Tariffs in a world of large global capital flows – implications for central banks[1]

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Thank you for the kind invitation to speak here at Bruegel. Bruegel is of course well known for its excellent analysis of many policy-important topics. These include European and global perspectives on international finance, macroeconomics and trade, which have increasingly come together in recent policy discussions.

Today, I will explore the growing global financial ties that interconnect economies, investors and markets. These ties have profound implications for the economic outlook, the way economies respond to shocks and the formulation of policy responses.

We live in an era of large supply headwinds, including the recent shock of trade tariffs. These shocks are complex because they affect the real economy through different channels, on both the demand and the supply side of the economy. When the effects of tariffs resemble a supply shock, limiting their inflationary impact through tighter monetary policy risks worsening the impact on growth. By contrast, monetary policy does not face such a trade-off for demand shocks, as they push economic activity and prices in the same direction. The long-standing common prescription for central banks to "look through" supply shocks may no longer apply today, particularly with the inflation surge during the pandemic recovery still fresh in the minds of households and businesses. Central bank responses should be guided by the need to keep inflation expectations well anchored. And as financial factors can shape the impact of real shocks to the economy, policymakers must complement their assessment of the monetary and financial stability outlook with close consideration of financial linkages and the transmission to financial conditions.

Indeed, the global economy is far more interconnected than when tariffs were last a prominent feature of trade many decades ago. Today, trade flows have been supported by long and complex supply chains that span the globe. But the world has also become highly interconnected through large financial capital flows. In the past, gross trade – the red line in the graph, reflecting trade openness and integration – was similar in size to external financial liabilities – the blue line, reflecting financial openness and integration (Graph 1). Today, external financial flows dominate

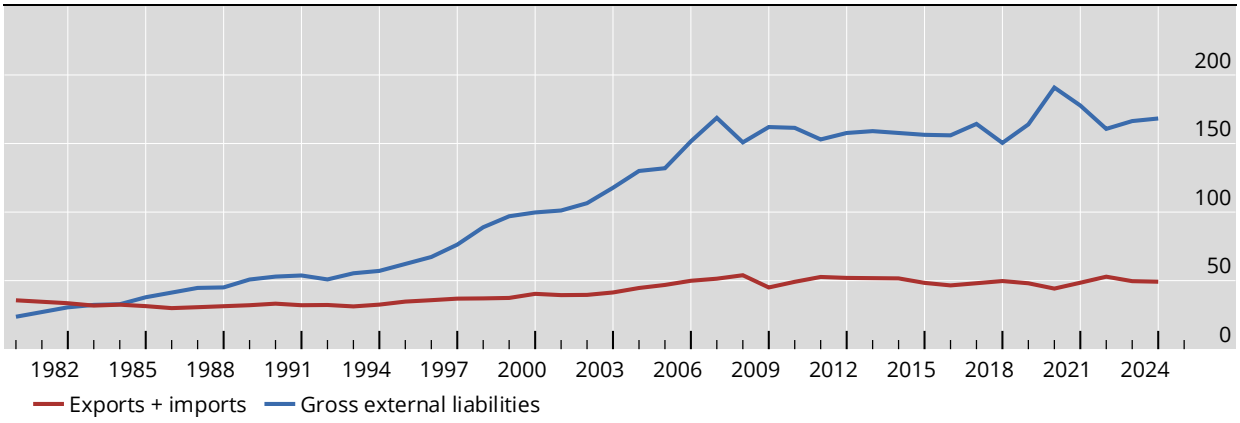
[1] I would like to thank Bryan Hardy, Stefan Avdjiev, Gaston Gelos, Tom Rosewall and Marjorie Santos for their help in preparing these remarks and providing insightful comments. The views expressed are not necessarily those of the Bank for International Settlements.

trade. Since the 1980s, when these both stood at 30% of world GDP, financial positions have grown to near 170% of GDP today, compared with 50% of GDP for trade.

Understanding the web of financial interlinkages and the nature of large capital flows is critical for policymakers' assessment of macroeconomic and financial stability. A resilient banking system and buoyant financial markets have helped to buffer the economy from the expected negative impact of tariffs. But financial market sentiment can quickly reverse in the wake of negative news. In a world of large global capital flows, market stress will quickly reverberate across countries, potentially fuelling a feedback loop between economic and financial vulnerabilities.

External financial flows have outpaced trade

As a percentage of world GDP[1] Graph 1



[1] "World" refers to a sample of 43 advanced and emerging market economies. Exports and imports cover goods and services.

Sources: IMF, *International Investment Position* and *World Economic Outlook*; BIS calculations.

Tariffs as a negative supply shock

This year has seen a sharp increase in tariffs worldwide, which were largely expected to affect global growth and create difficult policy trade-offs for central banks. These tariffs came amid a prolonged period of uncertainty about trade policy. Today, various estimates suggest the US effective tariff rate has surged to a level not seen since the 1930s, shown here by the blue dot (Graph 2.A). US tariffs faced by exporters have varied across countries and are particularly large for China (Graph 2.B).

In theory, increased tariffs act as a negative supply shock for imposing countries and a negative demand shock for targeted countries. The interconnections of global supply chains, with intermediate goods crossing borders multiple times, and with firms' varying ability to divert their trade flows, blurs the picture. In particular, disruptions to supply chains and diversion of trade flows could have further effects on output and inflation beyond the direct effects of the tariffs.

For central banks, calibrating the appropriate policy response to tariffs and supply shocks more generally can be challenging (Maechler (2024)). Limiting the inflationary impact of tariffs through tighter monetary policy will add to the headwinds for economic growth, creating a difficult trade-off. Furthermore, monetary policy takes time to work its way through the economy. By the time it gains traction on inflation, the economy may have absorbed the shock, leaving only the negative impact on growth. As a result, a common prescription for central banks was to "look through" supply shocks. This is because tariffs were expected to have only a one-off impact on the price level, and thus a transitory rather than a permanent impact on the inflation rate (Burgert et al (2025); Hofmann et al (2024)). In other words, by waiting, central banks would allow inflationary pressures to abate without unnecessarily depressing growth.

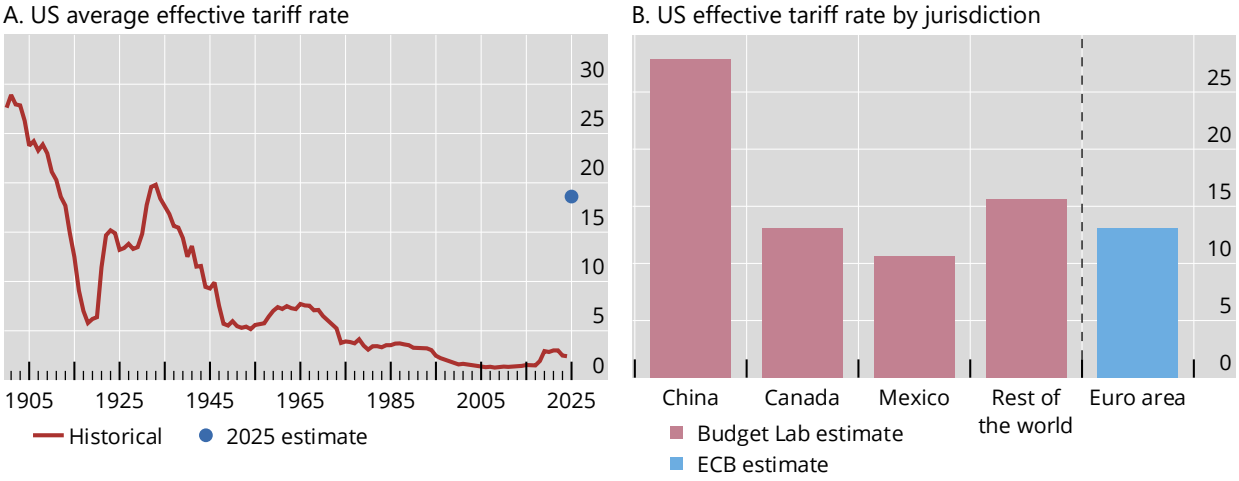
The look-through approach may no longer be effective, as central banks need to factor in many other moving parts when taking their policy decisions. In the case of large and/or persistent shocks, there is heightened risk of de-anchoring inflation expectations. This risk is greater against the backdrop of the recent inflation surge. Central banks need to continue to monitor closely the evolution of inflation dynamics in the face of such shocks and the risks to inflation expectations.

So far, however, recent events have defied expectations. We have not observed a big impact from tariffs in the data. The underlying factors are difficult to disentangle and likely multifaceted.

Tariffs are set to surge and vary by jurisdiction[1]

In per cent

Graph 2



[1] Estimated as of 7 August 2025. The effective tariff rate is defined as customs duty revenue as a percentage of goods imports.

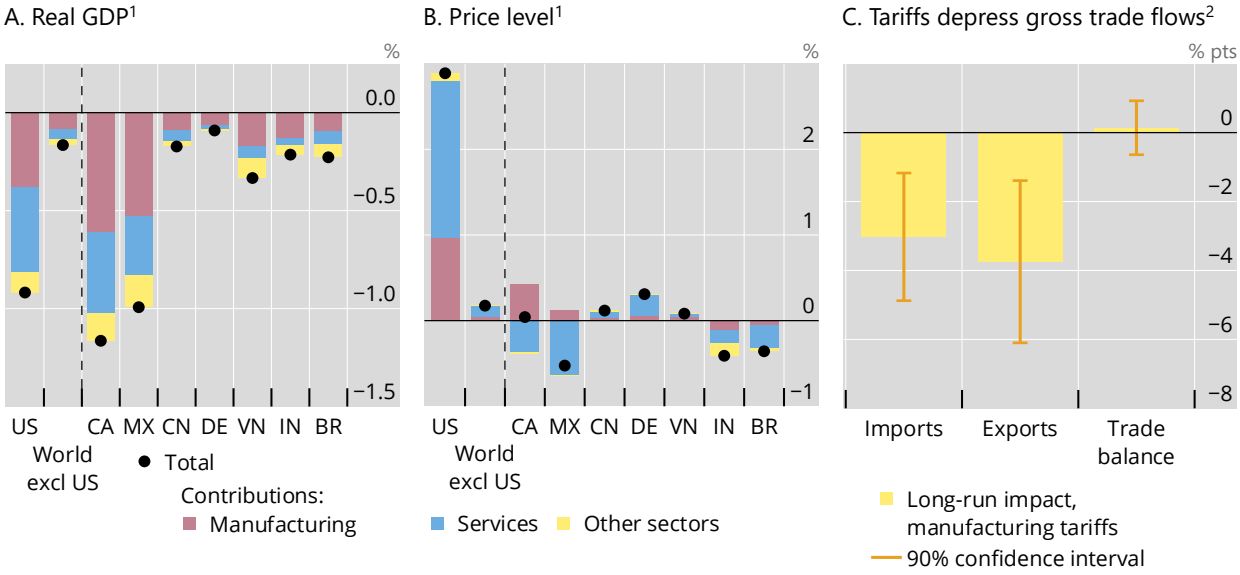
Sources: Burgert et al (2025); ECB; Budget Lab at Yale.

The puzzle of the tariff impact

With this in mind, let's examine the tariff impacts so far. Most macroeconomic models would predict that higher tariffs imposed by the United States would lead to a slowdown in growth (especially in the US), an increase in inflation in tariff-imposing countries and decreased trade.

Recent work by my BIS colleagues is one example of the modelled impact of the tariff shock (Graph 3; Burgert et al (2025)).

Tariffs to weigh on growth and trade, with varied impact on prices — Graph 3

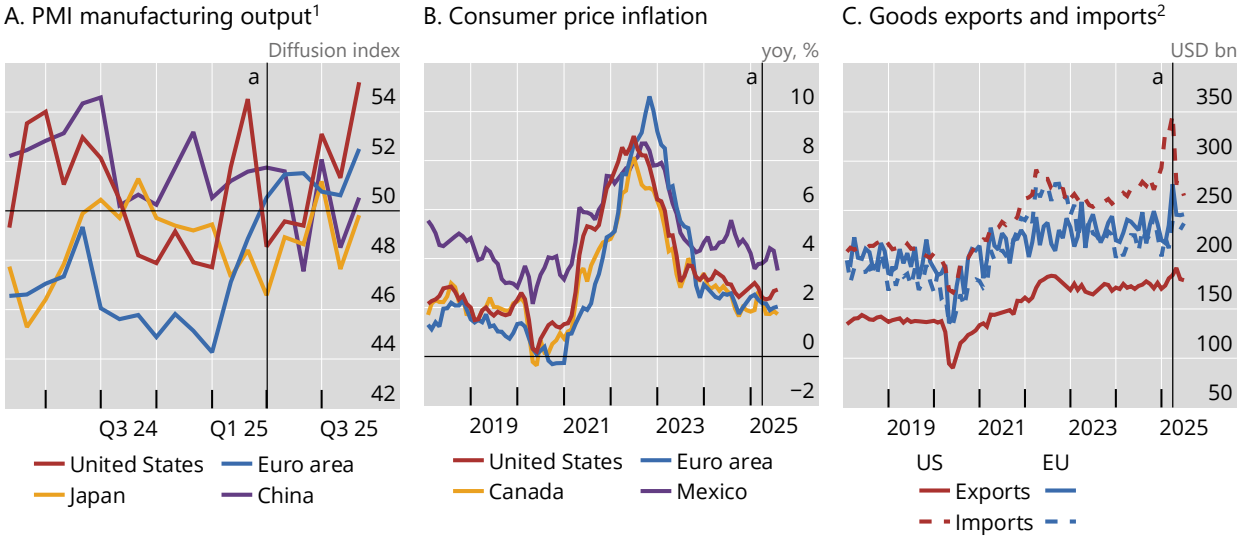


[1] Short-run impacts of announced tariffs as of 25 August based on simulations of the multi-sector globalist trade model (See Burgert et al (2025) Box A for details), as deviations from a counterfactual where tariffs remained at end-2024 levels. [2] Bars correspond to a 1 percentage point increase in average manufacturing tariffs. Exports, imports and trade balance relate to goods and services. Long-run is defined as the asymptotic impact after taking into account the persistence of the dependent variable. The sample covers AT, AU, BE, CA, CH, DE, DK, ES, FI, FR, GB, GR, IT, JP, NL, NO, NZ, PT, SE and US. The estimation period covers 2001–23.

Sources: Asian Development Bank Multi-Regional Input-Output (MRIO) Tables; BIS calculations (Burgert et al (2025); BIS (2025a)).

However, the economic outcomes so far have been relatively mild. US manufacturing purchasing managers' indices (PMIs) turned down in April and May, but have since picked up, while the euro area and other countries suggest stable or growing output (Graph 4.A). Inflation largely remains in check, although there are some signs of upward pressure (Graph 4.B). Goods trade has declined recently following the effects of front-loading of US imports in the first quarter of 2025, but remains consistent with the levels typically seen in recent years (Graph 4.C).

Economic activity has been resilient, and inflation largely remains in check Graph 4



[a] US administration unveils reciprocal tariffs (2 April 2025).

[1] A value over 50 indicates that the number of firms reporting output expansion is greater than the number of those reporting output contraction. [2] European Union (EU) exports and imports exclude intra-EU trade.

Sources: World Trade Organization; IHS Markit; LSEG Datastream; national data.

Financial context for the April tariff shock

So, why have we not seen a bigger impact on economic activity so far?

Many factors are potentially at play. For instance, the high uncertainty around tariffs led many firms to wait for things to become clearer and absorb cost increases through their margins in the interim. Some supply chain realignment, trade diversion to other countries and frontloading of imports may also have helped to offset tariff effects.

I want to emphasise the resilience of financial markets and the role of large global financial interconnections as key for understanding the full picture of the past six months. Perhaps this partly reflects the limited macroeconomic reaction to date. But an important caveat is that even though financial conditions helped to mitigate some negative effects of the tariffs, a tightening in those conditions could expose vulnerabilities and cause the benign situation to reverse quickly.

But returning to the role of financial factors in explaining the current mild impact of the April tariff shock, three factors stand out.

First, sound banks helped absorb the economic shock by providing good access to finance amid uncertainty. Earlier speculation about US trade policies and trading relationships across the globe led many firms to pre-emptively secure access to credit. Firms worldwide increased their borrowing and access to credit lines in late 2024 and into 2025 (Graph 5). These additional financial resources provided a buffer to help them manage the uncertainty. When tariffs were

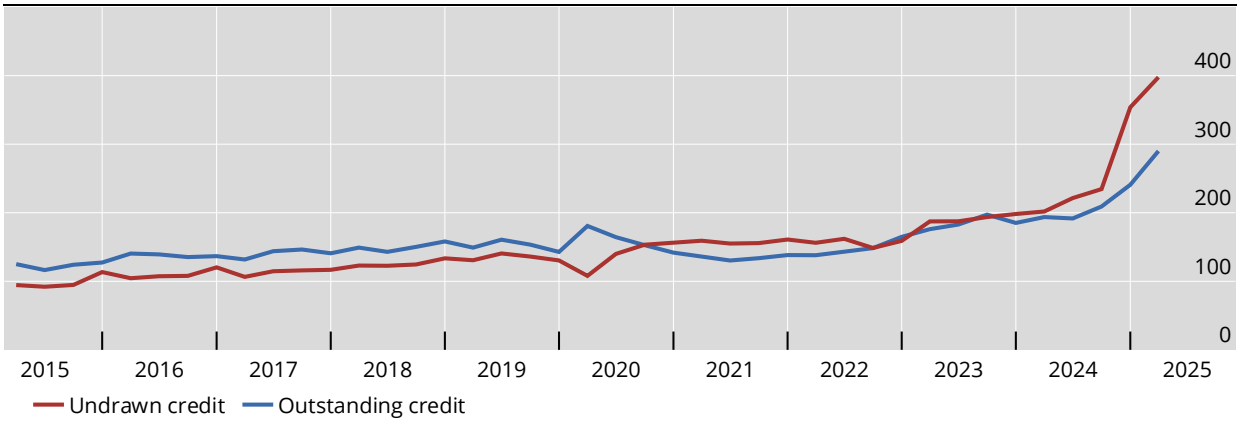
announced and uncertainty spiked, many firms already had secure access to finance. This may be linked to the temporary increase in goods imports seen in the US: firms front-loaded purchases to help smooth out possible tariff effects. Access to finance facilitates this kind of smoothing. Access to finance also helps firms reorient their supply chains and offset some of the upward price pressures that would otherwise materialise during the adjustment.

This pre-emptive borrowing was only possible because banks were largely healthy and resilient. This echoes the pattern seen in the aftermath of the Covid-19 shock: in part due to post-crisis regulatory reforms, banks have been a part of the solution to managing economic shocks rather than part of the problem.

Firms expanded borrowing and credit lines amid uncertainty[1]

In millions of US dollars

Graph 5



[1] Non-financial corporations' median undrawn credit and outstanding credit (includes commercial paper, revolving credit and term loans); seasonally adjusted.

Source: Banerjee et al (2025).

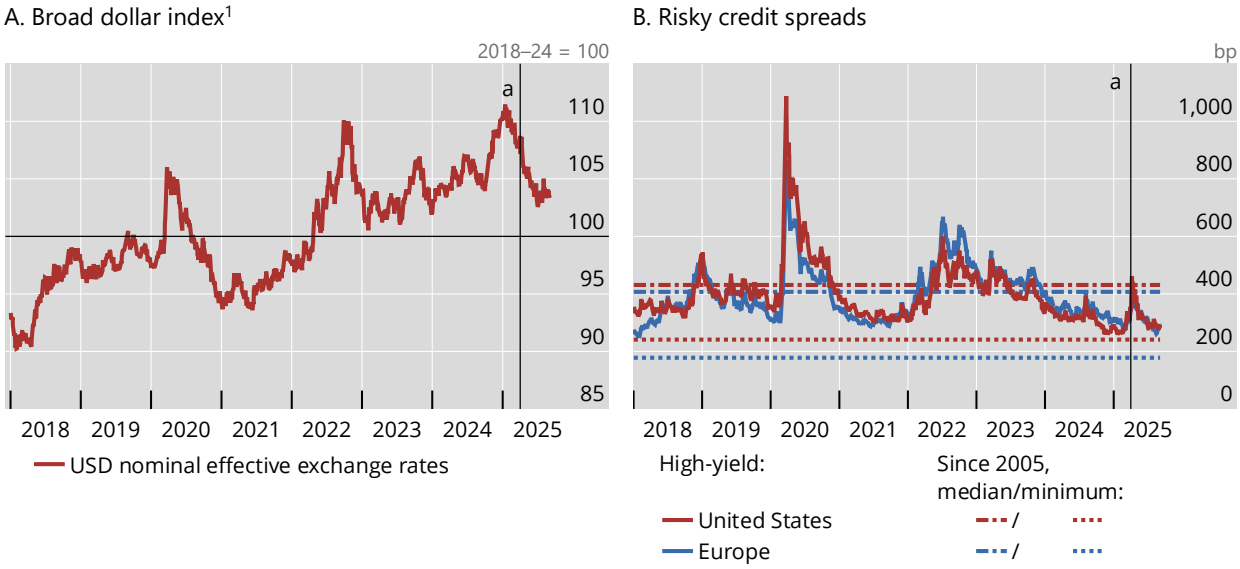
Second, monetary policy in major jurisdictions is on an easing path, particularly those targeted by tariffs. Policy easing has supported investors' optimism by reducing the perceived likelihood of adverse scenarios.

Third, the US dollar depreciated (Graph 6.A). This is unusual, not only from a trade perspective but also from a risk perspective. Standard macro models would predict that the dollar would appreciate after the US increased tariffs, as domestic consumers purchased fewer foreign goods. From a risk perspective, a negative shock like the April tariff disruption is typically associated with a decline in risk-taking and a flight to safety to the US dollar. This can occur even if the US is the epicentre of the shock, as was the case during the Great Financial Crisis. While financial markets were shaken initially, they quickly calmed and even turned buoyant, with credit spreads on high-yield bonds falling to near 20-year lows and market volatility declining (Graph 6.B).

The channels through which a weaker dollar affects the real economy are many and multifaceted. In the recent episode, the weaker US dollar was an important factor offsetting the tariff shock for the global economy. First, a lower US dollar can drive greater global financial and real activity, as

documented by BIS researchers and others (Avdjiev et al (2019); Hofmann et al (2025)). As the dollar depreciates, the value of non-dollar assets rises compared with dollar liabilities. This strengthens the balance sheets and returns of dollar-based global investors and increases their risk appetite (Bruno and Shin (2015); Gelos et al (2024)). Foreign investors increase lending, easing financial conditions. Second, for countries targeted by tariffs, a depreciating dollar puts downward pressure on local currency import prices, and hence on domestic inflation. This, in turn, increases the scope for monetary policy easing, to partly counteract tariffs' negative impact on their competitiveness and growth.

US dollar depreciated and market volatility declined since April — Graph 6



[a] US administration unveils reciprocal tariffs (2 April 2025).

[1] An increase indicates an appreciation of the US dollar against a broad basket of currencies.

Sources: BIS (2025c); ICE Data Indices; BIS effective exchange rates statistics.

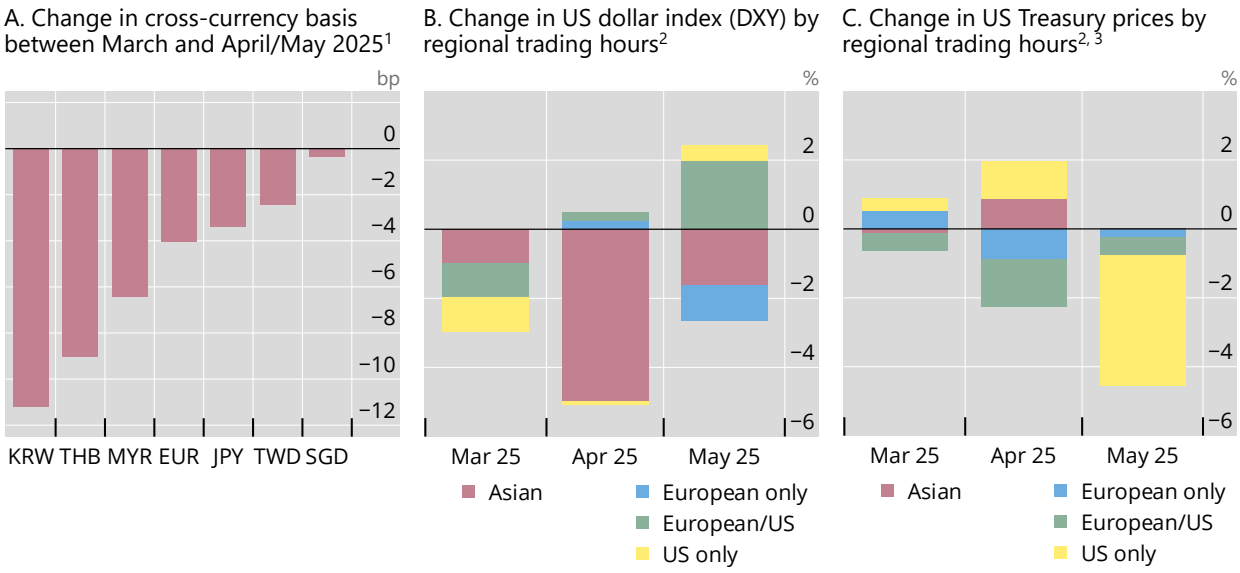
Why did the dollar depreciate in the first place? Financial drivers again played a key role.

The US dollar exchange rate did not appreciate, as suggested by standard trade models, which would have offset the price effects in the imposing country and helped soften the loss of competitiveness in the targeted country.

Rather, it was financial channels that led to a US dollar depreciation. A key driver appears to have been investors' re-evaluation of the dollar's hedging properties. Usually, the dollar provides good insurance against global downturns, so some investors hold long dollar positions. Investors in Asia in particular had open long US dollar exposure, which they sought to hedge after the fact when the tariff shock arose. They entered into FX forwards to offset these open positions, driving down demand for the dollar. The cost of hedging dollars, as reflected by the cross-currency basis against the dollar, increased for Asian currencies (Graph 7.A), and most of the dollar's depreciation in April and May occurred during Asian trading hours (Graph 7.B). Given the continued strong performance of US assets and the unrivalled depth of US financial markets, foreign investors did

not appreciably sell their US positions (Graph 7.C), but rather used derivatives to reduce their open dollar exposures. In other words, the US dollar move was driven less by financial flows than by a reassessment of investors' willingness to pay for hedging their existing positions against US dollar volatility.

Financial factors drove the US dollar depreciation in April and May — Graph 7



[1] One-year basis against USD. Difference between the March and April/May averages. [2] Asian = 00:00–08:59 UTC; European only = 09:00–13:59 UTC; European/US: 14:00–15:59 UTC; US only: 16:00–23:59 UTC. [3] Ten-year US Treasury notes.

Source: Shin et al (2025).

The rise and role of financial flows

Given the size of financial flows and the prominence of financial factors in driving outcomes over the past six months, delving deeper into the evolution of the international financial system can provide us with important insights for financial stability and the conduct of monetary policy.

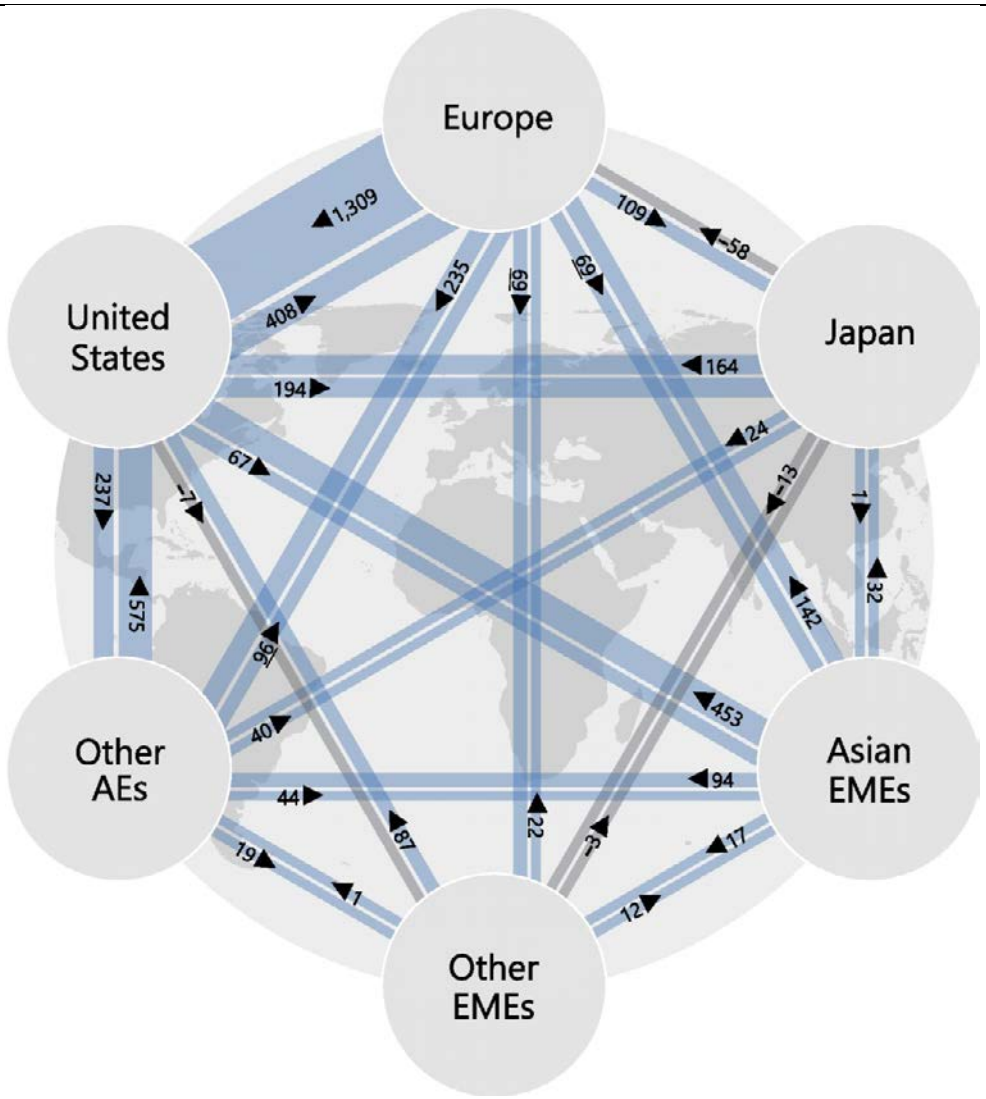
The latest BIS Annual Economic Report highlighted two key long-term developments that have reshaped the financial system and its interconnections. First, there has been huge growth of sovereign debt markets, tilting the share of credit towards the public sector. I will focus on the other side of this development: there has been strong growth in bond holdings, increasingly held by a different set of actors – institutional investors and other non-bank financial institutions, rather than banks.

The growing size of bond portfolios held by institutional investors has increased the need for asset diversification across countries, hence making the financial system highly interconnected. Graph 8 shows the change in cross-border bond holdings of private investors from 2015 to 2023, where thicker lines mean larger increases and grey lines mean decreases. These interlinkages have strengthened globally, even if they grew especially vis-à-vis the US and Europe.

The rise in global bond holdings has fostered deep financial interlinkages

Changes in cross-border bond holdings over 2015–23, net of official reserves, in billions of US dollars[1]

Graph 8



[1] Changes in international portfolio debt investment holdings excluding official reserves. Blue (grey) arrows indicate an increase (decrease) in holdings. The reported changes in outstanding stocks also include valuation effects. For details, see the endnote for Graph 4 in BIS (2025b).

Sources: IMF; BIS (2025b).

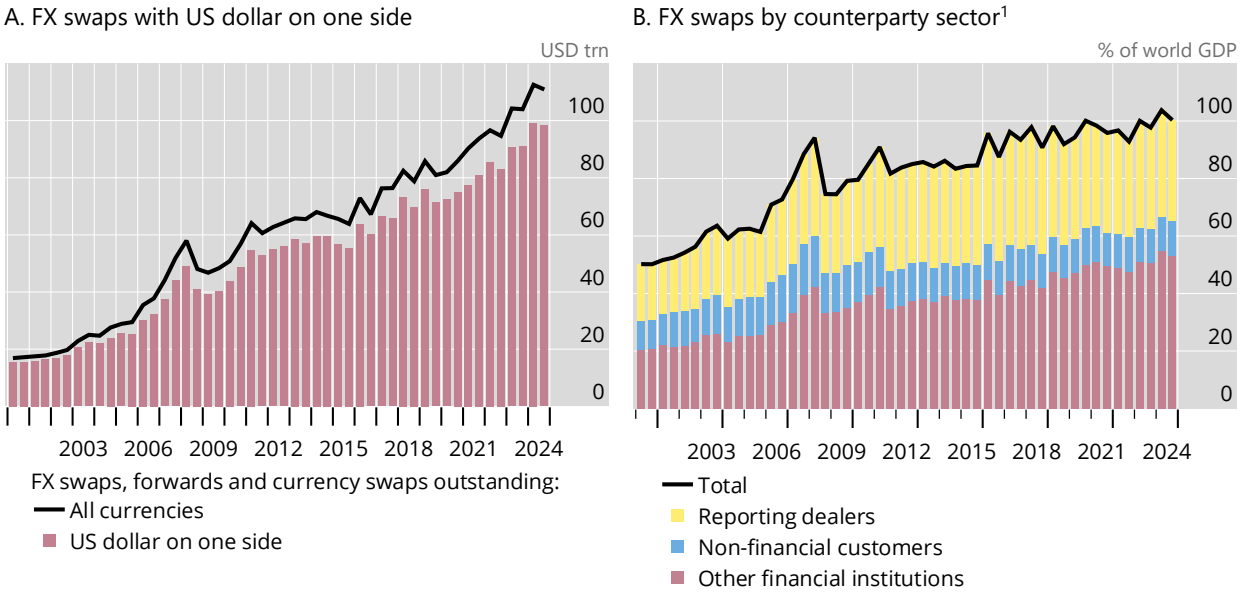
Large bond holders also sought to optimise the returns of their portfolios by insuring against FX volatility. This is reflected in the commensurate increase in the FX swap market. FX swaps allow institutional investors to hold cross-currency bonds on a hedged basis, facilitating increased access to the universe of assets across the world.

Two observations come out of the data. First, the FX swap market has the US dollar at its core: of the $111 trillion in FX swap contracts, $98 trillion have the US dollar on one leg of the transaction (Graph 9.A). Second, the depth of the FX swap market is central to fostering today's complex

network of financial interlinkages. The size of the FX swap market went from 50% of global GDP in 2000 to 100% today, creating an even larger set of international financial links than the growth of external liabilities I showed earlier. Institutional investors account for a large share of the FX swap contracts (Graph 9.B).

Today's deep cross-border financial links, including through bonds, derivatives and other instruments, mean that shifts in financial conditions can strongly influence economic conditions, even during major trade disruptions. This is because changes in investor risk appetite or balance sheet constraints can trigger shifts in capital flows, cross-currency investments and hedging demand. These shifts can serve, for example, as powerful drivers for short-term exchange rate dynamics and for financial conditions more generally. Recent BIS work indicates that domestic financial conditions have become more sensitive to global shocks, including those originating abroad (BIS (2025b)).

FX swaps grew significantly — Graph 9



[1] Including FX swaps, outright forwards and currency swaps; notional amounts outstanding as a percentage of the IMF *World Economic Outlook* measure of world GDP.

Sources: IMF, *World Economic Outlook*; BIS over-the-counter derivatives statistics.

Implications for central banks

I have argued that financial factors play a crucial role in understanding the impact of tariffs on the real economy.

Financial markets can either help mitigate or amplify economic shocks. Resilient banks and buoyant risk markets helped to buffer the negative effects of the recent tariffs and associated uncertainty. But a deterioration in asset markets and tighter credit conditions could expose vulnerabilities.

Tariffs can lead to longer supply chains, as trading partners reallocate away from countries that are or might be facing tariffs (Qui et al (2023)). Longer supply chains require access to financing (Kim and Shin (2024)). These debts will need to be repaid, potentially adding weak links in the chain.

And in the context of highly interconnected financial systems and large capital flows, changes in financial market sentiment could spread quickly, exacerbating the impact of shocks on prices and growth. Elevated valuations of risky assets may leave market participants vulnerable to setbacks from negative news that could prompt them to reprice risks rapidly on a global scale. A swift reversal of market sentiment could create cross-border feedback loops between economic and financial vulnerabilities. We should remain vigilant about the vulnerabilities.

This underscores how crucial it is that we better understand the exposures, hedging and leverage of institutional investors and other bond holders. In a different context, they might have accelerated the shock, tightening credit exactly when firms needed it most, leading to cascading shocks throughout supply chains and credit markets. Their response to different shocks and their liquidity needs under stress are key for financial stability considerations. International cooperation can play an important role in effectively monitoring financial vulnerabilities.

This has further implications for monetary policy. Policymakers must carefully balance supporting growth with preventing temporary price increases from turning into persistent inflation. And as financial market sentiment can shape the impact of real shocks to the economy, policymakers must complement their assessment of economic activity with a close consideration of financial linkages and their transmission to financial conditions. Fostering a better understanding of these may influence inflation expectations will help central banks determine when and how to look through a given shock.

As complicated economic situations seem to be the new normal, central banks do not have an easy task ahead of them. Large and growing financial interlinkages add to this challenge. A watchful eye on the financial system both at home and abroad is crucial to sound policymaking.

Thank you.

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