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Global exchange rate adjustments: drivers, impacts and policy implications

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Key takeaways

- *A sequence of major shocks to the global economy has led to substantial exchange rate adjustments, notably a strengthening of the US dollar against most currencies, reflecting cross-country differences in shock exposure and in the pace of monetary tightening.*
- *Given the central role of the US dollar as an invoicing currency, a dollar appreciation tends to raise foreign import prices. Unlike in the past, recent dollar appreciation has coincided with a surge in commodity prices, compounding the impact on inflation. Dollar appreciation has also been associated with a tightening of global financial conditions.*
- *FX intervention may help mitigate dislocations arising from exchange rate swings, but is likely to be effective only if it is part of a consistent macroeconomic policy stance that ensures macro-financial stability. In particular, a coherent fiscal-monetary mix is essential to avoid disruptive exchange rate movements that may arise from fears of fiscal dominance.*

Introduction

The world economy has been hit by two major shocks in succession – the Covid-19 pandemic and the Russian invasion of Ukraine – which have contributed to a significant rise in inflation and a global economic slowdown. These global shocks and the monetary policy responses to contain inflation have been associated with large exchange rate adjustments. In particular, the broad US dollar index has appreciated by around 10% since the beginning of this year, reaching its highest level in almost four decades (Graph 1, left-hand panel). The US dollar's appreciation has been broad-based against almost all major global currencies, with only a few exceptions (right-hand panel).

While exchange rate movements are an integral part of economies' adjustment to shocks and their asymmetric repercussions, the dollar's role as the premier international currency in global trade and finance implies that its movements have significant macro-financial consequences. This Bulletin discusses the drivers of recent exchange rate adjustments, the economic impacts and the policy implications.

Drivers of exchange rate adjustments

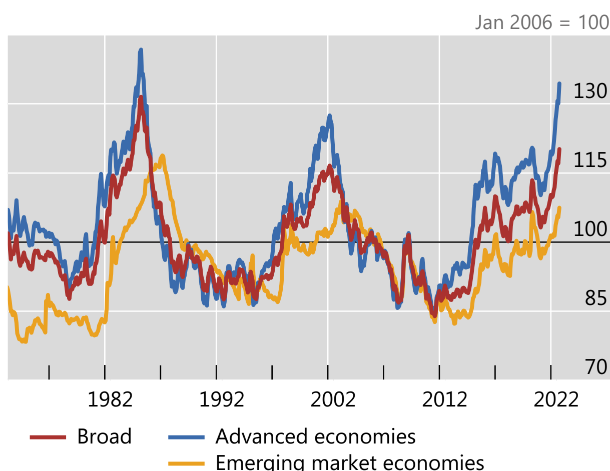
One factor driving the broad-based strengthening of the dollar has been changes in the terms of trade associated with the food and energy price shocks triggered by the Russian invasion of Ukraine (Graph 2, left-hand panel). The terms-of-trade deterioration in energy-importing economies – including the euro area and Japan – are consistent with real exchange rate depreciations that help restore external balance.

In a departure from past episodes of energy price increases, the United States has experienced a terms-of-trade improvement, partly because of its recent transition to being a net exporter of energy, notably of natural gas.

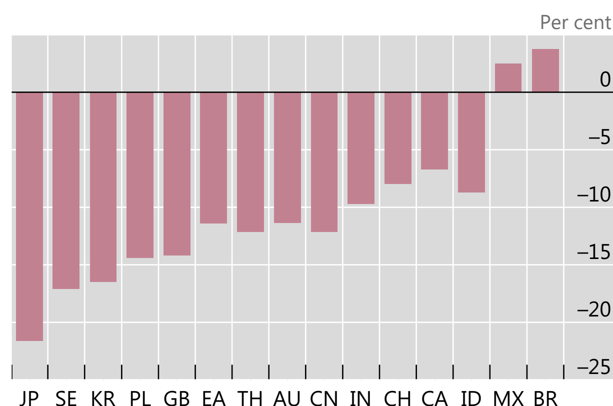
The dollar surges

Graph 1

Real US dollar index[1]



Exchange rates against the US dollar since Jan 2022[2]



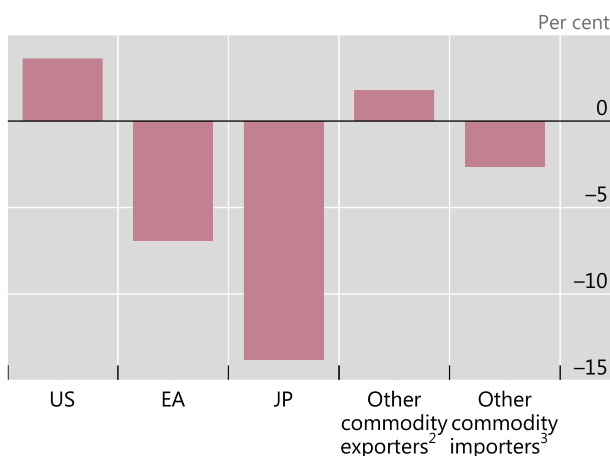
[1] Monthly average of Federal Reserve Board trade-weighted real US dollar index, based on trade in goods and services. An increase indicates appreciation of the US dollar. [2] Changes from 31 December 2021 to 27 October 2022 of nominal bilateral exchange rates against the US dollar. An increase corresponds to an appreciation of the domestic currency.

Sources: Federal Reserve Bank of St Louis, FRED; national data; BIS calculations.

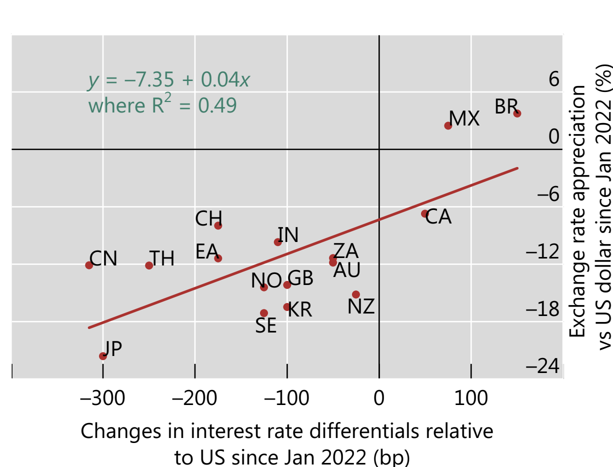
Terms of trade, interest rate differentials and exchange rates

Graph 2

Changes in terms of trade since Jan 2022[1]



Policy rate and exchange rate changes[4]



[1] Simple average across countries on changes from December 2021 to latest available data. [2] AU, BR, CA, MX and ID. [3] CH, CN, GB, KR, PL, SE and TH. [4] Changes from 31 December 2021 to 27 October 2022.

Sources: Refinitiv Datastream; national data; BIS calculations.

A second key factor driving the appreciation of the US dollar has been the divergent pace of monetary policy tightening across countries. The Federal Reserve has tightened monetary policy more rapidly than most other central banks, reflecting cross-country differences in economic conditions and the asymmetric impact of recent global shocks. Widening policy rate differentials have generally been associated with larger depreciations against the dollar (Graph 2, right-hand panel). Notably, the appreciation of the

Mexican peso and the Brazilian real against the dollar have been associated with earlier and more aggressive rate hikes by the Bank of Mexico and the Central Bank of Brazil.

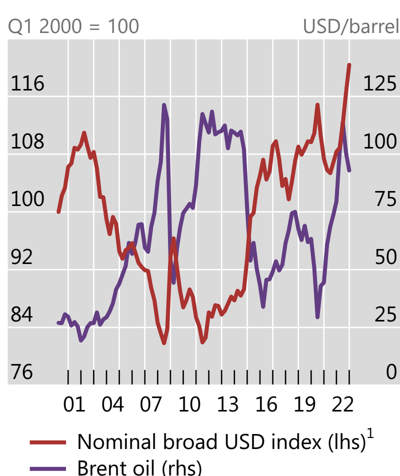
Finally, in addition to economic fundamentals and the divergent pace of monetary tightening, flight to safety dynamics in financial markets against the backdrop of high economic uncertainty have also supported the dollar.

Economic impacts of exchange rate adjustments

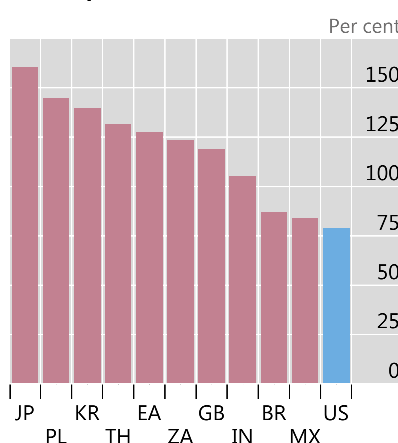
The dollar is the premier international currency across all uses – trade invoicing, trade financing, cross-border payments and funding in global capital markets. It was on one side of 88% of all FX trades in April 2022, according to the latest BIS Triennial Survey of Foreign Exchange and Over-the-counter Derivatives Markets (BIS (2022b)), unchanged from the previous survey in 2019.[1] To a greater extent than other currencies, the dollar's movements therefore affect the global economy through inflation, trade and financial conditions.[2]

The dollar, commodity prices and global trade — Graph 3

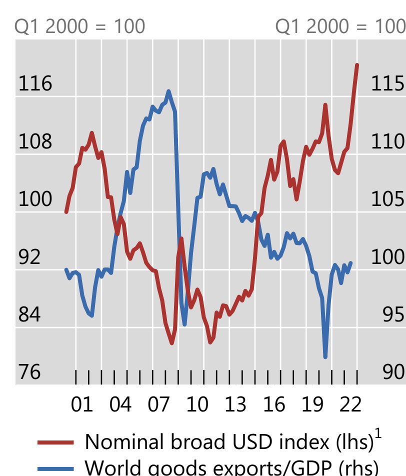
US dollar and oil prices



Increase in oil prices in domestic currency since 2021[2]



US dollar and global trade volume



[1] Federal Reserve Board trade-weighted nominal dollar index, broad group of major US trading partners, based on trade in goods and services. An increase indicates appreciation of the US dollar. [2] Percentage change from 31 December 2020 to 27 October 2022.

Sources: Federal Reserve Bank of St Louis, FRED; IMF, *World Economic Outlook*; World Trade Organization; Refinitiv Datastream; national data; BIS calculations.

First, given the use of the dollar in trade invoicing, a dollar appreciation tends to boost import prices abroad.[3] In the current episode, dollar appreciation has occurred at the same time as the surge in energy and food prices that has ensued from the war in Ukraine, compounding its inflationary effect. The coincidence of higher commodity prices and a stronger dollar has broken the usual historical tendency for dollar appreciation to coincide with weaker commodity prices measured in dollars (Graph 3, left-hand panel). Due to this break from past empirical relationships, commodity prices in local currencies have

[1] See CGFS (2020) for a detailed analysis of the dominant role of the dollar in international funding markets.

[2] For a more detailed discussion of these channels, see BIS (2019, 2022a).

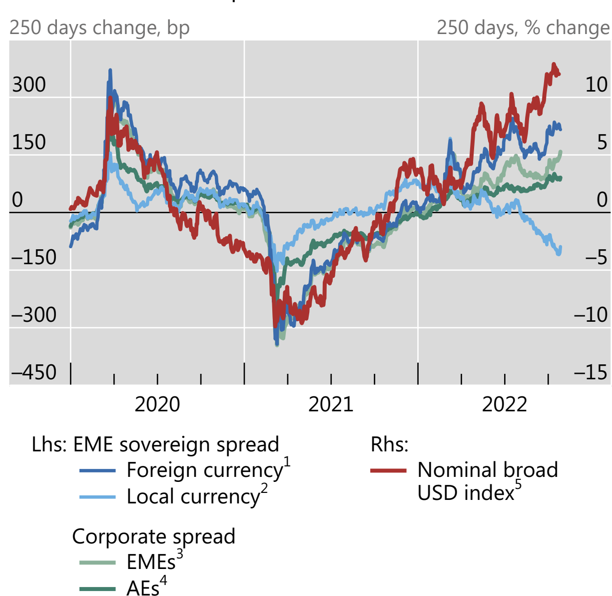
[3] A dollar appreciation tends to be disinflationary in the United States by lowering import prices. However, this effect is muted in the short run because of widespread dollar invoicing.

generally surged much more strongly than in US dollar terms (centre panel). Given the salience of food and energy prices in inflation dynamics, recent dollar strength has been a factor in the rise in inflation across the world.

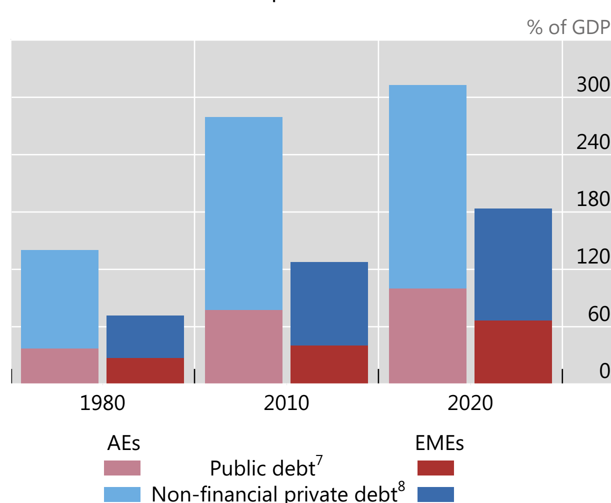
Second, an appreciation of the dollar tends to go hand in hand with weaker global trade (Graph 3, right-hand panel). This is linked to the widespread use of the dollar for trade invoicing and financing. When the dollar appreciates, export prices, which are sticky in the short term, do not change much, while import prices in local currency increase, depressing import demand.[4] In addition, a stronger dollar tightens trade credit conditions as trade credit is denominated mainly in US dollars. This hinders both imports and exports and puts pressure on global value chains.[5] Consistent with such outcomes, the World Trade Organization forecasts a significant slowdown in world trade growth in 2023.[6]

The dollar, global financial conditions and global debt Graph 4

US dollar and bond spreads



Public and non-financial private debt[6]



[1] JPMorgan EMBI Global diversified index spread over the 10-year US Treasury yield. [2] JPMorgan GBI-EM Broad diversified index spread over the 10-year US Treasury yield. [3] JPMorgan CEMBI Broad diversified index spread over the 10-year US Treasury yield. [4] JPMorgan GABI Investment Grade Developed Markets Corporates index spread over the 10-year US Treasury yield. [5] Federal Reserve Board trade-weighted nominal dollar index, broad group of major US trading partners, based on trade in goods and services. An increase indicates appreciation of the US dollar. [6] Simple average across 20 advanced economies (AEs) and 13 emerging market economies (EMEs) upon data availability. [7] General government debt upon availability; otherwise, public sector debt or central government debt. [8] Private loans and debt securities.

Sources: Federal Reserve Bank of St Louis, FRED; IMF, *Global Debt Database* and *World Economic Outlook*; JPMorgan Chase; BIS calculations.

Third, as the main funding currency in global capital markets, a stronger dollar tends to be associated with tighter global dollar funding conditions, tighter balance sheet constraints for borrowers with dollar debt and diminished appetite for risk-taking more broadly.[7] These effects show up in a positive relationship between the broad dollar exchange rate and emerging market economy (EME) sovereign and corporate bond spreads in both dollars and local currency as well as advanced economy (AE) corporate

[4] See Gopinath et al (2020).

[5] See Bruno and Shin (2021).

[6] See www.ungeneva.org/en/news-media/news/2022/10/wto-anticipates-sharp-slowdown-world-trade-growth-2023.

[7] See Hofmann et al (2022).

bond spreads (Graph 4, left-hand panel). Also this year, spreads widened as the dollar appreciated, except for EME local currency sovereign spreads, reflecting the notable resilience of many EMEs.

More generally, it is unclear whether the impact of swings in the dollar exchange rate on global financial conditions is now stronger or weaker than in the past. On the one hand, compared with the crisis-prone 1980s and 1990s, EMEs have reduced their reliance on FX borrowing and strengthened their policy frameworks.[8] On the other hand, dollar borrowing by EMEs has again risen over the past decade or so, driven mainly by corporates, and foreign investors often play an important role in local currency bond markets. More generally, in both EMEs and AEs, public and non-financial private debt has reached historical highs, compounding the macro-financial effects of tightening global financial conditions, including those linked to dollar appreciation (Graph 4, right-hand panel).

Policy considerations

Large currency depreciations against the US dollar may exacerbate the challenges faced by central banks as they work to prevent a transition to a high-inflation regime without unduly undermining economic activity.

Several countries have responded with FX intervention to address depreciation pressures on their currencies.[9] FX intervention can in the short term lean against excessive depreciations of the exchange rate to contain associated inflationary pressures and possible adverse financial stability repercussions. However, the monetary consequences of FX interventions should be taken into account. More fundamentally, FX intervention cannot replace sound macroeconomic policy.[10]

In particular, the key line of defence against disruptive exchange rate pressures is for countries to adopt a coherent stability-oriented approach to fiscal and monetary policy. Fiscal policies have been highly accommodative in recent years, to counter first the repercussions of Covid-19 and now those of the energy price shock (Graph 5, left-hand panel). Fiscal intervention to contain the energy price shock can help restrain inflation in the short run and stabilise households' purchasing power. However, against the background of supply constraints and elevated inflation, persistent fiscal expansions might force central banks to tighten monetary policy even more aggressively and possibly amplify exchange rate divergence. In particular, large deficits in countries with high debt and weak economic fundamentals could undermine fiscal sustainability and raise the spectre of fiscal dominance, possibly de-anchoring inflation expectations and accelerating currency depreciations.[11]

Finally, there is the question of whether the sharp appreciation of the dollar makes the case for greater global coordination of monetary policy. The concern could be that central banks may otherwise overtighten monetary policy from a global standpoint as they try to limit exchange rate depreciations.[12] While most central banks have increased policy rates rapidly in recent months and have communicated their intention to hike rates further, real interest rates have declined over the past year or so and remain negative in most regions (Graph 5, right-hand panel). Furthermore, inflation remains stubbornly elevated. These observations caution against the notion that monetary policy is overreacting to the global surge in inflation.

[8] See BIS (2019) for a more detailed discussion of the evolution of EME policy frameworks.

[9] See Gopinath and Gourinchas (2022).

[10] FX intervention may raise global challenges if it is deployed by many countries at once, as large sales of reserves can test liquidity in core bond markets.

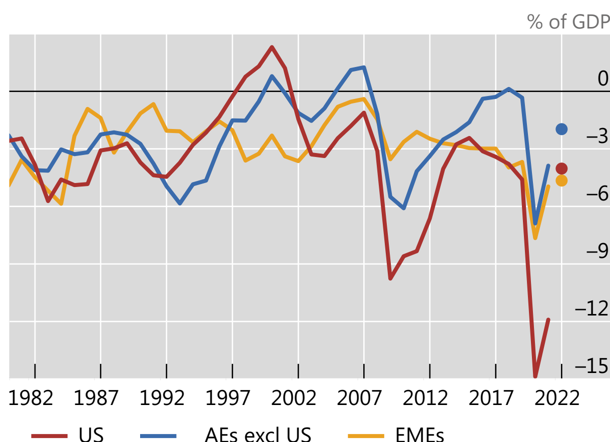
[11] On the importance of fiscal sustainability as an anchor of macro-financial stability frameworks, see BIS (2022a).

[12] See Obstfeld (2022).

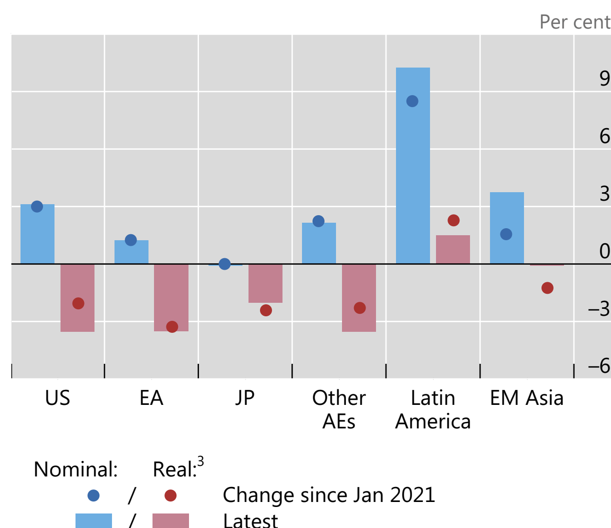
Fiscal deficits and policy rates

Graph 5

Fiscal balances over time[1]



Nominal and real policy rates[2]



[1] Simple average across 21 AEs and 27 EMEs upon data availability. Dots for 2022 correspond to forecasted values. [2] Other AEs, Latin America and EM Asia respectively refer to simple averages across eight AEs, five Latin American and 10 Asian economies. [3] Nominal policy rate deflated by core inflation. Nominal policy rate as of 27 October 2022; core inflation as of September 2022.

Sources: Federal Reserve Bank of St Louis, FRED; IMF, *World Economic Outlook*; Refinitiv Datastream; national data; BIS calculations.

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