REPORT TO CONGRESS

Macroeconomic and Foreign Exchange Policies of Major Trading Partners of the United States

U.S. DEPARTMENT OF THE TREASURY • OFFICE OF INTERNATIONAL AFFAIRS

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Contents

This Report reviews developments in international economic and exchange rate policies and is submitted pursuant to the Omnibus Trade and Competitiveness Act of 1988, 22 U.S.C. § 5305, and Section 701 of the Trade Facilitation and Trade Enforcement Act of 2015, 19 U.S.C. § 4421.[1]

[1] The Treasury Department has consulted with the Board of Governors of the Federal Reserve System and International Monetary Fund management and staff in preparing this Report.

Executive Summary

The global economic outlook is facing considerable uncertainty. Russia's illegal war against Ukraine is taking a devastating human toll, from lives lost, to families displaced internally or becoming refugees. It is also imperiling the global recovery from the COVID-19 pandemic through supply disruptions and rising commodity prices, as well as increasing food insecurity and inequality. The IMF projects slow global growth in both 2022 and 2023 due in no small part to Russia's war, with substantial markdowns in expected growth for both years from the forecasts six months ago and 2023 marked down from the July forecast. The dollar has strengthened considerably in the last year and the U.S. current account deficit has widened. While these conditions can sometimes be problematic from the perspective of this Report, these movements appear to be driven by stronger output conditions and more rapid monetary tightening in the United States. The bulk of currency intervention by our partners was in fact aimed to strengthen, not weaken, their currencies.

In the last year, fundamental factors, including diverging growth and monetary outlooks against the backdrop of Russia's war, the COVID-19 pandemic, and supply chain bottlenecks resulting in rising, broad-based inflationary pressures, have impacted major currencies. Shortly after a brief spike in the value of the dollar at the start of the COVID-19 pandemic, the dollar depreciated through much of 2020. Since May 2021, though, the dollar strengthened against most major trading partners' currencies, reflecting strong U.S. growth and rising interest rate differentials, as well as safe haven flows.

In particular, the nominal trade-weighted dollar appreciated over 10% in the year through end-September, surpassing its highest level in two decades. The Japanese yen depreciated roughly 25% against the dollar over this period, largely due to widening interest rate differentials as the Bank of Japan has maintained its highly accommodative stance that includes yield curve control measures. Meanwhile, the euro has gradually depreciated since March as Russia's war against Ukraine has impacted the energy landscape and raised concerns about economic activity, weakening more than 20% against the dollar in the year through end-September. The pound saw a an even stronger depreciation over this period and experiences a subsequent, sharp depreciation following the British government's announcement of fiscal policies. While dollar appreciation has been largest versus advanced economies this year, appreciation is broad based. The Chinese renminbi depreciated almost 11% against the dollar in the year through end-September. From a longer-term perspective, the dollar appreciated comparably against currencies of advanced economies and emerging markets between the onset of pandemic-induced financial market volatility in mid-February 2020 to end-September 2022, strengthening by 11% against advanced economy currencies and 8% against emerging market currencies.

After being roughly stable over the past several years, global current account imbalances—the sum of current account surpluses and deficits globally—widened due to the trade distortions associated with the COVID-19 pandemic. At the global level, current account surpluses widened for the second consecutive year to 2.1% of world GDP in 2021, up 0.4 percentage points from 2020. The IMF estimates that global imbalances widened further in 2022 largely because of ongoing pandemic-related factors and elevated commodities prices caused by Russia's war. The IMF expects current account balances to remain elevated in the near term though the future path is subject to uncertainty surrounding the pandemic, the war, and high commodity prices. These levels are still considerably smaller than their most recent peak in 2005-2008. Among major U.S. trading partners, the very large surpluses of Germany, Korea, Ireland, Switzerland, Taiwan, the Netherlands, and Singapore have each remained significant as a share of GDP over the four quarters through June 2022. During this period, Japan's current account surplus was smaller than in the four quarters through June 2021 as a share of GDP, but in dollar terms remained elevated at $82 billion. China's surplus was even higher in dollar terms at $367 billion over four quarters through June 2022 (2.0% of GDP), roughly $41 billion higher than in the four quarters through June 2021. Meanwhile, a strong U.S. policy response to the COVID-19 pandemic, the resulting pick-up in domestic demand, and a strong dollar caused the U.S. current account deficit to rise to 4.1% of GDP in the four quarters through June 2022.

The Biden Administration believes market determined exchange rates reflecting economic fundamentals is the appropriate arrangement for the dollar. When major economies face different stresses and accordingly pursue different policies, this will typically be reflected in currency movements. We monitor currency movements and their impact around the world, cognizant that a range of approaches to manage consequences by developing and emerging economies may be warranted in certain circumstances. We are also vigilant in responding to strains that this can present, whether it means a need for help from multilaterals, debt restructuring, or other responses. The Administration strongly opposes attempts by the United States' trading partners to artificially manipulate currency values to gain unfair advantage over American workers. Treasury continues to press other economies to uphold the exchange rate commitments they have made in the G-20, the G-7, and at the IMF. All G-7 members have committed to market determined exchange rates. All G-20 members have agreed that strong fundamentals and sound policies are essential to the stability of the international monetary system and not to target our exchange rates for competitive purposes.[2] All IMF members have committed to avoid manipulating their exchange rates to gain an unfair competitive advantage over other members.

With currencies under depreciation pressure many of our major trading partners have intervened over the past year to stem the pace of depreciation against the dollar. Nevertheless, certain economies have conducted foreign exchange market intervention in a persistent, one-sided manner with the aggregate effect of counteracting appreciation pressures. Over the four quarters through June 2022, two major U.S. trading partners—Singapore and Switzerland—intervened in the foreign exchange market in a sustained, asymmetric manner to limit upward pressure on their currencies. In addition, while the present global macroeconomic circumstances – elevated inflation, monetary tightening to slow demand, and dollar appreciation – reduce concerns about current account surpluses, it is important to monitor countries' external balances and whether their production and domestic absorption are broadly aligned.

[2] For a list of further commitments, see the April 2021 Report on Macroeconomic and Exchange Rate Policies of Major Trading Partners. Available at: https://home.treasury.gov/system/files/206/April_2021_FX_Report_FINAL.pdf.

Treasury Analysis under the 1988 and 2015 Legislation

This Report assesses developments in international economic and exchange rate policies over the four quarters through June 2022. The analysis in this Report is guided by Sections 3001-3006 of the Omnibus Trade and Competitiveness Act of 1988 (1988 Act) (codified at 22 U.S.C. §§ 5301-5306) and Sections 701 and 702 of the Trade Facilitation and Trade Enforcement Act of 2015 (2015 Act) (codified at 19 U.S.C. §§ 4421-4422), as discussed in Section 2 of this Report.

Under the 2015 Act, Treasury is required to assess the macroeconomic and exchange rate policies of major trading partners of the United States for three specific criteria. Treasury sets the benchmark and threshold for determining which countries are major trading partners, as well as the thresholds for the three specific criteria in the 2015 Act.

In this Report, Treasury has reviewed the 20 largest U.S. trading partners[3] against the thresholds Treasury has established for the three criteria in the 2015 Act:

(1) A significant bilateral trade surplus with the United States is a goods and services trade surplus that is at least $15 billion.
(2) A material current account surplus is one that is at least 3% of GDP, or a surplus for which Treasury estimates there is a material current account "gap" using Treasury's Global Exchange Rate Assessment Framework (GERAF).
(3) Persistent, one-sided intervention occurs when net purchases of foreign currency are conducted repeatedly, in at least 8 out of 12 months, and these net purchases total at least 2% of an economy's GDP over a 12-month period.[4]

Treasury is able to estimate current account gaps using GERAF only on an annual basis due to data availability. However, external positions have adjusted considerably over the four quarters through June 2022, and therefore the latest available GERAF estimates (i.e., estimates for 2021) may not fully reflect recent developments during the review period in this Report. To account for this, Treasury considers a material current account gap to be one where a given current account balance—stripping out cyclical factors—is substantially higher than the expected current account balance given the economy's economic fundamentals and the appropriate mix of macroeconomic policies.

In accordance with the 1988 Act, Treasury has also evaluated in this Report whether trading partners have manipulated the rate of exchange between their currency and the United States dollar for purposes of preventing effective balance of payments adjustments or gaining unfair competitive advantage in international trade.

Because the standards in the 1988 Act and the 2015 Act are distinct, a trading partner could be found to meet the standards identified in one of the statutes without necessarily

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[3] Based on total bilateral trade in goods and services (i.e., imports plus exports).
[4] These quantitative thresholds for the scale and persistence of intervention are considered *sufficient* on their own to meet the criterion. Other patterns of intervention, with lesser amounts or less frequent interventions, might also meet the criterion depending on the circumstances of the intervention.

being found to meet the standards identified in the other. Section 2 provides further discussion of the distinctions between the 1988 Act and the 2015 Act.

Treasury Conclusions Related to the 2015 Act

Switzerland once again exceeded the thresholds for all three criteria over the four quarters through June 2022, as it had in the last Report which covered the four quarters through December 2021. Therefore, Treasury is continuing enhanced analysis of Switzerland's macroeconomic and exchange rate policies in this Report, and Treasury is also continuing its enhanced bilateral engagement with Switzerland to discuss the Swiss authorities' policy options to address the underlying causes of its external imbalances.

Vietnam has been removed from the Monitoring List, having only met one of the three criteria over the four quarters through June 2022 as it had in the June 2022 Report for the four quarters through December 2021. Vietnam had previously exceeded the thresholds for all three criteria as noted in the December 2021, April 2021, and December 2020 Reports, in each of which Treasury conducted enhanced analysis of Vietnam. In early 2021, Treasury commenced enhanced bilateral engagement with Vietnam in accordance with the 2015 Act. As a result of discussions through the enhanced engagement process, Treasury and the State Bank of Vietnam- (SBV) reached agreement in July 2021 to address Treasury's concerns about Vietnam's currency practices.[5] Treasury continues to engage closely with the SBV to monitor Vietnam's progress in addressing Treasury's concerns and remains satisfied with the progress made by Vietnam.

Taiwan again exceeded the thresholds for two criteria over the four quarters through June 2022 as it did in the June 2022 Report for the four quarters though December 2021. Taiwan had previously exceeded the thresholds for all three criteria as noted in the December 2021 and April 2021 Reports, in each of which Treasury conducted enhanced analysis of Taiwan. As Taiwan continues to meet two of the three criteria, Taiwan will remain on the Monitoring List.

In May 2021, Treasury commenced enhanced bilateral engagement with Taiwan in accordance with the 2015 Act. These productive discussions have helped develop a common understanding of the policy issues related to Treasury's concerns about Taiwan's currency practices. Treasury continues to engage closely with Taiwan's authorities.

Treasury Assessments of Other Major Trading Partners

Treasury has found in this Report that no major trading partner other than Switzerland met all three criteria under the 2015 Act during the four quarters ending June 2022.

Treasury has also established a Monitoring List of major trading partners that merit close attention to their currency practices and macroeconomic policies. An economy meeting two of the three criteria in the 2015 Act is placed on the Monitoring List. Once on the

[5] See "Joint Statement from the U.S. Department of the Treasury and the State Bank of Vietnam." Available at: https://home.treasury.gov/news/press-releases/jy0280.

Monitoring List, an economy will remain there for at least two consecutive Reports to help ensure that any improvement in performance versus the criteria is durable and is not due to temporary factors. As a further measure, Treasury will add and retain on the Monitoring List any major U.S. trading partner that accounts for a large and disproportionate share of the overall U.S. trade deficit even if that economy has not met two of the three criteria from the 2015 Act. **In this Report, the Monitoring List comprises China, Japan, Korea, Germany, Malaysia, Singapore, and Taiwan.**

Italy, India, Mexico, Thailand, and Vietnam have been removed from the Monitoring List in this Report, having met only one out of three criteria for two consecutive Reports.

China's failure to publish foreign exchange intervention and broader lack of transparency around key features of its exchange rate mechanism make it an outlier among major economies and warrants Treasury's close monitoring.

Treasury Conclusions Related to the 1988 Act

The 1988 Act requires Treasury to consider whether any economy manipulates the rate of exchange between its currency and the U.S. dollar for purposes of preventing effective balance of payments adjustments or gaining unfair competitive advantage in international trade. **In this Report, Treasury has concluded that no major trading partner of the United States engaged in conduct of the kind described in Section 3004 of the 1988 Act during the relevant period.** This determination has taken account of a broad range of factors, including not only trade and current account imbalances and foreign exchange intervention (the 2015 Act criteria), but also currency developments, exchange rate practices, foreign exchange reserve coverage, capital controls, and monetary policy.

Treasury continues to carefully track the foreign exchange and macroeconomic policies of U.S. trading partners under the requirements of both the 1988 Act and the 2015 Act, and to review the appropriate metrics for assessing how policies contribute to currency misalignments and global imbalances. The Administration has strongly advocated for our major trading partners to carefully calibrate policy tools to support a strong and sustainable global recovery. Treasury also continues to stress the importance of all economies publishing data related to external balances, foreign exchange reserves, and intervention in a timely and transparent fashion.

Section 1: Global Economic and External Developments

This Report covers economic, trade, and exchange rate developments in the United States, the global economy, and the 20 largest trading partners of the United States for the four quarters through June 2022 and, where quarterly and/or monthly data are available, through end-September 2022. Total goods and services trade of the economies covered with the United States amounted to more than $5.1 trillion in the four quarters through June 2022, almost 80% of all U.S. trade during that period.

U.S. Economic Trends

After expanding in 2021 at the fastest pace in about 40 years, real gross domestic product (GDP) in the United States contracted slightly in the first half of 2022. Despite the mild pullback in this measure of aggregate economic activity, GDP returned to growth in the third quarter and other data have suggested persistent expansion throughout the year. Labor markets remained very strong during the first three quarters of this year with substantive job growth. Meanwhile the headline unemployment rate declined from 3.9% at the end of 2021 to 3.5% as of September 2022—returning to the pre-pandemic, half-century low. Moreover, household balance sheets remained healthy, and supply-chain disruptions appeared to ease toward the end of the second quarter and through the third quarter—though improved supply chains have not yet led to materially lower inflation. Indeed, inflation remained elevated on a year-over-year basis as domestic factors were aggravated by Russia's war against Ukraine and the related rise in energy and food prices. Given the higher and persistent rates of inflation, the Federal Open Market Committee raised its policy rate by a combined 125 basis points in May and June; by September, the policy rate was 300 basis points higher than at the beginning of the year.

The outlook for growth in the latter half of 2022 remains favorable. Real GDP rebounded 2.6% at an annual rate in the third quarter, more than offsetting the modest contractions in the first two quarters. Even so, the economic outlook for the final quarter of the year remains uncertain with risks largely weighted to the downside. In early October, before the third quarter GDP estimate, private forecasters projected real GDP would grow 0.2% at an annual rate in the fourth quarter. Further commodity price increases associated with Russia's war against Ukraine could translate into higher U.S. inflation, while supply chain disruptions could re-emerge. By contrast, however, COVID-19 is moving from pandemic to endemic and its risk to the economy has waned. As of mid-September, nearly 80% of the U.S. population had received at least one dose of the COVID-19 vaccines and the administration of bivalent COVID-19 vaccines should reduce the prevalence and severity of Omicron subvariant cases in the autumn and winter of 2022, mitigating the economic impact from COVID-19.

Economic Performance in 2022 H1

Economic performance during the first half of this year was constrained by a further winding down of fiscal support, renewed lockdowns in Asia combined with increased disruptions to supply chains, and accelerating inflation. Russia's war against Ukraine contributed to the slowdown by pushing up commodity prices and contributing to consumer inflation, which has weighed on household confidence. As a result, real GDP growth swung from a brisk 4.8% annualized pace during the latter half of 2021 to two consecutive quarterly declines of 1.6% and 0.6% in the first and second quarters, respectively.

Despite the contraction of headline GDP, real growth in private domestic final purchases (PDFP) remained positive, slowing from 2.4% in the latter half of 2021 to 1.3% in this year's first half. Although there was a significant decline in residential real estate investment in the first two quarters of 2022, there was moderate growth in consumption and a solid advance in business fixed investment, excluding structures.

Among the components of PDFP that supported growth, real personal consumption expenditures increased by 1.7% at an annual rate during the first half of 2022, slowing from a gain of 3.0% during the second half of 2021. Business fixed investment (BFI) growth accelerated to 3.9% during the first half of 2022, after rising by 0.9% during the latter half of 2021.

The final two components of PDFP continued to decline at fast paces in the first half of 2022. Business investment in structures pulled back 8.6% at an annual rate in the first half of 2022 versus a 9.7% decline in the final two quarters of 2021, and residential investment dropped 10.8%, extending the decline of 3.5% seen during the second half of 2021.

Meanwhile, public-sector consumption and investment fell further in the first half of 2022. Government spending fell at all levels, dropping by 1.9% at an annual rate over the first two quarters of 2022, following a decline of 0.6% in the latter half of 2021. Expenditures dropped by 4.4% at the federal level, while state and local government spending decreased by 0.5%.

International demand posed a somewhat larger drag on growth as net exports subtracted an average 1.0 percentage point annualized from real GDP during the first half, after shaving an average 0.6 percentage points in 2021's second half. Import growth slowed modestly over these two periods, moderating by 2.4 percentage points to 10.0% during this year's first half. Export growth slowed more quickly, falling from 10.5% in the latter half of 2021 to 4.2% in the first half of 2022.

Private inventory accumulation, or intermediate demand for goods, presented a drag on GDP growth. In the last half of 2021, firms began to rebuild stocks on hand; the change in private inventories swung by a net $446 billion between the first and second halves of 2021, which added an average of 3.5 percentage points to GDP growth. Although inventories continued to increase in the first half of 2022, the net change in inventories slowed to $218 billion, which shaved 0.9 percentage points from headline growth.

In contrast to real GDP data, other economic indicators present a more sanguine view of the state of the U.S. economy in the first half of 2022. Real gross domestic income (GDI), which theoretically should equal real GDP with some statistical discrepancy, diverged from the reading from demand components. In the first half of 2022, real GDI *grew* 0.4% at an annual rate in the first half, compared to the 1.1% decrease in real GDP. In short, GDI suggests that economic expansion continued modestly through the first half of 2022.[6]

In addition, labor markets remained very strong during the first half of 2022 as robust labor demand encountered relatively slow improvement in labor supply. Payroll job creation remained unusually rapid, accelerating to an average 590,000 per month during the latter half of 2021, before stepping down to a still-brisk pace of 444,000 per month during the first half of 2022. In 2021, a record 6.7 million jobs were created with well over 3.5 million added in the latter half of the year. The economy generated another 2.7 million jobs during the first half of this year. Meanwhile after falling to 3.9% in December 2021, the unemployment rate (U-3) dropped to 3.6% by June 2022, only 0.1 percentage points above the five-decade low seen just before the pandemic. Although improvement in the labor force participation rate (LFPR) has been unsteady, it has trended slowly higher. By December, LFPR was 61.9%, or 0.3 percentage points higher than in June 2021. During the first half of 2022, headline LFPR remained in a higher range of 62.2% and 62.4% and, as of June 2022, as was 0.3 percentage points higher than in December.

Inflation began to pick up in mid-2021, due to supply-demand mismatches. Household goods demand ran ahead of pre-pandemic trend, as household consumption was strong due to healthy household balance sheets, robust income growth. and the multiple rounds of fiscal support. In addition, the supply side of the economy has not kept pace as producers pared back employment and investment during the pandemic and supply-chain disruptions further constrained production.

High inflation continued into the first half of 2022 as supply-demand mismatches persisted, high house prices fed into the cost of shelter, and Russia's illegal war against Ukraine further elevated energy and food prices—the latter of which are affected by the former due to pass-through to agricultural supply chains through natural gas for fertilizer, diesel for tractors and trucks, and other methods. Through June 2022, the headline consumer price index CPI rose by 9.1% over the year, reflecting in part a nearly 41.6% jump in energy prices and a 10.4% increase in the food CPI. For core prices (excluding food and energy), the CPI rose by 5.9% over the year through June 2022, boosted in part by soaring prices for new and used motor vehicles—with yearly gains of 11.4% and 7.1%, respectively—and a 5.6% jump in the shelter index over the same period. In addition, there was a broad-based rising in other core prices, with non-motor vehicle core goods rising and estimated 5.9% over the year and core services up 5.4%.

[6] On September 29, the Bureau of Economic Analysis (BEA) released its annual revision of gross domestic product and related economist estimates. With the inclusion of more complete data, the revisions somewhat reconciled the divergence of GDI growth from GDP growth for 2020 and 2021: BEA revised up its estimate of GDP and revised lower its estimate of GDI. An abnormal statistical discrepancy still exists for 2022, but future annual revisions may narrow the divergence between GDP and GDI.

Economic Developments Since June 2022

According to the advance estimate, real GDP rose 2.6% at an annual rate in the third quarter, more than offsetting the modest contraction in the first half of the year. However, some details within the report were somewhat weak. Real PDFP barely increased in the third quarter—increasing just 0.1 percentage point on an annualized basis—as sharp drops in residential investment and business spending on structures nearly offset growth in household consumption and business investment in equipment and intellectual property products. For PCE, specifically, household demand for goods (both durables and nondurables) fell, while spending on most services—save for health care—weakened.

Excluding PDFP, economic activity contributed to GDP growth in Q3, on net. The net export deficit narrowed by $157 billion to $1,274 billion, contributing 2.8 percentage points to headline growth. Although inventories continued to be a drag on growth, the pace slowed and the change in private inventories subtracted 0.7 percentage points from GDP growth. By contrast, the public sector added 0.4 percentage points to GDP growth, with nearly equal contributions from both the federal sector and state and local governments.

Tight labor markets persisted in the third quarter. Demand for labor remained elevated—though there were some signs of easing. The economy added an additional 1.1 million jobs during the third quarter, and the level of employment surpassed pre-pandemic levels during August 2022. Even so, job growth slowed from an average over 440,000 jobs per month in the first half of the year to an average of near 370,000 in the third quarter. The still-strong employment growth contributed to the unemployment rate remaining low. The U-3 fluctuated between 3.5% to 3.7% of the labor force—little changed from the second quarter—and was 3.5% in September, returning to the half-century low seen just before the onset of the pandemic. By September, the LFPR stood at 62.3%, matching the rate in the first half of the year. However, there were positive signs among prime-age workers. The prime-age LFPR in September was 82.7%, up 0.4 percentage points from June 2022 and halving the distance to the nearly twelve-year high of 83.1% reached in January 2020. The rise in prime-age participation may be a positive sign for easing tightness on the supply side of labor markets.

Year-over-year inflation remained elevated in the third quarter—though monthly increases at the headline level were noticeably slower compared with the first half of the year. In July and August, headline CPI monthly inflation was 0.0% and 0.1%, respectively, as falling energy prices offset still-strong price growth for food and core goods and services. The CPI for energy goods and services declined in each month of the third quarter, dropping a cumulative 11.3% since June. Meanwhile, food price inflation remained elevated, declining only modestly from 1.0% in June to 0.8% in September. Core inflation was also modestly softer, growing 6.4% at an annual rate in the third quarter versus 6.6% in the second. However, core inflation has a high floor due to persistent and strong growth of shelter prices, such as rents and owners' equivalent rents. By contrast, inflation for other core services appears to have weakened in the third quarter. Excluding shelter, core services inflation dropped from an 10.0% annualized growth rate in the second quarter to a 4.8% growth rate in the third quarter. Core goods prices, meanwhile, were another key contributor to core inflation in the third quarter, stepping up from a 3.1% annualized growth rate in the second quarter to 5.3% in the third. This acceleration followed spiking prices from May to August, but monthly core goods inflation was flat by September.

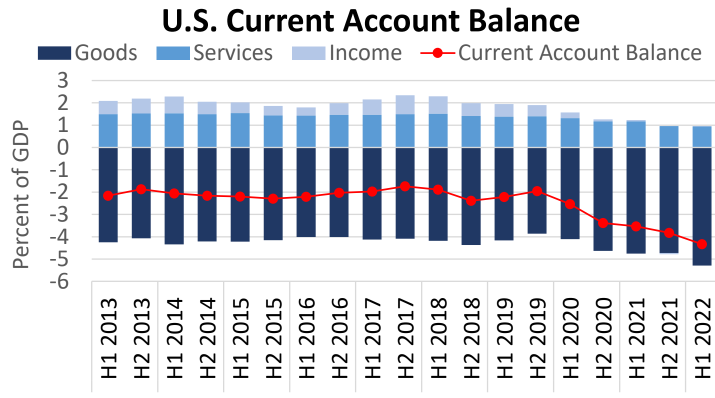
Due to the persistence of still-elevated inflation, the FOMC has continued to tighten monetary policy. Since June, the FOMC has raised the federal funds rate target range by an additional 150 basis points, leading to a range of 3.00-3.25% by the end of September. The FOMC's latest Summary of Economic Projections, released in September, implied a year-end federal funds target rate range of 4.25–4.5%, consistent with increases of 75 basis points and 50 basis points at the final two meetings of the year. The FOMC's balance sheet runoff—that is, allowing maturity of longer-term assets without reinvestment—began on June 1. In September, runoff caps were raised as scheduled to $90 billion ($60 billion Treasuries, $35 billion mortgage-backed securities).

Federal Finances in Fiscal Year 2022

The federal government's deficit and debt were trending higher before the pandemic but rose sharply, following the various fiscal responses to combat the pandemic's effect on the economy. The federal deficit peaked a $3.1 trillion in fiscal year (FY) 2020, equivalent to 14.9% of nominal GDP. Although two major federal pandemic assistance packages were passed in FY 2021—the Coronavirus Response and Relief Supplemental Appropriations Act of 2021 and the American Rescue Plan—the federal government's budget deficit fell to $2.8 trillion (12.3% of GDP) over the fiscal year.

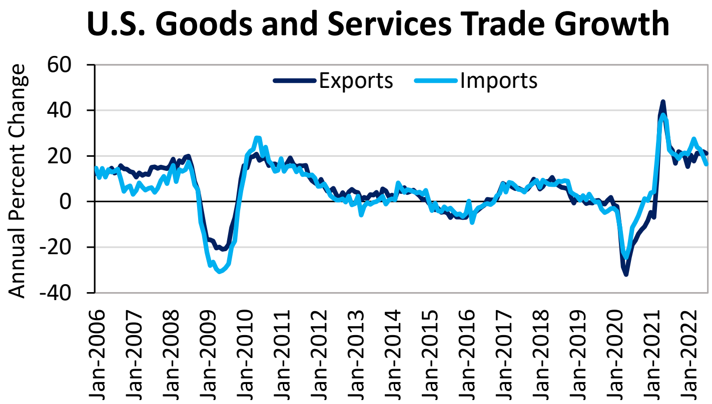
Federal finances continued to improve significantly FY 2022. The federal deficit totaled $1.4 trillion, falling by 50% over the year. As a share of the economy, the federal deficit was 5.5% of nominal GDP. Higher federal receipts accounted for the majority of the decrease in the deficit, rising by $850 billion to $4.9 trillion, equivalent to 19.6% of GDP. Receipts growth was driven in large part by higher individual income tax receipts, related to the strong labor market in FY 2022. Meanwhile, outlays fell by $550 billion to $6.3 trillion, equivalent to 25.1% of the economy. The largest source of the decrease in outlays was from income security programs, which fell by $783 billion as federal pandemic assistance expired. By contrast, outlays for Medicare and Medicaid, Social Security, and net interest—that is, payments on accrued federal debt—continued to increase over the year. Medicare and Medicaid outlays were $130 billion higher over the year, while Social Security outlays increased by $84 billion. Net interest outlays were up by $123 billion from FY 2022. At the end of FY 2022, gross federal debt stood at $30.9 trillion (123.7% of GDP) while debt held by the public was $24.3 trillion (97.2% of GDP).

U.S. Current Account and Trade Balances



Sources: Bureau of Economic Analysis, Haver

The current account deficit rose in the first half of 2022 to 4.3% of GDP, up 0.5 percentage points from the previous half. This was the largest deficit as a share of GDP since the end of 2008. This increase was accounted for both by a rising goods deficit and lower services and income surpluses. From 2013 to 2020, the headline U.S. current account deficit had been quite stable, around 2-2.5% of GDP.



Source: U.S. Census Bureau

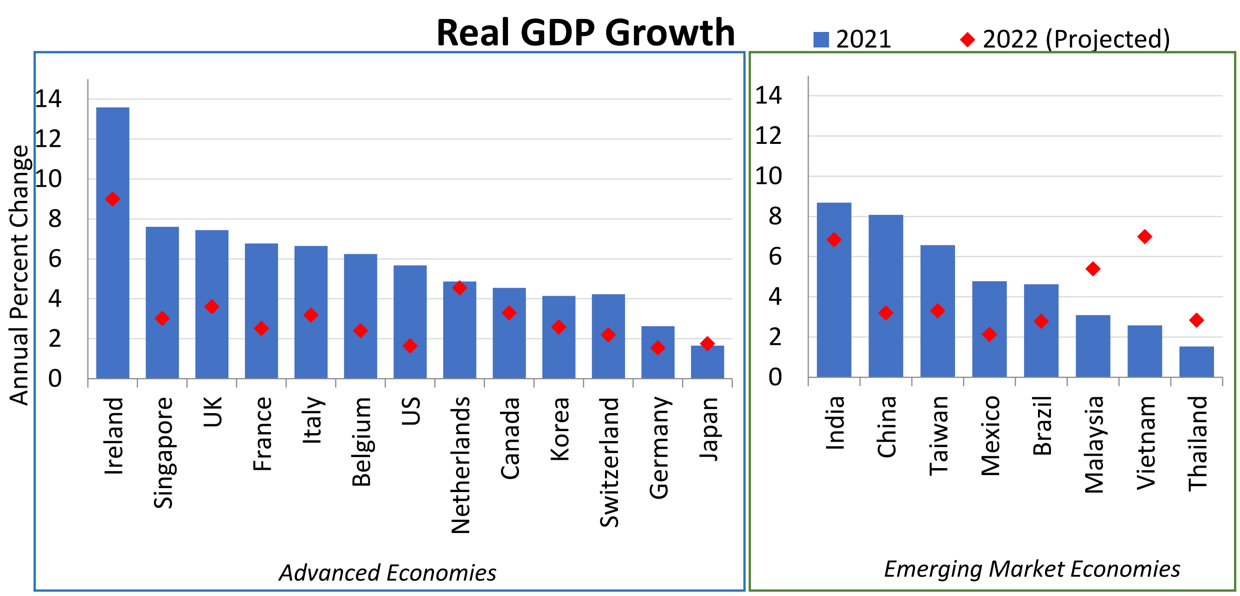
Beginning in the second half of 2020, U.S. domestic demand recovered quickly, while demand in the rest of the world did so more moderately, resulting in a widening trade deficit—both in nominal terms and as a share of GDP. The U.S. goods and services trade deficit was 3.8% of GDP in the second half of 2021, slightly wider than in the first half of 2021, as growth in U.S. imports of both goods and services outpaced export growth. As inflation persisted into 2022 and Russia's war against Ukraine injected fresh uncertainty over critical commodities supply, monetary tightening in the United States responded to stabilize rising prices. The divergence in monetary policy between the United States and other countries on top of growing fears of a global slowdown, contributed to dollar strength, and the U.S. trade deficit increased to 4.4% of GDP in the first half of 2022.

At the end of June 2022, the U.S. net international investment position marked a net liability of about $16.3 trillion (65.5% of GDP), a narrowing of $1.8 trillion compared to end-2021. The value of U.S.-owned foreign assets was $31.0 trillion, while the value of foreign-owned U.S. assets stood at $47.3 trillion.

International Economic Trends

Russia's war against Ukraine continues to undermine the nascent global economic recovery from COVID-19 and has caused critical commodity prices to soar, exacerbating inflation. In addition to the tremendous human cost of Russia's war and the devastation it is having on the Ukrainian economy, regional and global spillovers have been significant. Alongside supply and demand mismatches which have elevated inflation, Russia's war against Ukraine has sent prices of energy, agricultural goods, and base metals to historic highs. Inflation has thus persisted longer than expected, with monetary policy responding in line with central bank mandates. Following a healthy rebound in global output of 6.0% in 2021, led by advanced economies and owing partially to their forceful policy support, the IMF projects global economic growth to slow in 2022 to 3.2%. Many emerging markets and developing economies where output and labor markets remain further below pre-pandemic trajectories must now also contend with increasing energy and food insecurity, rising debt burdens, and capital flow volatility. For commodity importers, the twin risks of subdued growth and high inflation are becoming more prominent.

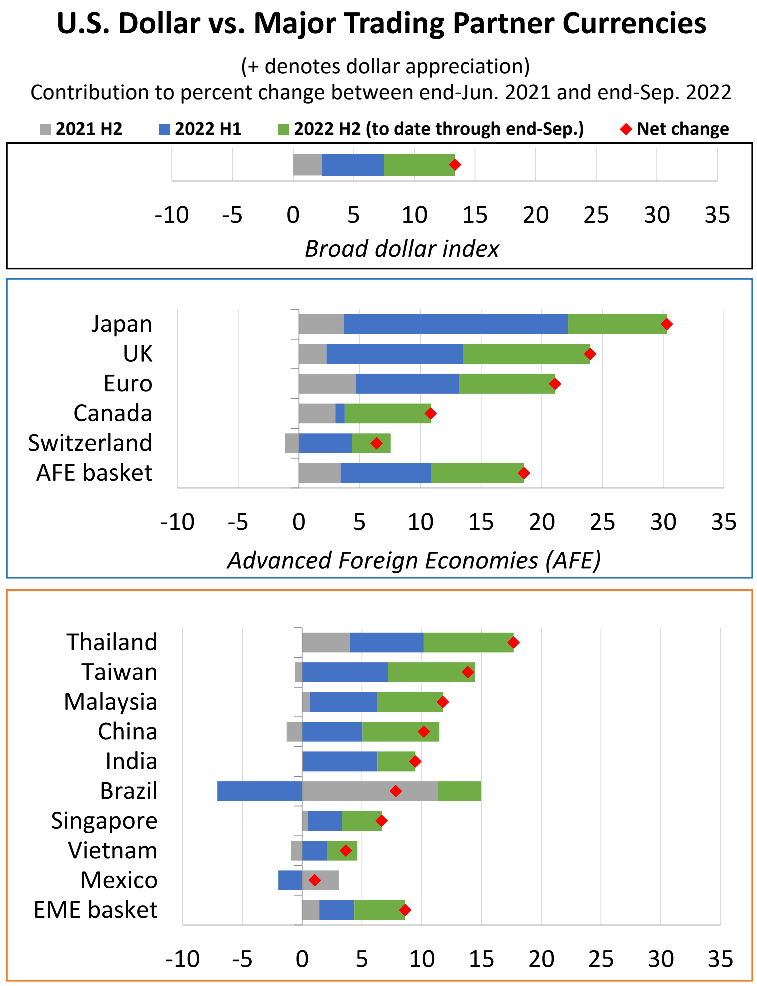
In light of the prospects for weaker growth and strains on fiscal and external positions, countries should carefully calibrate macroeconomic policies. Targeted fiscal policy should protect the most vulnerable, while monetary policy responds in line with central bank mandates. Some emerging market and developing economies have significant buffers to withstand external shocks. Commodity exporters have the opportunity now through high prices to build up fiscal buffers and reserves. Yet others with weak monetary and fiscal credibility may be more constrained altogether. Identifying the sources of inflationary pressure and/or weak growth is also necessary. Different policy responses will be required to address weak growth, depending on its drivers.



Sources: IMF World Economic Outlook October 2022

Foreign Exchange Markets[7]

Strong performance of the U.S. economy, more rapid tightening of monetary policy by the Federal Reserve relative to the rest of the world, terms of trade shocks, and safe-haven buying weighed on foreign currencies, bringing the nominal trade-weighted dollar up 13.4% from the end of June 2021 to end-September 2022; the strongest upward appreciation occurred in the third quarter of 2022, when the nominal trade weighted dollar rose 5.4%.

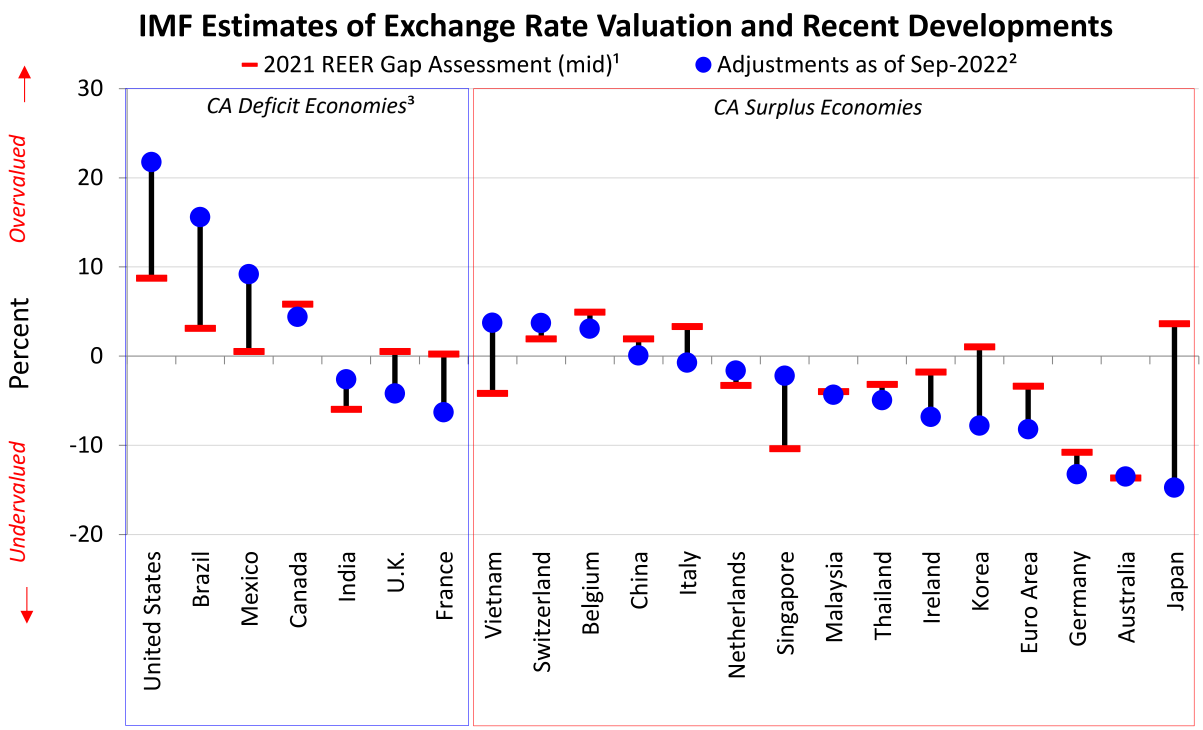


Sources: FRB, Haver

In 2022 through end-September, the dollar appreciated against all other major trading partners' currencies except small depreciations against the currencies of commodity exporters Mexico and Brazil. The dollar strengthened against advanced economy currencies in particular, appreciating by nearly 26% against the Japanese yen, 21% against the British pound, and 16% against the euro during this period. On net, the dollar appreciated most strongly against advanced economies currencies, by about 15%, whereas the dollar appreciated against emerging market currencies by about 7% during the same period. Much of the dollar appreciation in advanced economy currencies happened recently. From a longer-term perspective, the dollar appreciated comparably against currencies of advanced economies and emerging markets between the onset of pandemic-induced financial market volatility in mid-February 2020 to end-September 2022, strengthening by 11% against advanced economy currencies and 8% against emerging market currencies.

[7] Unless otherwise noted, this Report quotes exchange rate movements using end-of-period data. Bilateral movements against the dollar and the nominal effective dollar index are calculated using daily frequency or end-of-period monthly data from the Federal Reserve Board. Movements in the real effective exchange rate for the dollar are calculated using monthly frequency data from the Federal Reserve Board, and the real effective exchange rate for all other currencies in this Report is calculated using monthly frequency data from the Bank for International Settlements (BIS) or JP Morgan if BIS data are unavailable.

Against this backdrop, several major trading partners have intervened to stem the pace of depreciation against the dollar. In September 2022, Japanese authorities intervened in currency markets. This was their first intervention in currency markets in almost 11 years; they stated that the intervention aimed to reduce recent heightened volatility of the yen. They purchased yen and sold dollars which strengthens the value of the yen, pushing back against depreciation.



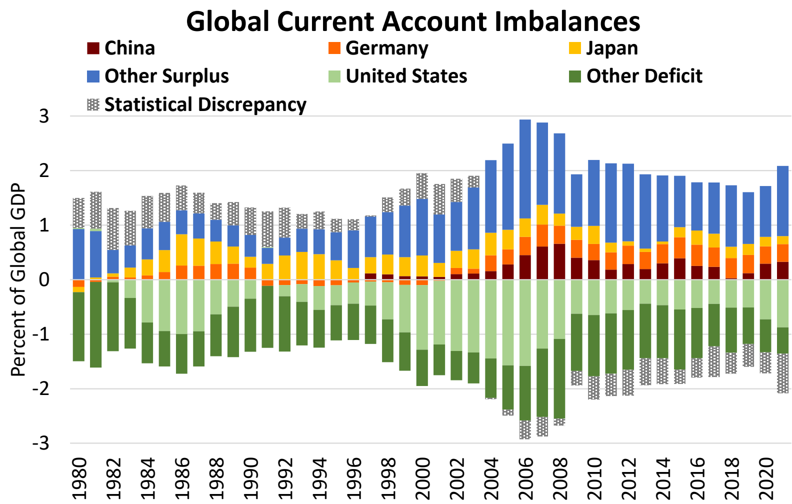
Sources: IMF 2022 External Sector Report, IMF 2022 Article IV Consultation Staff Report for Ireland, IMF 2022 Article IV Consultation Staff Report for Vietnam, BIS REER Indices, JP Morgan, FRB
1/The IMF's estimate of real effective exchange rate (REER) gap (expressed as a range) compares the country's average REER in 2021 to the level consistent with the country's medium-term economic fundamentals and desired policies. The midpoint of the gap range is depicted above.
2/Change between 2021 average REER and end-September 2022. Because the REER level consistent with the country's medium-term economic fundamentals and desired policies changes over time, these adjustments provide partial information about current exchange rate misalignments.
3/Economies sorted based on whether they were more frequently in deficit or surplus over the past five years.
Note: The IMF does not provide an estimate of Taiwan's REER gap.

On a real effective basis, the dollar appreciated 14.2% from end-June 2021 to end-September 2022. The real broad dollar is 21.1% above its 20-year average as of end-September 2022. In its most recent assessment, the IMF continued to judge the dollar to be overvalued on a real effective exchange rate basis. Meanwhile, the real effective exchange rates of several current account surplus economies that the IMF assessed to be undervalued in 2021 have adjusted minimally or depreciated through September 2022 relative to the 2021 average (e.g., the Netherlands, Malaysia, Thailand, Australia, and Germany). However, these adjustments only provide partial information about current exchange rate misalignments, especially given that the significant movements in currencies this year reflected multiple macroeconomic fundamentals. In particular, temporary terms of trade shocks or policy rate differentials can affect medium-term equilibrium levels without meaning that exchange rates have departed from fundamentals.

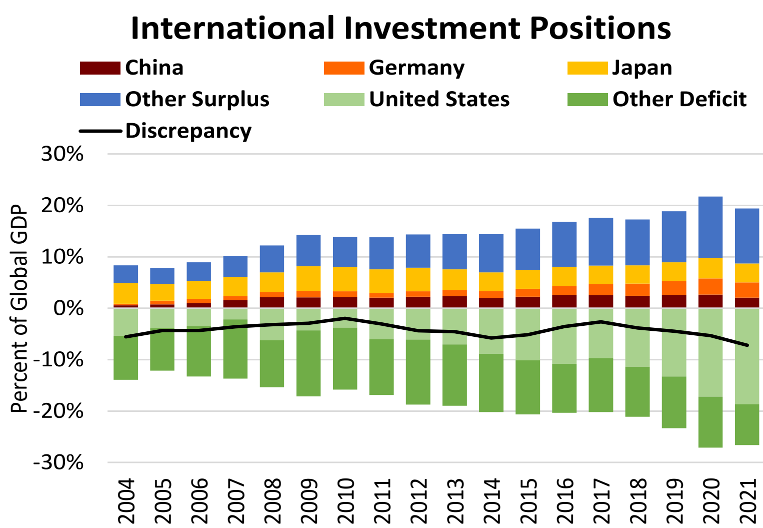
Global Imbalances

Global current account imbalances[8] were broadly stable in the few years prior to the pandemic before widening over 2020 and 2021. The IMF projects them to remain high this year before starting to narrow in 2023. The efforts to contain the COVID-19 pandemic and its negative economic effects led to extraordinary policy responses that influenced global trade and shifts in saving and investment and drove increases in global imbalances.

In addition to the lingering effects of COVID-19, historically high energy and commodity prices as a result of Russia's war against Ukraine are boosting the external positions of commodity exporters while weakening those of importers. Monetary tightening has induced currency realignments which may further widen global account imbalances in 2022.



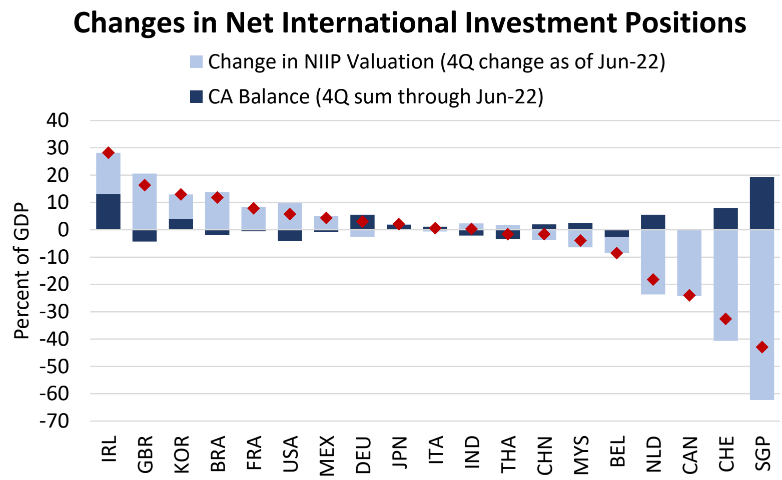
Sources: IMF WEO, Haver



Note: Discrepancy between aggregate creditor and debtor positions reflect any missing country-level data, as well as the global statistical discrepancy. Negative discrepancy values suggest missing data predominantly correspond to net debtor countries.
Sources: IMF, Central Bank of China (Taiwan).

[8] Measured as the sum of absolute current account deficits and surpluses.

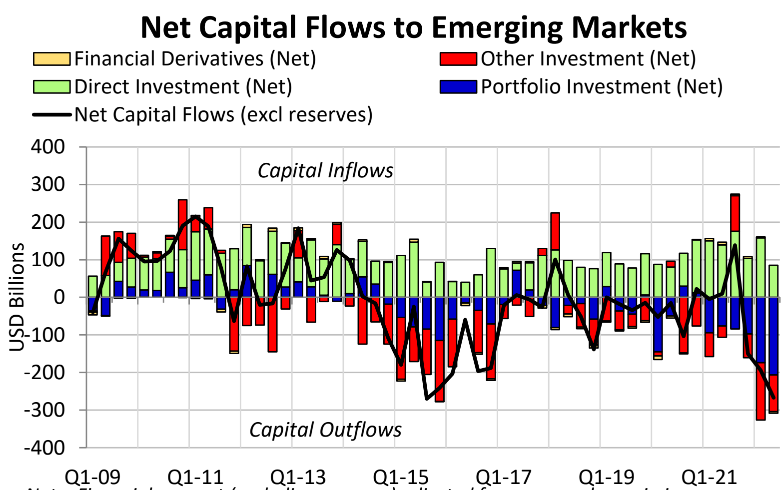
Net international investment positions widened to a historical peak in 2020. The IMF estimates that this was due to changes in net foreign asset positions that were larger than explained by current account balances in a number of cases, reflecting large valuation changes, including those driven by asset price and currency movements. Among major U.S. trading partners, the change in net international investment positions over the four quarters through June 2022 primarily reflect valuation effects. Notably, in the case of the Netherlands, Switzerland, and Singapore, these valuation changes led to decreased net foreign asset positions despite large, widening current account balances.



Sources: Haver, IMF, National Authorities

Capital Flows to Emerging Market Economies

Net capital flows to emerging market economies remained under pressure as global financial conditions tightened, global growth prospects dimmed, and emerging market currencies broadly depreciated over the four quarters through June 2022. During this period, net outflows from emerging markets of portfolio and other investment increased to $781 billion, roughly $334 billion more than the same period in 2021.[9] Nonresident net flows remained positive, suggesting that foreign investor demand for emerging market economy assets remained buoyant despite the multiple pressures weighing on their external positions, but were offset by continued net outflows from residents.[10] On a



Note: Financial account (excluding reserves) adjusted for errors and ommissions. 2022 reflects data through the end-June where available.
Source: National Authorities, U.S. Department of the Treasury Staff Calculations

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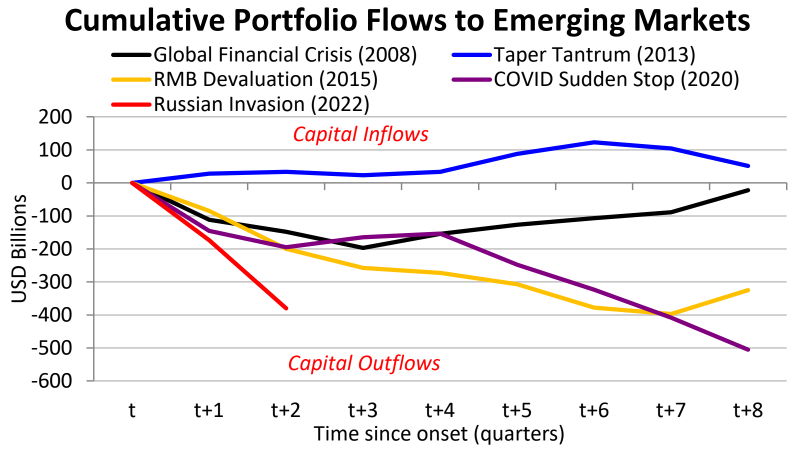
[9] In the case of several emerging markets, early and substantial monetary policy tightening may have helped to lessen the severity of net capital outflows.

[10] These sustained net outflows from residents can reflect both short-term cyclical factors such as changes in global risk appetite as well as long-term, structural characteristics including reduced investment home bias, increased sophistication of domestic investments, and increased access to international markets.

cumulative basis since the onset of the pandemic, net portfolio flows remain well below pre-pandemic levels; moreover, net portfolio outflows have since accelerated after Russia's war against Ukraine, declining by about $380 billion since Russia's war began. Excluding China, net outflows of portfolio investment to emerging markets have been less pronounced, with a cumulative decline of $222 billion compared to pre-invasion levels.



Note: Depicts net resident and nonresident portfolio investment flows on a cumulative basis following particular shock episodes. 2022 reflects data through the end-June where available.

Source: National Authorities, U.S. Department of the Treasury Staff Calculations

On a quarterly basis, total net capital flows were positive in the third quarter of 2021, primarily due to relatively large inflows of other investment. Amid early signs of tightening global financial conditions in the fourth quarter of 2021, emerging markets experienced net outflows of portfolio investment and other investment and these outflows outweighed continued robust foreign direct investment. This trend accelerated in the first quarter of 2022 after the onset of Russia's war against Ukraine, where net portfolio outflows across emerging market economies reached a record $174 billion. Net nonresident flows retreated from emerging market economies for the first time since the onset of the COVID-19 pandemic, while residents increased their investments abroad. Net nonresident outflows picked up in the second quarter of 2022 and net resident outflows remained relatively unchanged, with overall net portfolio outflows totaling $207 billion, the largest nominal quarterly portfolio outflow on record. Notably, net portfolio investment flows retreated from China at a record pace in the first and second quarters of 2022, with net outflows totaling about $80 billion in each quarter.

Higher frequency data (from sources beyond quarterly balance of payments data) suggest that, since end-June, nonresident portfolio flows to emerging markets have been mixed, particularly across asset classes, and remain relatively volatile as foreign investors parse out signals regarding the pace of monetary policy tightening across the global economy, the prospects for continued global growth, and the outlook for China's economy.

Foreign Exchange Reserves

Global foreign currency reserves totaled $12.0 trillion over the four quarters through end-June 2022, falling by $769 billion. This decrease was driven predominantly by a $576 billion decline due to valuation effects resulting from dollar appreciation over this period, as well as estimated net sales of $306 billion in foreign exchange. Meanwhile, estimated interest income of $113 billion offset some of the decline in reserves levels.

Despite this decline, Treasury assesses that the economies covered in this Report continue to maintain ample—or more than ample—foreign currency reserves based on standard adequacy benchmarks. Reserves in most of these economies are more than sufficient to cover short-term external liabilities and anticipated import costs. Moreover, the most recent IMF assessments of adequacy based on composite metrics across emerging market economies for 2021 suggest reserves are broadly adequate.

Table 1: Foreign Exchange Reserves

	FX Reserves (USD Bns)	1Y Δ FX Reserves (USD Bns)	FX Reserves (% of GDP)	FX Reserves (% of ST debt)	FX Reserves (% of IMF ARA Metric)*
China	3,071.3	-142.7	17%	227%	109%
Japan	1,192.9	-101.3	26%	39%	..
Switzerland	887.4	-131.4	110%	75%	..
India	525.6	-43.1	16%	405%	195%
Taiwan	549.0	5.7	70%	256%	..
Korea	414.5	-26.7	23%	225%	99%
Singapore	305.0	-88.9	74%	25%	..
Brazil	311.3	-25.6	18%	406%	162%
Thailand	201.4	-28.5	40%	313%	249%
Mexico	177.3	-7.7	13%	308%	131%
UK	110.3	-19.2	3%	2%	..
Malaysia	99.7	-6.6	25%	97%	122%
Vietnam	101.4	1.6	27%	257%	..
Canada	79.0	3.1	4%	8%	..
France	52.2	-1.9	2%	2%	..
Italy	46.4	-2.1	2%	4%	..
Australia	34.4	-2.9	2%	9%	..
Germany	37.3	0.3	1%	1%	..
Belgium	10.7	0.1	2%	2%	..
Netherlands	4.8	-1.1	0%	0%	..
Ireland	5.2	-0.1	1%	1%	..
United States	36.3	-6.1	0%	0%	..
World	12,032.0	-768.6	n.a.	n.a.	..

Foreign exchange reserves as of end-June 2022.

GDP caluclated as sum of rolling 4Q GDP through Q2-2022.

Short-term debt consists of gross external debt with original maturity of one year or less, as of the end of Q2-2022; Vietnam as of Q4-2021; Ireland as of Q2-2020.

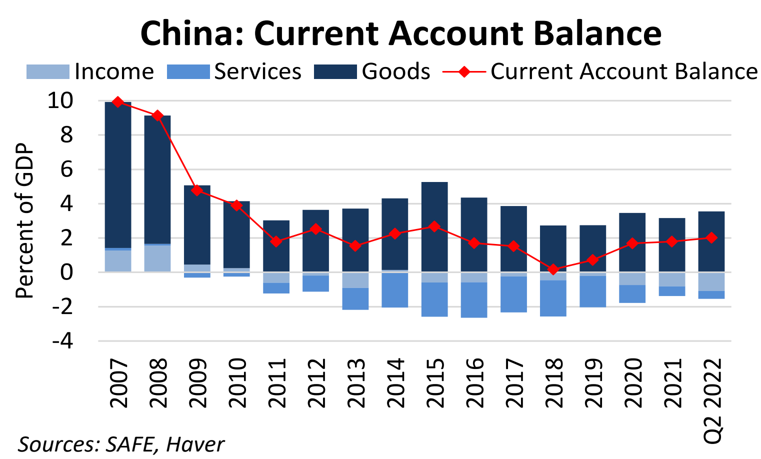
** IMF Assessing Reserve Adequacy Metric, a composite measure of reserve adequacy, as of end-2021. China's reserves are compared to the IMF's capital controls-adjusted metric. The IMF assesses reserves between 100-150% of the ARA metric to be adequate.*

Sources: National Authorities, World Bank, IMF, BIS.

Economic Developments in Selected Major Trading Partners

China

China's growth momentum slowed markedly in the first half of 2022, with real GDP growth falling from 4.8% year-on-year in the first quarter to 0.4% year-on-year in the second quarter compared to 8.1% real growth in full-year 2021. China's economy faces several immediate headwinds, including ongoing periodic large-scale lockdowns to curb the spread of COVID-19, significant weakness in the property sector, and a likely softening in external demand. Private consumption and credit demand remain weak, partially reflecting a significant deterioration in consumer confidence amid activity restrictions and elevated uncertainty. Weak private demand also reflects the unbalanced nature of China's macroeconomic policy response to the pandemic, which has favored infrastructure investment and support for manufacturing firms over direct support for households. In response to the deteriorating economic outlook, the authorities have modestly loosened their fiscal and monetary policy stances this year, introducing tax cuts and tax rebates, facilitating additional financing for local governments and priority sectors, and lowering policy rates.



Sources: SAFE, Haver

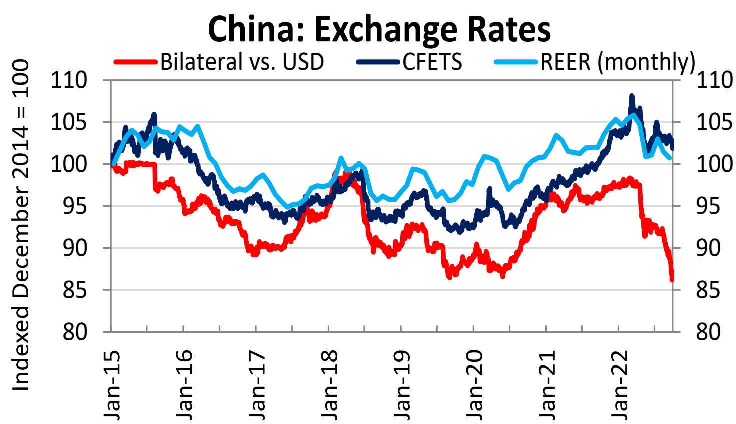
China's current account surplus of 2.0% of GDP over the four quarters through June 2022 was unchanged compared to the previous four quarters. China's goods trade surplus widened marginally to 3.6% of GDP during this period compared to 3.5% of GDP in the preceding four quarters, reflecting both the continuation of strong external demand during most of this period and significant weakness in domestic demand.[11] The services trade deficit remained subdued at 0.5% of GDP in the four quarters through 2022, largely due to continued restrictions on outbound travel. China's income deficit widened to 1.1% of GDP during the year through June 2022 from 0.8% of GDP previously, largely due to a rapid widening of the investment income deficit in the second quarter of 2022.

China's bilateral goods trade surplus with the United States remains the largest by far of any U.S. trading partner, reaching $397 billion in the four quarters through June 2022 from $335 billion in the preceding four quarters. China ran a bilateral services trade deficit of $15 billion during this period. Overall, China's bilateral goods and services surplus with

[11] These trade statistics are based on China's official balance of payments data compiled by the State Administration of Foreign Exchange (SAFE). Separate trade data from China's General Administration of Customs imply a goods trade surplus of 4.4% of GDP in the year through June 2022. It is not clear at this time what factors are driving the growing discrepancy between goods trade data released by SAFE and Customs.

the United States reached $382 billion during this period, compared with $314 billion in the preceding four quarters.

China's financial account swung sharply into a deficit of $101 billion in the first half of 2022 from a surplus of $37 billion in the second half of 2021, contributing to depreciation pressures on the RMB. The swing in the financial account was driven primarily by large and sustained nonresident portfolio outflows starting in February 2022. These nonresident portfolio outflows, $74 billion in the first half of 2022 compared to $88 billion in net inflows in the second half of 2021, have been concentrated in outflows from China's onshore bond market and occur against a backdrop of a growing divergence in China's monetary policy stance with that of other major economies and slowing Chinese economic activity amid the deepening property crisis. In this same context, Chinese residents significantly accelerated their accumulation of foreign debt securities in the first half of 2022, making net purchases of $85 billion in the first half of 2022 compared to $26 billion in the preceding six months, providing another source of capital outflows. A net errors and omissions deficit of $179 billion over the four quarters through June 2022 suggests strong undocumented capital outflows not captured in identified components of the financial account, in line with previous years.



Sources: CFETS, FRB, BIS

The RMB depreciated by 10.5% against the dollar in the first nine months of 2022, after appreciating considerably in 2020 and being relatively flat against the dollar in 2021. Over the first nine months of the year, the RMB depreciated by 1.4% against the People's Bank of China's (PBOC) China Foreign Exchange Trade System (CFETS) nominal basket and by 4.4% on a real effective basis.[12] The RMB's moderate depreciation against the CFETS basket this year follows significant appreciation in in the nominal effective exchange rate in 2020 and 2021. The RMB experienced its sharpest depreciation against the dollar during two distinct periods of rapid weakening between mid-April and mid-May as well as mid-August through the most recently available data. These depreciation episodes occurred during periods in which the dollar was appreciating rapidly on a nominal effective basis and China's domestic growth outlook was deteriorating amid COVID-related developments and property sector stress.

China provides very limited transparency regarding key features of its exchange rate mechanism, including the policy objectives of its exchange rate management regime and its activities in the offshore RMB market. The PBOC manages the RMB through a range of tools including setting the central parity rate (the "daily fix") that serves as the midpoint of

[12] The CFETS RMB index is a trade-weighted basket of 24 currencies published by the PBOC.

the daily trading band. Chinese authorities can directly intervene in foreign exchange markets as well as influence the interest rates of RMB-denominated assets that trade offshore, the timing and volume of forward swap sales and purchases by China's state-owned banks, and the conversion of foreign exchange proceeds by state-owned enterprises.

The authorities have implemented several regulatory and administrative measures this year to counteract RMB depreciation pressures. In late April 2022, following a week of rapid RMB depreciation, the PBOC announced that it would lower the foreign currency required reserve ratio to 8% from 9%, loosening onshore FX liquidity conditions. In early September 2022, after three weeks of rapid depreciation sent the RMB to a two-year low against the dollar, the PBOC lowered this ratio by an additional two percentage points to 6%. In late September, the PBOC imposed a reserve requirement of 20% on FX forward contracts. During this period, the PBOC consistently set the daily fix at a level stronger than the market consensus forecast, which the market has interpreted as the authorities signaling their discomfort with the pace of depreciation. Moreover, the authorities have slowed the pace of capital liberalization measures, for example, only increasing the outbound investment quota under the Qualified Domestic Institutional Investor program once this year (by $2 billion), compared to seven increases worth a total of $40 billion in 2021. Meanwhile, press reports suggest that the authorities increased their regulatory scrutiny of overseas investment,[13] warned banks against "aggressively selling" the RMB,[14] and later directly instructed state-owned banks to sell dollars and purchase RMB to resist RMB depreciation.[15] These measures follow a nearly two-year period during which Chinese policymakers pursued measures that had the effect of counteracting RMB appreciation pressures.

China's lack of transparency and use of a wide array of tools complicate Treasury's ability to assess the degree to which official actions are designed to impact the exchange rate. Treasury will continue to closely monitor China's use of exchange rate management, capital flow, and regulatory measures and their potential impact on the exchange rate.

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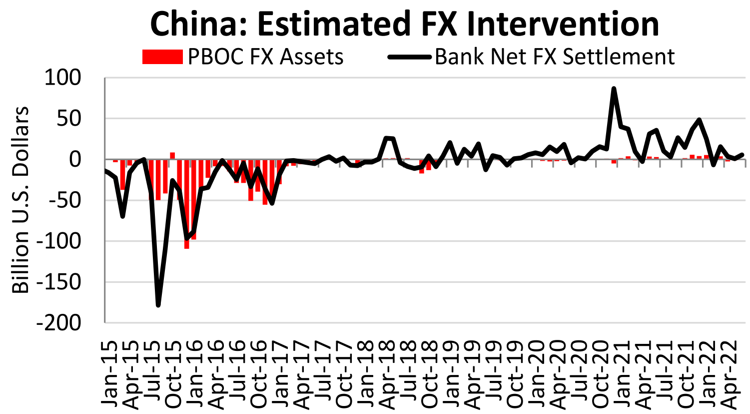
[13] "China Is Said to be Wary of Outbound Spending as Fed Hikes," *Bloomberg,* July 14, 2022.

[14] "China Regulator Warns Banks Against Yuan Selling," *Reuters,* August 24, 2022.

[15] "China's State Banks Told to Stock Up for Yuan Intervention," *Reuters*, September 29, 2022. "China's State Banks Seen Acquiring Dollars in Swaps Market to Stabilize Yuan," *Reuters*, October 17, 2022.

China's headline foreign exchange reserves decreased by $143 billion over the four quarters through June 2022, standing at $3.1 trillion (on an unadjusted basis). China is an outlier among the economies covered in this Report in not disclosing its foreign exchange market intervention, which forces Treasury staff to estimate China's direct intervention in the foreign exchange market through the following two proxy measures. The PBOC's foreign exchange assets booked at historical cost increased by $17 billion over the four quarters through June 2022. Meanwhile, net foreign exchange settlement data, another proxy measure for foreign exchange intervention that includes the activities of China's state-owned banks, recorded net foreign exchange purchases of $182 billion in the four quarters through June 2022, adjusted for changes in outstanding forwards. These figures represent estimates of Chinese foreign exchange intervention during a period primarily characterized by the continuation of the RMB's sustained appreciation trend, before the RMB started depreciating against the dollar in April 2022. As noted in previous Treasury FX Reports, the divergence between these two proxy measures could be an indication that monthly changes in the PBOC's foreign exchange assets are not adequately capturing the full range of China's intervention methods. Overall, these developments highlight the need for China to improve transparency regarding its foreign exchange intervention activities.

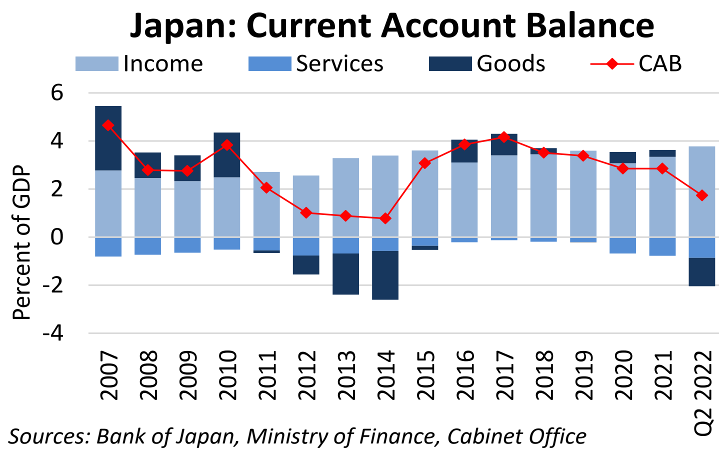


Sources: PBOC, SAFE, U.S. Treasury Estimates

The authorities should seek to support economic growth in a manner that does not exacerbate economic imbalances or risks to financial stability—ideally through increased demand-side support, which would bolster household disposable income and facilitate a recovery of private consumption. Policy support for the property sector should be carefully calibrated to mitigate moral hazard while accelerating insolvency and resolution procedures. China should make use of available fiscal space to develop a systemic approach to resolving strains in local government finances. Fiscal measures directed toward households, along with structural reforms like continued liberalization of the household registration (*hukou*) system and enhancement of the social safety net, could protect households amid growing economic uncertainty and support a recovery in private consumption. Additional reforms aimed at reducing the role of SOEs and lowering barriers to firm entry and exit could revive flagging productivity growth.

Japan

Over the four quarters ending in June 2022, economic growth decelerated by about 1 percentage point compared to 2021, averaging roughly 1% on a year-on-year basis. Investment levels have continued to decline since the beginning of the pandemic, while net exports are lower from a terms of trade shock in commodities. However, amid easing pandemic restrictions, Japanese consumers have increased their consumption with spending approaching levels last seen in 2019. The IMF forecasts annual GDP growth in 2022 will advance 1.7%, although lower-than-expected growth among major trade partners or a further deterioration in terms of trade from higher commodities prices pose downside risks. While inflation has risen recently, reaching 3.0% year-on-year in September on the back of higher energy prices, monetary policy remains highly accommodative on the expectation that inflation will not sustainably breach the 2% target.



Sources: Bank of Japan, Ministry of Finance, Cabinet Office

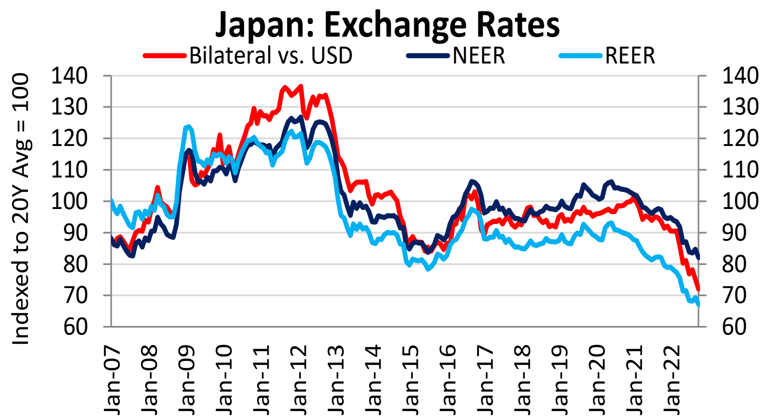
Japan's current account surplus narrowed appreciably over the four quarters ending in June 2022 from end-2021. The current account surplus fell from 2.9% of GDP in 2021 to 1.8% of GDP largely as a result of a deterioration in the goods balance. The goods trade balance fell into deficit, declining 2 percentage points from 0.3% of GDP in 2021 to -1.2% of GDP over the four quarters ending in June 2022 amid higher commodity prices, in particular for energy imports. The services balance remained in deficit, but at -0.9% of GDP is not materially different than the -0.8% of GDP level recorded last year. Services balances are in deficit largely due to pandemic-related travel restrictions imposed as a precaution against COVID-19 transmission. Japan's substantial net foreign income balance has helped to keep the current account balance in positive territory. Net income flows rose to 3.8% of GDP from 3.3% of GDP reflecting rising foreign profits buoyed by a weak yen. At 2% of GDP, primary income outflows remain unchanged since 2021. Income outflows are at a modest level for a country of Japan's size and development, reflecting, in part, Japan's low stock of FDI.[16] The goods and services trade surplus with the United States was $62 billion over the four quarters ending in June 2022, up 12%, or $6.6 billion, compared to the same period in 2021.

Japan experienced net capital outflows of 1.2% of GDP over the four quarters ending in June 2022, driven by sizeable direct investment abroad (1.9% of GDP) and loan, insurance, and trade credit outflows (1.7%) that were partly offset by net portfolio inflows (4.2% of GDP) that occurred amid the sustained depreciation of the yen.

The yen depreciated 17.7% against the U.S. dollar over the four quarters ending in June 2022, and 20.4% from the beginning of the year to end-September. The depreciation broadly reflects widening interest rate differentials between the United States and Japan resulting from divergent monetary policies; the United States has raised interest rates while Japan has kept interest rates at historic lows and continues its yield curve control

[16] In the four quarters ending 1Q 2022 Japan's primary income outflows as a share of GDP were the lowest among G7 economies. Primary income outflows for G7 economies averaged 4.5% of GDP, more than twice Japan's levels.

operations given inflation has not yet met targets. The lower yen also reflects the negative terms of trade shock coming from higher energy prices and subsequent widening trade deficit. On a real effective basis, the yen depreciated 15.0% over the first nine months of the year and currently sits near 50-year lows. The real effective exchange rate has depreciated even more than the nominal effective exchange rate given Japan's low inflation rate compared to its trading partners.



Sources: FRB, Bank for International Settlements

Japan is transparent with respect to foreign exchange operations, regularly publishing its foreign exchange interventions each month. In September, Japanese authorities intervened in the foreign exchange market in the direction to stem the pace of depreciation of the yen, citing excess volatility and disorderly exchange rate movements. It was the first time since 1998 that Japan intervened to support the yen. Prior to September, Japan last intervened in 2011 to weaken the yen. Treasury's firm expectation is that in large, freely traded exchange markets, intervention should be reserved only for very exceptional circumstances with appropriate prior consultations.

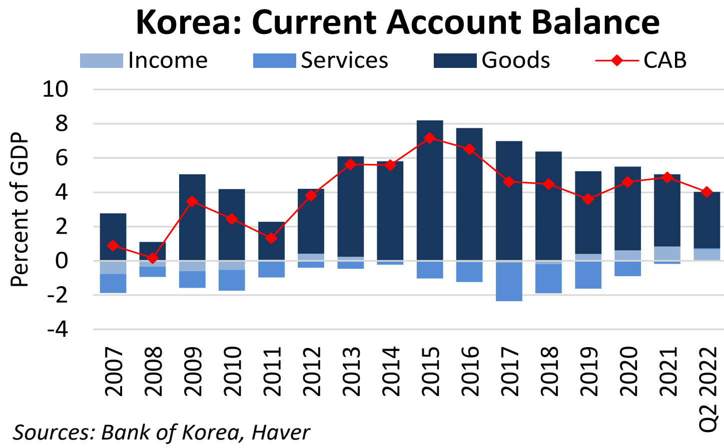
Japanese policymakers provided an appropriately sizable fiscal and monetary response to support the economy amid the pandemic. Japan should remain responsive to new developments that warrant additional support, but ease restrictions and financial assistance with more targeted support as health conditions allow. Japan should pivot its focus on implementing structural reforms that would improve potential growth and raise levels of wealth and welfare. To achieve this, policymakers should promote reforms to small and medium enterprises that encourage the exit of non-viable firms and entry of firms with stronger potential to raise efficiency and productivity; increase labor mobility and digitalization; encourage green investment; further promote career development and advancement among female workers who disproportionately suffer from underemployment; and advance enduring corporate governance reforms.

Korea

Korea's real GDP grew by 3.5% over the four quarters ending in June 2022. Growth was led by strong private consumption and supportive government spending, which helped buoy the Korean economy amongst a weakening in the external sector in the first half of 2022 driven by Russia's war against Ukraine and COVID-related shutdowns in China. The Korean government passed a supplementary budget that raised the 2022 fiscal deficit to 5.1% of GDP, from 4.4% in the prior year. The government's 2023 budget proposal expects to narrow the fiscal deficit to 2.6%. With a low debt-to-GDP ratio of approximately 50%, Korea should carefully calibrate fiscal policy to avoid unnecessarily rapid fiscal adjustment.

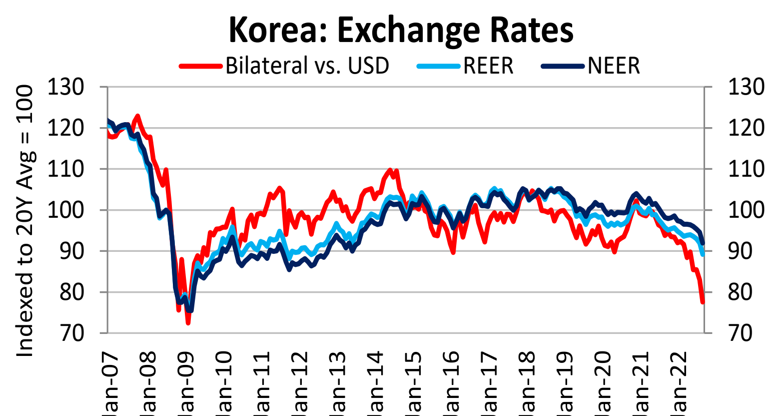
Korea's central bank began to tighten monetary policy from August 2021 to address financial imbalances and above-target inflation, most recently implementing an extraordinary 50 basis point increase to a policy rate of 3.0% in October 2022.

Korea's current account surplus declined sharply to 4.0% of GDP over the four quarters ending in June 2022 from 4.9% a year prior. The decline was driven by a decrease in Korea's goods surplus due to weakening external demand and increased energy import prices. Some of the decline was offset by an increase in the services balance, which was positive on an annualized basis for the first time since 1999. The small services surplus was due to some lingering pandemic effects that have kept the transportation and tourism balances elevated. Moderation in Korea's current account surplus continues a narrowing trend that began in 2015 and reflects some normalization of pandemic-induced demand for Korean exports coupled with rising energy prices as a result of Russia's war against Ukraine. Korea's bilateral trade surplus with the United States, inclusive of goods and services, increased to $32 billion over the four quarters ending in June 2022, up from $13 billion over the same period a year prior.



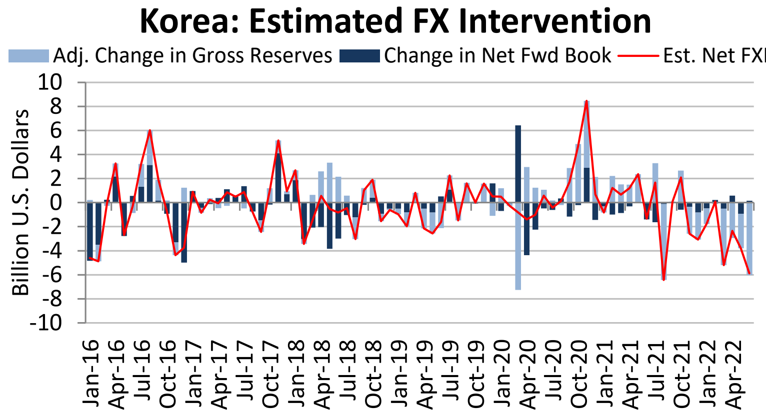
Sources: Bank of Korea, Haver

The Korean won depreciated in 2022, weakening 17.0% against the dollar and 6.8% on a real effective basis through September. Thus, despite the relatively sharp depreciation against the dollar, the real effective index has not moved nearly as much, as many of Korea's trade partners are also weakening against the dollar. This follows a weakening in 2021 on both bilateral and real effective bases by 8.6% and 5.3% respectively. The sharp decline in Korea's goods trade balance driven by rising energy prices as well as sizeable equity outflows stemming from rising global interest rates have been factors in persistent won weakness. Korea's national pension fund's total foreign asset holdings decreased by around $10 billion over the four quarters ending in June 2022, from $310 billion to $300 billion, likely driven by declines in foreign asset prices.



Sources: FRB, Bank for International Settlements

Korea reported net foreign exchange sales of $38 billion (2.1% of GDP) in the spot market over the four quarters ending in June 2022 in the context of a weakening won. That is, the intervention is in the direction to strengthen Korea's currency. Treasury estimates that the Korean authorities sold foreign exchange at increasing amounts throughout the twelve-month report period in line with increasingly rapid won depreciation. Korea maintains ample foreign exchange reserves at $394 billion as of September 2022, equal to 2.1 times gross short-term external debt. Korea publicly reports its foreign exchange intervention on a quarterly basis.[17] Korea has well-developed institutions and markets and should limit currency intervention to only exceptional circumstances of disorderly market conditions.



Sources: Bank of Korea, U.S. Treasury estimates

After supporting the economic recovery from the COVID-19 pandemic, Korean authorities have deployed monetary and fiscal policies to arrest inflation and financial imbalance concerns while continuing to support vulnerable households. Going forward, the authorities should encourage equitable and green growth policies that will raise incomes for vulnerable workers while undergirding energy security and economic resilience. Progress on structural reforms, such as encouraging broad-based participation in the labor market, strengthening social safety net programs, and integrating carbon reduction commitments into economic planning would help secure economic opportunity for disadvantaged workers, reduce old-age poverty, and insulate Korea from external energy shocks.

The Euro Area

Despite a strong economic recovery from the pandemic in 2021, growth in the euro area has been struggling against headwinds for the past year. The recovery first decelerated during the fourth quarter of 2021 due to rising energy prices and the spread of the Omicron variant. Although growth in many parts of the euro area picked up by the second quarter of 2022 to an annualized rate of 3.2%, economic spillovers from Russia's war against Ukraine have exacerbated supply chain woes and reduced real disposable incomes through rising energy costs and inflation. While the IMF expects the euro area economy to grow 3.1% in 2022, it projects much variation within, with Germany growing 1.5% and

[17] Treasury's estimates are monthly and are based on interest-adjusted changes in foreign currency reserves from monthly balance of payments statistics as well as changes in the central bank's forward position. Treasury estimated $27 billion in estimated net foreign exchange sales through the four quarters ending in June 2022. Differences in estimated Bank of Korea operating profits likely drove the gap between Treasury's estimate and the Korean authorities' reported intervention figure.

Spain's economy growing 4.3%. The IMF also projects momentum to slow with fourth quarter-over-fourth quarter growth for the euro area in 2022 of 1.0%.

The unprecedented monetary and fiscal policy response launched to counter the pandemic was key to the robust recovery in 2021, and prior to Russia's war against Ukraine, the aggregate fiscal policy posture was already on track to remain supportive through 2022. Russia's war against Ukraine has led to record energy prices, resulting in further outlays, as governments attempt to shield consumers and businesses from the impacts, accelerate the drive toward energy independence, as well as to bolster defense spending and respond to the influx of refugees. Given the need for further expenditures, the European Commission announced that the fiscal rule will be suspended through 2023, but it did not advocate a broad fiscal impulse; rather, it recommended governments move to a prudent fiscal policy while enacting temporary, targeted measures as necessary in response to spillovers.

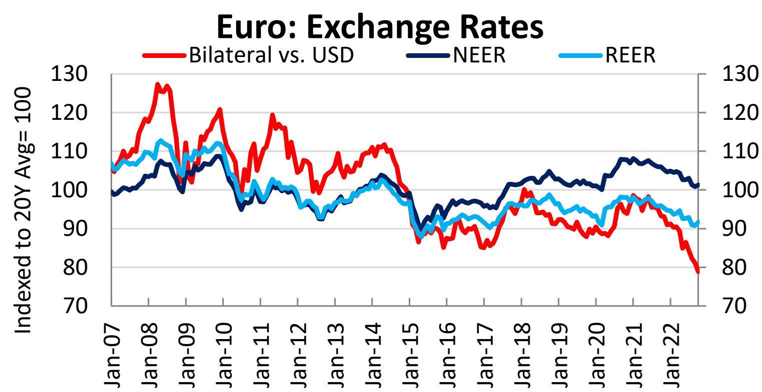
Fiscal measures are funded in part through the roughly $747 (€750) billion Next Generation EU (NGEU) pandemic recovery package agreed in July 2020. NGEU is now operational, with $80 (€80) billion in grants and $33 (€33) billion in loans from the Recovery and Resilience Fund (RRF)—the main component of the NGEU—distributed to member states thus far. The RRF consists of up to $337 (€338) billion in grants and $384 (€386) billion in loans. While member states have applied for all of the RRF's grants, roughly $219 (€220) billion in lending capacity remains.

Russia's war against Ukraine and the spike in inflation accelerated the ECB's policy normalization timetable. Prior to the war, the pace of net asset purchases under its Pandemic Emergency Purchase Program (PEPP) and Asset Purchase Program (APP) had slowed from end-October 2021; net asset purchases under the PEPP ended as of April 2022 and under the APP as of July 2022. When the ECB began signaling its intent to shift toward normalization this spring, Italian spreads over German bonds started to rise, reigniting fears about Italy's debt sustainability. In response, the ECB Governing Council convened an ad hoc meeting on June 15, announcing that it would flexibly reinvest PEPP redemptions to counter fragmentation and mandating the completion of a new anti-fragmentation instrument. On July 21, the ECB announced its new Transmission Protection Instrument (TPI) alongside its decision to hike rates for the first time since 2011, bringing the deposit rate out of negative territory to 0%. The TPI allows for purchases of sovereign bonds "to counter unwarranted, disorderly market dynamics that pose a serious threat to the transmission of monetary policy across the euro area." There is no preset limit on purchases under the TPI. While the ECB enumerated criteria for a country's bonds to be eligible, it left substantial ambiguity by noting that the criteria will be "dynamically adjusted." At its September 8 monetary policy meeting, the ECB hiked rates again by 75 basis points, bringing the deposit rate to 0.75%.

While the recovery gained momentum, so too did inflation, with headline inflation accelerating to 9.9% year-on-year in September. Though some of the inflationary forces are likely transitory factors, Russia's war against Ukraine has added substantial new pressure to prices and there is some risk of higher inflation expectations becoming entrenched. In its September projections, the ECB forecasts headline inflation of 8.1% in

2022 in its baseline scenario. Despite this surge, the ECB anticipates that inflation will return to around its target level of 2% by the end of its forecast window in 2024.

The euro area current account surplus fell to 0.9% of GDP in in the four quarters through June 2022, down from 3.1% in the same period in 2020-21. As supply chain disruptions, COVID-19 outbreaks, and high imported energy prices impact European exports, the IMF expects the current account surplus to be 1.0% of GDP in 2022. In its August 2022 External Sector Report, the IMF assessed that the euro area's external position in 2021 was moderately stronger than the level implied by medium-term fundamentals and desirable policies.



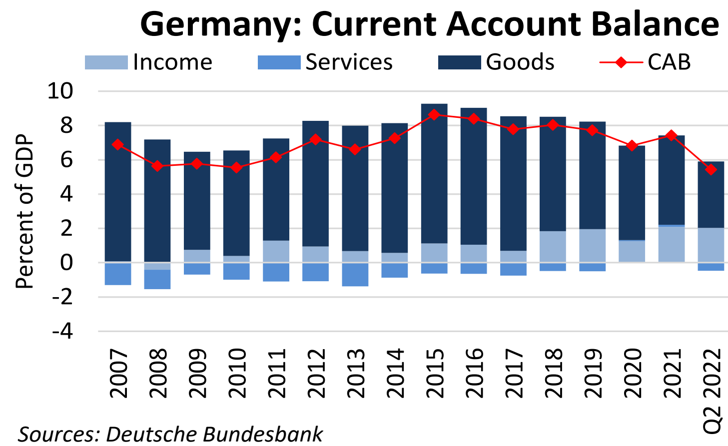
Sources: FRB, Bank for International Settlements

The euro has depreciated by 20% against the dollar since the beginning of 2021 as widening interest rate differentials between the United States and Europe supported dollar strength. Since the beginning of Russia's war against Ukraine through end-September, the euro depreciated 12.3% against the dollar, as Russia's war has impacted the energy landscape and raised concerns about economic activity. In real effective terms, the euro depreciated 2.4% since February 2022. The ECB publishes its foreign exchange intervention and has not intervened in foreign exchange markets since 2011.

Germany

Germany's economic recovery was faltering from continued COVID-related disruptions even prior to Russia's war against Ukraine. Ongoing pandemic restrictions, supply chain disruptions, and high energy prices led to a stagnation of economic activity in the fourth quarter of 2021, pulling down overall 2021 GDP growth to 2.6%. With Russia's war creating new economic headwinds across Europe, and Germany being particularly impacted by natural gas cutoff's from Russia, the IMF's October WEO forecasts project German real GDP growth to decelerate to 1.5% in 2022; growth flatlined in the first half of the year, with annualized first quarter growth of 0.8% and second quarter growth of 0.4%. The core 2022 German federal budget, $99 (€100) billion special fund for military modernization, and four energy relief packages totaling up to $287 (€295) billion have extended Germany's 2020-21 period of greater utilization of its fiscal space, although the German government intends to return to technical compliance with the debt brake in 2023. German headline inflation has continued to accelerate through 2022 largely due to energy prices and supply constraints. Heightened inflation is weighing on consumer confidence, with inflation expectations continuing to rise and consumer sentiment falling to a record low in September.

Germany's current account narrowed to 5.4% in the four quarters through June 2022, largely due to high imported energy prices and supply chain bottlenecks. Its current account remains in sizable surplus despite these shocks. It has had a large surplus as a share of GDP for well over a decade as production is consistently above domestic absorption. A major economy with such a consistently large surplus requires offsetting borrowing on a persistent basis by the rest of the world on net. Germany's bilateral goods and services trade surplus with the United States stood at $72 billion for the four quarters through June 2022 up from $65 billion in the same period in 2020-21.



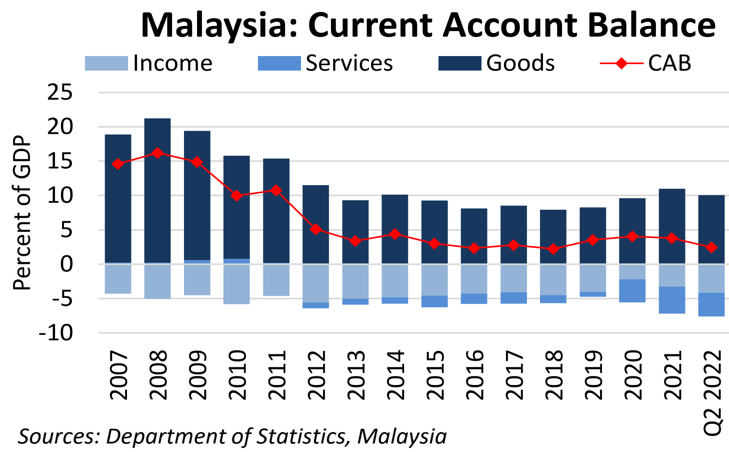
Sources: Deutsche Bundesbank

The German government took strong fiscal measures in response to COVID-19 and Russia's war against Ukraine, including the continued suspension of the national fiscal rules to allow for new debt issuance in 2022. However, Germany needs to significantly improve its chronic spending under-execution, which contributed to persistent fiscal surpluses pre-pandemic. Treasury encourages the Scholz government to deploy its substantial fiscal space in 2023 and beyond, including through strengthening efforts to combat climate change, enhance energy security, and reinvigorate investment—which would help external rebalancing proceed at a reasonable pace. Deploying fiscal space could help moderate Germany's average annual current account surplus of nearly $285 billion and average annual fiscal surplus of $4.5 billion over the past decade. Alternatively (or in conjunction), incentives or tax changes to encourage greater investment and consumption could help address the chronically low level of domestic demand.

Malaysia

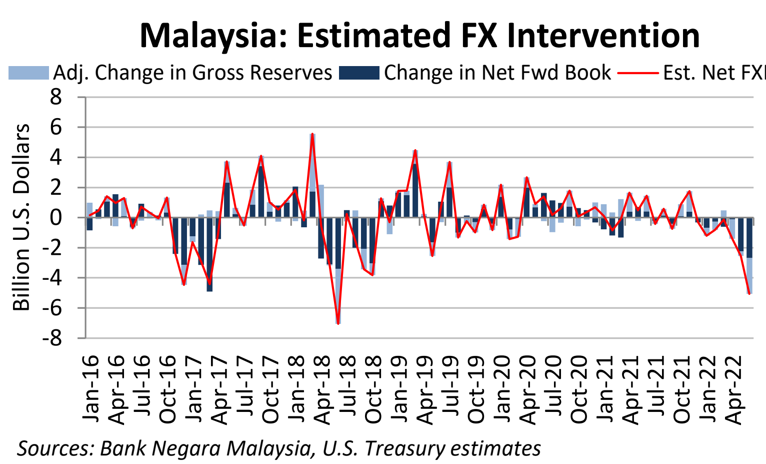
Malaysia's economy registered robust growth in the first half of 2022, on the back of firming domestic demand, resilient goods exports, and continued policy support for households and businesses. The authorities project economic momentum will be sustained through the remainder of 2022, in line with the IMF's projection of 5.4% real GDP growth, though the outlook remains vulnerable to a further weakening of global growth. Following the shocks to energy and food prices in early 2022 stemming from Russia's war against Ukraine, the authorities have provided significant fiscal support intended to buffer households and temper rising prices through subsidy and cash aid spending, including broad-based fuel subsidies, that is projected to reach 5% of GDP this year. This fiscal support has kept the fiscal deficit above 5% of GDP, where it has been since 2020. Wider fiscal deficits in recent years and the drag on activity from the pandemic and more recent shocks have pushed up Malaysia's public debt-to-GDP close to the federal government's statutory debt limit of 65% of GDP. With subsidies and other administered prices helping limit the rise in headline inflation—which stood at 4.5% year-on-year in September—Bank Negara Malaysia (BNM) has favored a gradual pace of monetary tightening amid continued slack in the economy. BNM has raised its key policy rate a cumulative 75 basis points to 2.5% as of September since its initial rate increase in May.

Malaysia has consistently maintained current account surpluses over the last several years, though the surplus has narrowed substantially in the first half of 2022 and stood at 2.5% of GDP over the four quarters through June 2022. Malaysia's goods surplus has narrowed since the second half of 2021 as import growth outpaced export growth, while Malaysia's large income deficit widened amid elevated earnings on foreign investor holdings. Malaysia's services deficit remains wider than pre-pandemic levels from still-subdued travel-related receipts but has started to narrow amid border reopening measures. The IMF over the last decade has consistently assessed Malaysia's external position to be stronger than the level consistent with medium-term fundamentals and desired policies.

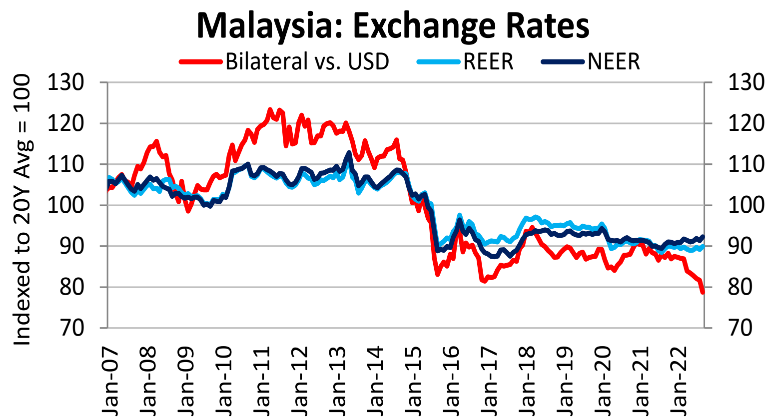


Malaysia's goods and services trade surplus with the United States reached $39 billion in the four quarters through June 2022. Malaysia and the United States have strong supply chain linkages in key industries, particularly electronics and related parts. Malaysia continues to register a large bilateral goods trade surplus with the United States, which registered $39 billion in the four quarters through June 2022, led by exports of electrical machinery and parts. Conversely, Malaysia engages in relatively limited bilateral services trade with the United States—about $6 billion in gross bilateral services trade flows in the four quarters through June 2022—and bilateral services trade was roughly balanced over the same period.

Malaysia has established a track record of two-way intervention in the foreign exchange market in recent years. Malaysia does not publish data on its foreign exchange intervention; however, the authorities have conveyed credibly to Treasury that net sales of foreign exchange in the four quarters through June 2022 were $6.7 billion or 1.7% of GDP. That is, the intervention is in the



direction to strengthen Malaysia's currency. According to internal Treasury estimates, net sales accelerated over the first half of the year amid net portfolio outflows in the second quarter of 2022 and other depreciation pressures on the ringgit. Foreign exchange reserves stood at around $95 billion at end-September 2022, down $10 billion compared to end-2021. Reserves remain broadly adequate according to standard adequacy metrics, including that of the IMF.



Sources: FRB, Bank for International Settlements

Like many regional peer currencies, the ringgit has faced downward pressure last year and into 2022. On net, the ringgit has depreciated 9.9% against the U.S. dollar since the beginning of the year through end-September. Despite this slide against the dollar, the ringgit has appreciated 1.8% on a nominal effective basis year-to-date through September as the ringgit has outperformed the currencies of some other major trading partners, including the yen, won, and euro. Over the same period, the ringgit has appreciated by only 0.2% on a real effective basis as inflation in Malaysia has been lower, on average, than in its trading partners, though inflation differentials have narrowed in recent months.

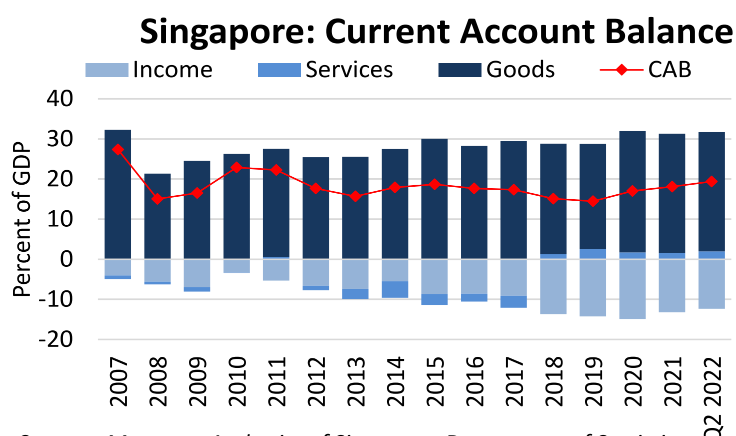
The authorities should aim for gradual and steady fiscal consolidation to contain public debt and rebuild fiscal buffers, while preserving space to upgrade the social protection system and bolster key investments (e.g., climate resilience and energy transition). As part of those efforts, the authorities should replace the largely untargeted fuel subsidies with targeted support measures, which would allow the authorities to continue providing support for vulnerable populations while reducing Malaysia's elevated subsidies bill. A more effective social protection system along with targeted public investments would help foster inclusive and sustainable growth while also supporting external rebalancing. The authorities should continue to allow the exchange rate to move to reflect economic fundamentals and limit foreign exchange intervention to circumstances of disorderly market conditions, while avoiding excessive accumulation of reserves.

Singapore

Singapore's economic growth momentum has slowed in 2022, with sequential growth moderating in the first half of 2022, after the country saw a strong recovery of 7.6% real GDP growth in 2021. External shocks stemming from Russia's war against Ukraine have exacerbated domestic inflationary pressures and slowing growth momentum from Singapore's major trading partners has weighed on Singapore's economic outlook. The authorities anticipate real GDP growth will come in at 3-4% this year, supported by a continued recovery in domestic-oriented and travel-related sectors, but external headwinds will likely continue to pose downside risks to near-term growth.

In this context, the authorities announced a $1.1 billion (0.3% of GDP) support package in June to help mitigate increased living costs through targeted relief measures for businesses, workers, and households. While the authorities' initial fiscal year (FY) 2022 budget (April 2022-March 2023) aimed to narrow the deficit to 0.5% of GDP, from 0.9% of GDP the year prior, the enactment of the June support package will likely leave the fiscal deficit broadly unchanged compared to FY 2021. The authorities have signaled that the government stands ready to provide additional fiscal support should economic conditions deteriorate but remain careful not to implement policy actions that may stoke inflationary pressures. Meanwhile, the authorities have reiterated their commitment to raise the goods-and-services tax from 7% to 9% in two stages beginning next year.

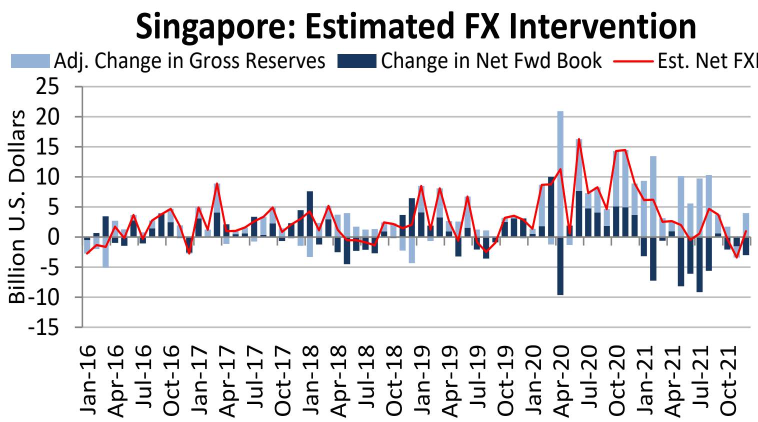
The Monetary Authority of Singapore (MAS), which uses an exchange-rate based regime for implementing monetary policy, was one of the first central banks in the region to initiate a tightening cycle in response to burgeoning inflation pressures. MAS began tightening monetary policy in October 2021, and has since further tightened monetary policy four times, including two off-cycle moves in January and July 2022. Nonetheless, price pressures have intensified this year amid both external shocks and a relatively tight domestic labor market, with realized inflation consistently coming in above MAS forecasts from earlier in 2022. As of September, headline inflation reached 7.5% year-on-year and core inflation stood at 5.3% year-on-year. MAS projects that inflation will remain elevated in the near term, reflecting underlying constraints in global commodity and labor markets alongside resilient private consumption expenditure.



Sources: Monetary Authority of Singapore, Department of Statistics

Singapore's outsized current account surplus averaged 17% of GDP over the last ten years and reached 19.4% of GDP in the four quarters through June 2022, owing primarily to a massive goods surplus, offset in part by a sizable income deficit. The IMF in recent years has consistently assessed Singapore's external position to be substantially stronger than warranted by economic fundamentals and desirable policies. Singapore's long history of large current account surpluses has pushed its net international investment position to around 250% of GDP, one of the highest levels in the world.

Singapore's bilateral goods and services trade deficit with the United States was $31 billion in the four quarters through June 2022, driven primarily by a deficit in services trade. Singapore has long run a bilateral services deficit with the United States, and this deficit has widened in the last decade to reach $22 billion in the four quarters through June 2022. Key Singaporean services imports from the United States include research and development, intellectual property, and professional and management services. Singapore's bilateral goods trade deficit with the United States widened to $9 billion in the four quarters through June 2022, largely due to a substantial increase in fuel and fuel product imports from the United States and a decline in medicinal product exports to the United States, in line with a broader normalization of pre-pandemic trade flows. The Singapore goods deficit with the United States reflects in part Singapore's role as a regional transshipment hub, with some of Singapore's imports from the United States ultimately intended for other destinations in the region.

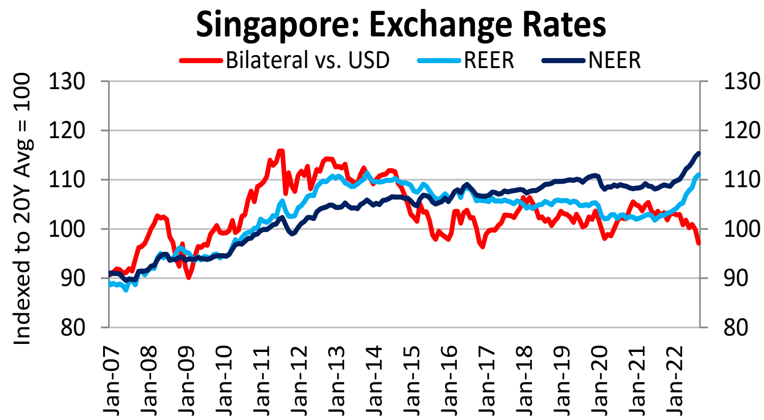


Sources: Monetary Authority of Singapore, U.S. Treasury estimates

MAS uses the nominal effective exchange rate of the Singapore dollar (the S$NEER) as its primary tool for monetary policy and uses foreign exchange intervention to help manage the S$NEER and implement its policy. In April and October 2022, MAS published data on intervention covering the second half of 2021 and first half of 2022, respectively, indicating total net purchases of $64 billion in foreign currency in the four quarters through June 2022, equivalent to 15.6% of GDP. These purchases have acted to stem appreciation pressures at a juncture where inflation has been rising further above target. Official foreign exchange reserves totaled $276 billion (67% of GDP) at end-September 2022. Despite MAS' significant net purchases of foreign exchange over the last year, official reserves held by MAS have declined this year as MAS has transferred more than $160 billion of excess reserves to the Singaporean government for longer-term management by GIC, one of Singapore's sovereign wealth and investment funds).[18] In addition to the reserves held by MAS, Singapore's government also has access to substantial official foreign assets managed by GIC and a second sovereign wealth and investment fund, Temasek.

[18] From March 2022, Singapore's government began employing a new type of non-marketable security to facilitate the transfer of excess official reserves from MAS to the government. The Reserves Management Government Securities (RMGS) are issued by the government to MAS in exchange for excess reserves at the time of transfer. Additional information about RMGS may be found here: https://www.mas.gov.sg/statistics/reserve-statistics/reserves-management-government-securities

Compared to other currencies, the Singapore dollar has depreciated modestly against the U.S. dollar so far this year, while outperforming many other regional currencies. On net, the Singapore dollar has depreciated 5.8% against the U.S. dollar since the beginning of the year through end-September. Meanwhile, the Singapore dollar has strengthened against most other currencies in the region, in some cases reaching record highs against other trading partners, as MAS aggressively tightened monetary policy. Consequently, the Singapore dollar appreciated 6.1% and 7.4% on a nominal effective and real effective basis, respectively, through end-September.



Sources: FRB, Bank for International Settlements

The authorities should consider several fiscal and monetary policies to address Singapore's large and persistent external imbalances and the public sector's large net foreign asset position. Further appreciation of the nominal and the real effective exchange rate over the medium term, consistent with economic fundamentals, should continue to play a role in facilitating external rebalancing. The authorities should refrain from one-sided foreign exchange intervention and excessive reserve accumulation. As inflationary pressures ease, the authorities should also loosen fiscal policy on a structural basis, including by reconsidering fiscal policy rules that drive a tighter than warranted fiscal stance across the economic cycle and tax policies that may dampen domestic demand. A sustained expansion in the provision and coverage of social services would help reduce incentives for private saving and support stronger consumption. In addition, reforms to the pension system, including reducing the high rates for mandatory contributions to the government pension scheme and managing official assets in a way that transfers more wealth to Singaporean households, would have similar benefits in strengthening domestically driven growth. Consistent with the government's stated goals, substantial new infrastructure investment could help build resilience to threats from climate change while also supporting greater domestic demand.

Taiwan

Treasury conducted enhanced analysis of Taiwan in its April 2021 and December 2021 Reports, and in-depth analysis of Taiwan in its June 2022 FX Report. In May 2021, Treasury commenced enhanced bilateral engagement with Taiwan in accordance with the 2015 Act.[19] These productive discussions have helped develop a common understanding of the policy issues related to Treasury's concerns about Taiwan's currency practices. Treasury continues to engage with Taiwan's authorities.

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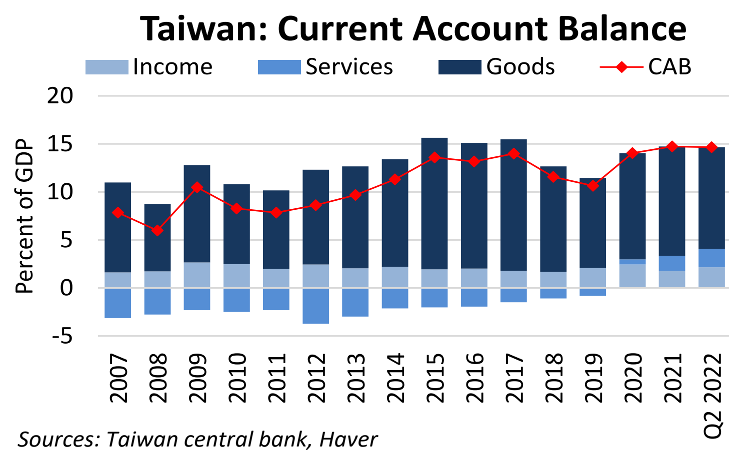
[19] *Report to Congress: Macroeconomic and Foreign Exchange Policies of Major Trading Partners of the United States*, U.S. Department of the Treasury, Office of International Affairs, pp. 42-44 (June 2022), available at https://home.treasury.gov/system/files/136/FINAL_Spring_2022_FXR.pdf

Taiwan's real GDP grew by 3.9% over the four quarters ending in June 2022, largely driven by growth in fixed asset investment, down from 6.7% a year prior. Net exports and private consumption declined slightly over the same period, primarily due to factors in the second quarter of 2022 that included rising imports due to increased energy prices, COVID-19 lockdowns in China, and a surge in domestic COVID-19 cases. In April, the authorities extended targeted fiscal relief to offset the effects of the pandemic, including expanded unemployment benefits and direct transfers to impacted households and businesses, through unspent special budget funding from 2021. The central bank began policy normalization to address elevated inflation with an extraordinary 25 basis point hike in March 2022 followed by two 12.5 basis point hikes in June and September 2022.

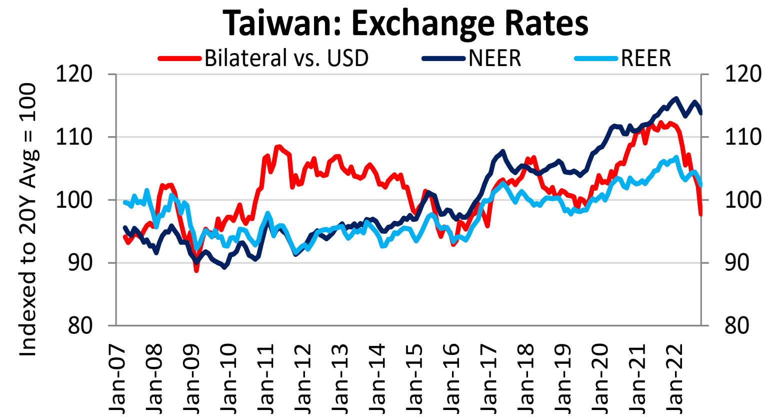


Taiwan's current account surplus was $116 billion (14.7% of GDP) through the four quarters ending in June 2022, compared to $112 billion (15.4% of GDP) in the four quarters prior. The current account surplus was driven by Taiwan's $84 billion goods trade surplus (10.6% of GDP), down from $89 billion (12.2% of GDP) in the four quarters prior. Goods exports remained elevated due to pandemic-induced shifts in patterns of global demand, though outsized growth in electrical machinery exports has slowed and may have peaked in the first quarter of 2022. Import growth drove the slight decline in Taiwan's current account goods surplus as rising prices of imported commodities weighed on the external position of energy importing economies. Further deterioration in the external environment, including sluggish growth in China and Europe, a cyclical downturn in the semiconductor market, and the effects of Russia's war against Ukraine on energy prices, could further weigh on Taiwan's goods surplus going forward, but at present it remains outsized relative to GDP.

Taiwan's services balance stood at $15 billion (1.9% of GDP) over the Report period, continuing a decade long strengthening trend that began after a record services deficit of 3.7% of GDP in 2012. Nevertheless, Taiwan's services surplus over the last two years is the result of pandemic distortions, namely in rising freight transport service exports and the decline in overseas tourism due to Taiwan's ongoing strict travel restrictions. Taiwan's services surplus is likely to moderate as the authorities loosen travel restrictions and as shipping constraints moderate in the second half of 2022.

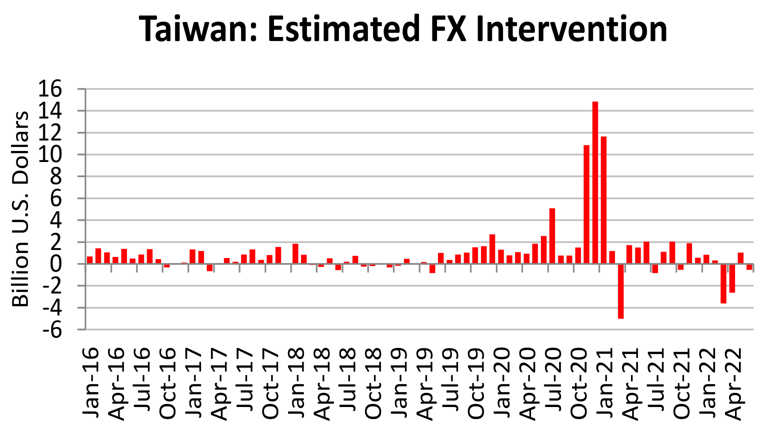
Taiwan recorded a $49 billion bilateral trade surplus over the Report period, up from $33 billion a year prior. The trade surplus was primarily composed of goods trade and was driven by semiconductors and electronic goods exports. Taiwan's bilateral services trade with the United States was a small $2 billion surplus over the Report period, from a $2 billion deficit a year prior.

The New Taiwan Dollar (TWD) weakened throughout the first nine months of 2022, depreciating 12.7% against the dollar and 3.7% on a real effective basis, after steadily strengthening through 2021. Russia's war against Ukraine drove a sharp depreciation of the TWD in February 2022. Since then, lingering geopolitical uncertainty, rising energy prices, and persistent large portfolio equity outflows caused in part by the tightening global interest rate environment have continued to drive the TWD weaker against the dollar. From August 2022, a broad-based slowdown in both Taiwan's tech and non-tech exports further contributed to TWD depreciation pressures.



Sources: FRB, Bank for International Settlements

The stated policy of the central bank is to maintain a "managed float" exchange rate, in principle determined by market forces but with flexibility to maintain an orderly foreign exchange market. The central bank publicly disclosed $8 billion (1.0% of GDP) in foreign exchange sales over the four quarters ending in June 2022, with $0.4 billion in purchases occurring in the second half of 2021 and $8.3 billion in sales occurring in the first half of 2022. That is, the intervention is in the direction to strengthen Taiwan's currency. Treasury estimates the majority of these purchases occurred in March and April 2022 following Russia's war against Ukraine. Taiwan publishes its data on foreign exchange intervention on a semi-annual basis, with a three-month lag.



Sources: Taiwan central bank, U.S. Treasury estimates

As Taiwan transitions away from pandemic restrictions, the authorities should continue to deploy a careful mix of policies that support domestic demand, raise the labor share of income, and better insulate Taiwan from external shocks. Fiscal support for vulnerable workers, including short-term and young workers, should not be withdrawn too quickly and where appropriate some of these programs could persist beyond the pandemic emergency. The authorities should explore regulatory and fiscal mechanisms to encourage green growth and meet Taiwan's 2050 net-zero carbon emissions target, including by setting a 2030 intermediate emission target, which would improve Taiwan's resilience to future external energy shocks. Foreign exchange intervention should be limited and allow currency movements in line with economic fundamentals.

Enhanced Analysis Under the 2015 Act

Switzerland

Treasury conducted enhanced analysis of Switzerland in its December 2020 and April 2021 FX Reports, in-depth analysis in its December 2021 Report, and enhanced analysis in its June 2022 Report. In early 2021, Treasury commenced enhanced bilateral engagement with Switzerland in accordance with the 2015 Act.[20] Since Switzerland meets the thresholds for all three criteria under the 2015 Act during the period covered by this Report, an enhanced analysis of recent economic developments is provided below, along with an update on Treasury's enhanced bilateral engagement with the Swiss authorities.

While Switzerland was hit early and hard by the COVID-19 pandemic, economic growth began to improve following a relaxation of virus restrictions, and the economy grew by 4.2% in 2021 overall. Uncertainty over the outlook remains high given the associated adverse spillovers, including with respect to inflationary pressures and refugee flows, of Russia's war against Ukraine and given the continued spread of COVID-19 variants. Thus far the war against Ukraine has primarily affected the Swiss economy through an increase in commodity prices, which is likely to increase companies' production costs and constrain consumption. The Swiss National Bank's (SNB) baseline scenario for 2022 is GDP growth of roughly 2.0%, slightly weaker than the IMF's forecast of 2.2%.

Government employment assistance has helped to limit unemployment and bolster consumer spending, with the unemployment rate averaging 3.0% in 2021. Since the beginning of the COVID-19 crisis, the IMF estimates that Switzerland's COVID-related fiscal response amounted to more than 10% of GDP, including both direct and indirect measures, although less than half of the funds made available had been used by the end of 2021. Even with relatively large announced fiscal stimulus, Switzerland's general government deficit only reached 3.0% in 2020 (significantly smaller than in neighboring countries) and subsequently narrowed to 0.7% in 2021. The IMF expects further narrowing to 0.3% in 2022. The authorities adopted a "dispatch" on September 16, 2022 that extended the current CO_2 law until 2024 and included measures for incentivizing reductions in greenhouse gas emissions for the 2025-2030 period following the defeat of a revised CO_2

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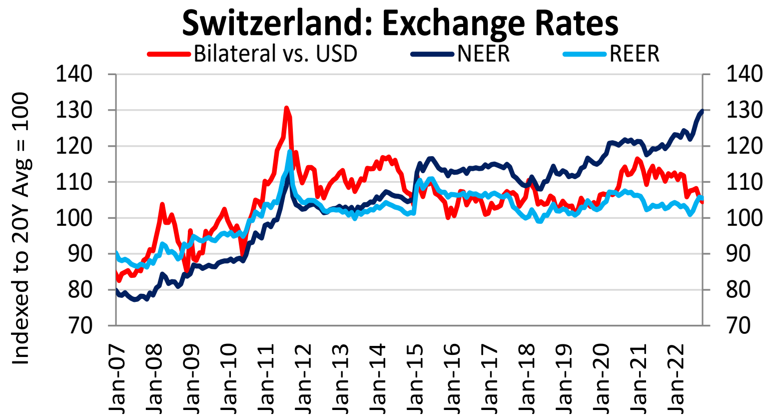
[20] *Report to Congress: Macroeconomic and Foreign Exchange Policies of Major Trading Partners of the United States*, U.S. Department of the Treasury, Office of International Affairs, pp. 48-55 (Dec. 2020), available at https://home.treasury.gov/system/files/206/December-2020-FX-Report-FINAL.pdf, and
Report to Congress: Macroeconomic and Foreign Exchange Policies of Major Trading Partners of the United States, U.S. Department of the Treasury, Office of International Affairs, pp. 50-53 (Apr. 2021), available at https://home.treasury.gov/system/files/206/April_2021_FX_Report_FINAL.pdf.
Report to Congress: Macroeconomic and Foreign Exchange Policies of Major Trading Partners of the United States, U.S. Department of the Treasury, Office of International Affairs, pp. 42-45 (Dec. 2021), available at https://home.treasury.gov/system/files/206/December-2021-FXR-FINAL.pdf

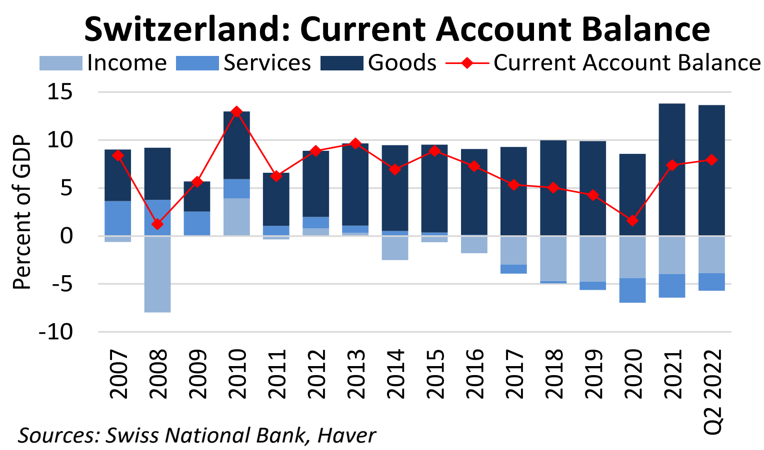
law in a June 13, 2021 referendum. The laws offer the potential for an increase in fiscal spending to meet climate targets in the near term.

Higher inflation in trading partners and expected monetary tightening in other European economies and the United States eased appreciation pressures on the franc in 2021. Over the first nine months of 2022, the Swiss franc depreciated 7.1% against the dollar and appreciated 7.5% against the euro. On a nominal effective and real effective basis, the Swiss franc appreciated by 5.3% and 1.1% respectively, over the same period. The Swiss National Bank has noted that if there were to be an excessive appreciation of the Swiss franc, they would purchase foreign currency, but likewise, if the Swiss franc were to weaken, they would consider selling foreign currency. On September 22, 2022, the Swiss National Bank raised policy rates out of negative territory by 0.75 percentage points to 0.5%.



Sources: FRB, Bank for International Settlements

The Swiss authorities have a history of restrained macroeconomic management, particularly a fiscal policy approach that prioritized debt reduction for several decades beginning in the 1990s. The country's highly competitive corporate tax system has made Switzerland a destination for multinational enterprises, contributing to Switzerland's outsized role in some high value-added global industries (e.g., pharmaceuticals and merchanting).[21] These factors have contributed to persistent, and often extremely large, current account surpluses during recent decades. In 2021 the current account surplus rebounded to 7.4% of GDP, following an unusually small surplus of 1.5% of GDP during 2020.[22] In the four quarters through June 2022, the current account surplus was 8.0% of GDP, and the IMF currently projects a



Sources: Swiss National Bank, Haver

[21] The authorities have agreed to implement the OECD-led global corporate tax reforms, which will imply bringing rates up to 15 percent for all cantons when it becomes effective. Anecdotal evidence from the Swiss authorities suggests that pharmaceuticals and merchanting may be insensitive to exchange rate changes, and increased trade in these sectors can potentially lead to increased current account balances even when exchange rates appreciate.

[22] At the time of the December 2021 Report, the 2020 current account surplus totaled just 1.2% of GDP.

6.2% of GDP current account surplus for 2022. The recent current account surplus continues to be due to high exports of goods and merchanting. Despite the large recent current account surpluses, Switzerland's net international investment position declined relative to GDP as of June 2022 to 81% from 92% in 2021, making it a smaller net lender to the rest of the world when compared to the size of its economy.[23]

Switzerland's tight fiscal policy is a result, in part, of its federal "debt brake" rule that calls for a structural fiscal balance on an *ex-ante* basis, and in the case of *ex post* spending overruns, requires the government to offset with structural surpluses in the following years. The federal debt brake rule is reinforced further by separate fiscal rules implemented by Swiss cantons, which vary substantially. The federal debt brake rule's design and implementation tend to skew towards tighter fiscal policy than warranted, due to consistently conservative forecasting of structural revenue and under-execution of expenditures. Switzerland ends almost each year with a larger budget surplus than planned, and Switzerland has seen significant debt reduction since implementing the debt brake rule, rather than the original intent of debt stabilization. In addition, the rule is applied asymmetrically, as it mandates an offset requirement in case of *ex post* overspending, but not for *ex post* underspending.

Due to these factors, Switzerland's fiscal policy has consistently overperformed the rule's objective, thereby weighing on economic growth, complicating efforts to maintain positive inflation, and contributing to external surpluses. In response to the COVID-19 crisis, however, the Swiss parliament approved an extended timeframe for the reduction of the remainder of COVID-related debt until 2035 with the option of lengthening the timeframe to 2039 under extraordinary circumstances. The fiscal savings will be achieved through spending underruns of CHF1 billion per year and a measure that recognizes profits shared by the SNB as revenue. This would avoid any expenditure cuts or measures to increase tax revenue. The Swiss have also undertaken measures to further limit spending underruns in the future.

In addition to consistent government saving, other structural factors play a role in Switzerland's historically large current account surpluses, including high per capita income; a large share of prime-aged savers and an aging population; a high household savings rate, which is almost double the advanced economy average per OECD data; relatively limited domestic investment opportunities; measurement issues; and a large positive net international investment position, for which returns further raise the income balance.

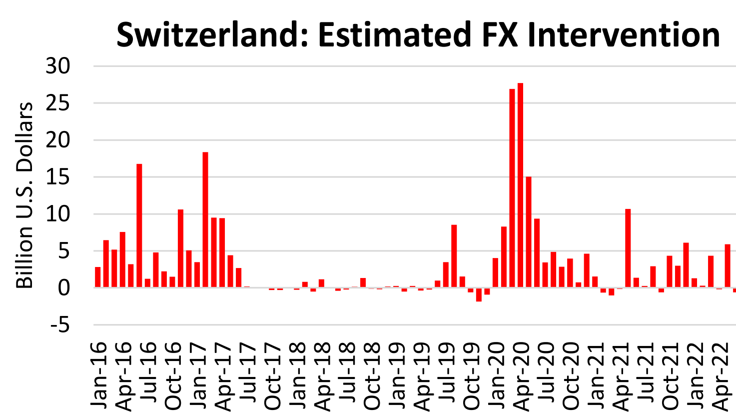
Increased public investment would lower government net saving, help Switzerland meet its long-term challenges associated with an aging population, and help rebalance the policy mix. The high level of household saving could also be addressed via amending the pension system to reduce barriers to working longer, equalizing and then raising male and female retirement ages, and continuing efforts to contain rising healthcare costs. While Switzerland is considering measures to address some of these challenges, it is unclear

[23] This decline reflects valuation effects.

whether any will be implemented in the near term as policy making often requires approval through referendum.

Switzerland's bilateral goods and services trade surplus with the United States declined to $16 billion in the four quarters ending in June 2022 compared to $25 billion in the four quarters ending in June 2021 as goods exports to the U.S. decreased and services imports from the U.S. increased. This decline moves Switzerland's goods and services trade surplus with the United States much closer to the $15 billion threshold established to assess whether a trading partner has a significant bilateral trade surplus with the United States. During the same period Switzerland's goods trade surplus with the United States declined to $37 billion, versus $43 billion during the same period one year ago. Switzerland maintains a large goods trade surplus with the United States, but this traditionally has been mirrored largely by a services trade deficit. Switzerland's bilateral services trade deficit with the United States stood at $21 billion in the four quarters ending in June 2022, compared to $19 billion in the four quarters ending in June 2021. Until 2020, the United States' trade deficit with Switzerland in recent years had been closer to balance when including services data. Part of the increase in the trade deficit over the past two years compared to previous years is attributable to large gold exports to the United States that continued well into the pandemic, while services imports from the United States did not increase by the same magnitude. While gold exports are on a slight downward path, the geopolitical uncertainty caused by Russia's war against Ukraine is expected to support demand for gold exports in the near term.

Switzerland is a small, open economy with significant exposure to external factors, and exchange rate movements can often have a major impact on inflation. The Swiss franc has also long been a safe haven currency that investors acquire during periods when global risk appetite recedes, or financial volatility accelerates, which can pose challenges for Swiss macroeconomic policymakers. The IMF classifies the Swiss franc as a *de facto* crawl-like arrangement currency, and the SNB sets monetary policy with the aim of keeping inflation stable. In times of heightened regional and global risk, the large safe haven inflows can put considerable appreciation pressure on the franc, and sustained appreciation can weigh on domestic inflation.



Sources: Swiss National Bank, U.S. Treasury estimates

Over the last 15 years, the franc has been subject to notable pressures from large swings in global risk appetite, particularly emanating from the global financial crisis, the euro area crisis, and the COVID-19 pandemic. The SNB has employed a range of tools to try to offset appreciation pressure on the franc and limit negative impacts on inflation and domestic growth. From the start of the COVID-19 pandemic until September 2022, the SNB maintained negative interest rates to limit franc appreciation and combat deflationary risks. As the interest rate is at the effective lower bound and with limited space for quantitative easing due to a shallow market for debt security issuance, foreign exchange intervention became the remaining effective tool for the SNB to meet its inflation objectives. With the exception of May 2021, the SNB's net foreign exchange purchases have broadly moderated since the onset of the pandemic in early 2020. Based on the SNB's published intervention figures, SNB intervention in the four quarters ending in June 2022 amounted to $23 billion, or 2.8% of GDP, compared with $28 billion or 3.5% of GDP in the four quarters through June 2021. By the end of 2021, Switzerland's foreign currency reserves stood at $1.03 trillion, up slightly from $1 trillion at end-2020. As of end June 2022, reserves covered 75% of short-term debt and 110% of GDP.

In its June 16, 2022 monetary policy decision, the SNB increased its main policy rate by 50bp to -0.25% in response to increased inflationary pressure, and on September 22, 2022 the SNB raised the policy rate another 75bps to 0.5%. Switzerland's inflation rate increased to 0.6% in 2021 and 3.2% in September 2022. The SNB attributes the increase to spillovers from Russia's war against Ukraine including increased prices in natural gas and electricity. In their latest communication, the SNB projects inflation to reach 3.0% in 2022, above its 2% ceiling, before falling to 2.4% in 2023, based on the assumption that the policy rate remains at 0.5% over the forecast horizon.

Since early 2021, Treasury has been conducting enhanced bilateral engagement with Switzerland in accordance with the 2015 Act and has been discussing with the Swiss authorities the policy options to address the underlying causes of Switzerland's external imbalances. We expect these productive discussions to continue to help us reach a deeper understanding of the policy issues related to Switzerland's external imbalances. Treasury and the Swiss authorities are continuing a separate but related Standing Macroeconomic and Financial Dialogue to discuss macroeconomic issues.

Section 2: Intensified Evaluation of Major Trading Partners

The 1988 Act requires the Secretary of the Treasury to provide semiannual reports to Congress on international economic and exchange rate policy. Under Section 3004 of the 1988 Act, the Secretary must:

> *"consider whether countries manipulate the rate of exchange between their currency and the United States dollar for purposes of preventing effective balance of payments adjustment or gaining unfair competitive advantage in international trade."*

This determination may encompass analysis of a broad range of factors, including not only trade and current account imbalances and foreign exchange intervention (the criteria evaluated under the 2015 Act), but also currency developments, the design of exchange rate regimes and exchange rate practices, foreign exchange reserve coverage, capital controls, monetary policy, and trade policy actions, as well as foreign exchange activities by quasi-official entities that may be undertaken on behalf of official entities, among other factors.

The 2015 Act requires the Secretary of the Treasury to provide semiannual reports on the macroeconomic and foreign exchange rate policies of the major trading partners of the United States. Section 701 of the 2015 Act requires that Treasury undertake an enhanced analysis of macroeconomic and exchange rate policies for each major trading partner "that has— (1) a significant bilateral trade surplus with the United States; (2) a material current account surplus; and (3) engaged in persistent one-sided intervention in the foreign exchange market." Additionally, the 2015 Act requires the President, through the Secretary of the Treasury, to "commence enhanced bilateral engagement with each country for which an enhanced analysis" is included in the report. The Act also provides for the possible imposition of penalties if, on or after one year of the commencement of enhanced bilateral engagement, the Secretary determines that a country "has failed to adopt appropriate policies to correct the undervaluation and surpluses" that triggered the enhanced analysis and enhanced bilateral engagement.

Key Criteria

Pursuant to Section 701 of the 2015 Act, this section of the Report seeks to identify any major trading partner of the United States that has: (1) a significant bilateral trade surplus with the United States, (2) a material current account surplus, and (3) engaged in persistent one-sided intervention in the foreign exchange market. Required data for the period of review (the four quarters through June 2022, unless otherwise noted) are provided in Table 1 (p. 18) and Table 2 (p. 45).

As noted earlier, Treasury reviews developments in the 20 largest trading partners of the United States, along with other trading partners that remain on the Monitoring List over the period of review. These economies accounted for almost 80% of U.S. trade in goods and services over the four quarters through June 2022. This includes all U.S. trading partners whose bilateral goods and services surplus with the United States in the four quarters through June 2022 exceeded $15 billion.

The results of Treasury's latest assessment pursuant to Section 701 of the 2015 Act are discussed below.

Criterion (1) – Significant bilateral trade surplus with the United States:

Column 3 in Table 2 provides the bilateral goods and services trade balances for the United States' 20 largest trading partners for the four quarters through June 2022.[24] China has the largest trade surplus with the United States by far, after which the sizes of the bilateral trade surpluses decline notably. Treasury assesses that economies with a bilateral goods and services surplus of at least $15 billion have a "significant" surplus. Highlighted in red in column 3 are the 14 major trading partners that have a bilateral surplus that met this threshold for the four quarters through June 2022. Table 3 provides additional contextual information on total and bilateral trade, including individual goods and services trade balances, with these trading partners. Because the Report now incorporates services trade, Table 3, which provides disaggregated goods and services trade data, will be essential for comparison with past Reports that focused on goods trade.

Criterion (2) – Material current account surplus:

Treasury assesses current account surpluses of at least 3% of GDP or a surplus for which Treasury estimates there is a substantial current account "gap" to be "material" for the purposes of enhanced analysis. Highlighted in red in column 2a of Table 2 are the seven economies that met these thresholds over the four quarters through June 2022. No economy that did not already meet the 3% current account surplus threshold had a substantial current account gap.[25] Column 2b shows the change in the current account surplus as a share of GDP over the last three years, although this is not a criterion for enhanced analysis.

Criterion (3) – Persistent, one-sided intervention:

Treasury assesses net purchases of foreign currency, conducted repeatedly, in at least 8 out of 12 months, totaling at least 2% of an economy's GDP, to be persistent, one-sided intervention.[26] Columns 1a and 1c in Table 2 provide Treasury's assessment of this

[24] Although this Report does not treat the euro area itself as a major trading partner for the purposes of the 2015 Act—this Report assesses euro area countries individually—data for the euro area are presented in Table 2 and elsewhere in this Report both for comparative and contextual purposes, and because policies of the ECB, which holds responsibility for monetary policy for the euro area, will be assessed as the monetary authority of individual euro area countries.
[25] See Box 2 in the December 2021 Report on Macroeconomic and Exchange Rate Policies of the United States' Major Trading Partners for a summary of how Treasury estimates current account gaps.
[26] Notably, this quantitative threshold is sufficient to meet the criterion. Other patterns of intervention, with lesser amounts or less frequent interventions, might also meet the criterion depending on the circumstances of the intervention.

criterion.[27] In economies where foreign exchange interventions are not published, Treasury uses estimates of net purchases of foreign currency as a proxy for intervention. Highlighted in red in column 1a and 1c are the two major trading partners that met this criterion for the four quarters through June 2022, per Treasury estimates.

[27] Treasury uses publicly available data for intervention on foreign asset purchases by authorities, or estimated intervention based on valuation-adjusted foreign exchange reserves. This methodology requires assumptions about both the currency and asset composition of reserves in order to isolate returns on assets held in reserves and currency valuation moves from actual purchases and sales, including estimations of transactions in foreign exchange derivatives markets. Treasury also uses alternative data series when they provide a more accurate picture of foreign exchange balances, such as Taiwan's reporting of net foreign assets at its central bank. To the extent the assumptions made do not reflect the true composition of reserves, estimates may overstate or understate intervention. Treasury strongly encourages those economies in this Report that do not currently release data on foreign exchange intervention to do so.

Table 2. Major Foreign Trading Partners Evaluation Criteria

	FX Intervention			Current Account			Bilateral Trade
	Net Purchases (% of GDP, Trailing 4Q) (1a)	Net Purchases (USD Bil., Trailing 4Q) (1b)	Net Purchases 8 of 12 Months† (1c)	Balance (% of GDP, Trailing 4Q) (2a)	3 Year Change in Balance (% of GDP) (2b)	Balance (USD Bil., Trailing 4Q) (2c)	Goods and Services Surplus with United States (USD Bil., Trailing 4Q) (3)
Canada	0.0	0	No	0.2	2.5	5	**51**
Mexico	0.0	0	No	-0.8	0.5	-10	**118**
China	0.1 — 1 *	17 — 182	Yes	2.0	1.2	367	**382**
Japan	0.0	0	No	1.8	-1.6	82	**62**
Germany	0.0	0	No	**5.4**	-2.1	228	**72**
United Kingdom	0.0	0	No	-4.3	0.1	-138	-14
Korea	-2.1	-38	No	**4.0**	0.0	71	**32**
Ireland	0.0	0	No	**13.1**	21.0	68	9
India	-0.9	-30	No	-2.1	0.0	-69	**48**
Switzerland	**2.8**	23	**Yes**	**8.0**	5.0	65	**16**
Taiwan	-1.0	-8	Yes	**14.7**	3.7	116	**49**
Netherlands	0.0	0	No	**5.5**	-2.7	56	-34
France	0.0	0	No	-0.4	-0.4	-10	**18**
Vietnam	-2.9 **	-11	No	-1.6	-2.8	-6	**105**
Singapore	**15.6**	64	**Yes**	**19.4**	4.0	80	-31
Brazil	-1.6	-28	No	-1.9	0.9	-34	-30
Italy	0.0	0	No	1.2	-1.7	24	**41**
Malaysia	-1.7 **	-7	No	2.5	-0.7	10	**39**
Thailand	-3.4 **	-17	No	-3.3	-8.4	-17	**38**
Australia	-0.2	-3	No	2.2	3.1	36	-25
Memo: Euro Area	0.0	0	No	0.9	-1.7	131	**118**

Note: Current account balance measured using BOP data, recorded in U.S. dollars, from national authorities.

Sources: Haver Analytics; National Authorities; U.S. Census Bureau; Bureau of Economic Analysis; and U.S. Department of the Treasury Staff Estimates.

† In assessing the persistence of intervention, Treasury will consider an economy that is judged to have purchased foreign exchange on net for 8 of the 12 months to have met the threshold.

* China does not publish FX intervention, forcing Treasury staff to estimate intervention activity from monthly changes in the PBOC's foreign exchange assets and monthly data on net foreign exchange settlements, adjusted for changes in outstanding forwards. Based on either the PBOC's foreign exchange assets data or net foreign exchange settlements data, intervention was persistent.

** Authorities do not publish FX intervention. Authorities have conveyed bilaterally to Treasury the size of net FX purchases during the four quarters ending June 2022.

Table 3. Major Foreign Trading Partners - Expanded Trade Data

	USD Bil., Trailing 4Q						% of GDP, Trailing 4Q					
	Total Trade			Trade Surplus with United States			Total Trade			Trade Surplus with United States		
	Goods and Services (1a)	Goods (1b)	Services (1c)	Goods and Services (2a)	Goods (2b)	Services (2c)	Goods and Services (3a)	Goods (3b)	Services (3c)	Goods and Services (4a)	Goods (4b)	Services (4c)
Canada	845	747	97	51	77	-26	40.3	35.6	4.6	2.4	3.7	-1.2
Mexico	791	726	65	118	119	0	58.2	53.4	4.8	8.7	8.7	0.0
China	765	700	65	382	397	-15	4.2	3.8	0.4	2.1	2.2	-0.1
Japan	291	219	72	62	64	-2	6.3	4.7	1.5	1.3	1.4	0.0
Germany	281	206	75	72	69	3	6.7	4.9	1.8	1.7	1.6	0.1
United Kingdom	267	127	140	-14	-8	-7	8.2	3.9	4.3	-0.4	-0.2	-0.2
Korea	208	174	34	32	39	-7	11.8	9.8	1.9	1.8	2.2	-0.4
Ireland	196	97	100	9	64	-55	37.9	18.7	19.2	1.7	12.3	-10.7
India	181	129	53	48	39	9	5.5	3.9	1.6	1.4	1.2	0.3
Switzerland	176	93	83	16	37	-21	21.7	11.4	10.3	2.0	4.6	-2.6
Taiwan	150	127	23	49	47	2	19.0	16.1	2.9	6.2	5.9	0.2
Netherlands	139	101	38	-34	-23	-11	13.7	10.0	3.7	-3.3	-2.3	-1.0
France	134	91	43	18	14	3	4.6	3.1	1.5	0.6	0.5	0.1
Vietnam	132	129	3	105	107	-1	34.6	33.9	0.7	27.6	27.9	-0.4
Singapore	117	71	46	-31	-9	-22	28.4	17.2	11.2	-7.4	-2.2	-5.2
Brazil	113	89	24	-30	-17	-13	6.5	5.1	1.4	-1.7	-1.0	-0.7
Italy	106	90	16	41	40	1	5.1	4.4	0.8	2.0	2.0	0.0
Malaysia	78	73	6	39	39	0	19.9	18.5	1.4	9.9	10.0	-0.1
Thailand	72	68	4	38	39	-1	14.3	13.6	0.8	7.6	7.8	-0.2
Australia	68	43	25	-25	-13	-11	4.1	2.6	1.5	-1.5	-0.8	-0.7
Memo: Euro Area	1074	750	323	118	180	-62	7.4	5.2	2.2	0.8	1.2	-0.4

Source: U.S. Census Bureau, and Bureau of Economic Analysis.

Transparency of Foreign Exchange Policies and Practices

There is broad consensus that economic policy transparency enhances the credibility of economic institutions and fosters a more efficient allocation of resources as information asymmetries are reduced. Treasury will continue to press its major trading partners to make significant strides in enhancing the transparency of currency practices. As part of this effort, Treasury will monitor and provide its assessment of foreign exchange policy transparency in the semiannual *Report on Macroeconomic and Foreign Exchange Policies of Major Trading Partners of the United States* on a regular basis.

Table 4: Transparency of the United States and Its Major Trading Partner's Foreign Currency Regimes

	Foreign Exchange Reserves Data			Intervention			
	Headline Reserves: Frequency /Lag	Derivative Position in IRFCL	Currency Composition	Stated Objective	Publish Intervention	Frequency	Lag
USA	Weekly/1 day	Yes	Public	Yes	Yes	As it happens*	None
ECB	Monthly/ 2 weeks	Yes	Public[28]	No	Yes	As it happens*	None
UK	Monthly/ 3-7 days	Yes	COFER[29]	Yes	Yes	As it happens*	None
Japan	Monthly/ 1 week	Yes	COFER	Yes	Yes	Monthly	2 days
Canada	Monthly/ 1 week	Yes	Public	Yes	Yes	As it happens*	None
Switzerland	Monthly/ 1 week	Yes	Public	Yes	Yes	Quarterly	3 months
Australia	Monthly/ 1 week	Yes	Public	Yes	Yes	Annually[30]	4 months
Brazil	Daily/2 days	Yes	Public	Yes	Yes	Daily	5 days
Mexico	Weekly/4 days	Yes	Public	Yes	Yes	Monthly	6 days
India	Weekly/7 days	Yes	COFER	Yes	Yes	Monthly	2 months
China	Monthly/ 1 week	?[31]	COFER	No	No		
Taiwan	Monthly/ 1 week	Yes	No	Yes	Yes	Semi-annually	3 months
Korea	Monthly/ 1 week	Yes	COFER	Yes	Yes	Quarterly	3 months

[28] The ECB's template on international reserves and foreign currency liquidity reports the currency composition of the ECB's official reserve assets each December but does not provide a comparable breakdown for the Eurosystem.
[29] "COFER" means the country provides the data confidentially to the IMF through its Composition of Foreign Exchange Reserves (COFER) database.
[30] Australia publishes daily foreign exchange intervention one time per year in October. Australia has not intervened in foreign exchange markets since November 2008.
[31] Treasury staff have questions about the consistency of China's reported derivatives position.

Singapore	Monthly/ 1 week	Yes	COFER	Yes	Yes	Semi-annually	3 months
Thailand	Weekly/1 week	Yes	No	Yes	Yes[32]	Semi-annually	3 months
Malaysia	Biweekly/ 1 week	Yes	No	Yes	Yes[33]	Semi-annually	3 months
Vietnam	Monthly/ 2-3 months	No	No	Yes	Yes[34]	Semi-annually	3 months

* Intervention is published officially in certain reports on a regular basis but in practice intervention is announced on the day it takes place.

[32] Thailand discloses its foreign exchange intervention to Treasury with consent to publish in the FX Report.
[33] Malaysia discloses its foreign exchange intervention to Treasury with consent to publish in the FX Report.
[34] Vietnam discloses its foreign exchange intervention to Treasury with consent to publish in the FX Report.

Summary of Findings

Pursuant to the 2015 Act, Treasury finds that Switzerland met all three criteria for enhanced analysis in the current review period of the four quarters through June 2022 based on the most recent available data. Taiwan, which had met all three criteria for enhanced analysis under the 2015 Act in the December and April 2021 Reports and met two of the three criteria for enhanced analysis in the June 2022 Report, again met two of the three criteria for enhanced analysis in this Report. **In total, seven economies—China, Japan, Korea, Germany, Malaysia, Singapore, and Taiwan—constitute Treasury's Monitoring List.**

Italy, India, Mexico, Thailand, and Vietnam have been removed from the Monitoring List in this Report, having met only one out of three criteria for two consecutive Reports.

With regard to the economies covered in this Report:

- China had met one of the three criteria in every Report from the October 2016 Report through the April 2021 Report, having a significant bilateral trade surplus with the United States, with this surplus accounting for a disproportionate share of the overall U.S. trade deficit. China met two criteria in the December 2021 Report, having a material current account surplus and a significant bilateral trade surplus with the United States. For the four quarters ending June 2022, China met one of the three criteria (significant bilateral trade surplus) and therefore remains on the Monitoring List.
- Japan had met two of the three criteria in every Report from the April 2016 Report through the June 2022 Report, having a material current account surplus and a significant bilateral trade surplus with the United States. Over the four quarters through June 2022, Japan met one of the three criteria, having a significant bilateral trade surpluses with the United States.
- Germany has met two of the three criteria in every Report since the April 2016 Report, having a material current account surplus and a significant bilateral trade surplus with the United States.
- Korea has met two of the three criteria in every Report since April 2016, except for the May 2019 Report, having a material current account surplus and a significant bilateral trade surplus with the United States. While Korea's bilateral trade surplus with the United States briefly dipped below the threshold in 2018, it rose back above the threshold in 2019.
- Malaysia has met two of the three criteria since the May 2019 Report, having a material current account surplus and a significant bilateral trade surplus with the United States. For the four quarters ending June 2022, Malaysia met only one criterion (significant bilateral trade surplus).
- Singapore has met two of the three criteria since the May 2019 Report, having a material current account surplus and engaged in persistent, one-sided intervention in the foreign exchange market.
- Taiwan met two of the three criteria in the December 2020 Report, having a material current account surplus and a significant bilateral trade surplus with the United States.

> Taiwan met all three of the criteria in the April and December 2021 Reports. Taiwan met two of the three criteria in the June 2022 Report and continues to meet two of the three criteria in this Report, having a significant bilateral trade surplus with the United States and material current account surplus over the reporting period.

Switzerland once again exceeded the thresholds for all three criteria over the four quarters through June 2022, as it had in the last Report which covered the four quarters through December 2021. Therefore, Treasury is continuing enhanced analysis of Switzerland's macroeconomic and exchange rate policies in this Report. Since Switzerland has once again exceeded the thresholds for all three criteria, Treasury will also continue its enhanced bilateral engagement with Switzerland to discuss the Swiss authorities' policy options to address the underlying causes of its external imbalances.

Treasury will closely monitor and assess the economic trends and foreign exchange policies of each of these economies.

In this Report, Treasury has concluded that no major trading partner of the United States engaged in conduct of the kind described in Section 3004 of the 1988 Act during the relevant period. This determination has taken account of a broad range of factors, including not only trade and current account imbalances and foreign exchange intervention (the criteria in the 2015 Act), but also currency developments, exchange rate practices, foreign exchange reserve coverage, capital controls, and monetary policy.

As the global economy continues to stabilize, it is critical that key economies adopt policies that allow for a narrowing of excessive surpluses and deficits. Heightened risks of economic scarring further underscore the need for governments to bolster domestic-led rather than externally supported growth. This would establish a firmer foundation for strong, balanced growth across the global economy.

Glossary of Key Terms in the Report

Exchange Rate – The price at which one currency can be exchanged for another. Also referred to as the bilateral exchange rate.

Exchange Rate Regime – The manner or rules under which an economy manages the exchange rate of its currency, particularly the extent to which it intervenes in the foreign exchange market. Exchange rate regimes range from floating to pegged.

Floating (Flexible) Exchange Rate – An exchange rate regime under which the foreign exchange rate of a currency is fully determined by the market with intervention from the government or central bank being used sparingly.

Foreign Exchange Reserves – Foreign assets held by the central bank that can be used to finance the balance of payments and for intervention in the exchange market. Foreign assets consist of gold, Special Drawing Rights (SDRs), and foreign currency (most of which is held in short-term government securities). The latter are used for intervention in the foreign exchange markets.

Intervention – The purchase or sale of an economy's currency in the foreign exchange market by a government entity (typically a central bank) in order to influence its exchange rate. Purchases involve the exchange of an economy's own currency for a foreign currency, increasing its foreign currency reserves. Sales involve the exchange of an economy's foreign currency reserves for its own currency, reducing foreign currency reserves. Interventions may be sterilized or unsterilized.

Nominal Effective Exchange Rate (NEER) – A measure of the overall value of an economy's currency relative to a set of other currencies. The effective exchange rate is an index calculated as a weighted average of bilateral exchange rates. The weight given to each economy's currency in the index typically reflects the amount of trade with that economy.

Pegged (Fixed) Exchange Rate – An exchange rate regime under which an economy maintains a set rate of exchange between its currency and another currency or a basket of currencies. Often the exchange rate is allowed to move within a narrow predetermined (although not always announced) band. Pegs are maintained through a variety of measures, including capital controls and intervention.

Real Effective Exchange Rate (REER) – A weighted average of bilateral exchange rates, expressed in price-adjusted terms. Unlike the nominal effective exchange rate, it is further adjusted for the effects of inflation in the countries concerned.

Trade Weighted Exchange Rate – See Nominal Effective Exchange Rate.