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.
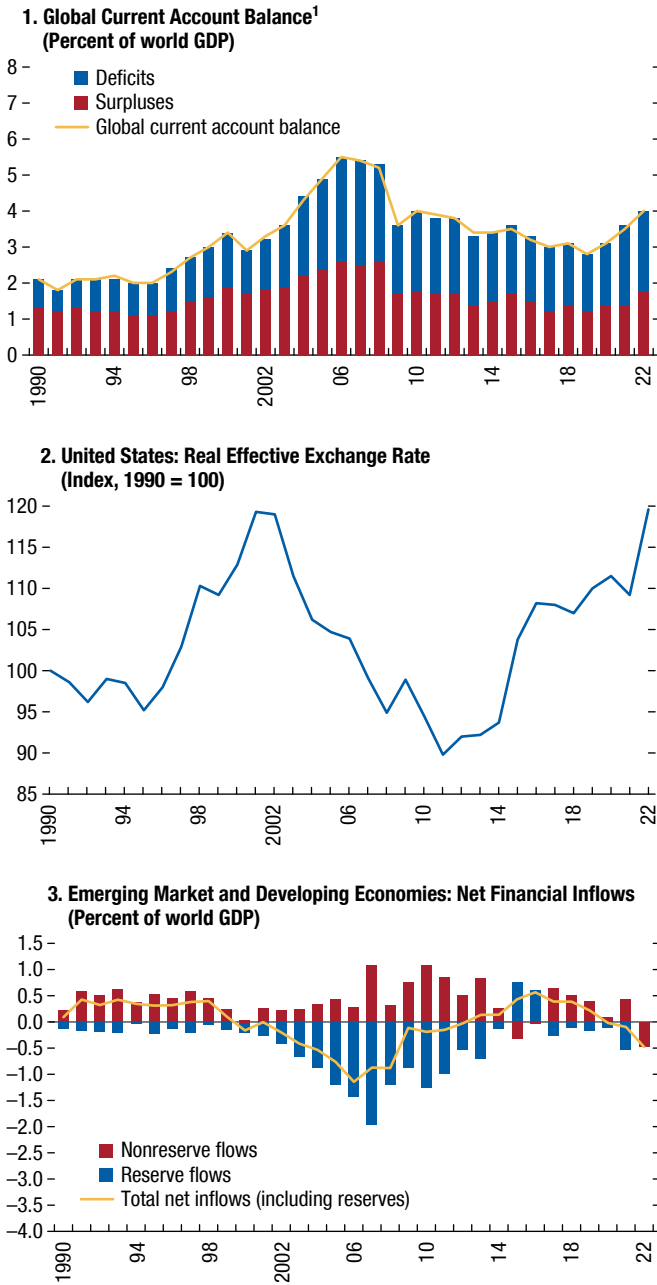
Recent Developments in Current Account Balances

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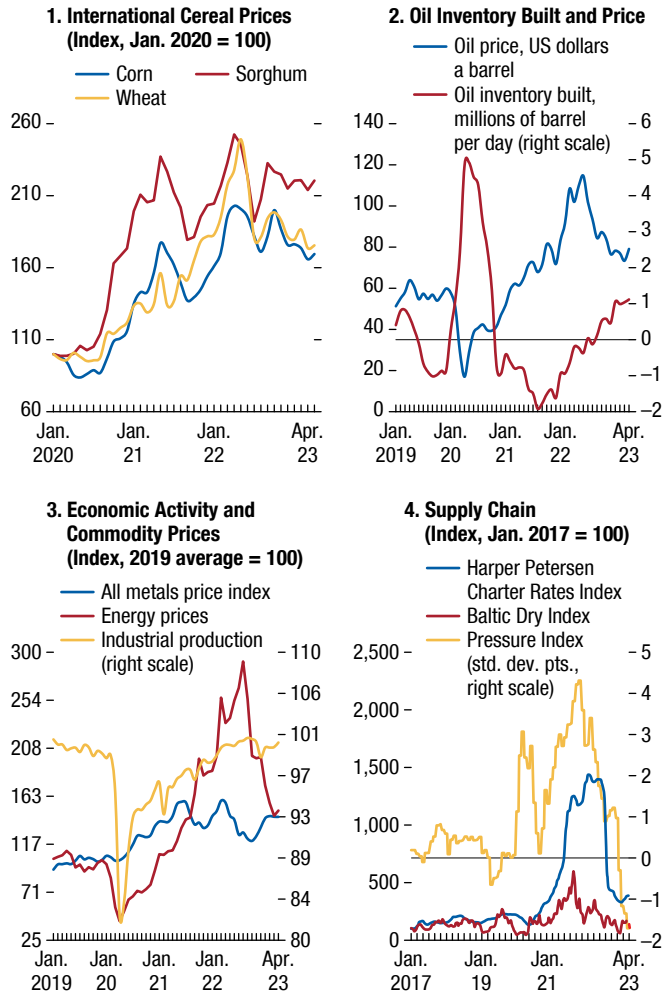
Figure 1.1. Global Current Account Balances, REER, and Capital Flows, 1990–2022

1. Global Current Account Balance[1]
(Percent of world GDP)

- Deficits
- Surpluses
- Global current account balance

2. United States: Real Effective Exchange Rate
(Index, 1990 = 100)

3. Emerging Market and Developing Economies: Net Financial Inflows
(Percent of world GDP)

- Nonreserve flows
- Reserve flows
- Total net inflows (including reserves)

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

1. International Cereal Prices
(Index, Jan. 2020 = 100)

- Corn
- Sorghum
- Wheat

2. Oil Inventory Built and Price

- Oil price, US dollars a barrel
- Oil inventory built, millions of barrel per day (right scale)

3. Economic Activity and Commodity Prices
(Index, 2019 average = 100)

- All metals price index
- Energy prices
- Industrial production (right scale)

4. Supply Chain
(Index, Jan. 2017 = 100)

- Harper Petersen Charter Rates Index
- Baltic Dry Index
- Pressure Index (std. dev. pts., right scale)

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
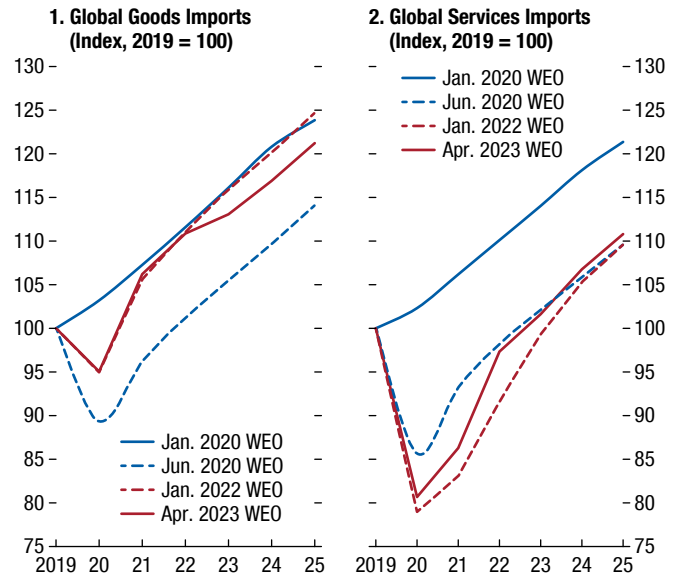*(Average of balances in percent of GDP)*
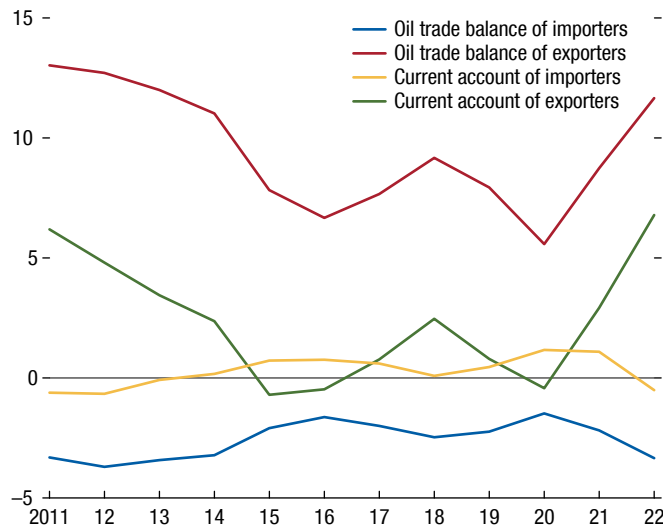
Sources: IMF, April 2023 *World Economic Outlook*; and IMF staff calculations.
Note: Countries are defined as exporters or importers by their oil trade balance in 2021. Figure includes External Balance Assessment countries: Hong Kong SAR, Saudi Arabia, and Singapore. Importer countries are Argentina, 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
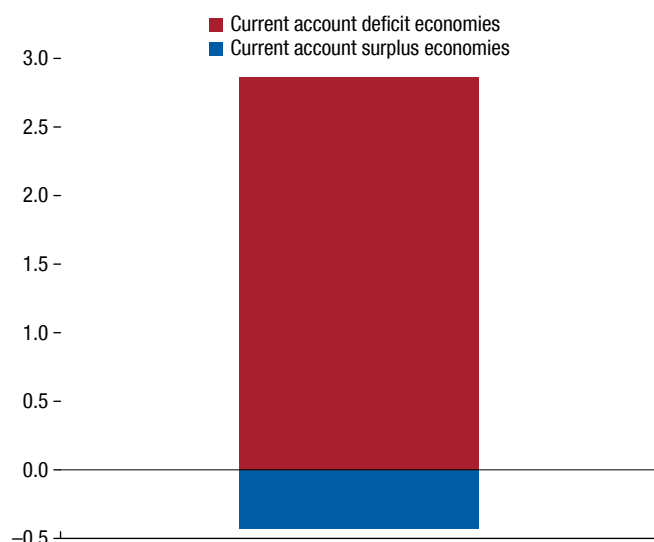*(Percent of world GDP)*
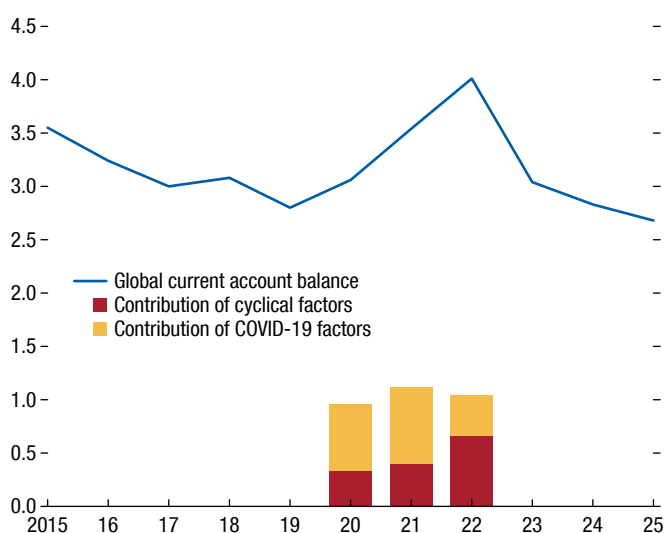
Sources: CEIC Data, Global Database; IMF, Primary Commodity Price System; Refinitiv Datastream; UN, Comtrade; UN Conference on Trade and Development; and IMF staff calculations.
Note: Global current account balance is the sum of absolute values of current account; COVID-19 factors are the sum of absolute 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.
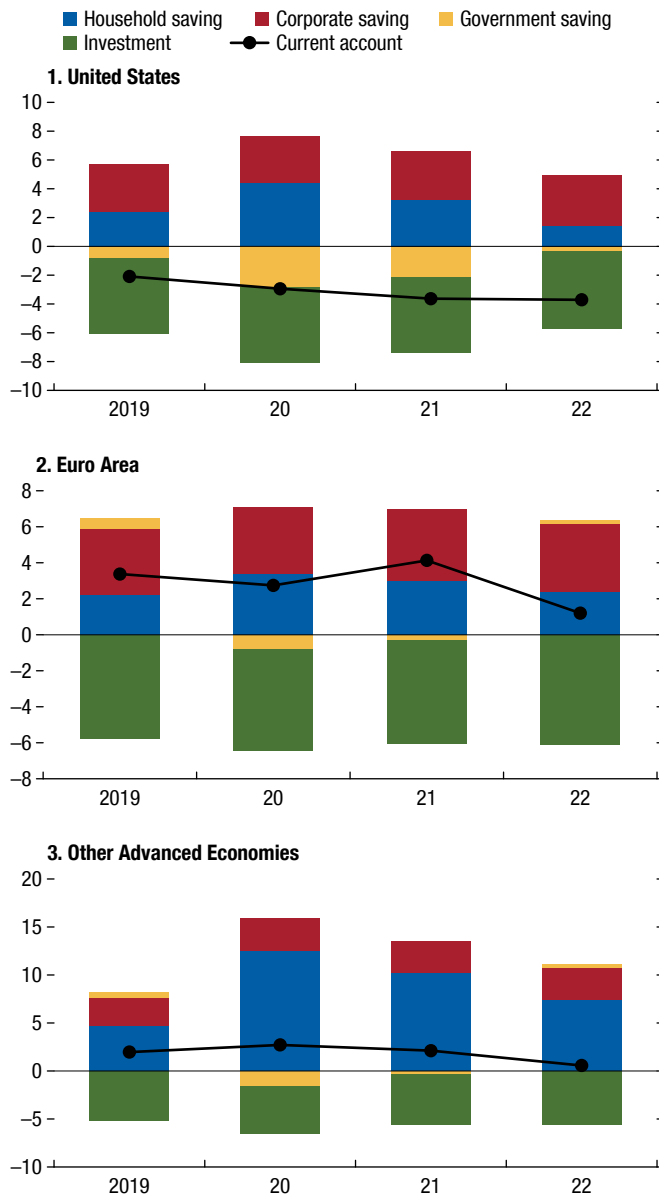
In the early months of 2023, trade data suggest that global trade balances widened compared with their levels at the end of 2022, driven by the reopening of China offsetting the impact from falling commodity prices. China's exports temporarily improved in the first quarter of the year against the backdrop 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
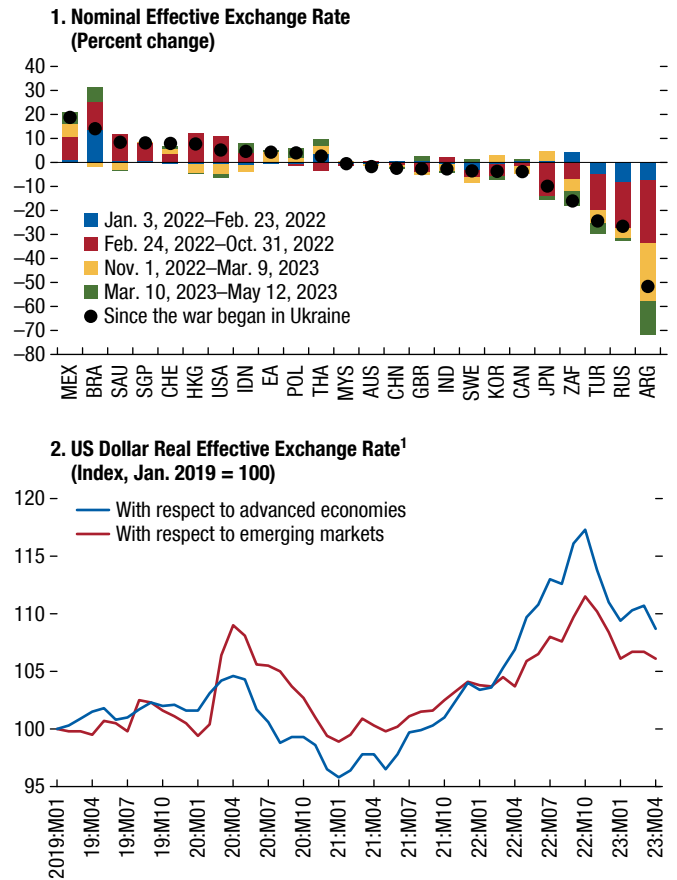
Figure 1.7. Current Account Decomposition
(Percent of GDP)

Legend: Household saving | Corporate saving | Government saving | Investment | Current account

1. United States

2. Euro Area

3. Other Advanced Economies

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

1. Nominal Effective Exchange Rate
(Percent change)

Legend: Jan. 3, 2022–Feb. 23, 2022 | Feb. 24, 2022–Oct. 31, 2022 | Nov. 1, 2022–Mar. 9, 2023 | Mar. 10, 2023–May 12, 2023 | Since the war began in Ukraine

Countries: MEX, BRA, SAU, SGP, CHE, HKG, USA, IDN, EA, POL, THA, MYS, AUS, CHN, GBR, IND, SWE, KOR, CAN, JPN, ZAF, TUR, RUS, ARG

2. US Dollar Real Effective Exchange Rate[1]
(Index, Jan. 2019 = 100)

Legend: With respect to advanced economies | With respect to emerging markets

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

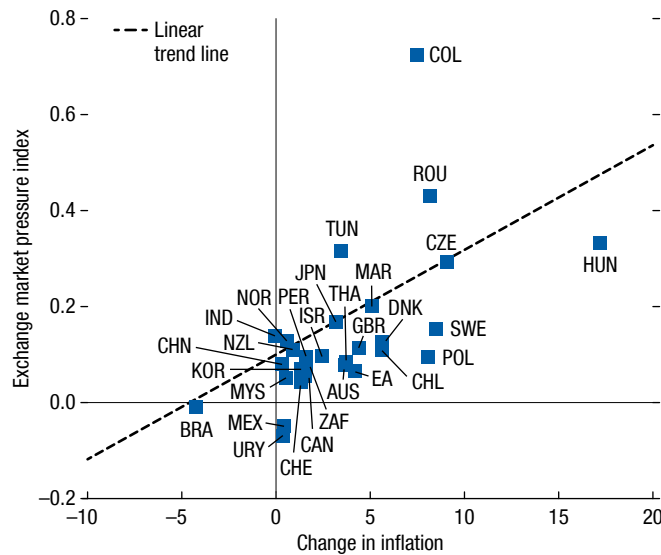**Exchange Market Pressure Index**
(Percent change)
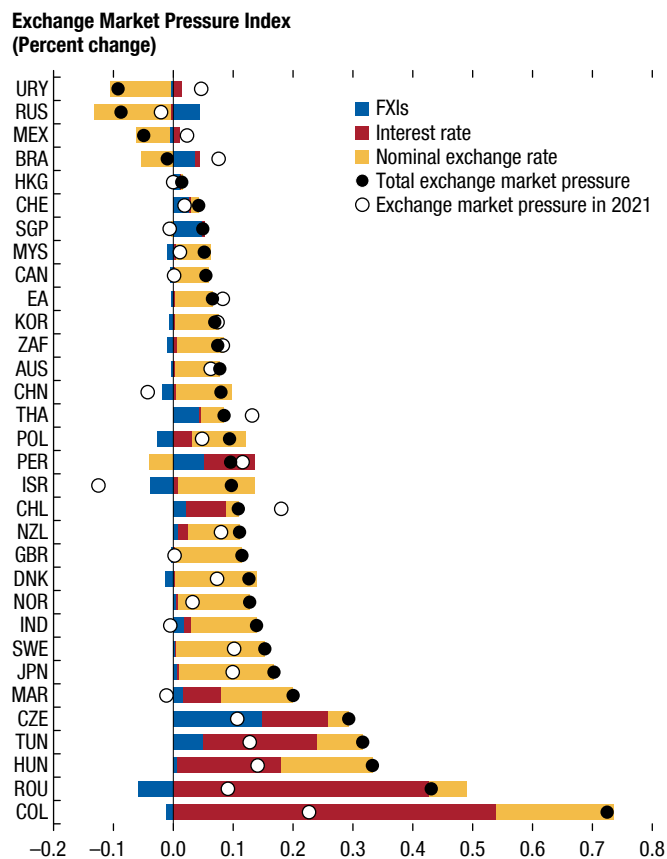
Sources: Adler and others (2021); Goldberg and Krogstrup (2023); IMF, *International Financial Statistics*; and IMF staff calculations.
Note: Positive values correspond to exchange market pressure that would depreciate the nominal exchange rate. A country's total exchange market pressure in 2022 is the 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
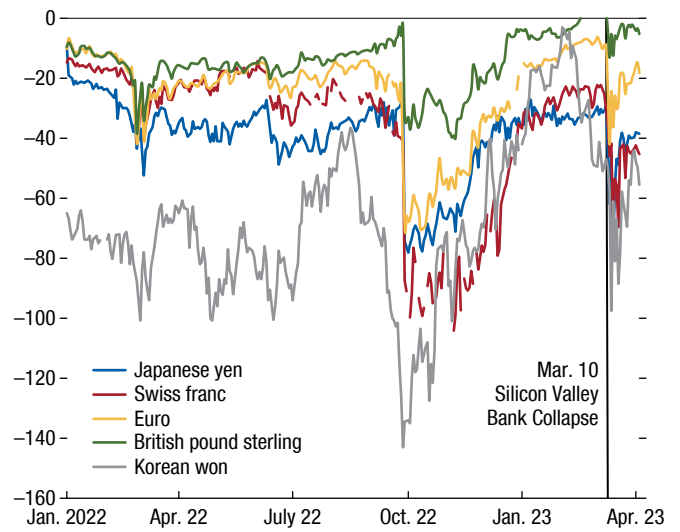(Figure 1.10).[5]

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 dol-
lar 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 high-
er-income economies that occurred in the lead-up to
the global financial crisis (Figure 1.1; see also the 2021
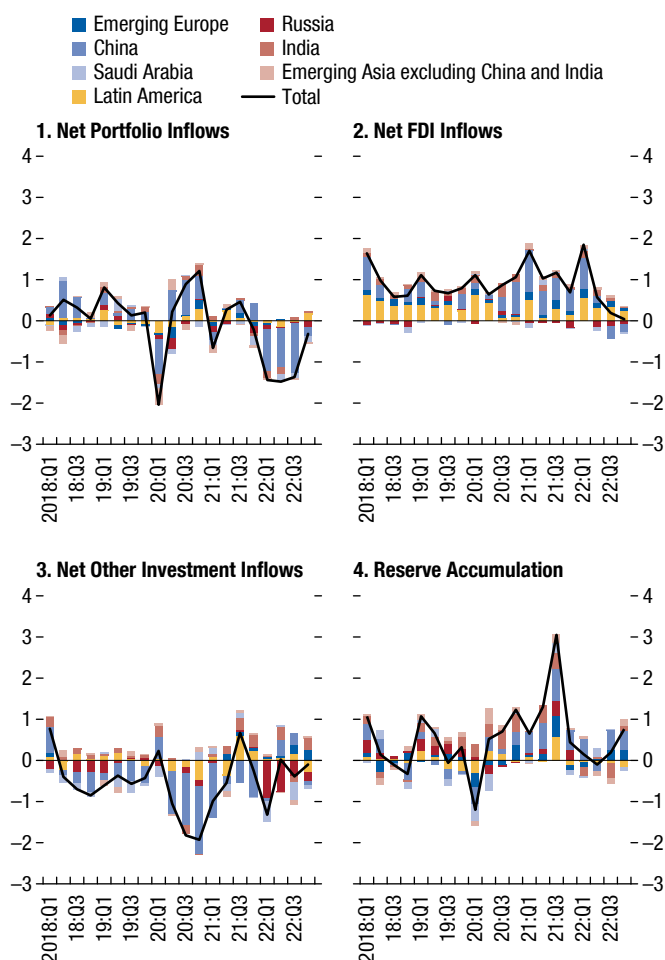
External Sector Report Online Annex 1.2).[6] However, in
2022, net capital outflows from EMDEs, and particu-
larly from China, took place not via an accumulation
of official foreign exchange reserves, but via other types
of flows. Consistent with this pattern, private holdings
of US assets increased (Box 1.1). This net flow of cap-
ital 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 partic-
ular 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 cap-
ture 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)

Legend: Emerging Europe, China, Saudi Arabia, Latin America, Russia, India, Emerging Asia excluding China and India, Total

1. Net Portfolio Inflows

2. Net FDI Inflows

3. Net Other Investment Inflows

4. Reserve Accumulation

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

Legend: Advanced economies, Emerging markets

1. Surges

2. Stops

3. Flights

4. Retrenchment
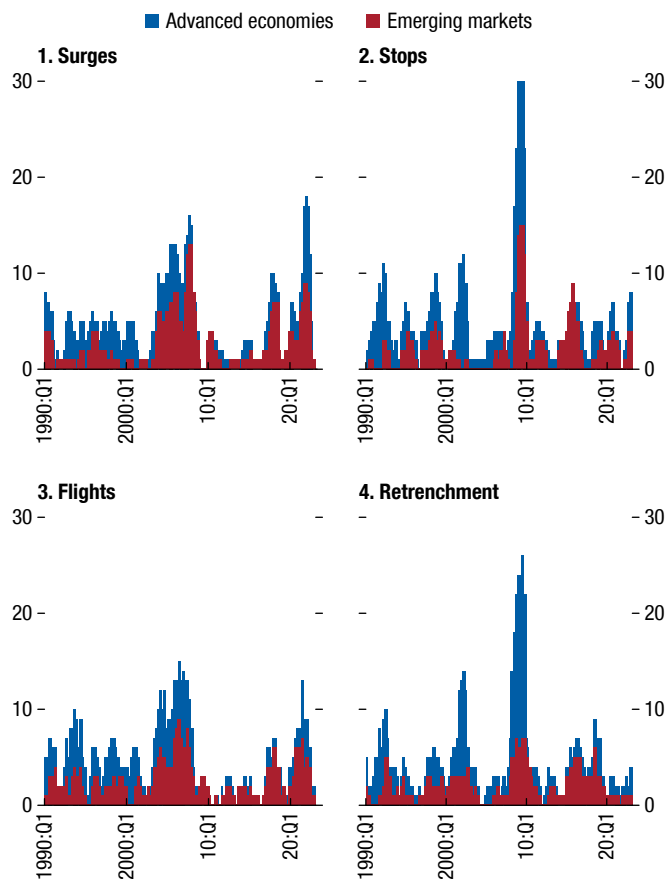
Sources: IMF, *Balance of Payments*; and IMF, *International Financial Statistics*.
Note: Capital flows are defined as gross inflows and outflows (excluding reserves). Episodes are based on flows in billions of US dollars. Sample is External Balance Assessment countries. Last observation is fourth quarter 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.

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

[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.

Figure 1.14. Cumulative High-Frequency Portfolio Flows to EMDEs January 2022–April 2023
(Billions of US dollars)
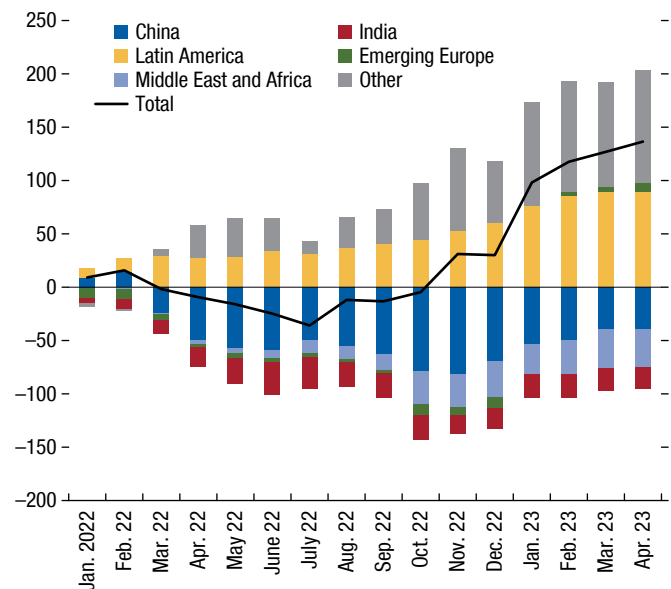
Sources: Institute of International Finance; and IMF staff calculations.

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

[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)
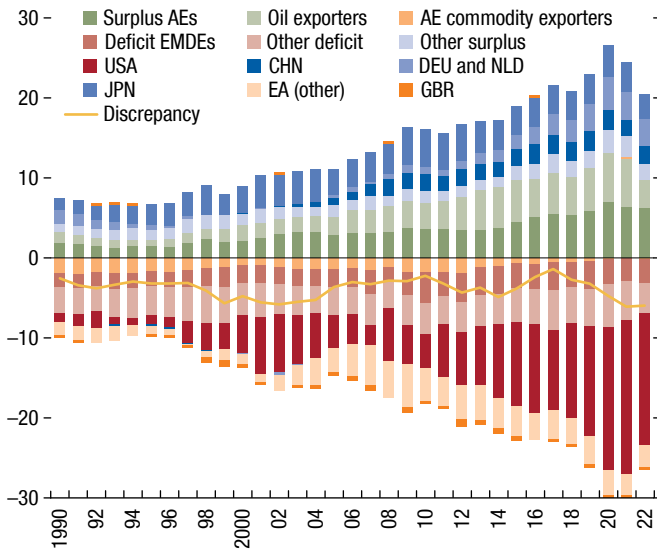
Sources: External Wealth of Nations database; IMF, *April 2023 World Economic Outlook*; and IMF staff calculations.
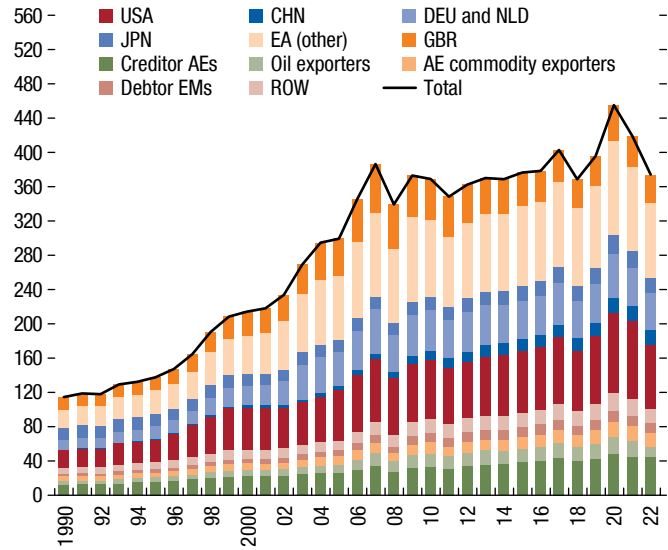Note: Advanced economy (AE) commodity exporters comprise Australia, Canada, and New Zealand; creditor AEs comprise Hong Kong SAR, Korea, Singapore, Sweden, Switzerland, and Taiwan Province of China; deficit emerging market and developing economies (EMDEs) comprise Brazil, Chile, India, Indonesia, Mexico, 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)
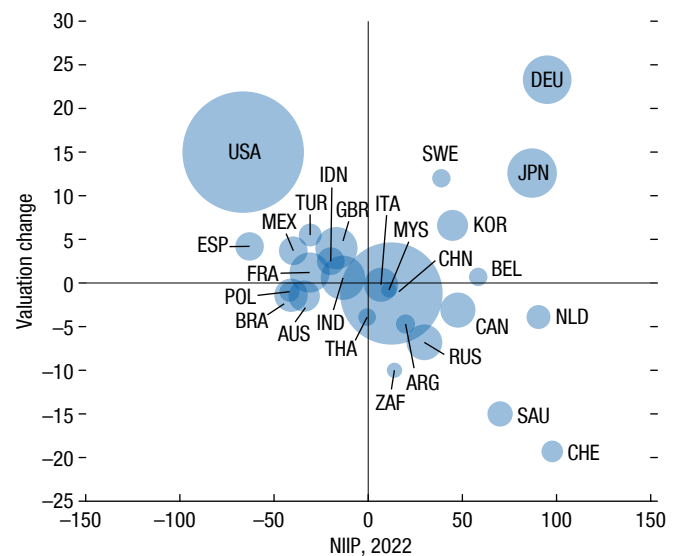
Sources: IMF, *April 2023 World Economic Outlook*; and IMF staff calculations.
Note: Valuation changes are calculated as the difference between changes in net international investment position (NIIP) and current account. For some countries, NIIPs are still projections. Bubble sizes are proportional to 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)
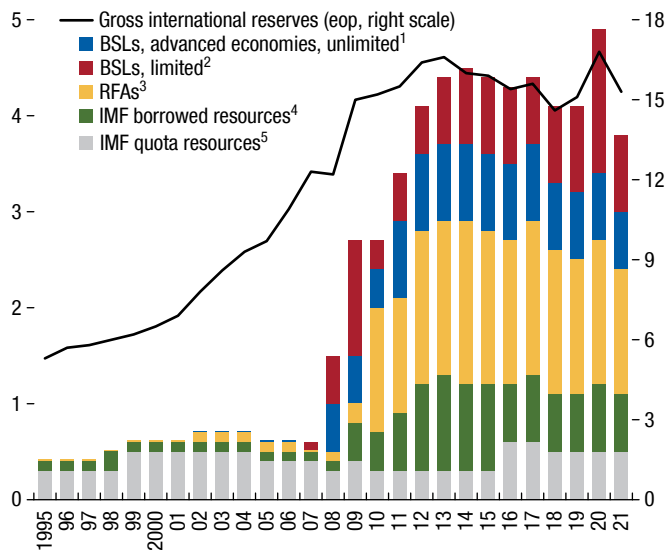
Sources: Central bank websites; Perks and others (2021); RFA annual reports; and IMF staff estimates.
Note: BSLs = bilateral swap lines; eop = end of period; RFAs = regional financing arrangements. Two-way arrangements are counted only once.
[1]Permanent swap lines among major advanced economy central 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

[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.

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,

[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)
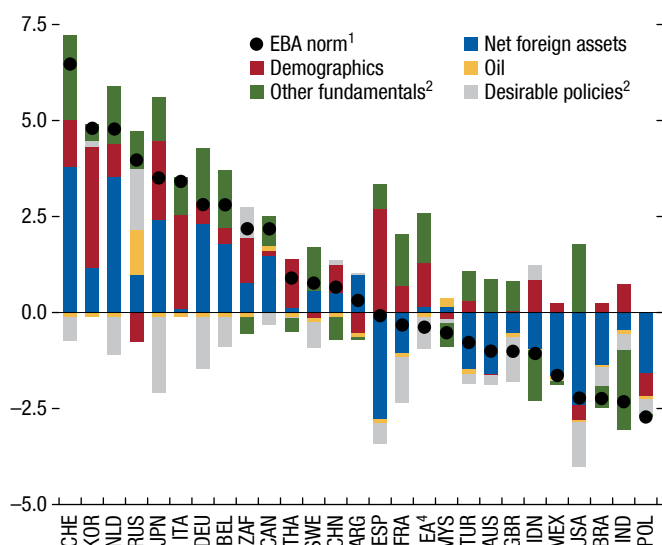
Source: IMF, External Balance Assessment estimates.
Note: Figure excludes Hong Kong SAR, Saudi Arabia, and Singapore, as they are not included in the EBA regression model. EA = euro area; EBA = External Balance Assessment. Data labels use International Organization for Standardization (ISO) country codes.
[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

Figure 1.21. Evolution of Headline Current Account Balances and IMF Staff Gaps
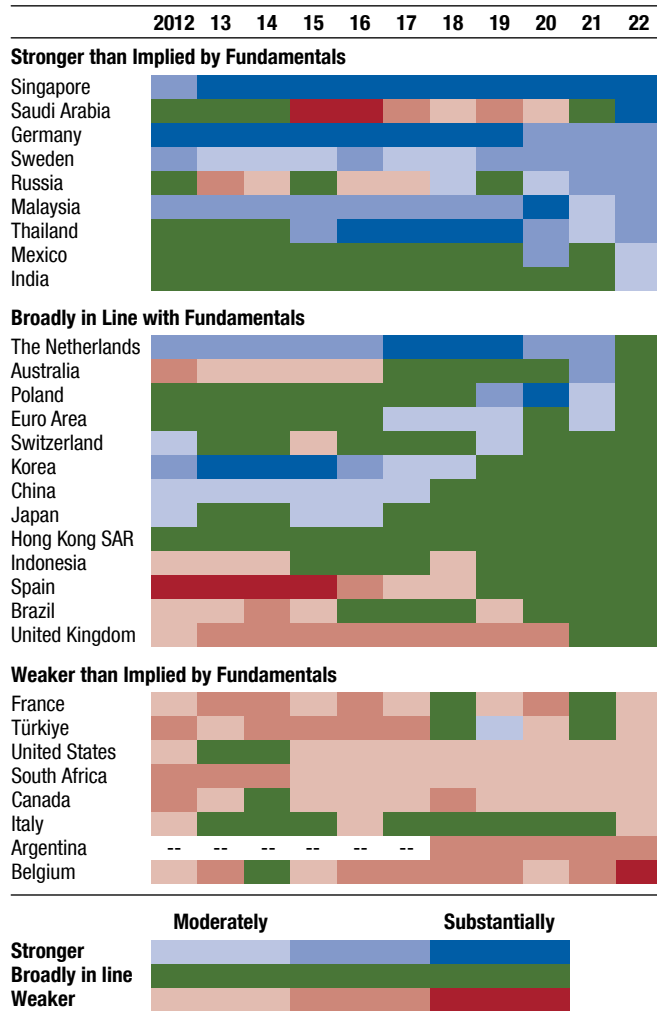
Source: IMF staff assessments.
Note: Grouping and ordering are based on economies' excess imbalance during 2022. Coverage of Argentina in the *External Sector Report* started in 2018.
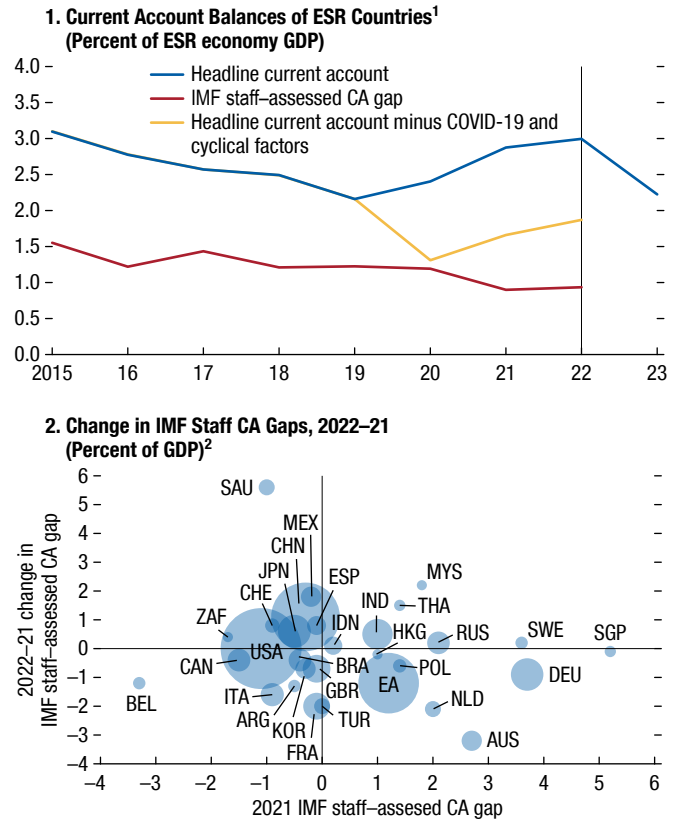
Source: IMF staff calculations.
Note: CA = current account; EA = euro area; ESR = *External Sector Report*. Data labels in the figure use International Organization for Standardization (ISO) country codes.
[1]The headline CA for 2023 is a projection.
[2]Bubble sizes are proportional to 2022 GDP in US 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

[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.

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

Figure 1.22. IMF Staff Current Account and Real Effective Exchange Rate Gaps
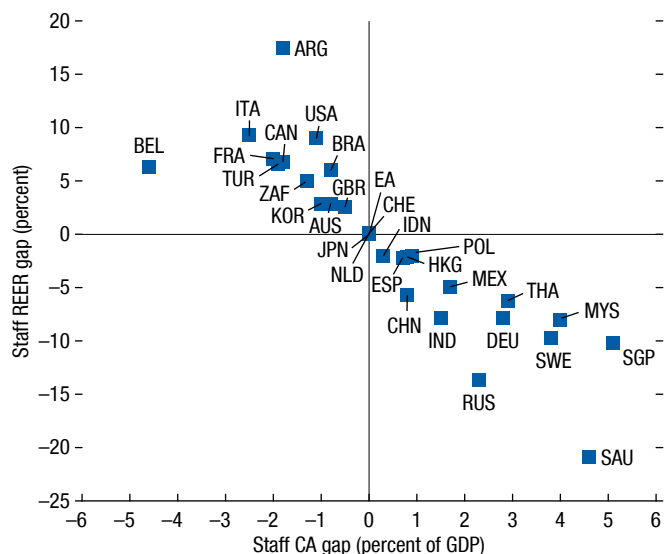
Source: IMF staff assessments.
Note: Real effective exchange rate (REER) gap is based on 2022 *External Sector Report*. CA = current account; EA = euro area. Data labels in the figure use International Organization for Standardization (ISO) country codes.

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,

[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.

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

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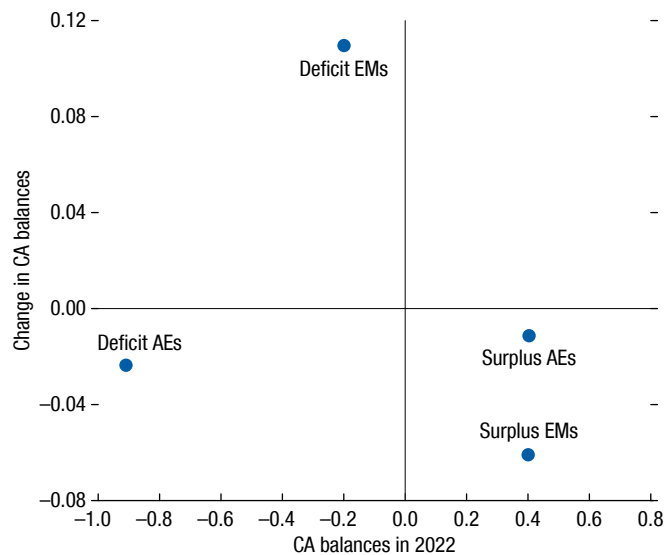
Sources: IMF, April 2023 *World Economic Outlook*; and IMF staff estimates from G20 Model simulations.
Note: AEs = advanced economies; CA = current account; EMs = emerging market economies.

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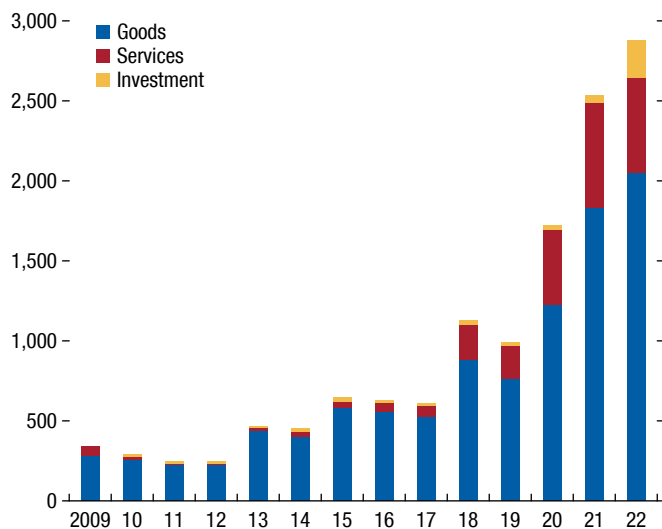
Sources: Global Trade Alert; and IMF staff calculations.
Note: Data as of April 26, 2023.

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)
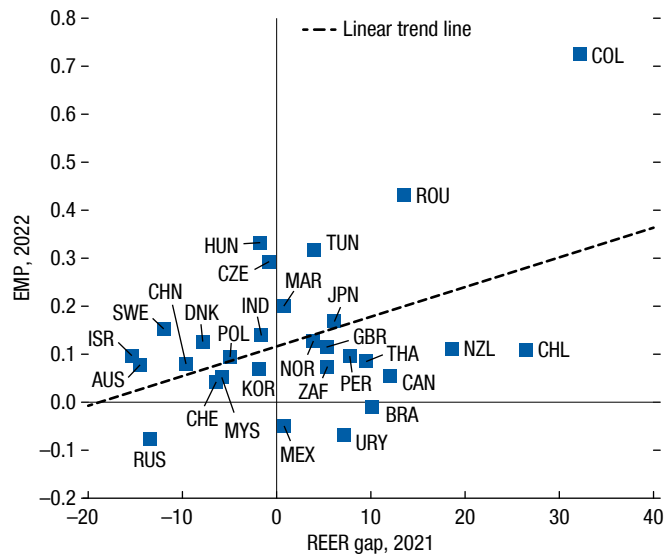
Sources: Goldberg and Krogstrup (2023); and IMF staff calculations.
Note: CA = current account; EMP = exchange market pressure index. Real effective exchange rate (REER) gaps are current-account-implied REER gaps based on EBA CA gaps for 2021. The REER gaps shown in this figure can deviate from the CA-implied 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.
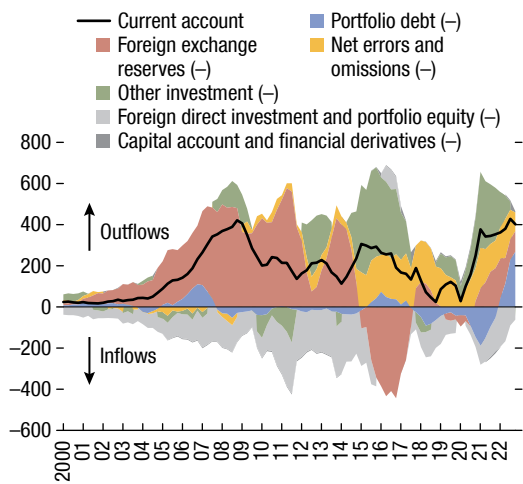
Box 1.1. The Financial Side of Global Imbalances

Russia's invasion of Ukraine has increased the risk of geo-economic 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

Figure 1.1.2. Saudi Arabia: Current Account Surplus and Capital Flows, Four-Quarter Trailing Sums
(Billions of US dollars)
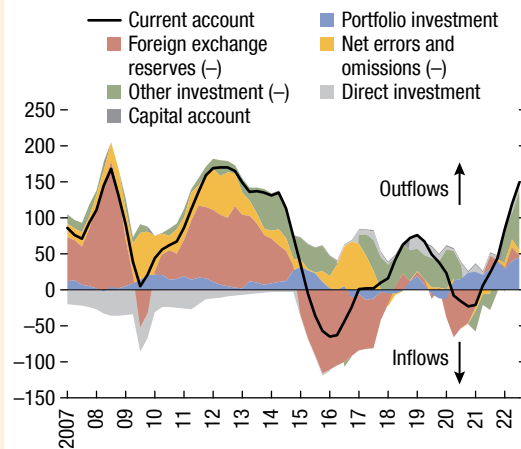
Sources: Refinitiv Datastream; and IMF staff calculations.
Note: Figure shows total cross-border total liabilities (amounts outstanding) of reporting banks in all currencies. Last observation: third quarter of 2022.

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.

This box was prepared by Cian Allen and Cyril Rebillard.

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).

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

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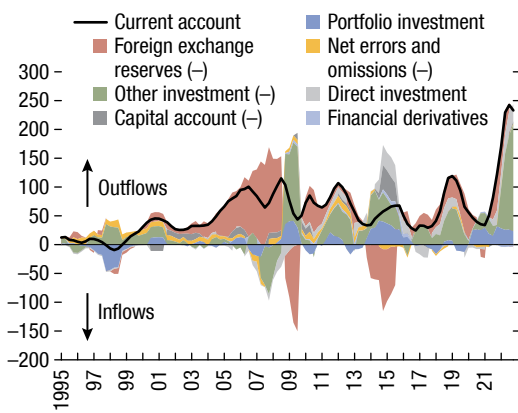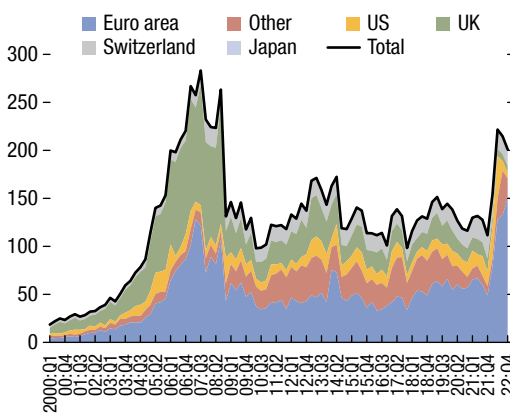
Sources: Bank for International Settlements locational banking statistics; and IMF staff calculations.
Note: Figure shows total cross-border total liabilities (amounts outstanding) of reporting banks in all currencies. Last observation: fourth quarter of 2022.

**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)
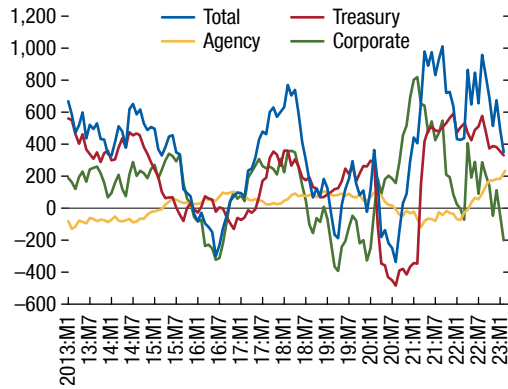
Sources: Federal Reserve; and IMF staff calculations.
Note: Estimated flows are essentially constructed using changes
in foreign holdings of US Treasury securities adjusted for
valuation effects as discussed in Bertaut and Judson (2014).
Tabova and Warnock (2021) assess the different sources
available 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)
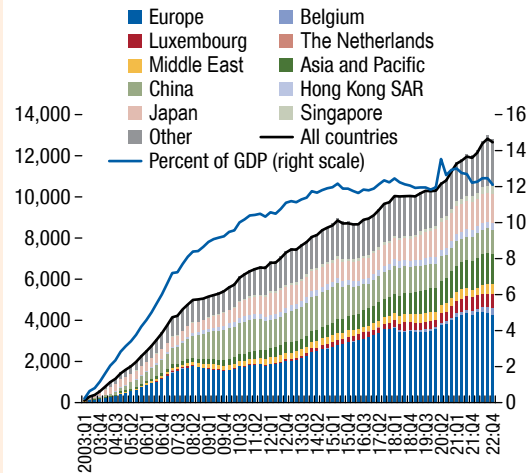
Sources: US Bureau of Economic Analysis; and IMF staff
calculations.
Note: "Other" includes Canada, Latin America and other Western
Hemisphere, Africa, and international organizations.

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

- In China, while the 2015–16 sale of US Treasur-
  ies 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 Trea-
  sury 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 signifi-
  cantly 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 provid-
  ing 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)

Legend: Total — Treasury — — Agency — — Corporate

1. Russia
2. China
3. Cayman Islands
4. UK
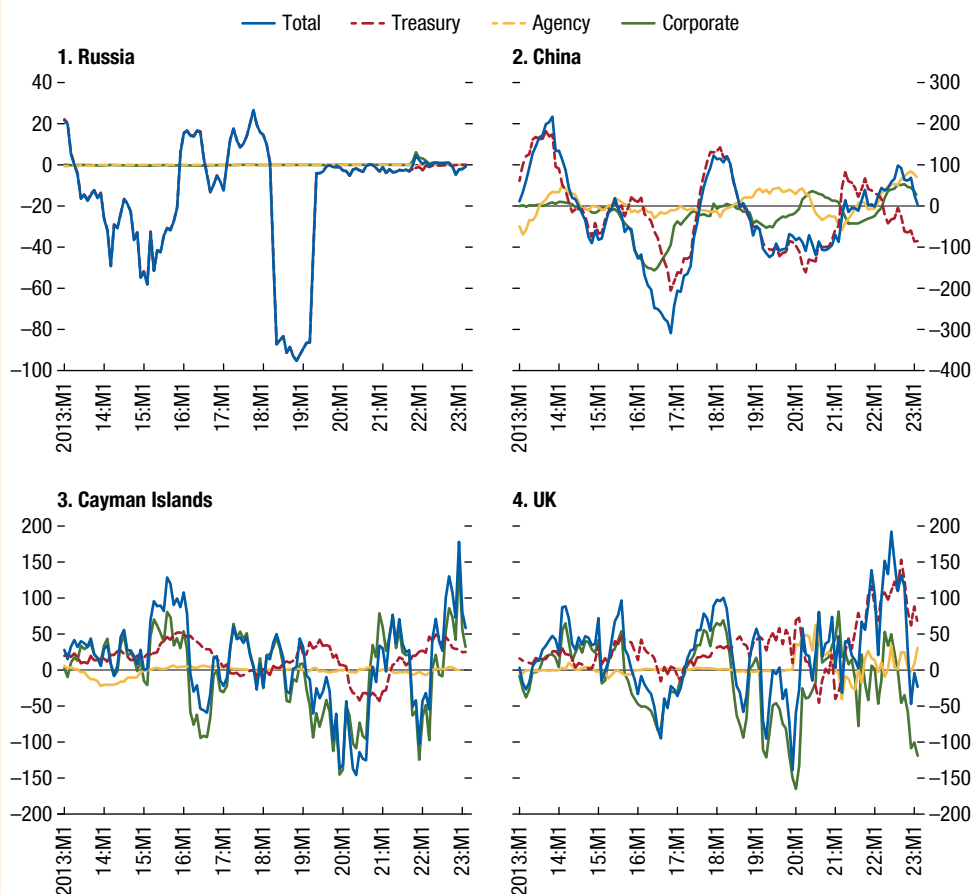
Sources: Federal Reserve, and IMF staff calculations.
Note: The estimated flows are essentially constructed using changes in foreign holdings of US Treasury securities adjusted for valuation effects as discussed in Bertaut and Judson (2014). Tabova and Warnock (2021) assess the different sources available 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**
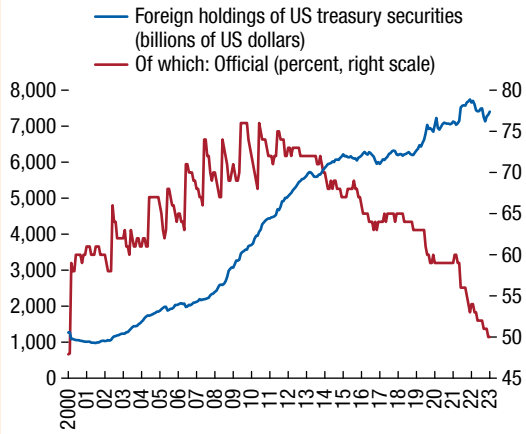
Sources: Refinitiv Datastream; and US Department of the
Treasury, Treasury International Capital System.

**Figure 1.1.10. Currency Composition of Official
Foreign Exchange Reserves**
(Percent of allocated reserves)
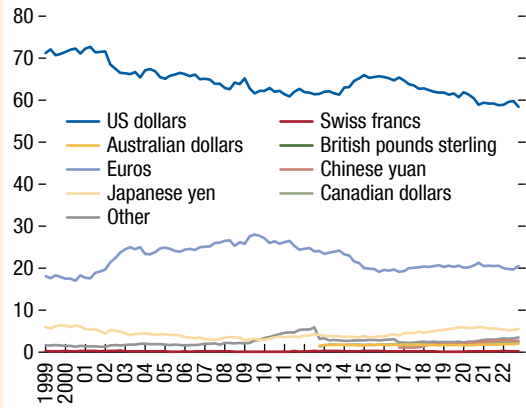
Source: IMF, Currency Composition of Official Foreign Exchange
Reserve (COFER).

**Figure 1.1.11. China: Incurrence of Portfolio
Investment Assets**
(Billions of US dollars)
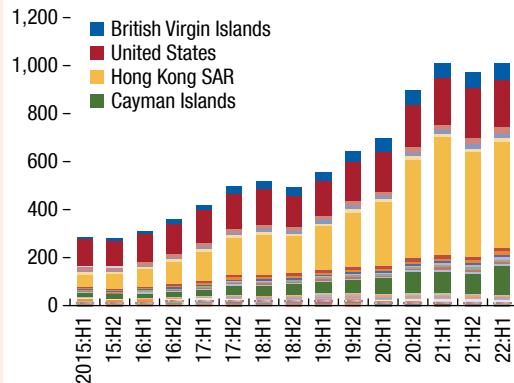
Source: IMF, Coordinated Portfolio Investment Survey.
Note: Legend only displays selected economies for clarity.

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

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.

Figure 1.2.1. Cumulative Distribution of Foreign Currency Exposures

1. Aggregate Foreign Currency Exposures[1]

Legend:
- EMDEs, 1990
- AEs, 1990
- EMDEs, 2007
- AEs, 2007
- EMDEs, 2020
- AEs, 2020

Y-axis: Cumulative probability
X-axis: Foreign currency exposure (percent of total assets and liabilities)

2. EMDEs: Aggregate Net Foreign Currency Exposure[2] (Percent of GDP)

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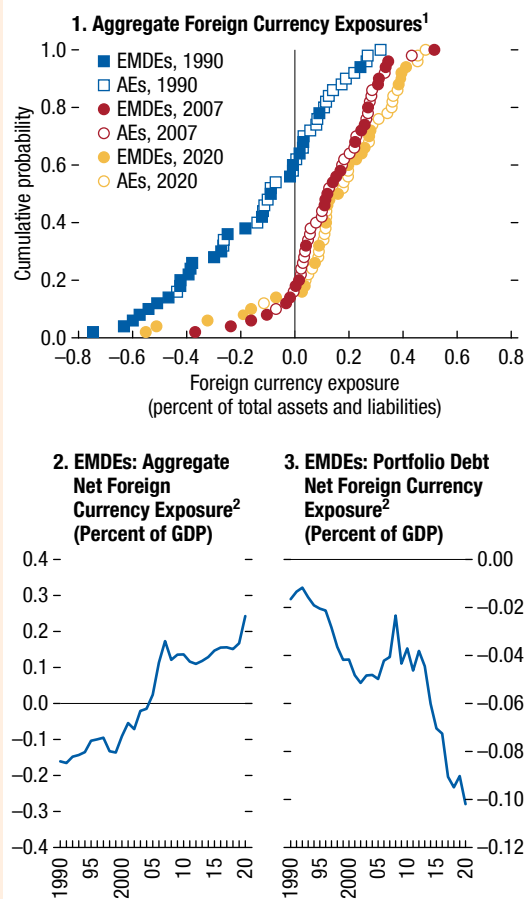
Source: Allen, Gautam, and Juvenal (2023).
Note: AEs = advanced economies; EMDEs = emerging market and developing economies.
[1]Aggregate foreign currency exposure is defined as total net foreign assets denominated in foreign currency as a share of total assets and liabilities.
[2]A 1 percent uniform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

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.

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

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.

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

---

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
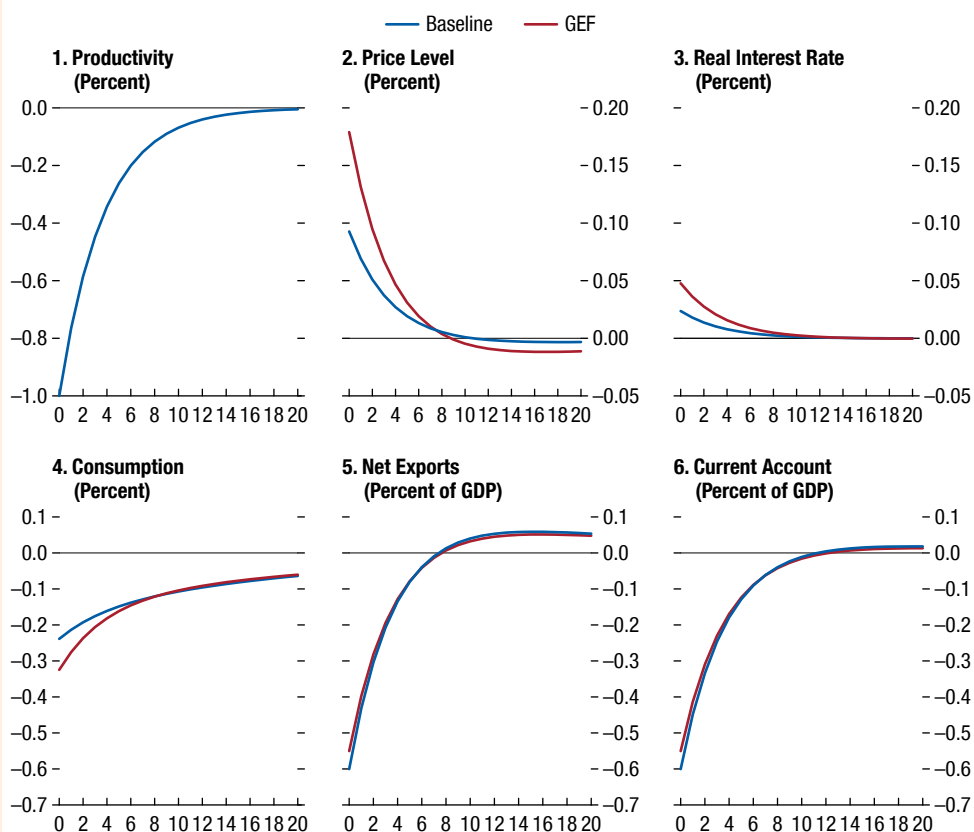
Source: Simulations based on Cuñat and Zymek (2023).
Note: One unit of time on the horizontal axes corresponds to one year. The "Baseline" simulation is calibrated to the trade openness of a representative country from the group of emerging market and developing economies (EMDEs). The "GEF" simulation 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)				(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

Economy	Overall Assessment	Current Account (Percent of GDP)		IMF Staff CA Gap (Percent of GDP)		IMF Staff REER Gap (Percent)		International Investment Position (Percent of GDP)			CA NFA Stabilizing (Percent of GDP)	SE of CA Norm (Percent)
		Actual	Cycl. Adj.	Midpoint	Range	Midpoint	Range	Net	Liabilities	Assets		
Argentina	Weaker	−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]	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	REER (Percent Change) 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)

| Economy | EBA Gap | | | | Fiscal Gap | | | | | Public Health Expenditure Gap | | | | | Private Credit Gap | | | | | Foreign Exchange Intervention and Capital Controls Gap | | | | | | |
| | | | | | | Domestic | | | | | Domestic | | | | | Domestic | | | | | Domestic | | | | | |
	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	-0.1	-0.1	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 = 0.0; 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.

References

Adler, Gustavo, and Daniel Garcia-Macia. 2018. "The Stabilizing Role of Net Foreign Asset Returns." IMF Working Paper 18/79, International Monetary Fund, Washington, DC.

Adler, Gustavo, Kyun Suk Chang, Rui Mano, and Yuting Shao. 2021. "Foreign Exchange Intervention: A Dataset of Public Data and Proxies." IMF Working Paper 2021/047, International Monetary Fund, Washington, DC.

Aiyar, Shekhar, Jiaqian Chen, Christian Ebeke, Roberto Garcia-Saltos, Tryggvi Gudmundsson, Anna Ilyina, Alvar Kangur, and others. 2023. "Geoeconomic Fragmentation and the Future of Multilateralism." IMF Staff Discussion Note 2023/001, International Monetary Fund, Washington, DC.

Allen, Cian, Camila Casas, Giovanni Ganelli, Luciana Juvenal, Daniel Leigh, Pau Rabanal, Cyril Rebillard, Jair Rodriguez, and João Tovar Jalles. 2023. "2022 Update of the External Balance Assessment Methodology." IMF Working Paper 23/47, International Monetary Fund, Washington, DC.

Allen, Cian, Deepali Gautam, and Luciana Juvenal. 2023. "Currencies of External Balance Sheets." Unpublished, International Monetary Fund, Washington, DC.

Antolín-Díaz, Juan, Ivan Petrella, and Juan F. Rubio-Ramírez. 2021. "Structural Scenario Analysis with SVARs." *Journal of Monetary Economics* 117: 798–815.

Bank for International Settlements (BIS). 2023. "Statistical Release: BIS International Banking Statistics and Global Liquidity Indicators at End-December 2022." Bank for International Settlements, Basel, Switzerland.

Bertaut, Carol, and Ruth A. Judson. 2014. "Estimating U.S. Cross-Border Securities Positions: New Data and New Methods." International Finance Discussion Papers 1113, Board of Governors of the Federal Reserve System, Washington, DC.

Blanchard, Olivier J., and Mitali Das. 2017. "A New Index of Debt Sustainability." NBER Working Paper 24068, National Bureau of Economic Research, Cambridge, MA.

Bolhuis, Marijn A., Jiaqian Chen, and Benjamin Kett. 2023. "Fragmentation in Global Trade: Accounting for Commodities." IMF Working Paper 23/73, International Monetary Fund, Washington, DC.

Boz, Emine, Luis Cubeddu, and Maurice Obstfeld. 2017. "Revisiting the Paradox of Capital." Vox: CEPR Policy Portal, March 9.

Boz, Emine, Nan Li, and Hongrui Zhang. 2019. "Effective Trade Costs and the Current Account: An Empirical Analysis." IMF Working Paper 19/08, International Monetary Fund, Washington, DC.

Cherif Reda, Fuad Hasanov, and Nikola Spatafora and comprising Rahul Giri, Dimitre Milkov, Saad Quayyum, Gonzalo Salinas, and Andrew Warner. 2022. "Industrial Policy for Growth and Diversification: A Conceptual Framework." IMF Departmental Paper DP/2022/017, International Monetary Fund, Washington, DC.

Cuñat, Alejandro, and Robert Zymek. 2023. "Trade Costs and Imbalances in a Small Open Economy." Unpublished, International Monetary Fund, Washington, DC.

David, Antonio C., and Carlos Eduardo Gonçalves. 2021. "In Search of Lost Time: Examining the Duration of Sudden Stops in Capital Flows." *Journal of International Money and Finance* 117 (C).

Denbee, Edd, Carsten Jung, and Francesco Paternò. 2016. "Stitching Together the Global Financial Safety Net." Financial Stability Paper 36, Bank of England, London. https://www.bankofengland.co.uk/financial-stability-paper/2016/stitching-together-the-global-financial-safety-net.

Eaton, Jonathan, Samuel Kortum, and Brent Neiman. 2016. "Obstfeld and Rogoff's International Macro Puzzles: A Quantitative Assessment." *Journal of Economic Dynamics and Control* 72: 5–23. https://doi.org/10.1016/j.jedc.2016.06.002.

Forbes, Kristin J., and Francis E. Warnock. 2012. "Capital Flow Waves: Surges, Stops, Flight, and Retrenchment." *Journal of International Economics* 88 (2): 235–51. https://doi.org/10.1016/j.jinteco.2012.03.006.

Forbes, Kristin J., and Francis E. Warnock. 2021. "Capital Flow Waves—or Ripples? Extreme Capital Flow Movements since the Crisis." *Journal of International Money and Finance* 116: 102394. https://doi.org/10.1016/j.jimonfin.2021.102394.

Goldberg, Linda S., and Signe Krogstrup. 2023. "International Capital Flow Pressures and Global Factors." NBER Working Paper 30887, National Bureau of Economic Research, Cambridge, MA. https://www.nber.org/papers/w30887.

Gourinchas, Pierre-Olivier, and Olivier Jeanne. 2013. "Capital Flows to Developing Countries: The Allocation Puzzle." *The Review of Economic Studies* 80 (4): 1484–1515.

International Monetary Fund (IMF). 2015. "Assessing Reserve Adequacy–Specific Proposals." IMF Policy Paper, Washington, DC.

International Monetary Fund (IMF). 2016. "Adequacy of the Global Financial Safety Net." IMF Policy Paper, Washington, DC. https://www.imf.org/en/Publications/Policy-Papers/Issues/2016/12/31/Adequacy-of-the-Global-Financial-Safety-Net-PP5025.

Joy, Mark, Noëmie Lisack, Simon Lloyd, Dennis Reinhardt, Rana Sajedi, and Simon Whitaker. 2018. "Mind the (Current Account) Gap." Financial Stability Paper 43, Bank of England, London. https://www.bankofengland.co.uk/financial-stability-paper/2018/mind-the-current-account-gap.

Jordà, Òscar, Moritz Schularick, and Alan M. Taylor. 2017. "Macrofinancial History and the New Business Cycle Facts." *NBER Macroeconomics Annual* 31: 213–63. https://doi.org/10.1086/690241.

Lane, Philip R., and Gian Maria Milesi-Ferretti. 2018. "The External Wealth of Nations Revisited: International Financial Integration in the Aftermath of the Global Financial Crisis."

IMF Economic Review 66 (1): 189–222. https://doi.org/10.1057/s41308-017-0048-y.

Lane, Philip R., and Jay C. Shambaugh. 2010. "The Long or Short of It: Determinants of Foreign Currency Exposure in External Balance Sheets." *Journal of International Economics* 80 (1): 33–44. https://doi.org/10.1016/j.jinteco.2009.09.007.

Lucas, Robert. 1990. "Why Doesn't Capital Flow from Rich to Poor Countries?" *American Economic Review* 80 (May): 92–96.

Obstfeld, Maurice. 2017. "Assessing Global Imbalances: The Nuts and Bolts." *IMF Blog*, June 26, 2017. https://www.imf.org/en/Blogs/Articles/2017/06/26/assessing-global-imbalances-the-nuts-and-bolts.

Obstfeld, Maurice, and Kenneth Rogoff. 2000. "The Six Major Puzzles in International Macroeconomics: Is There a Common Cause?" *NBER Macroeconomics Annual* 15: 339–90. https://doi.org/10.1086/654423.

Perks, Michael, Yudong Rao, Jongsoon Shin, and Kiichi Tokuoka. 2021. "Evolution of Bilateral Swap Lines." IMF Working Paper 21/210, International Monetary Fund, Washington, DC. https://www.imf.org/en/Publications/WP/Issues/2021/08/06/Evolution-of-Bilateral-Swap-Lines-463358.

Prasad, Eswar, Raghuram G. Rajan and Arvind Subramanian. 2007. "The Paradox of Capital." *Finance & Development* 44 (1): 16.

Reyes-Heroles, Ricardo. 2017. "The Role of Trade Costs in the Rise of Trade Imbalances." Working Paper. 2017 Meeting Papers 212, Society for Economic Dynamics.

Tabova M. Alexandra, and Francis E. Warnock. 2021. "Foreign Investors and US Treasuries." NBER Working Paper 29313, National Bureau of Economic Research, Cambridge, MA.