



PERSPECTIVES

Special

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US deficits: A new twist on Wicksell



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Key takeaways

- The US runs substantial current account and budget deficits but remains one of the richest countries in the world today. Its continuing ability to attract capital and generate wealth has been helped by the country's central role in the post-WW2 economic order.
- Worries that changes in the global economic order would now lead to lower US capital inflows have not yet materialized to a meaningful extent.
- Moreover, increasing US productivity and return on equity (RoE), boosted by its tech dominance, provide further compelling reasons to invest in the US. The difference between this RoE and the natural rate of interest is now the new relevant "Wicksell spread".
- Continued inflows will allow the US to bring forward future consumption and investment and will make it difficult for policy intervention to reduce US deficits or sustainably lower the value of the USD.

01

Introduction

The US economy presents an obvious paradox. It does not score highly on many of the usual indicators of economic health but the US remains one of the richest countries in the world today. Foreign investors remain willing to buy US assets and the US is still under no real pressure to bring its external or budgetary imbalances under control.

How can we reconcile the US's economic imbalances with its continued ability to attract foreign capital and generate wealth? The answer, we would argue, is to look at the US in an international context.

This report starts with **the historical background**. We first briefly survey the post-WW2 development of the global economic and political order, and the ways that this favoured the US economy and its currency for many decades – long after the ending of the Bretton Woods system in 1973. Despite the dilution, in relative terms, of US economic power (at least as measured by the secular decline of the US economy's share of global GDP) and the emergence of new geopolitical rivals (i.e. China), the USD remains the dominant global currency and this has bolstered demand for US assets.

Until recently, the US role in the international financial system and its resulting appeal for foreign investors, made it possible for it to enjoy risk-free market interest rates that were below its estimated **natural rate of interest**. In recent years this "Wicksell spread" appears to have narrowed but we would argue that now the more meaningful comparison is between the natural rate of interest and the US firms' **return on equity (RoE)**, for reasons we discuss later in the report. As a result, US assets remain very attractive for foreign investors and US deficits remain financeable.

Sustained US deficits show a country that is, fundamentally, living beyond its means. These differentials help explain investors' confidence, as implied by their continuing US asset purchases, in the longer-term outlook for the US economy. As noted above, for many years, the US's central role in the international financial system encouraged other countries to purchase US Treasuries as a "safe haven" investment and for currency reserves. More recently, investors in the US appear to have been attracted instead by the high return on equity (RoE) of US companies, particularly in the technology sector.

Foreign investors have therefore for several decades greatly supported the US economy, whether it be through US debt purchases or FDI making up for a shortfall in domestic investment. But the potential future fickleness of these foreign investors – whether manifest through reductions in their holdings of US debt or slowing inflows of FDI – also constitutes a risk to the US economy.



Many in the US are therefore **concerned about the extent of the deficits** (note, for example, Fed Chair Powell's comments after the January 2026 FOMC meeting) and a range of policies have been implemented or proposed with the aim of reducing them – while maintaining the central global role of the USD. Will these US policies work? We look at the issues around several policies and proposals which are relevant to current account and budget deficit reduction: tariffs, managing the value of the USD, the so-called “Pennsylvania plan” and the Genius Act. In short, we remain sceptical about whether these policies will deliver all the results that their advocates expect.

But, **in conclusion**, the most important reason that these policies will struggle to have an impact on US deficits can be deduced from understanding why the US economy can continue to attract foreign investment. Productivity and thus RoE in the US are higher than in any other industrialized country meaning that investment in the US economy continues, albeit increasingly into US firms' equity rather than US Treasuries. Continued investment in US industry seems likely to result in further US productivity gains, reinforcing this “virtuous cycle”. Moreover, investments require USD, which is why the dollar is unlikely to weaken much further.

02

The historical background

The US has shown a persistent current account deficit for decades (1). In 2024 it was equivalent to almost 4% of current price US GDP. The current account deficit is driven by a substantial deficit on physical goods, which more than offsets surpluses on services and investment income. Other evidence of US economic imbalances – in particular, of excess consumption – can be found in the federal government budget, in deficit every year since 2001 and now running at an annual rate of around USD1.8 trillion.

Nonetheless, the US has, so far, had very few problems in funding such deficits with foreign investors showing continued willingness to buy US assets. Financial markets have not put the US under any real pressure to bring these deficits under control. Why is this?

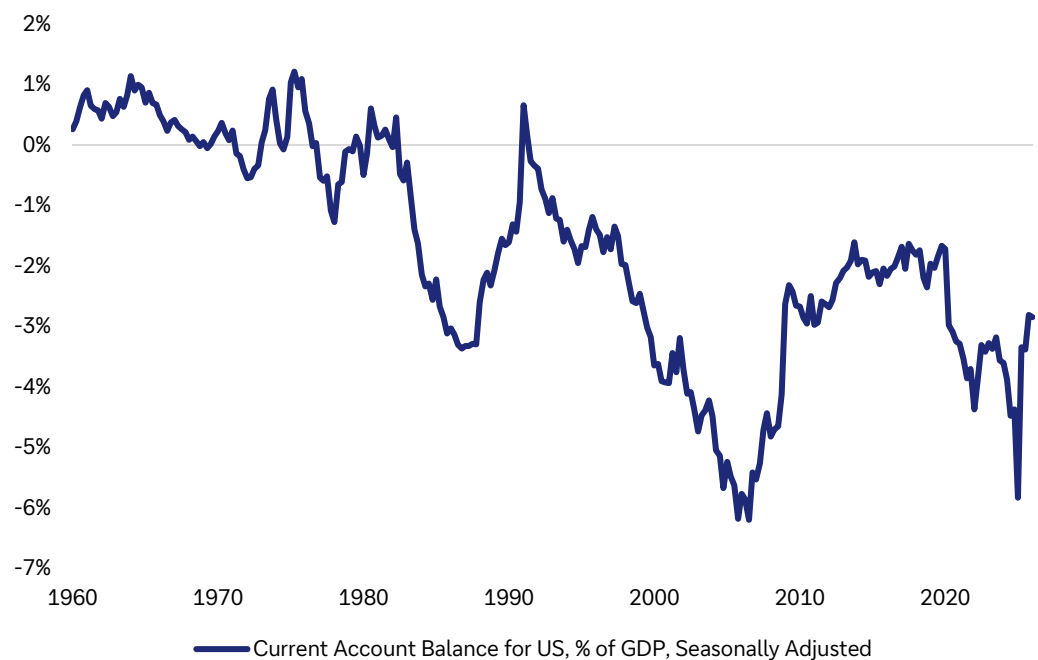
The unique role of the USD has played a major role in facilitating the increase in US net debt. The dollar's central position in the Bretton Woods system (from 1944), along with its importance in the global oil trade (see next page), quickly confirmed it as the key currency for international trade and finance in the second half of the 20th century.

Holding dollar-denominated deposits became a natural choice for foreign investors and since internationally traded goods were priced and invoiced in dollars, these dollar deposits were seen as likely to be valuable in the future even if exchange rates changed (Gopinath and Stein 2018).

Dollar dominance in turn incentivised other countries' central banks to accumulate dollar-denominated “safe” assets, particularly US Treasury bonds, as emergency reserves. Awareness of the US's enormous geopolitical and financial leverage – the country that controls the cross-border payments controls the economic activity in the world – also underpinned this demand for dollar-denominated assets. Studies have linked, for example, countries' willingness to hold USD reserves to the existence of military alliances with the US (Eichengreen, Mehl and Chitu 2017).



1: US current account remains firmly in deficit



Source: OECD, Deutsche Bank AG. Data as of July 3, 2026.

US policy engagement in the global economy has been **both planned and opportunistic**. The Bretton Woods agreement, concluded in July 1944, was ostensibly multilateral (if heavily steered by the US) and carefully formalised. But subsequent developments – for example the historic meeting between US President Franklin D. Roosevelt and Saudi King Ibn Saud in February 1945 aboard the cruiser USS Quincy – were often bilateral and less carefully scripted. The USS Quincy meeting, for example, did not result in a formal, written agreement on the exclusive use of **USD for the oil trade**. Instead, an informal but far-reaching strategic partnership was sealed with a handshake: US security for Saudi Arabia in exchange for oil, invoiced in USD. The dominance of the USD in oil and commodity trading, as noted above, helped establish the USD's global supremacy, as all countries had to hold USD to be able to buy oil and other commodities on the world markets. (Only recently has the USS Quincy agreement started to fray around the edges, with a separate 2025 agreement making it possible for China to now buy some oil using CNYUSD, the 1945 accord has now half a century longer than the currency elements of Bretton Woods.)

Other policy shifts over the last eight decades also remind us that President Trump's concerns about the US's external situation have **long historical roots** and have often been prompted by **real systemic concerns**. France's decision to turn its surplus USD holdings in the late 1960s into gold under Bretton Woods convertibility put pressure, for example, not just on the international financial system and but also on the financial situation of President Johnson's administration (Eichengreen 2004). Seeking to counter these and other risks, President Nixon acted in August 1971 to end the US obligation for direct convertibility of the USD into gold by foreign central banks (the "Nixon Shock"); by 1973 a system of flexible exchange rates was in place. The US Treasury



Secretary John Connally had famously uttered the phrase "The dollar is our currency, but it's your problem" at a meeting of G10 finance ministers in Rome in 1971. This warning still holds true today.

Current US concerns also reflect an appreciation that the **global geopolitical and economic balance is changing** and that this may erode the ability of the US to attract foreign capital inflows at current levels in future. In relative terms, the US's economic power has waned while China and other emerging economies' influence in the world has grown; its geopolitical power has also declined. If this encourages foreign creditors to reduce holdings of US Treasuries, yields on these would be expected to rise (see for example IMF 2023) with implications for the cost of servicing the US's accumulated net foreign debt. Being the world's largest debtor comes with other risks and limitations on policy action: changes in the exchange rate between the dollar and foreign creditors' currencies, for example, appear to have become more impactful on investors' desire to hold US assets as the US has become more indebted. USD strength, with its perceived impact on US exports and thus US jobs, has also become one way in which current global economic relations may be seen as "unfair" to the US.

03

The natural rate of interest

Are such worries overdone? A different perspective on foreign creditors' willingness to lend to the US can be gained through a concept first unveiled by the Swedish economist **Knut Wicksell** in 1898: the natural (sometimes referred to as the "neutral") rate of interest. Wicksell sought to explain macroeconomic imbalances through market interest rate differentials relative to this natural rate.

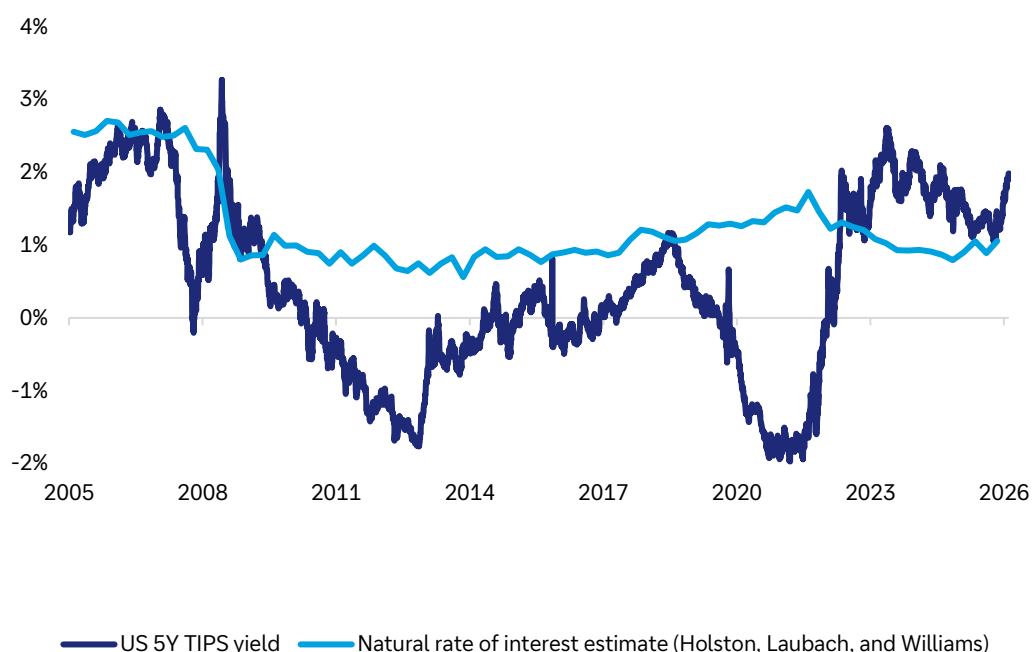
The natural rate of interest is now generally defined as the **real interest rate level in an economy which would put aggregate savings and investment in equilibrium**: this is the rate which would best support maximum output and employment while keeping inflation constant. (Other variables may also be considered as appropriate to the prevailing economic situation.) Wicksell's insight (still true, 127 years on) was to realise that if the risk-free market rate falls below the natural interest rate, borrowing becomes cheap and saving less attractive, leading to increased investment activity, declining savings, and higher inflation. A market rate which was above the natural interest rate would have the opposite effect.

What is interesting is when market and estimated natural rates of interest diverge for an extended period of time without the unwelcome side-effects noted above. And, as Figure 2 shows, for most of the last two decades US real risk-free market interest rates (as measured by 5-year Treasury Inflation Protected Securities, TIPS) have been below the estimated US natural rate of interest (commonly referred to as R-star or r^*). This supports the argument above that for much of the post-WW2 period, the US's global role has helped it attract capital inflows, keeping rates on Treasury securities lower than might otherwise have been expected.

More recently, an additional reason to invest in US assets has moved centre-stage – rising **US productivity**, which has outstripped growth in productivity in other developed economies (Figure 3), and one related result, an increasing differential between **US return on equity** (RoE) and RoE in other markets. Figure 4 illustrates with RoE estimates for some stock market indices. Such estimates can vary depending on the point of the investment cycle, and/or the index chosen, but the following broad RoE ranges are suggested: US 13–18% RoE, Europe (Eurozone): c. 8–12%, Japan c. 5–10% and emerging markets: mostly 10–15% (but more volatile).



Figure 2: The US natural rate of interest vs. US 5-year TIPS yields

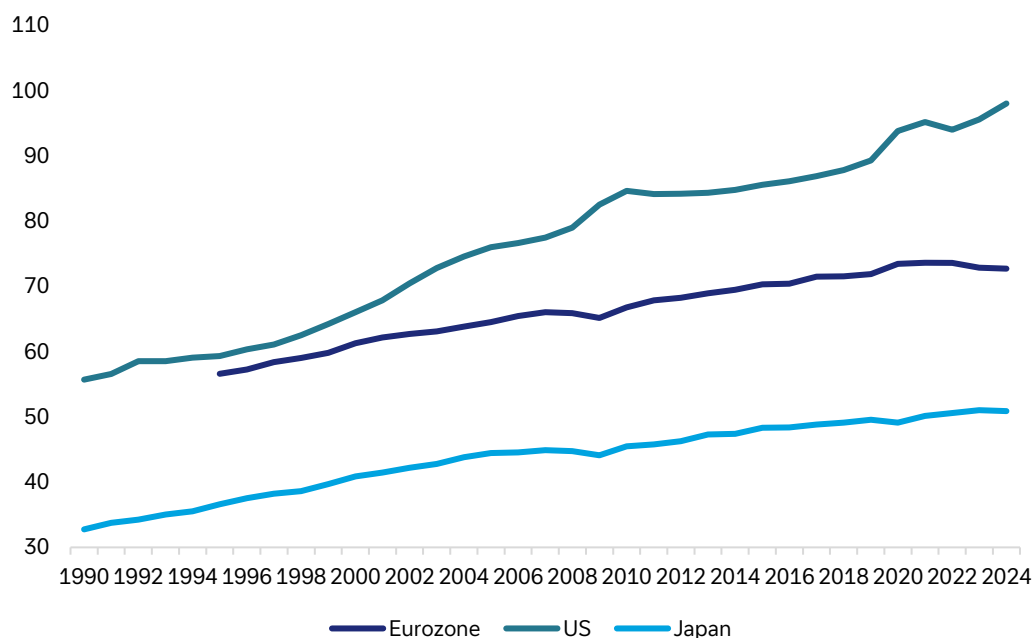


* Federal Reserve Bank of New York; Holston, Laubach and Williams model.

Source: LSEG Datastream, Federal Reserve Bank of New York, Deutsche Bank AG. Data as of July 3, 2026.

Figure 3: US productivity growth outstrips that in Eurozone and Japan

GDP per hour worked (USD, PPP converted, Chain linked volume (rebased), 2020)



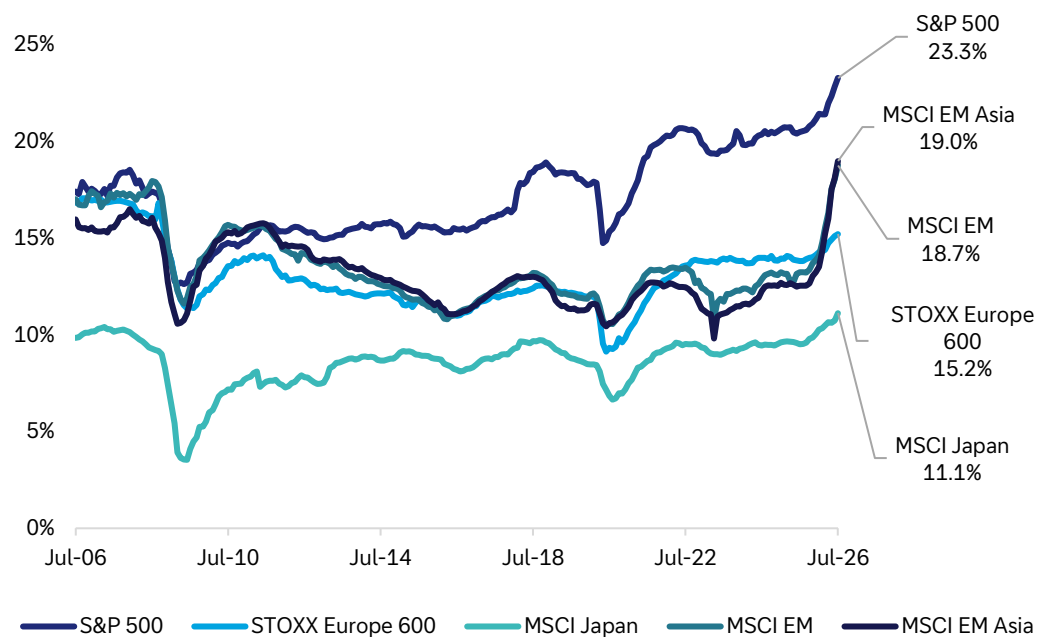
Source: OECD, Deutsche Bank AG. Data as of July 3, 2026.

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Figure 4: US RoE moves further ahead of other regions'

NTM Return on Equity (NTM EPS/ NTM BPS)



Source: LSEG Datastream, Deutsche Bank AG. Data as of July 3, 2026.

The tech sector, and the US prominence here, appears to have played a large part in increasing these differentials between US RoE and other developed economies. Figure 5 provides a global perspective of the impact of tech on global RoE.

We would argue therefore that the relevant “Wicksellian” key differential now is not between the natural rate of interest and the risk-free capital market rate, but instead between the natural rate of interest and overall capital market returns. This is probably more comparable to companies’ “cost of capital”, i.e. the rate of return they must earn on investments to generate any value. This “cost of capital” depends on the sources of funding that a company uses, both debt and equity. Calculation of the cost of debt is impacted by the difference between interest paid vs. the risk-free rate (see above) in addition to tax rates etc. But, in this context, return on equity may play a more significant role. This is calculated by the Capital Asset Pricing Model (CAPM) which takes the return on a risk-free asset (e.g. Treasury bonds) and adds on the difference between this and the expected stockmarket rate of return, adjusted for beta (the return risk). The basic condition for investment is that return on equity must exceed the cost of equity to create value. In the current US situation, high levels of return on equity appear to be well above the estimated natural rate of interest (the light blue line in Figure 2)), leading to increased investment. In this context, everything else being equal, it is rational to take on debt in order to finance investment in high RoE sectors, e.g. AI.

The result is that foreign investors, even if they are less convinced of the need to invest in US Treasuries than they might have been a few decades ago, now have an increasingly compelling economic argument to invest in US risk assets. The high RoE available on some US sectors (e.g. tech) now complementing or, to some degree, supplanting the structural/geopolitical factors which have so far supported inward



investment in the US during the post-WW2 period. To oversimplify: you could argue that US deficits are, in effect, being increasingly funded by its tech sector.

There are some necessary caveats around this. Productivity measures vary, as do measures of return on equity (see above). Natural rate of interest forecasts are also subject to many factors (e.g. inflation, national savings, demographics, government deficits etc.) and would seem likely to eventually be boosted by higher rates of productivity. (See academic studies of this relationship before the pandemic, e.g. Rachel and Smith 2017).

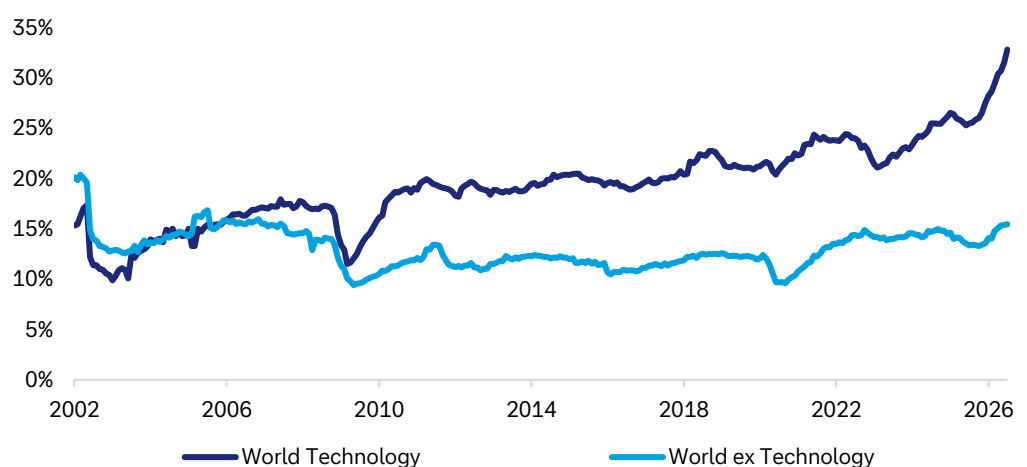
But the current gap between US RoE and the natural rate of interest seems sufficient to provide a buffer to cover some movement in either or both of these components. Moreover, the process for attracting investment is likely to be self-reinforcing: countries with relatively high productivity and economic growth (e.g. the US, in comparison with other developed market economies) will create more investment opportunities and thus a further demand for capital.

Looking at the US deficits in this way provides a rather different, and more positive, rationale for their existence. The conventional interpretation of the US deficits is that they show the US is persistently living beyond its means on borrowed money which will eventually have to be repaid. This remains fundamentally true but the point now is that investors are happy to fund US deficits not only because of the US's central position in the world order, but also because the US is able to offer higher returns on investment than other possible investment destinations. If the higher returns on offer reflect higher US productivity and corporate and technological successes, as they appear to do, deficits may be more a sign of US success than failure.

US deficits can also be seen as a way, in effect, of **shifting consumption from the future to the present** – intertemporal consumption smoothing. But the current regime also allows **US corporate investment to be brought forward**, something that is likely to be particularly important to meet high levels of projected AI and other tech investment. The willingness of foreign investors to supply the funds to do this is implicitly founded on their confidence that the US will continue to outgrow the rest of the world over the long term, despite any concerns about its short-term domestic economic management – a belief that is encouraged by the US's current dominance in artificial intelligence (AI).

Figure 5: The tech sector's impact on global RoE

NTM Return on Equity (NTM EPS/ NTM BPS)



Source: LSEG Datastream, Deutsche Bank AG. Data as of July 3, 2026.



04

Will US policy proposals work?

Nonetheless, various policies have been implemented or are proposed for dealing with the US current account and budget deficits, the value of USD and the extent of foreign ownership of US government debt – all deeply intertwined problems.

US tariffs policy is most fully executed so far, with a wide range of tariffs introduced and then further refined after “Liberation Day” on April 2. The US administration intends to use higher tariffs to increase customs revenues, so providing one way of narrowing its fiscal deficit (and thus borrowing requirements). But it also wants to use tariffs to reduce the volume and (ex-tariff) value of imports, with the aim of reducing the US’s external imbalance on merchandise trade and, ultimately, of bringing industrial jobs back to the US.

Initial estimates from the US Treasury Department do indeed suggest higher tariff revenues in fiscal year 2025 (which ended on September 30) but the medium and long-term impacts of tariffs on this on the US fiscal deficit remain unclear. While import tariffs might (on their own, everything else being equal) reduce the federal borrowing over the next 10 years, the risk remains that combined impact of the tariffs imposed by the US and its trading partners could reduce US domestic investment and productivity and thus stunt the US economy. The key point remains that the cost of tariffs will be borne predominantly by US companies and consumers, not by foreign exporters to the US.

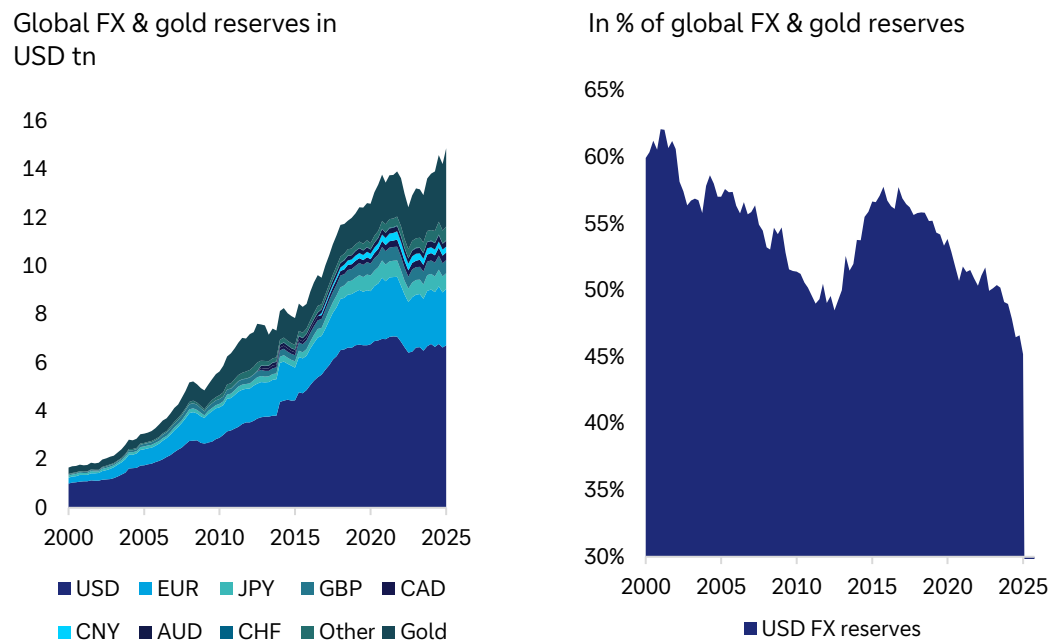
For tariffs to have a positive impact on the second issue, the US trade balance, they would need to reduce the value of imports relative to the value of exports – and both price and volume trends will be important here. Empirical studies on the impact of the 2018 trade war between the United States and China show that tariffs imposed during this period led to increased import prices as well as resulting in a significant reduction in the volume of imports and exports targeted by higher tariffs. (Fajgeholm et al. 2018; Amiti et al. 2019; Bonk and Larkou 2025). Likely long-term trends from recent tariffs may become clearer in coming months, but our general view is that the effects of tariffs on the overall level of imports may be less than some initially expected.

Industrial production in the US has stagnated since 2005 while it has risen by over 55% in the rest of the world. The loss of industrial jobs is also not unique to the US: the well-known Elephant Curve can be used to show that the loss of industrial jobs is affecting the income growth in the lower middle class in many developed economies. This graphical interpretation, which was first published by economists Christoph Lakner and Branko Milanovic in 2013 (see References below), in effect shows which income groups benefited most from globalization over the 1988-2008 period. The graph resembles an elephant facing right, when seen from the side: the x-axis of the chart shows income percentiles and the y-axis shows the increase in real income over the period for the income percentiles. In summary, the global rich (the very top percentiles) benefited greatly from globalization (the upward slope at the end of the elephant’s trunk); the poor, generally in Asia, also benefited (the elephant’s tail) although the very poorest did not; and that there was stagnation in incomes around the 80th-90th global income percentiles – a range which covers the lower middle class in the richer developed economies.

But there is a separate question about how much Americans really want these industrial jobs back. Even today, according to the National Association of Manufacturers, 500,000 manufacturing jobs remain unfilled and this number is projected to reach 1.9 million by 2033). Since 2015, more workers have left the manufacturing sector voluntarily than have been laid off. As the Cato Institute says, Americans may love the concept of industrial jobs but don't want to work in them themselves.



Figure 6: Declining US dominance of global FX reserves



Note: As per the IMF, international reserves are external assets that monetary authorities have readily available and control to meet balance of payments financing needs, intervene in exchange markets to influence their currency's rate, and for other related purposes.

Source: LSEG Datastream, Deutsche Bank AG. Data as of July 3, 2026.

Other recent US policy proposals and actions are more specifically focused on **managing the USD exchange rate, ensuring the US's continued dominance of the global exchange rate system and reducing foreign purchases of US government debt.**

In November 2024, the economist Stephen Miran (now the Chair of the Council of Economic Advisors and a Federal Reserve governor), proposed a **Mar-a-Lago Accord**, the name inspired by past official exchange rate interventions, such as the Plaza Accord in 1985 or Louvre Accord in 1987. This would have addressed the challenges around deficits and higher interest rates by coordinating a currency realignment, extending the duration of the US Treasuries held as foreign reserves (to reduce the impact of interest rates), and by using tariffs, or the threat of them, as leverage to encourage other countries to participate and adjust (i.e. appreciate) their supposedly undervalued currencies. But, perhaps due to worries about the real extent of US geopolitical influence and the declining share of official dollar-denominated reserves in total global foreign reserve holdings (Figure 6 above), such dollar management plans appear to be off the policy table for now. **A sustained dollar depreciation would also hold significant risks for the US economy** as it would likely make dollar assets less attractive to the financial markets (as they would expect their value to fall further) and the US would therefore have to offer higher interest rates to encourage markets to hold them.

In a sense, this is an updated version of the dilemma first recognised by economist **Robert Triffin** in 1960. He had then argued that continued US deficits on the current account, and the subsequent expansion of stock of USD held overseas, would ultimately threaten the US's ability to convert dollars into gold under the Bretton Woods agreement – which they eventually did in 1971. This time around, the dilemma is that any operation to reduce the value of the USD could change investor perceptions of intrinsic USD strength (still prevalent, after more than fifty years of floating exchange rates) and might therefore remove from the US its past privilege



based on this to borrow at lower interest rates than the rest of the world. Discussions around the Mar-o-Lago proposals, for example contributed to weakening of the USD in the first half of 2025, with investors and central banks purchasing fewer US Treasuries. Higher yields were only avoided by a slowing economy and the Fed ending quantitative tightening.

Another possible approach to improving the US's external debt imbalances, often dubbed the "Pennsylvania plan", would be to incentivise domestic long-term Treasury buying to reduce the reliance on foreign creditors. Incentives could include tax advantages for holding longer-term Treasuries, regulatory changes to exempt US Treasuries investment from certain banking requirements and making US residents' retirement plans purchase more US Treasuries. This too would have implications for the USD.

Worries about the future importance of the USD, and thus economic power of the US, can also be seen as one driver behind the **2025 US Stablecoins Act (the GENIUS Act)**. At present 98% of stablecoins in circulation, by market capitalisation, are linked to the USD and GENIUS Act aims to ensure that US lead on stablecoins is both preserved and formalized. Key provisions include requirements on stablecoin being backed by (US currency) liquid reserves, so potentially increasing the demand for USD. However, while the stablecoin legislation may have some success in maintaining future US currency dominance, it could also expose the US to a range of other risks, for example around changing demand for US Treasury holdings to provide the required reserves for stable coin issuance.

05

Conclusion: Wicksell redux

The US paradox – its ability to run sustained current account and budget deficits, while remaining one of the richest countries in the world today – cannot be ascribed only to its central role in the global economic order over the last 80 years. In the last few years, investor interest in the US, and thus its ability to sustain deficits, has also been supported by the country's relatively high productivity growth and high return on equity, largely the result of the country's successful technology sector and dominant position in artificial intelligence (AI).

Even so, political debate continues in the US on policy initiatives (e.g. tariffs) and other proposals designed to reduce the deficits and also restore some control over the value and international role of the USD. Deficits create external vulnerabilities and US politicians may also see elements of the current global economic order as unfair to their country. However, some of these policies implemented or proposed contain significant risks and we are sceptical about whether they can achieve all their claimed outcomes.

It is always useful to look beyond the politics and consider the economic fundamentals. The insights of economists of previous eras remain useful here. As we noted earlier in this report, Knut Wicksell, a Swedish economist who spanned the late 19th and early 20th centuries, was the first to argue that we should focus on the "natural rate of interest" – the real interest rate level in an economy which would put aggregate savings and investment in equilibrium – and understand the causes and consequences of actual rates diverging from this natural rate. **In the past, the usual focus has been on the divergence between this natural rate and risk-free market rate (the so-called "Wicksell spread"). But, in the case of the US, we could argue that the focus should instead be on the high existing spread between the natural rate and return on equity (RoE).** With this now providing a compelling case for continued investment in important parts of the US economy, the measures implemented or being considered by the



current US administration – tariffs, stable coins or official exchange rate interventions – are likely to have only a limited impact on the size of US fiscal and current account deficits. Moreover, the need to fund these elevated fiscal deficits and debt will also make the USD more difficult to weaken, limiting the extent of an expected fall in the value of the currency (we forecast EUR/USD 1.22 at end-June 2027). The US economy can therefore be seen, in some ways, as both a gainer and a victim of its own success.



Appendix

References

- Amiti, Mary; Stephen J. Redding and David E. Weinstein (2018). The impact of the 2018 Tariffs on Prices and Welfare. *Journal of Economic Perspectives*. Vol 33. No. 4. <https://www.aeaweb.org/articles?id=10.1257/jep.33.4.187>
- Bonk, Alica Ida and Chloe Larkou (2025). The macroeconomic impact of trade policy: a new identification approach. Working paper series No. 3102. European Central Bank. <https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp3102~95d818fe81.en.pdf?cc1862d0cab354c41f472c7a3b682300>
- Cox, J. (2025, October 6). US budget deficit edged lower in 2025 as tariffs, debt payments both saw new records. CNBC. https://www.cnbc.com/2025/10/16/us-budget-deficit-lower-in-2025-tariffs-debt-payments-both-at-records.html?__source=androidappshare
- Gopinath, Gina and Jeremy C. Stein (2018). Trade Invoicing, Bank Funding and Central Bank Reserve Holdings. *AEA Papers and Proceedings*. Vol 108. <https://www.aeaweb.org/articles?id=10.1257/pandp.20181065>
- Eichengreen, Barry. (2004). Global imbalances and the Lessons of Bretton Woods. NBER Working Paper Series. Working Paper 10497. https://www.nber.org/system/files/working_papers/w10497/w10497.pdf
- Eichengreen, Barry; Mehl, Arnaud; Chitu, Livia (2017). *How Global Currencies Work: Past, Present and Future*. Princeton University Press.
- Fajgelbaum, Pablo D; Pinelopi K Goldberg, Patrick J Kennedy, Amit K Khandelwal (2019). The Return to Protectionism- The Quarterly Journal of Economics. Volume 135, Issue 1. <https://academic.oup.com/qje/article-abstract/135/1/1/5626442>
- IMF (2023). Global Financial Stability Report 2023. [Global Financial Stability Report, April 2023: Safeguarding Financial Stability amid High Inflation and Geopolitical Risks](https://www.imf.org/en/Publications/GFSR/Issues/2023/04/20/gfsr-april-2023)
- Krugman, Paul R.; Maurice Obstfeld, and Marc J. Melitz (2023). *International Economics. Theory & Policy*. Pearson Education. ISBN 13: 978-1-292-40971-9.
- Lackner, Christoph and Milanovic, Branko (2013). Global Income Distribution: From the Fall of the Berlin Wall to the Great Recession. World Bank Working Paper. <https://documents.worldbank.org/en/publication/documents-eports/documentdetail/914431468162277879>
- Miran, Stephen (2024). A User's Guide to Restructuring the Global Trading System. Hudson Bay Capital. https://www.hudsonbaycapital.com/documents/FG/hudsonbay/research/638199_A_Users_Guide_to_Restructuring_the_Global_Trading_System.pdf
- Rachel, Lukasz and Thomas D. Smith (2017). Are Low Real Interest Rates Here to Stay? *International Journal of Central Banking*. Vol 13. No. 3. <https://www.ijcb.org/journal/ijcb17q3a1.pdf>
- Swafel, Phil. (2025, August 22). An Update About CBO's Projections of the Budgetary Effects of Tariffs. Congressional Budget Office. A Blog post. <https://www.cbo.gov/publication/61697>
- Triffin, R. (1960). *Gold and the dollar crisis*. Yale University Press, New Haven.
- Wicksell, Knut (1898). *Geld and Güterpreise: Eine Studie über die den Tasuchwert des Geldes bestimmenden Ursachen*.



Appendix

Glossary

A country's **balance of payments** records the balance of all economic transactions between residents and non-residents. It consists of the current account, financial account and capital account.

The **Bretton Woods system** was a post-WW2 international monetary system, signed by 44 countries in 1944, which tied other countries' currencies against the USD at fixed exchange rates, pegging the USD to gold at a fixed price and guaranteeing convertibility. The system ended in 1971, when the US suspended the convertibility of USD into gold. After a series of dollar devaluations, the main industrialised economies allowed their dollar exchange rates to float in 1930.

The **current account** records transactions arising from foreign trade (goods and services), income/payments (e.g. on investment and earnings) and transfers.

A country's **financial account** tracks transactions that arise from selling and purchasing financial assets as well as official reserve transactions.

International reserves are assets denominated in foreign currencies held by a national central bank, often intended to provide a buffer against unexpected external shocks to underpin monetary and exchange rate policy.

The **market rate** generally refers to the rate of interest paid on cash deposits.

The **Mar-a-Lago Accord** refers to a policy initiative that proposed a mix of trade and foreign policies to address the large fiscal and current account deficits of the United States. Introduced by a chairman of the Council of Economic Advisers under President Donald J. Trump and a Federal Reserve Board Member, Stephen Miran.

The **natural interest rate** is the real interest rate level that would support an economy at full employment without inflationary pressure. It brings aggregate savings and investment into equilibrium.

Net international investment position is the difference between a country's claims and liabilities to foreigners.

The **Pennsylvania Plan** refers to policy that aims to incentivise domestic long-term US sovereign bond buying to reduce reliance on foreign creditors.

Potential output level refers to the highest level of a country's economic output (i.e. GDP) that can be sustained over time, where productive resources are used efficiently with no upward pressure on inflation.

A **safe asset** is considered not to have a high risk of losing its value at some point in the market cycle. US sovereign bonds have historically been considered as a safe asset.

A **stablecoin** is a cryptocurrency that maintains a steady value against a fiat currency or other assets.

Total factor productivity measures the ratio of aggregated output to aggregated inputs. Economic growth can be boosted by an increase in total factor productivity as well as greater labour or capital inputs.



Appendix

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