses: In the near term, flexibility of exchange rate should be preserved to facilitate external adjustments that are driven by fundamentals. Over the medium term, policies should be implemented to strengthen social safety nets and public health care, including through a reorientation of fiscal spending. Structural policies should be implemented to encourage private investment and improve productivity growth, including through a reduction in skills mismatch, improvements in the quality of education, and measures to improve access to credit for small and medium-sized enterprises.

Foreign Asset and Liability Position and Trajectory

Background. The NIIP has averaged about 1 percent of GDP over the last decade but increased to 5.5 percent at end-2021, supported by strong CA surpluses during the pandemic that helped increase reserve assets. As of end-2022, NIIP had declined to 3.5 percent of GDP, primarily owing to a decline in reserve assets, even as the outflow of portfolio investment led to a decline in portfolio liabilities. Total external debt declined to 64 percent of GDP in 2022, compared with 70 percent at end-2021, and remains manageable. One-third of external debt is ringgit denominated and hence not exposed to valuation risks. Short-term external debt, which accounts for 42.1 percent of external debt, is also manageable, as most of it is either in the form of intragroup borrowing (among banks and corporations, and largely stable) or trade credits (backed by export earnings).

Assessment. Malaysia's NIIP is expected to increase over the medium term, supported by projected CA surpluses. Malaysia's balance sheet strength, along with exchange rate flexibility and increased domestic investor participation, would help support resilience to a variety of shocks, including outflows associated with external liabilities.

2022 (% GDP)	NIIP: 3.5	Gross Assets: 124.5	Debt Assets: 28.1	Gross Liab.: 121.0	Debt Liab.: 24.1

Current Account

Background. After averaging about 12 percent of GDP in the first decade of this century, the CA surplus has narrowed in the last decade, driven by strong domestic demand and a decline in national savings. In 2021, the surplus was 3.8 percent of GDP, bolstered by a strong goods surplus, due to external demand for pandemic-related exports, which more than offset a large services deficit because of COVID-19-related travel restrictions. The CA surplus declined to 3.1 percent of GDP in 2022, as the growth in imports exceeded the growth in exports, despite an improvement in the services balance driven by the removal of travel restrictions. A rebound in domestic demand and firms' building of inventories to mitigate the risk of future supply-chain disruptions largely spurred the growth in imports. In addition, the income account registered a higher deficit, as investment income of foreign investors in Malaysia exceeded that of Malaysian firms' investments abroad and as outward remittances increased.

Assessment. The EBA CA model estimates a cyclically adjusted CA balance of 2.4 percent of GDP and a norm of –0.5 percent, implying a model-assessed CA gap of 2.9 percent. In addition, the IMF staff has adjusted for temporary COVID-19-related factors that amount to 1.1 percent of GDP. These include the transitory effects of lower travel receipts (1.0 percent), higher transport costs (0.3 percent), and lower outflow of remittances (–0.2 percent). The staff assess a CA gap in the range of 3.5–4.5 percent, with a midpoint estimate of 4.0 percent. Relative policy gaps partly explain the CA gap, with weaker social safety nets, proxied by health care expenditure, an increase in reserve assets, and looser fiscal policies adopted by the rest of the world relative to Malaysia contributing positively (0.6 percent, 0.5 percent, and 0.2 percent, respectively) to the excess surplus and stronger credit growth contributing negatively (–0.8 percent). The CA surplus is expected to grow over the medium term, as tourism recovers and improves the services balance.

2022 (% GDP)	CA: 3.1	Cycl. Adj. CA: 2.4	EBA Norm: –0.5	EBA Gap: 2.9	COVID-19 Adj.: 1.1	Other Adj.: 0.0	Staff Gap: 4.0

Real Exchange Rate

Background. The ringgit witnessed strong external pressures following the war in Ukraine, but these pressures have moderated in recent months. Between the start of the war in Ukraine and end-October 2022, the ringgit depreciated about 12 percent against the dollar but has strengthened since November, resulting in a depreciation of about 5 percent for the year. Over the year, the REER depreciated by 1.4 percent, even as the NEER appreciated by 0.5 percent, as inflation in Malaysia was lower compared with that in its major trading partners. As of April 2023, the REER was 1.2 percent weaker than its 2022 average.

Assessment. With a semielasticity of 0.5 employed, the IMF staff–assessed CA gap implies a REER undervaluation of 8.0 percent in 2022. The REER index and level models estimate Malaysia's REER to be undervalued by 25.2 percent and 29.3 percent, respectively. This implies that over the medium term, Malaysia's REER needs to appreciate to narrow the CA gap. The staff assesses the REER to be undervalued in the range of 7.0–9.0 percent, with a midpoint estimate of 8.0 percent.

Capital and Financial Accounts: Flows and Policy Measures

Background. 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 changes in global financial conditions and domestic factors.

Assessment. 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.

FX Intervention and Reserves Level

Background. Gross international reserves, which had increased to $116.9 billion by end-2021, had declined to $114.7 billion by end-2022. Against the backdrop of large external pressures, reserves decreased significantly following the beginning of the war in Ukraine but recovered during the latter half of the year, as external pressures eased.

Assessment. Based on the IMF's composite ARA metric, reserves declined to about 110 percent of the ARA metric at end-2022, above the adequacy threshold of 100 percent but significantly lower than 121 percent of the ARA metric at the end of the previous year. An increase in the short-term external debt partly drove this decline. The reserve coverage declined to five months of prospective imports, or about 85 percent of short-term debt. The IMF staff assesses that Bank Negara Malaysia engaged in largely two-sided FX interventions over the course of the year. There is a role for FX intervention as needed to address disorderly market conditions (DMC) and to respond to large and relevant shocks when well-identified and costly frictions are present, including as these dominate the economic benefits of letting the exchange rate remain as the sole shock absorber and may themselves give rise to DMC.

Table 3.17. Mexico: Economy Assessment

Overall Assessment: *The external position in 2022 was moderately stronger than the level implied by medium-term fundamentals and desirable policies.* Although Mexico's CA deficit widened to 1.3 percent of GDP in 2022, its adjusted external position strengthened owing to the impact of the more accommodative fiscal stance in other economies. The CA deficit is expected to hover around 1 percent of GDP in the medium term.

Potential Policy Responses: Further structural reforms to address investment obstacles are critical to boost investment and growth in the medium and long terms and to maintain external sustainability. The reforms should include tackling economic informality and governance gaps, renewing 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 employed only to prevent disorderly market conditions. The IMF's Flexible Credit Line with Mexico continues to provide an added buffer against global tail risks.

Foreign Asset and Liability Position and Trajectory	**Background.** The NIIP is projected to improve from –42 percent of GDP in 2022 to about –33 percent of GDP over the medium term, driven mainly by a decline in foreign liabilities. Foreign assets in 2022 were mostly direct investment (18 percent of GDP) and international reserves (14 percent of GDP). Foreign liabilities were mostly direct investment (50 percent of GDP) and portfolio investment (34 percent of GDP). **Assessment.** While the NIIP is sustainable and the relatively high share of local currency denomination in its 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.					
2022 (% GDP)	NIIP: –42	Gross Assets: 52	Debt Assets: 17	Gross Liab.: 94	Debt Liab.: 33	
Current Account	**Background.** The CA deficit was 1.3 percent of GDP in 2022, up from 0.6 percent in 2021, mainly reflecting a lower (by 1.1 percent of GDP) trade balance partly offset by a higher (by 0.3 percent of GDP) primary income balance. The trade balance declined as both higher oil- and non-oil imports more than offset higher exports. The decline in the CA reflected lower public savings, while the private sector showed higher savings, partly offset by higher investment. Over the medium term, the CA balance is projected to hover around a deficit of 1 percent of GDP. **Assessment.** The EBA model estimates a cyclically adjusted CA balance of –0.4 percent of GDP and a cyclically adjusted CA norm of –1.6 percent of GDP. This implies an EBA model CA gap of 1.2 percent of GDP, reflecting policy gaps (0.4 percent of GDP, mostly driven by the fiscal gap of 0.6 percent of GDP) and an unidentified residual (0.8 percent of GDP). The estimated fiscal gap of 0.6 percent of GDP reflects a relatively tighter fiscal stance than in the rest of the world. IMF staff adjustments have been made to account for the transitory impact of the COVID-19 pandemic on tourism and travel services (–0.2 percent of GDP) and the transport balance (0.7 percent of GDP). In other words, the CA would have been stronger if it were not for the impact of higher transport costs on the transport services balance. Including these adjustments, the staff assesses the midpoint CA gap at 1.7 percent of GDP, with a range of 1.2 to 2.1 percent of GDP. The estimated standard error of the CA norm is 0.5 percent of GDP.					
2022 (% GDP)	CA: –1.3	Cycl. Adj. CA: –0.4	EBA Norm: –1.6	EBA Gap: 1.2	COVID-19 Adj.: 0.4	Other Adj.: 0.0	Staff Gap: 1.7
Real Exchange Rate	**Background.** In 2022, the peso fluctuated in a relatively narrow range of about 19 to 21 pesos per dollar. Average REER in 2022 appreciated by about 5 percent compared with the 2021 average, mostly driven by a nominal appreciation, reflected in an average NEER appreciation of 4 percent in 2022 compared with the average 2021 NEER. As of April 2023, the REER was 12.9 percent above the 2022 average. **Assessment.** The IMF staff CA gap implies a REER undervaluation of about 4.9 percent (with a semielasticity of 0.34 applied). The EBA REER index and level models estimate an undervaluation of 3.8 percent and an overvaluation of 14.9 percent, respectively, in 2022. The staff's overall assessment, based on the CA gap approach, is a REER undervaluation in the range of 3.6 to 6.3 percent, with a midpoint of 4.9 percent. This assessment is subject to high uncertainty, including due to large unidentified CA model residuals.					
Capital and Financial Accounts: Flows and Policy Measures	**Background.** In 2022, Mexico recorded net financial account inflows to the tune of 0.9 percent of GDP, compared with 0.1 percent of GDP in 2021. This reflected mainly net inflows of FDI of 1.6 percent of GDP, which portfolio outflows offset somewhat. The net portfolio balance registered an outflow (0.4 percent of GDP), though lower than in the previous year (3.3 percent of GDP). **Assessment.** 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.					
FX Intervention and Reserves Level	**Background.** 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 2022, gross international reserves were $201 billion (14 percent of GDP), down from $208 billion at the end of 2021. In 2022, no FX intervention was conducted. **Assessment.** At 119 percent of the ARA metric and 257 percent of short-term debt (at remaining maturity), the level of Mexico's foreign reserves at the end of 2022 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.					

Table 3.18. The Netherlands: Economy Assessment

Overall Assessment: *The external position in 2022 was broadly in line with the level implied by medium-term fundamentals and desirable policies.* The Netherlands' status as a base for multinational corporations and as a trading hub and financial center makes the external assessment particularly challenging. After a considerable contraction in 2022, the CA surplus is expected to rebound in 2023 before shrinking moderately in the medium term as population aging and fiscal loosening reduce domestic saving.

Potential Policy Responses: To keep the external balance in line with medium-term fundamentals and desirable policies, fostering investment in physical and human capital, also by facilitating access to finance, particularly for small and medium-sized enterprises, should take priority. Against this background, the government's structural investment and reform plans to safeguard energy security, allay housing market shortages, reinforce the education system, advance the climate transition, and further promote the digitalization of the economy are welcome.

Foreign Asset and Liability Position and Trajectory

Background. The NIIP reached 75.1 percent of GDP in 2022, compared with 93.2 percent in 2021, primarily reflecting denominator effects from a 10 percent increase in nominal GDP and a rise in the net stock of other investment, which was more than offset by declines in FDI, portfolio investment, and derivatives positions. FDI remains the largest component of the IIP, accounting for more than half of external assets and liabilities, also reflecting The Netherlands' role as the seat for multinational corporations and its importance as a financial center. The relocation of Shell's headquarters to the United Kingdom in 2022 may dampen NIIP fluctuations by substituting less volatile FDI liabilities (Shell's ownership of its Dutch operations) for portfolio investment liabilities (Shell's foreign shareholders).

Assessment. The Netherlands' safe haven status and its sizable foreign assets limit risks from its large foreign liabilities.

2022 (% GDP)	NIIP: 75.1	Gross Assets: 1,042.8	Debt Assets: 242.6	Gross Liab.: 967.7	Debt Liab.: 259.5

Current Account

Background. Statistical refinements by Statistics Netherlands applied over the period 2015–21 resulted in a downward revision of the CA surplus from 9.0 percent to 7.3 percent of GDP in 2021, primarily reflecting a better alignment of earnings between corporate and national/external accounting frameworks as well as a more appropriate classification of Dutch subsidiaries of foreign companies. In 2022, the CA surplus shrank to 4.4 percent of GDP (5.5 percent cyclically adjusted) as private savings declined from a deterioration in the terms of trade, chiefly related to a surge in global inflation aggravated by Russia's war in Ukraine, as well as widespread price and cost pressures on households and corporations, while domestic demand remained strong as the economy continued to rebound from the pandemic. Moreover, the primary income balance worsened on the back of a strong rise in corporate earnings reinvested in The Netherlands and higher payouts of interest to foreign holders of debt securities. Finally, Shell's relocation of its headquarters to London is estimated to have lowered the CA surplus by an additional 0.2 percentage point. The Netherlands' role as a trading hub and financial center contributes to a structurally strong headline external position. Specifically, multinationals based in The Netherlands are recording profits at their Dutch headquarters while channeling a large part of their investment abroad in the form of FDI, keeping nonfinancial corporate saving high. Relatedly, measurement biases of portfolio equity retained earnings 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. In 2023, the CA is projected to rebound to 6.3 percent of GDP, primarily reflecting easing international price pressures and weakening domestic demand.

Assessment. The EBA CA model estimates a CA norm of 4.8 percent of GDP. Based on a cyclically adjusted CA surplus of 5.5 percent of GDP in 2022, the EBA CA gap is assessed at 0.7 percent of GDP. The CA gap is attributable to policy gaps amounting to 1.9 percent of GDP, primarily reflecting a relatively tighter fiscal stance and a negative credit gap that remains wider than those abroad. Adjustors to correct for the (temporary) effects of the COVID-19 pandemic are assessed to amount to –0.2 percent of GDP, chiefly resulting from its lingering impact on transportation services. The portfolio retained earnings bias is assessed to be –0.5 percent based on the provision of granular data by the Dutch central bank that allowed for the translation of the balance-of-payments revisions performed by Statistics Netherlands to the net savings of different segments of the corporate sector. Taking these factors into consideration, and against a norm in the range of 4.3 to 5.3 percent of GDP, the IMF staff assesses the CA gap to be in the range of –0.6 to 0.5 percent of GDP.

2022 (% GDP)	CA: 4.4	Cycl. Adj. CA: 5.5	EBA Norm: 4.8	EBA Gap: 0.7	COVID-19 Adj.: –0.2	Other Adj.: –0.5	Staff Gap: 0.0

Real Exchange Rate

Background. In 2022, the annual average CPI-based REER remained broadly stable, weakening by 0.1 percent when compared with its 2021 average. At the same time, the average ULC-based REER depreciated by 3.7 percent as corresponding labor cost increases only partly reflected elevated rates of consumer price inflation, resulting in some gains in external competitiveness. As of April 2023, the CPI-based REER was 0.8 percent above its 2022 average.

Assessment. Assuming a semi-elasticity of 0.66, the IMF staff CA gap of 0.0 percent of GDP implies a REER gap within a range of –0.8 percent (undervaluation) to 1.0 percent (overvaluation) and a midpoint of 0.1 percent. EBA REER model estimates for 2022 indicate overvaluation in a range from 15.0 percent (level model) to 27.8 percent (index model), largely reflecting unexplained residuals.

Capital and Financial Accounts: Flows and Policy Measures

Background. A considerable share 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.

Assessment. 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.

FX Intervention and Reserves Level

Background. The euro has the status of a global reserve currency.

Assessment. Reserves held by euro area economies are typically low relative to standard metrics, but the currency floats freely.

Table 3.19. Poland: Economy Assessment

Overall Assessment: *The external position in 2022 was broadly in line with the level implied by medium-term fundamentals and desirable policies.* The CA deficit widened in 2022 on account of an adverse terms-of-trade shock and a decline in saving as the fiscal deficit increased and real wages declined. Escalation of the war in Ukraine, weaker external demand, and a persistently elevated inflation outlook are the main near-term risks.

Policy Responses: In the medium term, the fiscal deficit should be reduced while increasing investment by deploying NextGenerationEU (NGEU) grants to tackle challenges related to infrastructure gaps, digitalization, and climate change. Structural policies should (1) encourage corporate investment and improve productivity, including through initiatives to increase the availability of clean energy and supply of labor; and (2) safeguard banking sector soundness and incentivize credit allocation to the private sector by redesigning the bank asset tax.

Foreign Asset and Liability Position and Trajectory

Background. The NIIP strengthened to –34 percent of GDP in 2022, from –38 percent in 2021. Gross assets, liabilities, and reserves reached about 57, 91, and 24 percent of GDP, respectively. The stock of net FDI, equivalent to 38 percent of gross external liabilities, remains diversified across sectors and source countries. Gross external debt remained stable at about 54 percent of GDP; 31 percent of debt was intercompany lending, and 70 percent was of long maturity. In 2022, short-term debt (excluding intercompany debt) amounted to 18 percent of total debt and was mainly owed by banks (currency and deposits) and the nonfinancial private sector (trade credit). Automatic debt dynamics, helped by NGEU grants, along with GDP growth, are projected to strengthen the NIIP in the medium term.

Assessment. The level of external debt is moderate, and 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 over the last decade, in both size and structure, indicating less reliance on volatile flows (portfolio and short-term financing) and more on FDI, a more stable source of financing. The level of gross reserves as a percentage of short-term debt (156 percent) is adequate and reduces residual rollover risk.

2022 (% GDP)	NIIP: –34	Gross Assets: 57	Reserve Assets: 24	Gross Liab.: 91	Gross External Debt: 54

Current Account

Background. The CA deficit widened to 3.0 percent of GDP in 2022 from a deficit of 1.4 percent in 2021. The external balance in 2022 was characterized by (1) an increasing trade deficit due to terms-of-trade shocks; (2) a continued solid services surplus; (3) a stable primary income deficit, which attests to the profitability of foreign firms and strong reinvested earnings; (4) consumption by refugees, driving domestic demand; and (5) strong FDI inflows. In the near term, the CA deficit is set to narrow as adverse shocks fade and domestic demand slows. Over the medium term, the CA deficit is projected to decline to 2 percent as terms-of-trade shocks fade, with the continued CA deficit driven by EU fund inflows and higher military spending, which will increase imports. Sectoral savings-investment balances are projected to increase as the fiscal deficit declines, household saving increases as real wages recover, and corporate investment moderates as inventories normalize.

Assessment. The EBA CA model estimates a cyclically adjusted CA of –1.8 percent of GDP measured against a CA norm of –2.7 percent of GDP, with a standard error of 0.5 percent of GDP. An adjustment of –0.1 percent of GDP to the cyclically adjusted CA balance has been made for the transport COVID-19 adjustor. The resulting staff CA gap of 0.9 (±0.5) percent of GDP includes identified policy gaps of 1.9 percent of GDP and an unexplained residual of –1.0 percent of GDP.

2022 (% GDP)	CA: –3.0	Cycl. Adj. CA: –1.8	EBA Norm: –2.7	EBA Gap: 1.0	COVID-19 Adj: –0.1	Other Adj.: 0	Staff Gap: 0.9

Real Exchange Rate

Background. The annual average of the NEER depreciated by 3.6 percent in 2022, while the REER appreciated by 1.1 percent compared with the 2021 average, as inflation in Poland was higher than in its trading partners. In 2022, the zloty depreciated by 15.4 and 2.6 percent against the dollar and euro, respectively, compared with the 2021 average. As of April 2023, the REER was 8.9 percent above the 2022 average.

Assessment. The EBA REER index and level models estimate an REER gap of 2.7 and –19.0 percent, respectively. Consistent with the staff CA gap, the 2022 REER gap is assessed in a range from –3.1 to –1.0 percent, with a midpoint of –2.0 percent (when an estimated elasticity of 0.43 is used).

Capital and Financial Accounts: Flows and Policy Measures

Background. The capital account surplus declined to 0.3 percent of GDP in 2022 from 0.7 percent in 2021. Over the medium term, the capital account surplus is projected to stabilize around 0.5 percent of GDP, supported by EU inflows. FDI inflows have almost doubled since 2019, reaching 4.0 percent of GDP on a net basis in 2022. The largest sources of the inward FDI stock have been France, Germany, Luxembourg, and The Netherlands. Financial account inflows amounted to 4.4 percent of GDP in 2022. Foreign holdings of domestic government securities have declined continuously and significantly since 2016—reducing vulnerability to capital outflows—and by the end of 2022 represented 16.9 percent of the total (4.8 percent of GDP).

Assessment. The capital account is projected to remain a strong source of support for investment, reflecting EU cooperation frameworks. The diversified foreign investor base is also a mitigating factor, and the central bank has the tools to manage bouts of volatility.

FX Intervention and Reserves Level

Background. FX reserves increased by about $645 million in 2022 to $167 billion. Net reserves, which net out the central bank's repo operations (part of its reserve management strategy) and government FX deposits, stood at about $146 billion at the end of 2022, reflecting in part the central bank's conversion of a portion of EU funds received by the government to zloty. While the central bank briefly intervened in FX markets in March 2022 in the context of disorderly market conditions at the beginning of the war in Ukraine, the zloty is free floating.

Assessment. At about 157 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.

Table 3.20. Russia: Economy Assessment

Overall Assessment: *The external position in 2022 was stronger than the level implied by medium-term fundamentals and desirable policies.* However, the models do not account for Russia's idiosyncratic situation. In particular, (1) because of sanctions, large CA surpluses may not translate easily into an accumulation of readily accessible foreign assets in reserve currencies; and (2) on a forward-looking basis, the sanctions may lead to a permanent decline in the CA surplus relative to a nonsanctions scenario. Moreover, the range of uncertainty surrounding the estimates is exceptionally large.

Foreign Asset and Liability Position and Trajectory	**Background.** The NIIP stood at $762 billion or 34.4 percent of GDP at the end of 2022, which is slightly below its peak of 34.7 percent of GDP in 2020 but remained well above its 2018 level (23 percent of GDP). In 2022, both gross assets and gross liabilities fell sharply to 72 and 37.6 percent of GDP, respectively, from their 2021 levels (90 and 64 percent of GDP, respectively). External debt declined sharply as well, reaching 17 percent of GDP at end-2022, down from 27 percent of GDP at end-2021. As of end-2022, about one-third of the external debt was in domestic currency, and there were no obvious maturity mismatches between its gross asset and liability positions. The share of nonresidents' holdings of domestic government debt has fallen sharply, from 32.2 percent at the end of 2019 to 9.7 percent in February 2023.				
	Assessment. Before Russia's war in Ukraine, 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. It should be noted, however, that an unknown share of international reserves is currently frozen due to sanctions; sanctions also likely explain why last year's record CA surplus did not translate into higher reserves.				
2022 (% GDP)	NIIP: 34.4	Gross Assets: 72	Res. Assets: 26.0	Gross Liab.: 37.6	Debt Liab.: 17

Current Account	**Background.** In 2022, the CA surplus reached a record $233 billion (10.4 percent of GDP) versus $122 billion (6.9 percent of GDP) in 2021, reflecting highly favorable terms of trade, resilient oil export volumes, and lower imports reflecting the sanctions and recession. This year, the surplus is projected to decline sharply to $75.1 billion (3.6 percent of GDP), owing to lower effective oil prices and much lower gas prices, as well as a recovery of imports. The range of uncertainty surrounding the projections is exceptionally large, however.						
	Assessment. The EBA CA model estimates a norm of 4.0 percent of GDP for 2022 and a cyclically adjusted CA surplus of 6.7 percent of GDP. After a multilateral COVID-19 adjustment of –0.4 percent of GDP, reflecting a temporary adjustment for tourism service imports (–0.6 percent of GDP) and transportation services (0.2 percent of GDP), the IMF staff assesses the CA gap at 2.3 percent of GDP, with a range from 1.2 to 3.4 percent of GDP. Identified policies contributed –0.8 percent of GDP to the gap. However, the models do not account for Russia's idiosyncratic situation. In particular, (1) because of sanctions, large CA surpluses may not easily translate into an accumulation of readily accessible foreign assets in reserve currencies; and (2) on a forward-looking basis, the sanctions may lead to a permanent decline in the CA surplus relative to a nonsanctions scenario. Moreover, the range of uncertainty surrounding the CA gap estimates is exceptionally large.						
2022 (% GDP)	CA: 10.4	Cycl. Adj. CA: 6.7	EBA Norm: 4.0	EBA Gap: 2.7	COVID-19 Adj.: –0.4	Other Adj.: 0.0	Staff Gap: 2.3

Real Exchange Rate	**Background.** Since Russia's invasion of Ukraine, the ruble has been very volatile: at first, it depreciated by some 50 percent against the dollar, amid a selloff in Russian assets, but then it appreciated sharply in the face of sharp CA inflows, retracing all its losses and exceeding the value that prevailed before the war in Ukraine. As a result, the REER appreciated in 2022 by 31 percent (average) and 53 percent (at the end of the period). In 2023, the ruble has reversed some of its previous gains. As a result, the REER depreciated by about 20 percent between December 2022 and April 2023. As of April 2023, the REER was 7.1 percent below the 2022 average.
	Assessment. The IMF staff CA gap implies a REER undervaluation of 13.6 percent (midpoint) in 2022 (with an estimated elasticity of 0.17 applied). The EBA REER index model points to a REER overvaluation of 5.7 percent, while the EBA REER level model points to a REER undervaluation of 4.7 percent. Consistent with the staff CA gap, the staff assesses the REER as undervalued in 2022 in the range of 7.1 to 20.2 percent, with a midpoint of 13.6 percent. However, as indicated above, the models do not account for Russia's idiosyncratic situation.
Capital and Financial Accounts: Flows and Policy Measures	**Background.** In 2022, the Central Bank of Russia increased the interest rate to 20 percent and introduced broad capital flow measures to stave off capital outflows, including, among other things, a ban on selling securities by nonresidents, a ban on FX lending to nonresidents, and restrictions on the ability of nonresidents to transfer money abroad. It has since reversed most of these measures. Net private capital outflows reached $240 billion (10.6 percent of GDP) in 2022, well above their levels during crises in 1998, 2008, and 2014 (7.5–9 percent of GDP). Outflows were mostly concentrated in the first half of the year and were on a declining trend in the second half of the year. Notably, a meaningful part of these outflows appears to have gone toward a repayment of foreign liabilities by Russian firms.
	Assessment. In recent years, large FX reserves and the floating exchange rate regime have provided substantial buffers to help absorb shocks. Last year saw large capital outflows despite capital flow measures, but a meaningful part of these outflows appears to have been in the form of repayment of FX liabilities as a way of retaining buffers in the face of sanctions.
FX Intervention and Reserves Level	**Background.** In 2022, reserves fell by $48.6 billion to $582.0 billion from their end-2021 level despite a very large CA surplus, likely reflecting constrained reserves accumulation under sanctions. The fiscal rule was also abandoned and later replaced with a new rule, reducing budget-related FX operations. The decline in the stock of reserves in 2022 reflects the central bank's sales of foreign currency to support the ruble ($10.6 billion in the first quarter, partly offset by FX purchases of $3 billion for the rest of the year) and valuation changes.
	Assessment. As of end-2022, international reserves stood at 299.9 percent of the IMF's reserve adequacy metric. Considering Russia's vulnerability to oil price shocks, an additional commodity buffer of $96 billion is appropriate, translating into a ratio of reserves to the buffer-augmented ARA metric of 200.4 percent. While published reserves are considerably above this level, it should be noted again that because of sanctions, a share of these international reserves has been frozen, complicating any assessment of reserve adequacy.

Table 3.21. Saudi Arabia: Economy Assessment

Overall Assessment: *The external position in 2022 was substantially stronger than the level implied by medium-term fundamentals and desirable policies.* The external balance sheet remains strong. Reserves remain adequate according to standard IMF metrics. Under the current fiscal balance path, the central government's non-oil primary balance is expected to be on an improving trend. Given the economy's structure, the pegged exchange rate continues to provide Saudi Arabia with a credible policy anchor.

Potential Policy Responses: With the projected normalization of oil exports, the gap is expected to diminish. The ambitious structural reform agenda, as part of Vision 2030, to help diversify the economy, lift productivity, and boost the non-oil tradable sector, will be accompanied by a sizeable investment program, including by the Public Investment Fund (PIF), Saudi Arabia's SWF. These factors will reduce the current gap and help align the external position in the medium term. Continued fiscal reforms to avoid procyclical fiscal policy amid high hydrocarbon windfalls will be important, which includes delinking spending decisions from international oil price fluctuations while implementing a medium-term fiscal framework. Important structural fiscal reforms have been initiated over the past few years, including non-oil revenue mobilization, broad-based improvement of public financial management, and energy price reform. Risks associated with industrial policies should be minimized, while discriminatory policies should be avoided as they could create distortions in the allocation of resources and elicit retaliatory actions by trade partners.

Foreign Asset and Liability Position and Trajectory	**Background.** Net external assets are estimated at 61.5 percent of GDP at the end of 2022, down from 71.2 percent of GDP in 2021. While net external assets increased from US$618 billion to US$682 billion, nominal GDP expanded by a larger magnitude due to high oil prices. In the medium term, the NIIP is expected to stabilize at 63.8 percent of GDP. Only broad categories are available on the composition of external assets. Portfolio and other investments, reserves, and FDI, respectively, account for 53 percent, 35 percent, and 13 percent of total external assets. **Assessment.** The external balance sheet remains very strong. Substantial accumulated assets represent both protection against vulnerabilities from oil price volatility and savings of exhaustible resource revenues for future generations.

2022 (% GDP)	NIIP: 61.5	Gross Assets: 119.3	Res. Assets: 41.5	Gross Liab.: 57.8	Debt Liab.: 24.2

Current Account	**Background.** The CA balance registered a surplus of 13.6 percent of GDP in 2022, compared with a surplus of 5.1 percent in 2021. The trade balance improved by 9.1 percent of GDP as the price and volume of oil exports increased in 2022. The terms of trade improved by 28.9 percent during the year. For the projections, oil production is assumed to follow the OPEC+ (Organization of the Petroleum Exporting Countries, including Russia and other non-OPEC oil exporters) agreement, with a decline in 2023. The CA is expected to register a surplus in 2023 (around 6 percent of GDP) as oil export revenues decline relative to 2022, in part because of lower oil price projections (the terms of trade are projected to deteriorate by around 22 percent) in 2023. **Assessment.** The IMF staff assesses a CA gap of 4.7 percent of GDP using the EBA-Lite CA model, although the overall assessment is subject to significant model uncertainty due to the idiosyncratic characteristics of the Saudi Arabian economy. Saudi Arabia's reliance on oil complicates the application of standard external assessment methodologies, given the wide swings of oil prices between 2020 and 2022. Oil prices increased substantially, in part due to the war in Ukraine, thus rendering a large surplus. This increase is partially captured in the cyclical adjustment component (1.1 percent of GDP). Additional cyclical considerations factoring in the transitory impacts of the COVID-19 pandemic on travel and transport services are assessed to be near 0. The Consumption Allocation Rules suggest a CA gap of 0.3 percent of GDP for constant real annuity rules and –2.6 percent of GDP for constant real per capita annuity allocation rules. The Investment Needs Model suggests a CA gap of 14.4 percent of GDP. The estimated CA gap of 4.7 percent of GDP has an estimated range from 2.2 to 7.2 percent of GDP.[1]

2022 (% GDP)	CA: 13.6	Cycl. Adj. CA: 12.5	EBA Norm: —	EBA Gap: —	COVID-19 Adj.: 0.0	Other Adj.: —	Staff Gap: 4.7

Real Exchange Rate	**Background.** The riyal has been pegged to the US dollar at a rate of 3.75 since 1986. On average, the REER appreciated by 4.1 percent in 2022 and was 5 percent above its 10-year average, while the NEER appreciated by 8.7 percent in 2022. The NEER appreciation was mainly driven by the appreciation of the US dollar versus third currencies and with inflation less than in its trading partners, Saudi Arabia's REER appreciation was less than that of its NEER. As of April 2023, the REER was 0.2 percent below the 2022 average. **Assessment.** Exchange rate movements have a limited impact on Saudi Arabia's competitiveness in the short term, as most of its exports are oil or oil-related products that are denominated in dollars. There is limited substitutability between imports and domestically produced products, which in turn have significant imported labor and intermediate-input content. The EBA-Lite REER model suggests an overvaluation of 11.2 percent. Consistent with the IMF staff CA gap and based on an elasticity of 0.2, the staff assesses the REER to be undervalued by 21.6 percent, with a range of –9.1 to –34.1 percent.
Capital and Financial Accounts: Flows and Policy Measures	**Background.** Net financial outflows continued in 2022 as the PIF and other entities invested abroad. **Assessment.** A lack of detailed information on the nature of financial flows in Saudi Arabia complicates analysis of its financial account. The strong reserves position, including the sizable assets of the PIF, limits risks and vulnerabilities to capital flows.
FX Intervention and Reserves Level	**Background.** The PIF's investments abroad are increasing, although most of the government's foreign assets are still held at the central bank within international reserves. Net foreign assets increased to $440.5 billion (39.7 percent of GDP, 19.4 months of imports, and 231 percent of the ARA metric) at the end of 2022, down from $438.2 billion at the end of 2021 (and from $730 billion in 2014). This trend was, in part, driven by financial outflows. Reserves are expected to stabilize at about 14 months of imports in the medium term. **Assessment.** Reserves play a dual role: they are savings for both precautionary motives and future generations. Reserves are adequate for precautionary purposes (measured by the IMF's metrics). Buffers are also provided by external assets held by the PIF and national oil company. Nevertheless, fiscal prudence is needed over the medium term to strengthen the CA and increase savings for future generations.

Table 3.22. Singapore: Economy Assessment

Overall Assessment: *The external position in 2022 was substantially stronger than the level implied by medium-term fundamentals and desirable policies.* This assessment is subject to a wide range of uncertainty, however, reflecting Singapore's very open economy and status as a global trading and financial center. 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 that is actively saving for retirement declines, a recovery of capital-related imports, and higher public spending.

Potential Policy Responses: The planned execution of major green infrastructure projects and provision of assistance to vulnerable households 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 to address these matters, including spending on health care, green and other physical infrastructures, and human capital, would help reduce external imbalances over the medium term by lowering net public saving.

Foreign Asset and Liability Position and Trajectory	**Background.** The NIIP stood at 176.1 percent of GDP in 2022, down from 223 percent of GDP in 2021 and below the average level of 237.1 percent of GDP in 2017–21. Gross assets and liabilities are high, reflecting Singapore's status as a financial center. About half of foreign liabilities are in FDI, and about one-fifth are in the form of currency and deposits. The CA surplus has been the main driver of the NIIP since the global financial crisis, but valuation effects have been material in some years, driven mainly by the appreciation in S$ NEER as the Monetary Authority of Singapore tightened its exchange rate-based monetary policy. 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. **Assessment.** Large gross non-FDI liabilities (442 percent of GDP in 2022)—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.

2022 (% GDP)	NIIP: 176.1	Gross Assets: 1,125.5	Res. Assets: 62	Gross Liab.: 949.4	Debt Liab.: 332.2

Current Account	**Background.** The CA surplus was 19.3 percent of GDP in 2022, up from 18 percent in 2021. This increase mainly reflects a larger surplus in the services balance, in particular transport services, owing to significant hikes in freight rates arising from COVID-19 led disruptions in supply chains. The 2022 CA balance is higher than the average of 17.3 percent since 2017 and slightly 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.[1] 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 (whose assets were about 84.7 percent of GDP in 2022)—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 2022, public saving increased as the fiscal deficit narrowed further, following an unprecedented COVID-related stimulus, while private saving decreased slightly. **Assessment.** Guided by the EBA framework, the IMF staff assesses the 2022 CA gap to be in the range of 3.3–6.9 percent of GDP, with a midpoint of 5.1 percent.[2] The identified policy gaps remained close to zero in 2022, reflecting a more contractionary fiscal policy adopted in 2022 in Singapore compared with the rest of the world and low but efficient public health care expenditure.

2022 (% GDP)	CA: 19.3	Cycl. Adj. CA: 21.8	EBA Norm: —	EBA Gap: —	COVID-19 Adj.: –3.1	Other Adj.: —	Staff Gap: 5.1

Real Exchange Rate	**Background.** The REER appreciated by 6 percent in 2022, reflecting the appreciation of the NEER by 4.3 percent. This appreciation followed a cumulative depreciation of the REER by 3 percent and a cumulative depreciation of the NEER by 1.8 percent between 2019 and 2021. As of April 2023, the REER had appreciated by 6.1 percent relative to its 2022 average. **Assessment.** Consistent with the staff CA gap, the IMF staff assesses the REER to be undervalued in a range from 6.6 to 13.8 percent, with a midpoint of 10.2 percent (with an estimated elasticity of 0.5 applied).[3]
Capital and Financial Accounts: Flows and Policy Measures	**Background.** Singapore has an open capital account. As it is a trade and financial center in Asia, changes in market sentiment can affect Singapore significantly. 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 2022, the capital and financial account featured large outflows of 43.4 percent of GDP, up from 2 percent in 2021 (outflows ranged from 2 to 19.1 percent in 2017–21). **Assessment.** The financial account is likely to remain in deficit as long as the trade surplus remains large.
FX Intervention and Reserves Level	**Background.** With the NEER as the intermediate monetary policy target, intervention is undertaken to achieve inflation and output objectives. As Singapore is a financial center, prudential motives call for a larger NIIP buffer. Official reserves held by the Monetary Authority of Singapore reached $289.5 billion (62 percent of GDP) in 2022.[4] Aggregate data on FX intervention operations have been published (with a six-month lag) since April 2020. **Assessment.** In addition to FX reserves held by the Monetary Authority of Singapore, Singapore also has access to other official foreign assets managed by Temasek and GIC.[5] 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.

Table 3.23. South Africa: Economy Assessment

Overall Assessment: *The external position in 2022 was moderately weaker than the level implied by medium-term fundamentals and desirable policies.* After the exceptional CA surplus in 2021 (3.7 percent of GDP) thanks to high commodity prices and a number of temporary pandemic-related factors, the CA declined sharply to a small deficit in 2022. The CA deficit is expected to sizably worsen in 2023 on the back of softer commodity prices, weaker external demand, and higher energy-related capital imports.

Potential Policy Responses: Tackling external imbalances will require a combination of bold implementation of structural reforms and stronger fiscal consolidation under a credible medium-term framework, while providing space for critical infrastructure investment and well-targeted 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 further boost exports. Seizing opportunities to accumulate international reserves, should they arise, would strengthen the country's ability to deal with shocks. A flexible rand exchange rate should remain the main shock absorber.

Foreign Asset and Liability Position and Trajectory	**Background.** With large gross external assets and liabilities (131.4 and 114.2 percent of GDP, respectively, at the end of 2022), South Africa is highly integrated into international capital markets. Its NIIP fell from 26.3 percent of GDP in 2021 to 17.2 percent of GDP in 2022, mainly due to valuation adjustments from lower share prices in foreign assets and despite nonresident capital outflows, which reduce NIIP liabilities. The NIIP surplus is expected to continue falling over the medium term, as the CA balance is projected to return to a deficit in 2023 and beyond. Gross external debt declined sharply, from 50.5 percent of GDP in 2020 to 38.3 percent of GDP in 2021 (as GDP recovered), and increased slightly to 40.6 percent of GDP in 2022. Short-term external debt (on a residual-maturity basis) rose from about 10 percent of GDP in 2021 to 12.2 percent of GDP in 2022. **Assessment.** Risks from large gross external liabilities are mitigated by a large external asset position and the composition of its liabilities (mostly in equities, and with a significant share of external debt in rand).						
2022 (% GDP)	NIIP: 17.2	Gross Assets: 131.4	Debt Assets: 16.4	Gross Liab.: 114.2	Debt Liab.: 40.6		
Current Account	**Background.** The CA deficit turned into a surplus for the first time in nearly two decades in 2020, reaching 2 percent of GDP, owing to pandemic-related factors. The CA surplus then further increased to 3.7 percent of GDP in 2021, as continued buoyancy in terms of trade and commodity exports more than offset higher imports from a recovery in domestic demand. However, the CA sharply declined in 2022, to –0.5 percent of GDP, as commodity prices sizably fell from their peak (except coal prices), export supply bottlenecks (domestic ports and railways) worsened, external demand softened, and import demand stayed strong. In addition, private investment remained subdued in 2022. The CA is projected to move to a sizable deficit of 2.3 percent of GDP in 2023 and to deteriorate slightly further in 2024, on the back of softer commodity prices, weaker external demand, and higher energy-related capital imports. The deficit is expected to improve to about 2 percent of GDP over the medium term as these factors dissipate and logistical constraints are alleviated. **Assessment.** The IMF staff estimates a CA gap in the range of –2.0 to –0.5 percent of GDP in 2022 (the point estimate is –1.3 percent of GDP). The staff's cyclically adjusted CA is estimated at –1.4 percent of GDP in 2022. The assessment accounts for COVID-19-related adjustors of 0.2 percent of GDP, which capture the lingering impact of the pandemic on exports of precious minerals (–0.6 percent), travel services (including tourism) (0.5 percent), transportation (0.5 percent), and the income balance (which remains below pre-pandemic levels) (–0.2 percent),[1] as well as the statistical treatment of transfers and income accounts.[2] The adjusted CA norm for 2022 (1.6 percent of GDP) is obtained by subtracting 0.6 percentage point from the EBA CA norm (2.2 percent of GDP) to reflect lower life expectancy relative to other countries in the regression sample.[3]						
2022 (% GDP)	CA: –0.5	Cycl. Adj. CA: –1.4	EBA Norm: 2.2	EBA Gap: –3.6	COVID-19 Adj.: 0.2	Other Adj.: 2.1	Staff Gap: –1.3
Real Exchange Rate	**Background.** After depreciating during 2019–21, the CPI-REER appreciated by 3.4 percent overall during 2022, but it depreciated about 5.3 percent during the second half of 2022, mainly driven by nominal depreciation from a worsening external environment. As of April 2023, the REER was 9.1 percent below the 2022 average. **Assessment.** The IMF staff CA gap implies an overvalued REER with a midpoint of 5.0 percent, for 2022 (with an estimated elasticity of 0.25 applied). The REER-based regression points to overvaluation of 12.8 percent (level approach) but to a marginal undervaluation of 3.5 percent (index approach). Based on the CA approach, the staff assesses the REER to be overvalued by 5.0 percent, with a range of 2.1 to 7.9 percent.						
Capital and Financial Accounts: Flows and Policy Measures	**Background.** Net FDI inflows decreased significantly in 2022 (from 9.8 percent of GDP in 2021 to 1.6 percent in 2022), while net portfolio investment recorded substantially smaller outflows in the same period (–1.0 percent of GDP compared with –13 percent in 2021).[4] Gross external financing needs stood at 12.5 percent of GDP in 2022, up somewhat from 10.3 percent in 2021. **Assessment.** In 2022, financial market volatility in emerging markets persisted due to the war in Ukraine and tighter global financial conditions. South Africa witnessed capital outflows and a depreciation of the rand against the US dollar of 6.4 percent. Risks from a traditionally large reliance on non-FDI inflows for external financing and still-sizable nonresident holdings of local financial assets are mitigated by relatively small currency mismatches in the economy, a large equity liability composition of the NIIP, and a large domestic institutional investor base. The last of these tends to reduce asset price volatility during periods of market stress.						
FX Intervention and Reserves Level	**Background.** South Africa's exchange rate regime is classified as floating. Central bank intervention in the FX market is rare. At the end of 2022, international reserves were about 14.9 percent of GDP, 117.3 percent of gross external financing needs, and 4.9 months of imports. International reserves stand below the threshold suggested by the IMF's composite adequacy metric (89.5 percent of the metric, without existing CFM measures considered, and 99.5 percent of the metric with those measures considered). **Assessment.** If conditions allow, international reserve accumulation would be desirable over the medium term to strengthen the external liquidity buffer, subject to maintaining the primacy of the inflation objective.						

Table 3.24. Spain: Economy Assessment

Overall Assessment: *The external position in 2022 was broadly in line with the level implied by medium-term fundamentals and desirable policies.* IMF staff assesses Spain's CA norm to be relatively high owing to external sustainability risks from a still-large negative NIIP. Even though the NIIP continued to improve in 2022, strengthening it further will require sustaining a relatively high CA surplus in coming years. In the baseline, the CA balance is projected to recover to 1.6 percent of GDP in the medium term, supported by a rebound of external demand, further easing of manufacturing supply bottlenecks, and recent and prospective declines in energy prices.

Potential Policy Responses: Sustained fiscal consolidation efforts and higher private savings (relative to the pre-COVID-19 average) in the medium term will increase the likelihood that Spain will keep its CA balance in line with its norm. The increase in income to boost private saving could be achieved through productivity gains, which will require actions to enhance education outcomes, encourage innovation, and improve energy efficiency. Spain's recovery plan foresees investments and reforms in these areas, as well as specific measures to diversify and improve the quality of tourism services, but adequate implementation and ex post evaluation remain critical for success.

Foreign Asset and Liability Position and Trajectory	**Background.** The NIIP continued to improve in 2022 and reached –60.5 percent of GDP by the end of the year. This trajectory reflects a larger decrease in gross liabilities than in assets (as a percentage of GDP). Gross liabilities—of which nearly 70 percent correspond to external debt—had declined to 259.3 percent of GDP by the end of 2022. The negative NIIP is largely attributed to the general government and the central bank, with TARGET2 liabilities amounting to 35.6 percent of GDP by December 2022. **Assessment.** Despite its projected decline, the large negative NIIP comes with external vulnerabilities, including those from large gross financing needs, which could be affected by the pace of tightening of global financial conditions and policy responses. Mitigating factors include the favorable maturity structure of outstanding sovereign debt (averaging almost eight years) and the limited share of debt denominated in foreign currency (10.9 percent of total external debt).						
2022 (% GDP)	NIIP: –60.5	Gross Assets: 198.9	Debt Assets: 95.2	Gross Liab.: 259.3	Debt Liab.: 157.3		
Current Account	**Background.** The CA surplus deteriorated from 1.0 percent of GDP in 2021 to 0.6 percent of GDP in 2022. A strong recovery in services trade, notably tourism, was not enough to offset a surge in energy import prices. Higher public savings and a decline in private investment—including due to higher uncertainty and tighter financial conditions—were not enough to counterbalance the rise in public investment and a drawdown of excess private savings generated during the pandemic. Looking forward, slow export growth due to subdued growth prospects among trading partners, still-high (albeit declining) energy prices, and sustained nonenergy imports associated with NextGenerationEU investments will likely keep the trade balance subdued through 2024. In the medium term, the CA is projected to gradually recover, supported by a rebound of external demand, further easing of manufacturing supply bottlenecks, and recent and prospective declines in energy prices. **Assessment.** The 2022 cyclically adjusted CA balance is 1.4 percent of GDP. COVID-19 adjustors are estimated to be 0.05 for transport and 0.18 for travel services on account of tourism receipts remaining below precrisis levels despite their strong recovery in 2022. When these adjustments are incorporated, the 2022 cyclically adjusted CA balance is 1.7 percent of GDP, which is larger than the norm suggested by the EBA CA model. Given external sustainability considerations, including risks of adverse NIIP valuation effects, the IMF staff assesses the CA norm to be 1.0 percent of GDP, with a range of 0.2 to 1.8 percent of GDP. This yields a CA gap range of –0.1 to 1.5 percent of GDP, with a midpoint of 0.7 percent of GDP.[1]						
2022 (% GDP)	CA: 0.6	Cycl. Adj. CA: 1.4	EBA Norm: –0.1	EBA Gap: 1.5	COVID-19 Adj.: 0.2	Other Adj.: –1.1	Staff Gap: 0.7
Real Exchange Rate	**Background.** In 2022, Spain's CPI- and ULC-based REERs depreciated by 1.1 and 4.2 percent, respectively, offsetting some of the appreciation that had occurred in recent years. This depreciation adds to the overall depreciation trend observed since 2009, which has almost fully reversed the large appreciation in 1999–2008. As of April 2023, the CPI-based REER was 0.2 percent above the 2022 average. **Assessment.** The EBA REER models estimate an overvaluation of 10.6 percent (index) to 29.2 percent (level) for 2022. Based on the IMF staff CA gap range and using an elasticity of 0.31, the staff assesses the REER gap range to be –4.7 to 0.4 percent, with a midpoint of –2.2 percent.[2]						
Capital and Financial Accounts: Flows and Policy Measures	**Background.** The capital account surplus has remained high as a result of flows associated with NextGenerationEU funds. The financial account balance remained broadly unchanged at 1.8 percent of GDP in 2022 (it was 1.9 percent of GDP in 2021). Net outflows in other investment offset net inflows in portfolio investment, with limited impact from direct investment and financial derivatives. The behavior of other investment was largely driven by one-off repo operations by banks. **Assessment.** Large external financing needs leave Spain vulnerable to sustained market volatility, especially in a context of tighter global financial conditions.						
FX Intervention and Reserves Level	**Background.** The euro has the status of a global reserve currency. **Assessment.** Euro area economies typically hold low reserves relative to standard metrics, but the currency is free floating.						

Table 3.25. Sweden: Economy Assessment

Overall Assessment: *The external position in 2022 was stronger than the level implied by medium-term fundamentals and desirable policies.* This is despite a drop in the CA surplus by 2.2 percentage points to 4.3 percent of GDP. A projected downswing in 2023 and subsequent recovery are expected to bring the surplus further down before stabilizing at its long-term average of about 4 percent.

Potential Policy Responses: As inflation recedes, Sweden will have scope to increase private and public investment in the green transition and the health sector. This would lower the external balance besides helping meet Sweden's ambitious climate goals and prepare it for demographic challenges.

Foreign Asset and Liability Position and Trajectory	**Background.** The NIIP reached 39.8 percent of GDP in 2022, an increase of 16 percentage points, helped by net valuation gains (about 11.5 percent of GDP) and a CA surplus. Gross liabilities decreased to 284.8 percent of GDP in 2022, with more than half being gross external debt (172 percent of GDP). Other financial institutions (71.5 percent of GDP) hold the bulk of Sweden's net foreign assets, followed by its social security funds (20.1 percent of GDP), households (17 percent of GDP), and the Riksbank (7 percent of GDP), while nonfinancial corporations (31 percent of GDP), monetary financial institutions (42 percent of GDP), and the general government (2.4 percent of GDP) are net external debtors. Fifty percent of the NIIP is in foreign currency. **Assessment.** The NIIP is expected to firm further in the medium term, reflecting an outlook for continued CA surpluses. Sweden's foreign currency assets are almost three times as high as its foreign currency liabilities, providing a hedge against currency valuation changes. These estimates are subject to uncertainty, however, as IIP data typically include errors and omissions that have averaged greater than 2 percent of GDP in the past decade. Although rollovers of external debt (which include banks' covered bonds) introduce some vulnerability, risks are moderated by banks' ample liquidity and large capital buffers. The NIIP level and trajectory do not raise sustainability concerns.						
2022 (% GDP)	NIIP: 39.8	Gross Assets: 324.6	Debt Assets: 86.8	Gross Liab.: 284.8	Debt Liab.: 134.6		
Current Account	**Background.** The CA dropped to 4.3 percent of GDP in 2022 from 6.5 percent of GDP in 2021, on the back of slightly lower net exports of goods and high recovery-driven imports of services. In 2022 gross savings increased by 0.1 percentage point to stand at 32.4 percent of GDP, while gross investment increased by 2.3 percentage points to 28.1 percent of GDP, with the private sector mainly driving the slowdown in gross savings growth. Sweden continues to be a net oil importer, with the oil deficit remaining at –1 percent of GDP. Over the medium term, the CA is projected to return to its long-term average. **Assessment.** The cyclically adjusted CA is estimated at 5 percent of GDP in 2022, 4.2 percentage points above the cyclically adjusted EBA norm of 0.8 percent of GDP. However, the estimated EBA norm is low and continues to be 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, may also be driving Sweden's savings-investment balances. Considering temporary COVID-19 adjustment for travel of –0.3 percent of GDP (transport adjustor is 0 percent of GDP), the staff assesses the CA gap to be 3.8 percent of GDP in 2022, with a model-estimated range of 3.4 to 4.3 percent of GDP (using the model's standard error of ± 0.4 percent of GDP). Policies that would explain this gap make up 1 percentage point, with fiscal policy, which was more contractionary compared to the rest of the world, accounting for 1.1 percent, while the contributions of health, reserves, and credit gaps accounted for –0.2, 0.2 and 0 percent, respectively. Complementary EBA tools suggest that Sweden's pension system could explain about 1 percentage point of the gap.						
2022 (% GDP)	CA: 4.3	Cycl. Adj. CA: 5.0	EBA Norm: 0.8	EBA Gap: 4.2	COVID-19 Adj.: –0.3	Other Adj.: 0.0	Staff Gap: 3.8
Real Exchange Rate	**Background.** In 2022, the krona depreciated by about 6.7 percentage points in real effective terms (Organisation for Economic Co-operation and Development (OECD)–ULC based) relative to its 2021 average. As of April 2023, the CPI-based REER was 0.8 percent below its 2022 average. **Assessment.** The staff CA gap implies a REER gap of –10.3 percent (with an estimated elasticity of 0.37 applied). The REER index and level models suggest a gap of –15.9 percent and –17.0 percent, respectively, for 2022. The ULC-based REER index using OECD data depreciated and was about 9.7 percent below its 30-year average (since the krona was floated in 1993) over the course of 2022. Because this indicator has fluctuated around a broadly stable level, it provides a useful indication of valuation. Overall, the staff assesses the krona to be undervalued by between –4.0 to –15.4 percent, with a midpoint of –9.7 percent, as guided by the ULC-based REER index.[1]						
Capital and Financial Accounts: Flows and Policy Measures	**Background.** The financial account fell by 5.0 percentage points in 2022 to 3.1 percent of GDP. The change in net outflows was mainly driven by a drop in portfolio investments from 10.3 to –1.7 percent of GDP (caused by a decrease in long-term debt securities) while direct investments improved from 1.1 to 2.5 percent of GDP. **Assessment.** Large changes in capital flows are common in countries with large financial sectors such as Sweden, where the banking sector is nearly three times GDP. Strong financial regulation, supervision, and a sound financial sector can mitigate risk. According to the recent Financial System Stability Assessment for Sweden, the banking system is expected to be resilient to large liquidity shocks despite its substantial share of wholesale funding.						
FX Intervention and Reserves Level	**Background.** The exchange rate has been freely floating since 1993, and there have not been any interventions since 2002. Foreign currency reserves increased slightly to $67.5 billion in 2022 (reflecting increases in the IMF reserve position and loans to nonbank residents), approximately equivalent to 15 percent of the short-term external debt of monetary and financial institutions, about 11.4 percent of GDP, and three months of imports. **Assessment.** Despite having a floating exchange rate regime, it is important to maintain adequate foreign reserves in view of the high dependence of its commercial banks on wholesale funding in foreign currency and disruptions in such funding during global financial distress. As seen during the pandemic, the Riksbank can quickly establish swap facilities when necessary.[2]						

Table 3.26. Switzerland: Economy Assessment

Overall Assessment: *The external position in 2022 was broadly in line with the level implied by medium-term fundamentals and desirable policies.* However, complex measurement issues and data lags complicate the assessment.[1]

Potential Policy Responses: To maintain a broadly balanced external position, fiscal policy should remain in line with the authorities' debt-brake rule framework in the near term, while accommodating additional spending related to Russia's war in Ukraine (e.g., support for refugees). In the medium term, as inflation pressures ease, small fiscal deficits would help expand spending space to support necessary expenditures. Under the current inflation and liquidity conditions, if facing depreciation pressures, the Swiss National Bank (SNB) could continue to reduce FX holdings; it should refrain from using FX interventions to curb franc appreciation, unless excess market volatility makes them necessary. Macroprudential policies should continue to focus on safeguarding financial stability, taking into consideration the current cyclical position of the economy. Medium-term policies should be geared to ensuring balanced domestic and external contributions to growth.

Foreign Asset and Liability Position and Trajectory	**Background.** Switzerland is a major financial center with a large positive NIIP of 93.3 percent of GDP and large gross foreign asset and liability positions of 680.8 and 587.5 percent of GDP, respectively, at the end of 2022. The NIIP reflects both a history of large CA surpluses and valuation changes.[2] Compared with 2021, the NIIP declined in 2022 by 14.7 percentage points of GDP, mainly driven by negative valuation effects due both to exchange rate movements and price changes. Projections of the NIIP in 2023 and beyond are complicated by Switzerland's large gross positions and compositional differences among its assets and liabilities. **Assessment.** Switzerland's large gross liability position and the volatility of financial flows and investment returns present some risk, but its large gross asset position and the denomination of about two-thirds of its external liabilities in Swiss francs mitigate this risk.				
2022 (% GDP)	NIIP: 93.3	Gross Assets: 680.8	Reserve Assets: 110.6	Gross Liab.: 587.5	Debt Liab.: 198.5

Current Account	**Background.** Switzerland's CA surpluses averaged 6.6 percent of GDP during 2012–21. The CA surplus increased in 2022 to 10.1 percent of GDP, from 8.8 percent in 2021. This was driven by strong merchanting and a narrowed services trade deficit, more than offsetting a larger (by 0.8 percent of GDP) trade deficit in fuels and gas due to Russia's war in Ukraine. The CA surplus is expected to moderate to 7.8 percent of GDP in 2023 and remain near this level in the medium term as lower inflation and strength in key sectors (e.g., pharmaceutical, commodity trading) preserve competitiveness. **Assessment.** The EBA CA norm of 6.5 percent of GDP is close to last year's norm. Based on a cyclically adjusted CA surplus of 10.6 percent and the norm, the overall EBA-estimated CA gap equaled 4.1 percent of GDP in 2022.[3] Domestic policy gaps account for –1.0 percentage point and include excessive private sector credit (–1.2 percentage points) and fiscal underspending (0.3 percentage point); policy gaps in the rest of the world also contribute (0.8 percentage point). Adjustments for (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 (–3.6 percentage points) and retained earnings on portfolio equity investment (–0.4 percentage point) and (2) transitory impacts of the COVID-19 pandemic (–0.1 percentage point) reduced the gap to 0.0 percent of GDP (±0.8 percentage point).[4]						
2022 (% GDP)	CA: 10.1	Cycl. Adj. CA: 10.6	EBA Norm: 6.5	EBA Gap: 4.1	COVID-19 Adj.: –0.1	Other Adj.: –4.0	Staff Gap: 0.0

Real Exchange Rate	**Background.** Relative to its 2021 level, the average NEER appreciated by 4.4 percent in 2022, while the CPI- and PPI-based REERs depreciated by 0.9 and 11.2 percent, respectively.[5] In the first quarter of 2023, whereas the NEER and CPI-based REER appreciated by 0.9 and 0.7 percent, respectively, the PPI-based REER depreciated by 1.2 percent. It appears that the UBS–Credit Suisse merger has not had a significant impact on the franc exchange rate thus far. From a long-term perspective, the NEER has appreciated by 44 percent since 2010, while the CPI- and PPI-based REERs have appreciated by 5.3 percent and depreciated by 12.9 percent, respectively. As of April 2023, the CPI-based REER was 2.1 percent above the 2022 average. **Assessment.** The staff CA gap implies REER overvaluation of 0.1 percent in 2022 (with an elasticity of 0.55 applied). The EBA REER index and level models suggest that the average REER in 2022 was overvalued by 11.9 and 17.6 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, because of measurement issues, the results may not fully capture a secular improvement in productivity. Consistent with the staff CA gap, the staff assesses the REER gap for 2022 to be in the range of –1.3 percent (undervalued) to 1.5 percent (overvalued), with a midpoint of 0.1 percent.
Capital and Financial Accounts: Flows and Policy Measures	**Background.** Net financial outflows from Switzerland totaled 4.5 percent of GDP in 2022, including private outflows of 7.2 percent of GDP and a decrease in SNB reserve assets of 2.7 percent of GDP. During 2009–21, net private inflows averaged 2.2 percent of GDP, while the average annual increase in SNB reserves was 10.3 percent of GDP. **Assessment.** 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 declined and, on average, turned into net capital inflows between 2009 and 2020, adding to appreciation pressures. In 2022, partly driven by widened differentials between foreign and domestic interest rates, net private outflows increased from 4.6 percent of GDP in 2021 to 7.2 percent, while the SNB reduced reserve assets on a net basis through transactions for the first time since 2005.
FX Intervention and Reserves Level	**Background.** Official reserve assets (including gold) amounted to Sw F 852 billion (or $924 billion, 111 percent of GDP) at the end of 2022, down Sw F 162 billion (or $186 billion) from the end of 2021, mostly driven by valuation changes due both to investment losses (Sw F 131 billion) and exchange rate movements. The SNB sold Sw F 22.3 billion of FX (net) through FX interventions in 2022, against net purchases of Sw F 110 billion and Sw F 21 billion in 2020 and 2021, respectively. **Assessment.** Reserves are large relative to GDP but more moderate in comparison with short-term foreign liabilities. If the reserve currency status of the franc is taken into consideration, the adequacy of its FX reserves is not a pressing concern for Switzerland. On the other hand, the large financial loss incurred by the SNB in 2022 and the volatility of its income indicate a high level of risk associated with its vast balance sheet.

Table 3.27. Thailand: Economy Assessment

Overall Assessment: *The external position in 2022 was stronger than the level implied by medium-term fundamentals and desirable policies.* The goods trade balance worsened on account of both an increase in import bill with the surge in oil prices and a slowdown in goods exports as external demand weakened in the second half of the year. Whereas the services balance improved with a partial recovery of tourism and a decline in shipping costs, the overall CA balance deteriorated. The CA balance is expected to improve to 1.2 percent of GDP in 2023 as tourism receipts recover further and to return to a surplus of about 3 percent of GDP in the medium term.

Potential Policy Responses: Policies aimed at promoting investment, diminishing precautionary savings, and supporting domestic demand would bring the CA balance more in line with medium-term fundamentals and desirable policies. Public expenditures should be focused on targeted social transfers to continue to support the most vulnerable, as well as infrastructure investment to support a green recovery and reorientation of affected sectors. 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.

Foreign Asset and Liability Position and Trajectory	**Background.** Thailand's NIIP weakened in 2022 to –3.0 percent of GDP (from 6.6 percent in 2021). Its gross assets declined from 120 to 118 percent of GDP (with 44 percent of GDP being reserve assets), while its gross liabilities increased from 114 to 121 percent of GDP, dominated by direct (about half) and portfolio (about one-third) investment. Net direct and portfolio investment assets declined by 2 and 3 percentage points of GDP, respectively, while net other investment assets increased by 1 percentage point of GDP. **Assessment.** The NIIP is projected to remain in a small creditor position over the medium term given CA surpluses. External debt rose slightly to 40 percent of GDP, of which short-term debt (on a remaining-maturity basis) amounted to 16 percent of GDP. External debt stability and liquidity risks are limited.						
2022 (% GDP)	NIIP: –3.0	Gross Assets: 117.6	Debt Assets: 25.5	Gross Liab.: 120.6	Debt Liab.: 40.3		
Current Account	**Background.** Thailand's CA balance declined from –2.1 percent of GDP in 2021 to –3.2 percent of GDP in 2022, reflecting the impact of an increase in food and oil prices due to the war in Ukraine and slowdown in external demand in the second half of the year. A surge in import costs weakened the trade balance by 4.2 percent of GDP. A decline in shipping costs and post-pandemic tourism recovery, albeit still partial, improved the services account by 1.9 percent of GDP. From a savings-investment perspective, the recent CA deficits reflect a decline in private savings due to the COVID-19 shock and war in Ukraine as well as increased public dissaving from the generous fiscal support in response to the shock. The CA balance in 2023 is projected to improve to 1.2 percent of GDP as tourism strengthens further. **Assessment.** The EBA CA model estimates a cyclically adjusted CA of –2.3 percent of GDP and a CA norm of 0.9 percent of GDP for 2022. The CA gap of –3.2 percent of GDP consists of an identified policy gap of –1.4 percent of GDP and an unexplained residual of –1.8 percent of GDP, which partly reflects structural factors the EBA model does not capture. As the standard EBA cyclical adjustment does not account for the large COVID-19-related shocks to the travel and transport sectors, adjustors of 4.8 percent and 1.3 percent of GDP, respectively, are applied.[1] Overall, the IMF staff assesses the CA gap to be in the range of 2.2 to 3.6 percent of GDP, with a midpoint of 2.9 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.						
2022 (% GDP)	CA: –3.2	Cycl. Adj. CA: –2.3	EBA Norm: 0.9	EBA Gap: –3.2	COVID-19 Adj.: 6.1	Other Adj.: 0.0	Staff Gap: 2.9
Real Exchange Rate	**Background.** The baht has been on a gradual real appreciation trend since the mid-2000s, despite occasional bouts of volatility. However, the REER depreciated by 7.6 percent in 2021 on account of tightened global financial conditions alongside weak recovery in Thailand. The REER appreciated until June 2022, relative to the end of December 2021, supported by a strong recovery in Thailand, before depreciating over July–October as a result of high global volatility amid advanced economies' monetary policy normalization. The REER then resumed its appreciation in November, ending the year about 1 percent higher than the 2021 average. As of April 2023, the REER was 1.6 percent above the 2022 average. **Assessment.** Using an elasticity of 0.47 and based on the staff CA gap, the IMF staff assesses the REER to be undervalued in the 4.7 to 7.8 percent range, with a midpoint of –6.2 percent. The EBA index REER gap in 2022 is estimated at 6.7 percent, and the EBA level REER gap is estimated at –2.6 percent.						
Capital and Financial Accounts: Flows and Policy Measures	**Background.** In 2022, the capital and financial account balance (excluding change in reserves) strengthened to 0.5 percent of GDP from –1.2 percent in 2021, driven by a recovery in portfolio investment (from –2.4 percent in 2021 to 1.2 percent of GDP in 2022) and a decline in outward FDI (from 3.8 percent in 2021 to 1.7 percent of GDP in 2022). Other net investments declined from 2.3 to –1.1 percent of GDP. FX reserves declined by 2.1 percent of GDP. **Assessment.** Since 2013, Thailand has experienced episodes of volatility reflecting external financial conditions, political uncertainty, and most recently, shocks related to COVID-19 and the war in Ukraine. Nevertheless, Thailand has been able to weather such episodes well, given strong external buffers and fundamentals. The IMF staff welcomes the Bank of Thailand's removal of limits on nonresident baht accounts for qualifying nonresident firms to facilitate baht liquidity management and recommends additional phasing out of remaining CFM 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.						
FX Intervention and Reserves Level	**Background.** The exchange rate regime is classified as (de jure and de facto) floating. International reserves (including the net forward position) declined from 55.2 percent in 2021 to 49.6 percent of GDP in 2022, which is about 2.5 times the short-term debt, 11 months of imports, and 203 percent of the IMF's standard ARA metric. The exchange rate has been allowed to adjust, with some FX interventions in periods of large volatility. **Assessment.** 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 avoiding disorderly market conditions or addressing risks of de-anchoring inflation expectations and FX market dysfunction, especially during periods of elevated global volatility.						

Table 3.28. Türkiye: Economy Assessment

Overall Assessment: *The external position in 2022 is assessed to be moderately weaker than the level implied by medium-term fundamentals and desirable policies.* The assessment is supported by the low level of reserves, large external financing needs, and the size and composition of the NIIP, all of which contribute to external vulnerabilities. The CA deficit widened significantly in 2022, reflecting the sharp increase in imported energy prices. Türkiye's negative NIIP, while remaining large, narrowed significantly in 2021 as a result of a steep decline in equity liabilities due to valuation effects. 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 commodity price pressures ease.

Potential Policy Responses: Strengthening the policy framework would help Türkiye underpin its external sustainability going forward. Tightening of its monetary and fiscal policy stance and rebuilding policy credibility would help contain demand and reduce imports, thus improving the CA. They would also help support capital inflows and liraization and allow for a needed buildup of reserves over time.

Foreign Asset and Liability Position and Trajectory	**Background.** Türkiye's NIIP averaged –40 percent of GDP over 2018–22. At the end of 2022, the NIIP remained constant year over year, at about –31 percent of GDP, despite a slight increase during the first three quarters largely driven by a marked decrease in equity liabilities in dollar terms. External debt declined from 54 percent of GDP in 2021 to 52 percent of GDP in 2022. The private sector holds almost 53 percent of Türkiye's external debt, while the public sector (general government and central bank) holds the remaining 47 percent, and about one-third of the external debt is short term (on a remaining-maturity basis). **Assessment.** The size and composition of its 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 Türkiye's 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 expected to stabilize over the medium term because of a projected improvement in the CA balance and to hover around –33 percent of GDP through 2028, but unwinding of recent valuation effects could negatively affect the NIIP trajectory. External debt is sustainable over the medium term but is subject to risks, particularly from a large depreciation in the REER.				
2022 (% GDP)	NIIP: –30.8	Gross Assets: 33.6	Debt Assets: 13.7	Gross Liab.: 64.5	Debt Liab.: 44.2

Current Account	**Background.** The CA deficit averaged 2.4 percent of GDP over 2018–22. Higher commodity prices resulting from the war in Ukraine significantly weakened the energy CA balance in 2022 and substantially contributed to widening the CA deficit from 0.9 percent of GDP in 2021 to 5.3 percent of GDP in 2022. In contrast, the non-oil CA surplus underwent a more contained deterioration, declining from 4.3 percent of GDP in 2021 to 3.5 percent of GDP in 2022. **Assessment.** The EBA CA model norm for Türkiye is estimated at –0.8 percent of GDP, with an estimated standard error of ±0.7 percent of GDP. The CA deficit of 5.3 percent of GDP in 2022 narrows to a deficit of 2.5 percent of GDP after cyclical and terms-of-trade adjustments are made, with a resulting EBA CA gap of –1.7 percent of GDP. Adjusting for temporary pandemic-related shocks (transport: –0.2 percent) results in an IMF staff–assessed CA gap in the range of –2.6 percent to –1.2 percent of GDP, with a midpoint of –1.9 percent of GDP.						
2022 (% GDP)	CA: –5.3	Cycl. Adj. CA: –2.5	EBA Norm: –0.8	EBA Gap: –1.7	COVID-19 Adj.: –0.2	Other Adj.: 0.0	Staff Gap: –1.9

Real Exchange Rate	**Background.** The REER depreciated by an annual average of 9.5 percent over 2018–22, and the average REER depreciated by 10 percent in 2022. In contrast, since PPI inflation has been much higher than CPI inflation recently, the average PPI-based REER appreciated by about 9 percent in 2022. As of April 2023, the CPI-based REER had appreciated by 6.9 percent relative to the 2022 average. **Assessment.** Based on the IMF staff's estimates of the CA model and taking uncertainties into consideration, the staff assesses the REER to be overvalued, with a range of 4.0 percent to 9.0 percent and a midpoint of 6.5 percent (applying an estimated REER elasticity of 0.29). The EBA REER index and level models suggest the REER was undervalued in 2022 by 46.3 and 56.7 percent, respectively, although the models' residuals are very large for Türkiye. Given higher PPI inflation, a PPI-based REER measure would likely yield lower undervaluation.
Capital and Financial Accounts: Flows and Policy Measures	**Background.** Net capital inflows rebounded in 2022, mainly on account of one-off flows, including large positive net errors and omissions of $25.1 billion. Positive net inflows were also driven by FDI, whereas net portfolio inflows weakened further over the year. In January 2022, a new requirement for exporters to convert 25 percent of their export earnings within 180 days was introduced, which was increased to 40 percent in April 2022. **Assessment.** While net capital inflows continued to rebound in 2022, much of these inflows was of unknown origin. With annual gross external financing needs projected at about 23 percent of GDP on average over 2023–28 (they amounted to 24 percent of GDP in 2022), Türkiye remains vulnerable to adverse shifts in global investor sentiment. CFMs should be phased out as conditions improve to increase market liquidity and support dedollarization.
FX Intervention and Reserves Level	**Background.** The de jure exchange rate is classified as free floating. Following the sudden depreciation of the lira in the fourth quarter of 2021, gross reserves decreased sharply, falling to about $100 billion in the second quarter of 2022. Gross reserves recovered during the second half of 2022 and were at about $129 billion at the end of December 2022. Pressures on the lira were relieved by large foreign exchange interventions and the introduction of a scheme protecting lira term deposits against currency depreciation in December 2021. **Assessment.** Gross reserves were at 95 percent of the IMF's ARA metric as of the end of December 2022, still below the floor of the recommended 100–150 percent range. In addition, the quality of reserves remains an issue, with non–SDR basket currencies continuing to account for a large share (about 15 percent) of the central bank's FX reserves. Once monetary policy tightening is firmly underway, significant nonborrowed accumulation of reserves is needed over time. FX intervention to support the lira should also be limited to the most extreme cases of exchange rate volatility, undertaken only by the central bank itself (not state-owned banks).

Table 3.29. United Kingdom: Economy Assessment

Overall Assessment: *The external position in 2022 was broadly in line with the level implied by medium-term fundamentals and desirable policies.* The CA deficit deteriorated in 2022, reflecting a sharp terms-of-trade shock triggered by the war in Ukraine. The CA deficit would temporarily stay high in 2023–24, owing to an adjustment of income flows, before gradually narrowing over the medium term as the trade balance improves. Uncertainty surrounding this assessment remains significant, on account of measurement issues, the evolving effects of the EU-UK Trade and Cooperation Agreement, and the impact on capital flows of any final agreement between the EU and the UK on financial services.[1]

Potential Policy Responses: Gradual fiscal consolidation, while preserving the quality of key public services and protecting the vulnerable, should improve net public savings and help offset the decline in net private savings as private investment slowly recovers. This will help maintain the CA broadly in line with fundamentals and desirable policies. Over the medium term, implementing structural reforms to boost the UK's international competitiveness (including via upgrading the labor skills base to support labor reallocation to fast-growing sectors) would bolster national savings, which, in turn, would help finance the increased investment needs, including in support of climate transition.

Foreign Asset and Liability Position and Trajectory	**Background.** The NIIP improved to –11 percent of GDP in 2022 from –15 percent of GDP in 2021. A positive valuation effect led to an improvement in the NIIP despite the CA deficit.[2] About three-fifth of gross assets and liabilities is accounted for by other investment (221 percent of GDP in assets and 207 percent in liabilities) and portfolio investment (128 percent of GDP in assets and 132 percent in liabilities). Similarly, three-fourth of gross assets and liabilities are accounted for by the United States, other European countries, and Japan. External liabilities have a larger share denominated in pounds than do external assets.[3] The IMF staff projects that the NIIP will moderately decrease over the medium term, in line with projected (small) CA deficits. However, large and volatile valuation effects make these estimates particularly uncertain. **Assessment.** Since 2016, CA flows (which were negative) have been unable to explain changes in the NIIP (which have been largely positive), mainly on account of valuation gains from the pound's depreciation and two positive flows not recorded in the income balance of the CA: retained earnings on portfolio equity and inflation compensation on debt interest. Fluctuations in large gross stock positions could be a potential source of vulnerability (both gross assets and gross liabilities exceed 500 percent of GDP). Also, large short-term debt liability positions are sensitive to changes in market sentiment. However, the combination of the UK's exchange rate flexibility and its net liability position in domestic currency offer some insurance against external crises.					
2022 (% GDP)	NIIP: –11	Gross Assets: 563	Debt Assets: 283	Gross Liab.: 574	Debt Liab.: 293	
Current Account	**Background.** The CA deficit deteriorated from 1.5 percent of GDP in 2021 to 3.8 percent in 2022, reflecting a widening in the trade deficit due to a negative terms-of-trade shock from surging energy prices following the war in Ukraine. Net private savings declined from 6.8 percent in 2021 to 2.5 percent in 2022, more than offsetting lower net public borrowing, which declined from 8.3 percent in 2021 to 6.2 percent in 2022; gross savings also declined, while investment increased. The IMF staff projects that CA will moderately decrease to –3.5 percent of GDP over the medium term. **Assessment.** The EBA CA model estimates a norm of –1.0 percent of GDP and a CA gap of –1.2 percent of GDP. Adjustments to the EBA estimates include those for the lingering COVID-19 impact, totaling –0.3 percent of GDP: travel services (–0.4 percent of GDP) and transport balances (0.1 percent of GDP). As in previous years, unrecorded income—retained earnings on portfolio equity (0.2 percent of GDP) and inflation compensation on debt interest (0.5 percent of GDP)—contributed to an underestimation of the underlying CA. Overall, the IMF staff assesses the CA gap to be in the range of –1.8 to 0.2 percent of GDP, with a midpoint of –0.8 percent of GDP.					
2022 (% GDP)	CA: –3.8	Cycl. Adj. CA: –2.2	EBA Norm: –1.0	EBA Gap: –1.2	COVID-19 Adj.: –0.3	Other Adj.: 0.7	Staff Gap: –0.8
Real Exchange Rate	**Background.** The pound, on average, depreciated in real effective terms in 2022 by 1.4 percent relative to its average level in 2021, driven entirely by nominal depreciation, largely due to the surge in the dollar. Overall, the pound has depreciated in real terms by about 3.4 percentage points since mid-2016, reflecting market expectations of more restricted access to the EU market under post-Brexit trade arrangements. As of the end of April 2023, the REER had appreciated by 1.1 percent compared with its 2022 average. **Assessment.** The IMF staff CA gap implies a REER gap of about 2.9 percent in 2022 (with an estimated elasticity of 0.28 applied). The EBA REER level and index approaches suggest a gap of 2.3 and –8.4 percent, respectively, for 2022. Consistent with the staff CA gap, the staff assess the REER gap to be about 2.9 percent, in a range of –0.7 to 6.4 percent.						
Capital and Financial Accounts: Flows and Policy Measures	**Background.** Given the UK's role as an international financial center, portfolio investment and other investment are the key components of its financial account. In 2022, the CA deficit of 3.8 percent of GDP was financed by net portfolio investment of 3.5 percent of GDP, financial derivatives and other investment of 2.8 percent of GDP, net FDI of –3.8 percent of GDP, and errors and omissions of 1.3 percent of GDP. **Assessment.** Large fluctuations in capital flows are inherent in countries with large financial sectors. Such volatility is a potential source of vulnerability for the UK, although sound financial regulation and supervision and a healthy financial sector mitigate this vulnerability. An additional risk is that financial account flows may decelerate, driven by changes in the UK's trade relationship with the EU and the shift of some financial services to the EU.						
FX Intervention and Reserves Level	**Background.** The pound has the status of a global reserve currency. Sterling's share of global reserves has not changed materially since 2015 and stands at about 4.6 percent. **Assessment.** The United Kingdom typically holds low reserves relative to standard metrics, but the currency is free floating.						

Table 3.30. United States: Economy Assessment

Overall Assessment: *The external position in 2022 was moderately weaker than the level implied by medium-term fundamentals and desirable policies.* A marginal decline in the trade balance was led by a small deterioration in the services balance, resulting in a CA deficit of 3.7 percent of GDP (versus 3.6 percent of GDP in 2021). Although uncertainty and terms-of-trade changes caused by the war in Ukraine may continue to affect the near term, the CA deficit is projected to decline to about 2½ 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.

Potential Policy Responses: Over the medium term, suggested fiscal consolidation aimed at a medium-term general government primary surplus of about 1 percent of GDP should broadly stabilize the debt-to-GDP ratio and address the CA gap. Structural policies to increase productivity and competitiveness include upgrading infrastructure; enhancing the schooling, training, apprenticeship, 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 and other trade distortions 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.

Foreign Asset and Liability Position and Trajectory	**Background.** The NIIP, which averaged about –46 percent of GDP during 2016–19, deteriorated slightly from –67.8 percent of GDP in 2020 to –74.4 percent of GDP in 2021, before strengthening slightly again to –64.7 percent of GDP in 2022. Declines in the ratios of both assets and liabilities to GDP in 2022 can be imputed to declines in the value of assets and liabilities, as well as to increases in nominal GDP, to a lesser extent. 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. **Assessment.** Financial stability risks could surface in the form of an unexpected decline in foreign demand for US fixed-income securities, which are 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.					
2022 (% GDP)	NIIP: –64.7	Gross Assets: 112	Debt Assets: 18.8	Gross Liab: 176	Debt Liab.: 54.5	
Current Account	**Background.** The CA deficit was 3.7 percent of GDP in 2022, close to the 2021 level of 3.6 percent of GDP (moving from 3.2 to 3.5 percent of GDP in cyclically adjusted terms), compared with a pre-pandemic deficit of about 2 percent of GDP. On the trade side, its evolution since 2016 is explained mostly by a deterioration in the non-oil goods and services balance. In 2022, the trade balance remained broadly stable relative to 2021 (–3.7 versus –3.6 percent of GDP). Both national savings and investment increased as a percentage of GDP from 2016 to 2021 (with a massive increase in public dissaving due to the pandemic), after which the trend started to revert in 2022, with both national savings and investment converging back toward pre-pandemic levels. Based on an increase in public saving due to gradual fiscal consolidation (and unwinding of the extraordinary fiscal support), reflected in a lower trade deficit, the CA deficit is expected to decline slightly, to about 2.5 percent of GDP, over the medium term. **Assessment.** The EBA model estimates a cyclically adjusted CA balance of –3.5 percent of GDP and a cyclically adjusted CA norm of –2.2 percent of GDP. The EBA model CA gap is –1.2 percent of GDP for 2022, reflecting policy gaps (–0.6 percent of GDP, mostly driven by the private credit gap[1]) and an unidentified residual (about –0.6 percent of GDP) that may reflect structural factors not included in the model. On balance, the IMF staff assesses the 2022 cyclically adjusted CA to be lower by 1.1 percent of GDP than the level implied by medium-term fundamentals and desirable policies, with a range between –1.7 and –0.4 percent of GDP. This assessment includes a staff adjustor of 0.2 percent GDP to account for the temporary effects of COVID-19 on the travel and transport balances. The estimated standard error of the CA norm is 0.7 percent of GDP.						
2022 (% GDP)	CA: –3.7	Cycl. Adj. CA: –3.5	EBA Norm: –2.2	EBA Gap: –1.2	COVID-19 Adj.: 0.2	Other Adj.: 0.0	Staff Gap: –1.1
Real Exchange Rate	**Background.** After depreciating by 2.3 percent in 2021, the REER appreciated by 8.3 percent in 2022 (when yearly averages are compared). As of April 2023, the REER was 0.5 percent below the 2022 average. **Assessment.** Indirect estimates of the REER gap (based on the IMF staff's CA assessment) imply that the exchange rate was overvalued by 9.0 percent in 2022 (with an estimated elasticity of 0.12 applied). The EBA REER index model suggests an overvaluation of 10.7 percent, and the EBA REER level model suggests an overvaluation of 22.8 percent. Considering all the estimates and their uncertainties, the staff assesses the 2022 midpoint REER overvaluation to be 9.0 percent, with a range of 3.5 to 14.6 percent, where the range is obtained from the CA standard error and the corresponding CA elasticity.						
Capital and Financial Accounts: Flows and Policy Measures	**Background.** The financial account balance was about –2.7 percent of GDP in 2022, compared with –3.2 percent of GDP in 2021. This was mainly due to an increase in both net other investment and (to a lesser extent) net direct investment, partly offset by a reduction in net portfolio investment. **Assessment.** The US 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.						
FX Intervention and Reserves Level	**Assessment.** 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

[1]A band of ±1 percent of GDP (two standard errors of the CA norm) is applied to account for elevated country-specific uncertainty in the context of external vulnerabilities.

Belgium

[1]Methodological and source data changes in September 2019 led to major revisions of balance-of-payments data from 2015 onward, causing a break in the data series.

Canada

[1]The statistical treatments of retained earnings on portfolio equity and of net interest outflows (which are recorded in nominal terms and thus artificially boosted by currently high inflation) are estimated to have generated a downward bias in the income balance of 0.6 and 1 percent of GDP, respectively, totaling 1.6 percent of GDP.
[2]The semielasticity of the CA with respect to the REER is set to 0.27.

China

[1]See the IMF's 2021 Taxonomy of Capital Flow Management Measures for a list of China's existing CFM measures and related policy advice.

Euro Area

[1]The export and import elasticities are obtained as the average of estimates from Consultative Group on Exchange Rate Issues–inspired export and import equations using REERs relevant for the euro area with an autoregressive distributive lag (2,2,2) model on quarterly data 2000–19. The trade balance elasticity is calculated using the share of exports and imports in extra-EU trade in GDP.

Hong Kong Special Administrative Region

[1]Hong Kong Special Administrative Region 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 Special Administrative Region. Following this approach, the CA norm in 2022 is estimated to have been about 21.8 percent of GDP, implying a CA gap of –11.3 percent, which the model residuals explain almost entirely. The EBA CA gap is overstated, as it does not properly reflect the measurement issues that are relevant for Hong Kong Special Administrative Region, so three adjustments are made that reduce the CA norm by 11.2 percentage points of GDP to 10.6 percent (midpoint of the IMF staff–assessed norm range). First, a deduction of 5.7 percentage points of GDP (midpoint of an estimated 4.7–6.7 percentage point range) is made to the EBA model's implied contribution of the NIIP. This deduction is made because the positive NIIP contribution in EBA captures average income effects that are less relevant for Hong Kong Special Administrative Region, since the income balance relative to its NIIP is systematically lower than that in other peer economies, due to a persistently higher share of debt instruments on the asset side than on the liability side. Second, a deduction of 4¼ percentage points of GDP (midpoint of an estimated 4–4½ percentage point range) is made to account for a decline in the gold trade balance that reflects not changes in wealth but rather the increased physical settlement of gold futures contracts resulting from the opening of a precious metals depository. Third, a deduction of 1¼ percentage points of GDP (midpoint of an estimated 1–1½ percentage point range) is made to account for China's increased onshoring, which led to a decline in logistics and trading activities in Hong Kong Special Administrative Region but 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 demand in China. See "People's Republic of China—Hong Kong Special Administrative Region: Selected Issues" (Country Report No. 17/12) for more details.
[2]The range is calculated by applying the average semielasticities of Hong Kong Special Administrative Region and similar economies.
[3]The financial linkages with the Mainland have deepened in recent years with the increase in cross-border bank lending, capital market financing, and the internationalization of the RMB. As of end-2022, banking system claims on Mainland non-bank entities amounted to HK$6.4 trillion, or about 225 percent of GDP, down by about 9 percentage points from end-2021.

India

[1]The cyclical adjustment and COVID-19 adjustors have been computed based on the fiscal year (as opposed to the calendar year) to take into account the quarterly dynamics of commodity prices and travel and transport services between the second quarter of 2022 and the first quarter of 2023.

Indonesia

[1]Indonesia is among the few countries with low life expectancy at prime age, and demographic indicators are adjusted to account for this. As a result, the model-estimated CA norm is adjusted by subtracting 0.4 percentage point.
[2]The standard error of the EBA norm is 0.6 percent of GDP.
[3]The width of the range for the REER gap takes the standard ±3.6 percent interval applied to the midpoint of –2.0 percent, leading to a range of –5.6 to 1.6.

Japan

[1]Consistent with the 2022 *External Sector Report*, the IMF staff recommends allowing the estimated credit-to-GDP gap to decline gradually over the medium term from its currently estimated level of 25 percent (16 percent net of corporate savings), with a corresponding policy setting (P*) for the credit-to-GDP gap in five years of 9 percent of GDP.

Saudi Arabia

[1]EBA models do not include Saudi Arabia. The IMF staff has 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 7.7 percent of GDP (slightly higher than the CA norm of 7.5 percent of GDP in 2021). 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 and 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 13.3 percent of GDP and 16.2 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 14.4 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 2022 of 4.7 percent of GDP represents the staff's overall assessment, which is anchored on the EBA-Lite CA model. The range for the gap is calculated using the estimates for Norway, a comparable oil-rich economy in the EBA sample.

Singapore

[1]Singapore has a negative income balance despite its large positive NIIP, reflecting lower rates of return on its foreign assets relative to returns on its foreign liabilities, possibly because the composition of Singapore's assets is tilted toward safer assets with lower returns.

[2]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 have been about 15.6 percent of GDP in 2022 (including the multilateral consistency adjustor). However, using this approach overstates the CA gap. Accounting for Singapore's specificities requires several adjustments. First, a downward adjustment of 1.1 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, as well as 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; thus a total adjustment of –3.1 percent of GDP is applied to account for this transitory impact, including (1) a travel adjustor of –0.8 percent of GDP and (2) a transport adjustor of –2.3 percent of GDP. Third, a downward adjustment of 3.8 percentage points to the norm is made to better account for the effect of 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 –2.9 percentage points of GDP is applied to the underlying CA to account for measurement biases due to inflation and portfolio equity retained earnings (–5.8 and 2.9 percent of GDP, respectively). Adjusted for these factors, the staff–estimated CA gap is about 5.1 percent of GDP, to which the fiscal gap contributes about 0.3 percent of GDP, the credit gap about –0.6 percent of GDP, public health spending about –0.1 percent of GDP, and reserves about 0.0 percent of GDP.

[3]The IMF staff applies the maximum range of ±1.8 percent in the EBA sample for the CA gap, reflecting the uncertainty surrounding Singapore's assessment.

[4]Since March 2022, MAS has been transferring official foreign reserves that are not needed for the conduct of monetary policy and financial stability to the government, for long-term investment (Reserves Management Government Securities – RMGS). As of end-2022, MAS' outstanding holdings of RMGS was S$237.6 billion (36.9 percent of GDP).

[5]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 (GIC and Temasek) amount to at least 100 percent of GDP.

South Africa

[1]The South Africa–specific COVID-19 adjustors for 2022 of 0.2 percent of GDP are composed of adjustments for travel services (including tourism exports) (0.5 percent of GDP), transportation (0.5 percent of GDP), mineral exports (–0.6 percent of GDP), and an improved income balance (–0.2 percent of GDP). The mineral-exports adjustor reflects a temporary surge in mineral export prices and volumes, which are still above pre-pandemic averages, and the importance for South Africa of some mineral exports (for instance, palladium, platinum,

and rhodium), which are not included in the IMF EBA model (terms-of-trade adjustment).
[2]Net current transfers related to the Southern African Customs Union (SACU) in 2022 are assessed to have had 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 have contributed to an underestimation of the CA by 0.8 percent of GDP in 2022 overall.
[3]Because South Africa is among the few countries with relatively high adult mortality rates, the demographic indicators have been 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 2022. Overall, important positive contributors for the norm include demographics (even after downward adjustment to account for the aforementioned lower life expectancy), net foreign assets, and a desirable policy stance, especially in regard to reserves.
[4]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).

Spain

[1]The EBA model suggests a cyclically adjusted CA norm of –0.1 percent of GDP, with a standard error of 0.8 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 valuation effects are assumed to be zero over the projection horizon. Allowing for a safety margin, the staff therefore considers the CA norm to be 1.0 percent of GDP, with a range of 0.2 to 1.8 percent of GDP.
[2]The range of the REER gap is ±2.6 percent, which is computed based on Spain's estimated standard error of the EBA CA norm (0.8 percent of GDP) and a semielasticity of the CA to the REER of 0.31.

Sweden

[1]The upper and lower bounds are derived by adding/subtracting the standard deviation (5.7) from the average outcome (midpoint) to reflect uncertainty surrounding the EBA estimated norm.
[2]A $60 billion swap facility was agreed with the Federal Reserve to address dollar funding risks related to the pandemic. Although it was not utilized, it provided an important backstop function.

Switzerland

[1]Because of large revisions to historical balance-of-payments and IIP data, particular caution is needed when the ESA results for different periods are compared. For example, after the initial release in March 2022, the 2021 financial account net balance was subsequently revised upward, from Sw F 27.5 billion to Sw F 79.2 billion (a revision of 7.1 percent of 2021 GDP), driven by sizable revisions to both net acquisition of financial assets and net incurrence of liabilities.
[2]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. As a result, an appreciation (depreciation) of the Swiss franc has a negative (positive) effect on the NIIP. Other stock-flow adjustments include changes in statistical sources, such as changes in the number of entities surveyed and items covered.
[3]Part of the positive EBA CA gap may reflect institutional pension features, such as replacement and coverage rates, in Switzerland rather than other economic policy gaps.
[4]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 PE RE 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 *BPM* 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 PE RE bias was estimated using the "stock method" and "flow method" as explained in Adler and others (2019), and it is similar in size to estimates based on the Swiss National Bank's pilot *BPM7* data.

In addition, the CA balance is also adjusted for transitory impacts of the COVID-19 pandemic on trade of goods and services, including adjustors for tourism (0.0 percentage point) and transport (–0.1 percentage point). Adjusted for these COVID-19 related effects, the underlying CA would need to be reduced by about 0.1 percent of GDP.
[5]Prices of energy products, especially gas prices, were a main driver underlying the PPI inflation differentials between Switzerland and other advanced economies such as the euro area and the US. If core PPIs excluding energy products were used, the depreciation of the PPI-based franc REER in 2021 and 2022 would be smaller.

Thailand

[1]For Thailand, the change in the transport services balance between 2019 and 2022 was –2.1 percent of GDP. In the IMF 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 CA to be a worsening of about 60 percent (1.3 percent of GDP). Therefore, the staff proposes a transportation adjustor of 1.3 percent.

United Kingdom

[1]For example, long-term access of EU clearing members (such as banks and asset managers) to UK central counterparties (CCPs) remains uncertain. The EU has extended the equivalence for UK CCPs only until the end of June 2025.

[2]The official NIIP data may understate the true position: estimates of FDI stocks at market values imply a much higher NIIP, close to 100 percent of GDP, as reported in Bank of England (2022).

[3]Estimates in Bénétrix and others (2019) suggest that in 2017, about 94 percent of external assets were denominated in foreign currency, compared with 56 percent for external liabilities.

United States

[1]While the fiscal policy gap is estimated to be rather small, at –0.1 percent of GDP, the domestic fiscal policy gap is estimated to amount to about –1.3 percent of GDP.

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