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The US Trade Deficit: Myths and Realities

ABSTRACT   A policy priority of the US government is to reduce America's long-standing trade deficit. Economic planners in the Trump administration blame the postwar world trading system for harming the US economy and hope to change it through wide-ranging tariffs and other measures. Three prominent myths underlie the narrative that the United States has been victimized by trade partners. The first holds that trade liberalization that has left the United States open to mercantilist foreign practices is a primary cause of the aggregate US trade deficit. The second is that the dollar's status as the premier international reserve currency obliges the United States to run trade deficits to supply foreign official holders with dollars. The third is that US deficits are caused entirely by foreign financial inflows that America must accommodate by consuming more than it produces. This paper shows that the realities are more nuanced. While foreign and domestic trade policies can affect both imports and exports separately, they are not principal drivers of their difference, the trade deficit. The United States can supply the world with dollars without trade deficits. Finally, the trade deficit reflects the interplay of foreign and US macroeconomic factors (including China's saving rate and the US government budget deficit) and often US factors are dominant. Higher federal fiscal deficits, for example, will raise US trade deficits despite more import tariffs.

T he United States has had a net foreign trade deficit in goods and services in every quarter save one since the second quarter of 1976, with the deficit averaging 3.1 percent of GDP annually since the financial crisis

Figure 1. US Net Exports of Goods and Services as a Percentage of GDP, 1947–2024 (Nonseasonally Adjusted Quarterly Data)

Percent of GDP
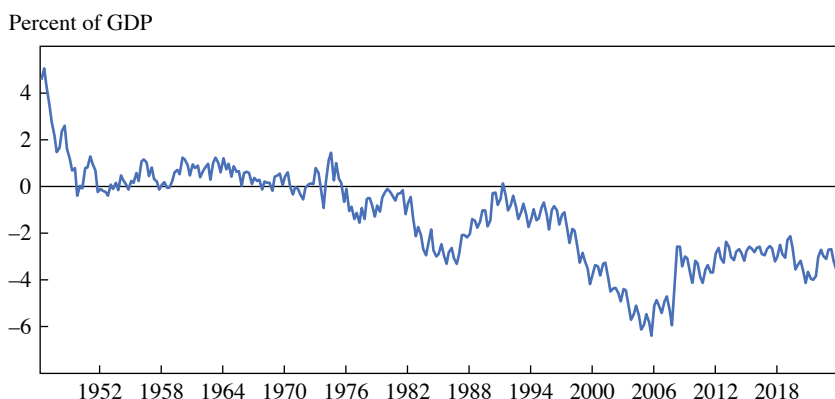
Source: Bureau of Economic Analysis (BEA), via FRED series NA000374Q and NA000334Q.

year 2008.[1] All the while, academic concern about the deficit has waxed and waned, peaking around the notable bulges during the Ronald Reagan and George W. Bush presidencies (see figure 1).[2] Yet, international trade and trade deficits have gained steadily in political salience. They played leading roles in recent US election cycles, with Donald Trump running in 2024 on a pledge of high universal tariffs aimed at curbing imports.

Long derided on the political left, trade deficits have more recently been widely blamed by the right as a cause of manufacturing decline and national impoverishment. The Biden administration was far from trade-friendly, even leaving aside its national security rationales for some trade restrictions: President Joe Biden's national security adviser, Jake Sullivan (2023, p. 3), asserted that "the postulate that deep trade liberalization would help America export goods, not jobs and capacity, was a promise made but not kept."[3] But President Trump's long-standing view is that foreign "cheating" causes

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1. The exception was 1992:Q1, when a fleeting surplus marked the end of a falling deficit trend starting in mid-1987 and owed to the unwinding of the 1990 oil price shock and slow US recovery from the Gulf War recession.

2. On the 1980s, see, for example, Krugman (1985) and Marris (1985). On the 2000s, see Cooper (2001, 2007), Mann (2002), the papers and comments collected in the Spring 2005 issue of *Brookings Papers on Economic Activity*, Cline (2005), Obstfeld (2005), Bertaut, Kamin, and Thomas (2008), and Caballero, Farhi, and Gourinchas (2008). Bayoumi and Gagnon (2025) revisit US external sustainability. Hanke and Li (2019) discuss the deficit and US trade policy deliberations during the Reagan administration.

3. A recent left-leaning critique of globalization is Scott and others (2022).

US trade deficits, through which other countries plunder American jobs and wealth.[4]

The president's advisers and a range of influential thinkers echo that view and flesh it out. Peter Navarro (2023, p. 766), the White House senior counselor for trade and manufacturing, sees a negative trade balance as evidence that America loses from international trade: "America's record on trade—specifically American's chronic and ever-expanding trade deficit—says that America is the globe's biggest trade loser and a victim of unfair, unbalanced, and nonreciprocal trade." Robert Lighthizer (2023, p. 25), the US trade representative in the first Trump administration, argues that through external deficits the United States is "trading [its] assets for short-term consumption," that trade deficits can fuel asset price bubbles, and that they have deindustrialized America; he writes that "long-term massive deficits tell the story of a country that has failed to protect its own interests." The analyst Michael Pettis (2024, para. 5) asserts that foreign lending to the United States "force[s] adjustments in the US economy that result in lower US savings, mainly through some combination of higher unemployment, higher household debt, investment bubbles, and a higher fiscal deficit," while hollowing out the manufacturing sector. Conservative commentator Oren Cass (2024), a vocal proponent of tariffs to revive manufacturing, expresses similar views. What all these narratives share is the claim that US deficits originate principally abroad, abetted by feckless trade policies that have expanded foreign exporters' access to America's markets.

Three superficially plausible but exaggerated claims underlie the narrative that the United States is a victim of economic decisions made abroad and therefore needs to upend the current global trading system. Each of these myths centers on a different component of the balance of payments. The first myth holds that trade liberalization that has left the United States open to mercantilist foreign practices is a primary cause of the aggregate US trade deficit. The second is that the dollar's status as the premier international reserve currency obliges the United States to run trade deficits to supply foreign official holders with dollars. The third is that US deficits are caused entirely by foreign financial inflows, which reflect a more general demand for US assets that America has no choice but to accommodate by consuming more than it produces.

The realities are more nuanced. First, trade policies can move the aggregate trade balance when they have important macroeconomic effects. However,

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4. For one of many accounts of President Trump's views on trade, see Holmes and Phillips (2017).

specific US liberalizations such as those associated with the North American Free Trade Agreement (NAFTA, now the United States-Mexico-Canada Agreement, or USMCA) can shift bilateral balances among trade partners but are not major causes of the overall US trade deficit, which will not respond strongly to new tariffs. Second, the dollar's reserve currency role does not require continuing US trade deficits. Finally, the trade deficit reflects an interplay of foreign and US macroeconomic shocks that vary over time in relative importance. US macroeconomic policies can reduce the trade deficit—for example, through a fiscal consolidation that raises national saving—so America need not adjust passively to foreign developments. Whether trade deficit reduction is desirable depends on circumstances: Deficits can raise welfare if foreign borrowing finances productive new investments or temporary shortfalls in income.

Given expected US fiscal policies, trade deficits will remain high and are likely to rise, notwithstanding new and prospective tariffs. Moreover, America's net financial liability to foreigners is now well above 80 percent of GDP and shows little sign of stabilizing (see figure 3). It is therefore important to reconsider the sources and effects of the US external imbalance, as well as alternative policies to reduce it and their collateral impacts. To do so comprehensively would be a massive task, fraught with difficult challenges of macroeconomic identification, so in this paper I confine myself to four (still ambitious) goals. First, to give an updated overview of the direct links between US deficits and the US national balance sheet.[5] Second, to evaluate the logical and empirical limits of the preceding three myths regarding trade policies, the dollar's global role, and financial inflows. Third, to highlight the domestic sources of the exceptionally large deficits of 1998–2008. That eventful decade offers an important case study because of its outsized intellectual and political impact on today's debates about globalization. It also exemplifies the complex interplay of domestic as well as global forces in determining the US trade balance. A concluding section summarizes and assesses US international economic policy developments.

I. External Imbalances and National Wealth: Basic Relationships

Conceptually, an economy's balance of trade, or level of net exports, reflects outcomes in markets for goods and services, while the evolution of its net international wealth depends also on financial returns at home and abroad

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5. Here I build on the thorough discussion by Milesi-Ferretti (2021).

(as well as international transfer payments, which I ignore for now for expository purposes). A review of relevant balance of payments concepts will help to elucidate the cross-border wealth transfers accompanying US international trade.

Measuring in nominal terms, net exports of goods and services, *NX*, are the difference $X - M$ between exports and imports of goods and services. Net exports also equal the difference between gross domestic product (GDP), or final output, *Y*, and domestic absorption, which is the sum of private consumption, *C*, gross private investment, *I*, and government purchases, *G*:

$$(1) \qquad NX = Y - \left(C + I + G \right).$$

Basic as it is, equation (1)—which is an *identity* and not a theory or hypothesis subject to falsification—has two immediate implications. First, a trade deficit ($NX < 0$) need not reflect excessive "short-term" consumption at the expense of future consumption. It could also result from productive investment (by the private sector or government) that raises future consumption possibilities while also raising workers' wages. Second, as stressed by Alexander (1952) in a classic paper, policies that purport to increase net exports, such as currency depreciation or tariffs, must work through the macroeconomic channel of raising total output relative to absorption.

A full accounting of the connection between trade flows and a country's net external wealth requires an analysis of national saving, which depends on the difference between national income, not national output, and consumption. In my simplified setting, national income is the sum of GDP and net income from the net international investment position. Let *A* denote gross claims on foreigners (including banking claims, debt and equity securities, and direct investments) offering a gross interest and dividend yield of R^A and let *L* denote gross liabilities to foreigners offering the yield R^L to nonresident holders. Using the time subscript *t* to indicate asset stocks at the start of a period *t* and economic flows within a period *t*, the current account balance CA_t is defined as national income less absorption, $CA_t = Y_t + (R_t^A - 1)A_t - (R_t^L - 1)L_t - C_t - I_t - G_t$, or:

$$(2) \qquad CA_t = NX_t + \left(R_t^A - 1 \right)A_t - \left(R_t^L - 1 \right)L_t = S_t - I_t,$$

where S_t denotes the national income accounts definition of saving. Thus, the current account equals, alternatively, net exports plus net international

asset income, or saving less investment. This is a broader concept of the external balance than net exports.

But even this measure does not fully capture the dynamics of net external assets, which are also driven by price changes, such as in equities and foreign exchange. Let CG^A denote the rate of capital gains on foreign assets and CG^L that on liabilities. Neither is reflected in national income accounts. Define the *total* gross returns $\tilde{R}^A \equiv R^A + CG^A$ and $\tilde{R}^L \equiv R^L + CG^L$. Then equation (2) implies that the level of *net* external assets $A - L$, also referred to as the net international investment position (NIIP), follows the process:

$$(3) \qquad\qquad A_{t+1} - L_{t+1} = NX_t + \tilde{R}^A_t A_t - \tilde{R}^L_t L_t.$$

Generally, $\tilde{R}^A$ and $\tilde{R}^L$ differ owing to different portfolio holdings by domestic and foreign residents, including different currency mixes, as well as differential cross-border taxation of returns. An important question in judging the US external position is whether America systematically pays less on its aggregate external liabilities than it earns on its external assets—a so-called exorbitant privilege, owing to the dollar's singular global status, the liquidity characteristics of US Treasury obligations, the depth and safety of US financial markets, or a relatively higher willingness of US investors to hold systematically riskier foreign securities and earn a commensurate risk premium.[6] If we think of $\tilde{R}^L$ as a benchmark global cost of funding, we can rewrite equation (3) in the equivalent form:

$$A_{t+1} - L_{t+1} = NX_t + \tilde{R}^L_t \left(A_t - L_t \right) + \left(\tilde{R}^A_t - \tilde{R}^L_t \right) A_t.$$

Any exorbitant privilege such that $\tilde{R}^A > \tilde{R}^L$ predictably and persistently allows the United States to consume more over time, in effect because it can sell the safety or liquidity services of its liabilities to the rest of the world in return for goods and services. To see this, iterate the last equation forward, rule out Ponzi borrowing, and take expectations to derive the national intertemporal budget constraint:

$$(4) \qquad L_t - A_t = \mathbb{E}_t \left\{ \sum_{i=0}^{\infty} \left[\prod_{j=1}^{i} \left(1 \Big/ \tilde{R}^L_{t+j} \right) \right] \left[NX_{t+i} + \left(\tilde{R}^A_{t+i} - \tilde{R}^L_{t+i} \right) A_{t+i} \right] \right\}.$$

6. For a comprehensive background survey on the role of asset returns in the international adjustment process, see Gourinchas and Rey (2014).

When $\tilde{R}_{t+i}^A - \tilde{R}_{t+1}^L \equiv 0$, a nation with foreign debts must eventually repay them entirely through net export surpluses.[7] If $\tilde{R}^A > \tilde{R}^L$ over the longer term, however, the country can earn seigniorage by borrowing abroad and investing in foreign assets A at a higher yield, taking on leverage in analogy to a hedge fund. The question is how far this process can go before the borrower's riskiness (inevitably) rises enough to erode its advantage.

II. Proximate Drivers of the US Net External Position

Persistent US trade deficits have been highly correlated with current account deficits and contributed to a growing negative NIIP. After emerging as an international creditor at the end of World War I, the United States became an international debtor in 1989 following the string of Reagan-era current account deficits that began in 1982.[8] Those concerned about trade deficits often point to their effect on US foreign indebtedness. An analysis of NIIP dynamics clarifies how the linkage has played out in practice.

The major systematic difference between CA and NX is the net income flow from external claims and liabilities. As noted, however, capital gains on the NIIP are an additional determinant of its evolution. In the US case they have been increasingly important.

Start with net international investment income. Figure 2 shows how the balance of US international investment income, as measured by the US Bureau of Economic Analysis (BEA), has evolved since 1960. Remarkably, despite the transition from international creditor to debtor in 1989 and a generally growing net foreign debt, the net flow of US foreign investment income has apparently stayed stubbornly positive, hitting a high of 1.37 percent of GDP in 2017 before declining sharply to a barely positive 0.04 percent of GDP in 2024.[9] Equation (4) implies that if the net cost of its external position is negative, the United States can remain intertemporally solvent while running smaller net export surpluses than would otherwise be necessary.

America's seeming ability to carry a large negative NIIP for many years at negative cost fueled the discussion of exorbitant privilege. US financial market openness and depth have been essential. Also fundamental was the concentration of US liabilities in dollar-denominated debt instruments and

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7. I am ignoring the situation that might arise in a dynamically inefficient world economy.

8. On the US emergence as an international creditor in the 1920s, see Eichengreen (1989).

9. The downward trend continued into 2025, with net international investment income edging into negative territory in the first half of the year. As noted above, and as is discussed further in a moment, the numbers in figure 2 are inflated in some periods by overstatement of the returns on US foreign direct investment abroad.

Figure 2. Balance of US International Investment Income as a Percentage of GDP, 1960–2024 (Annual Data)

Percent
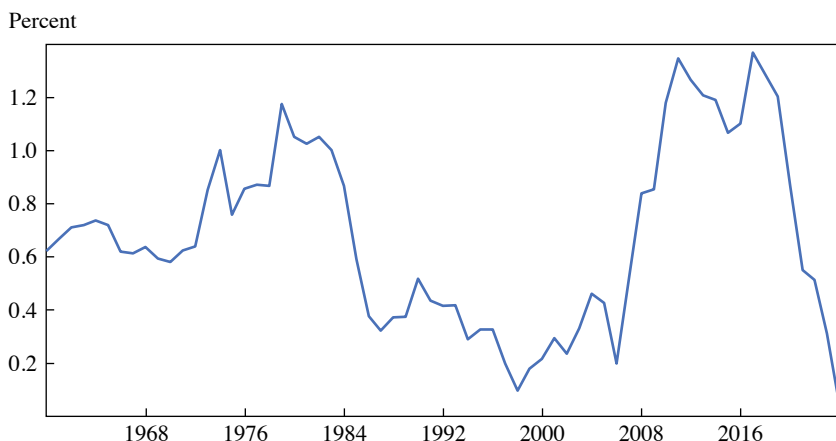
Source: BEA.

of its assets in equity instruments—portfolio and foreign direct investment (FDI)—allowing it to pay less due to a dollar liquidity premium and earn more due to an equity risk premium. Several studies suggest that those advantages may be ending.[10]

As documented by Guvenen and others (2022), however, the BEA measure in figure 2 is flawed due to multinational corporations' (MNCs) gaming of international tax rules by locating certain productive assets (notably intellectual property) overseas.[11] For example, measured net foreign earnings soared after the global financial crisis because of ultra-low US interest rates and a historically weak dollar, but also because of an acceleration of MNC profit shifting abroad (including corporate inversions). The Obama administration moved over 2014–2016 to limit inversions and in some respects, the 2017 Tax Cuts and Jobs Act further reduced the tax advantage of booking profits abroad. These policies, together with generally rising US interest rates (relative to foreign rates) and a stronger dollar starting in 2015, lowered net foreign earnings measured in dollars.

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10. For more detailed analyses, see Milesi-Ferretti (2021), Atkeson, Heathcote, and Perri (2023), Bertaut and others (2024), and Jiang, Richmond, and Zhang (2024).

11. Guvenen and others (2022) show how MNC profit shifting reduced measured US service exports over 1982–2016 while substantially bloating measured returns on FDI. This distortion did not affect the total measured current account balance, however.

Figure 3. US NIIP, Cumulative Current Account Balances, and Cumulative Net Exports as Percentages of GDP, 1976–2024 (Annual Data)

Percent of GDP
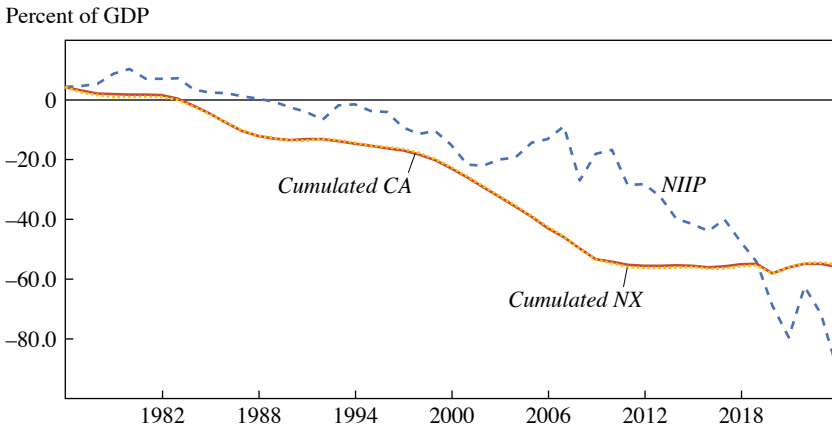
Source: BEA and author's calculations.

Equation (3) shows how asset price changes in addition to asset earnings and net exports feed into the evolution of the NIIP. Figure 3 plots the NIIP of the United States over time along with the values that would be implied by the cumulation of current account balances alone and by the cumulation of net exports alone (both of which omit capital gains and losses on the international position).[12] The NIIP first dips sharply below the two cumulative variables in 2020, as the COVID-19 pandemic breaks out, and it has remained lower since. At the end of 2024, US net international indebtedness stood at 89.9 percent of GDP, whereas the cumulation of past current account and trade deficits were 55.9 and 55.2 percent of GDP, respectively.[13]

Fluctuations in exchange rates and in prices of securities such as stocks explain the divergence in figure 3 between the actual NIIP and the level that cumulative current account balances would imply. But the effects are levered up by the very high levels of *gross* foreign assets and liabilities that net out to give the NIIP. Large gross positions are motivated by mutually

12. The cumulated *CA* and *NX* measures are both based at the 1976 value of the NIIP.

13. There is little difference between the cumulative current accounts and net exports, which may seem surprising in view of the sometimes sizable positive earnings on the NIIP. However, the other item separating *CA* from *NX*—net transfers from abroad—has at times been negative enough to offset positive net investment income.

Figure 4. US Foreign Assets (+), Liabilities (–), and NIIP as Percentages of GDP, 1976–2024 (Annual Data)

Percent of GDP
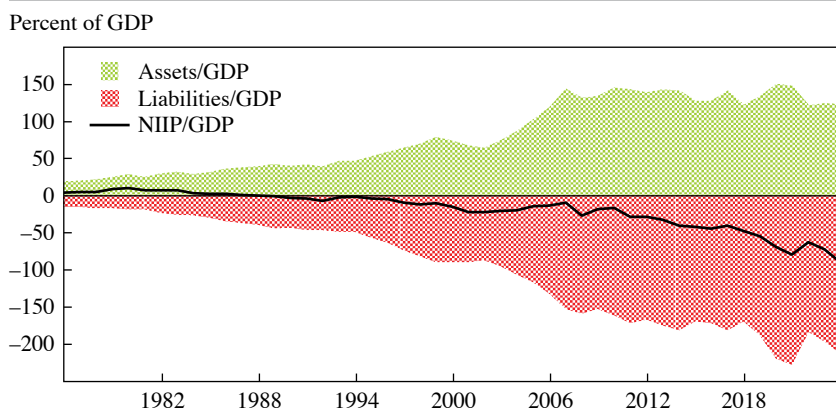
Source: BEA.

beneficial risk sharing between countries and by specialized financial inter-mediation, but also by less benign designs such as cross-border tax avoidance (or evasion) and regulatory arbitrage (see Coeurdacier and Rey 2013). Gross positions widened sharply over time as international financial integration grew and financial "value chains" of linked intermediaries exploded; see figure 4. At the close of 2024, US external liabilities were more than double its GDP and assets were about 122 percent of GDP. These are much higher than the levels at the start of the millennium.

Given such elevated leverage, asset price moves can cause changes in the NIIP that swamp those due to the current account. Foreign investors hold significant US equities, so a run-up of stock prices reduces the US NIIP; equity price rises abroad raise it. Movements in the dollar's exchange rate effect massive international redistributions. US foreign liabilities (debt and equity alike) are almost entirely dollar-denominated, whereas the US foreign asset position is skewed toward foreign currencies. As a result, a strengthening dollar worsens the NIIP and a weakening dollar enhances it.

The BEA estimates the components of the NIIP change due to asset price movements (measured in the assets' currency of denomination) and exchange rate movements. Its methodology allocates the overall annual change in the NIIP to the financial account balance (the net acquisition of foreign assets, equal to the current account balance apart from errors and omissions); price changes in local currency; exchange rate changes; and

Figure 5. Cumulative Accounting Breakdown of the End-of-Year NIIP for the United States, 2003–2024 (Annual Data)

Millions of dollars
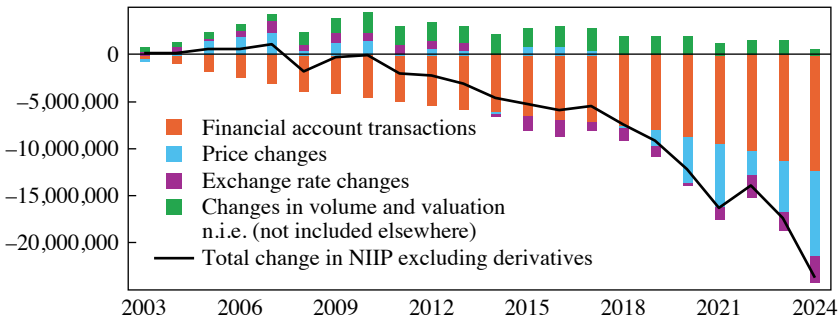
Source: BEA.

"changes in volume and valuation n.i.e. (not included elsewhere)."[14] Figure 5 shows the cumulative contribution of each factor to the NIIP.[15]

Cumulatively, divergent international asset price developments have been the prime non-*CA* driver of the US external position this decade and largely account for the recent decline shown in figure 3. To the extent that rising US stock prices portend expected future increases in productivity, the resulting fall in the NIIP means that some welfare gains are shared with foreigners. The other decade in which asset price changes played a big role in the medium-term evolution of the NIIP was the first one of this century, as I discuss below. Exchange rate changes have been important at times.

Since 2019 the major action has been in asset prices, with equity markets prominent. This reflects not only a turbulent period marked by the pandemic, policy responses, geopolitical pressures, and the post-pandemic, post-Ukraine inflation surge, but also the greater importance of equities for the liabilities side of the United States' balance sheet. Since 2015, the share of equities (portfolio and FDI) in US external liabilities has nearly doubled,

14. The last item reflects estimated effects of "addition of new reporters, corrected reporting, or other changes to the reporting panels" used in the US Treasury's Treasury International Capital (TIC) surveys. See BEA (2024), chapters 23 and 24.

15. These numbers value FDI holdings at market value, which the BEA measures by extrapolating prices of marketable portfolio equities to FDI holdings. Lane and Milesi-Ferretti (2018) and Milesi-Ferretti (2021) assess shortcomings of this approach, although alternatives also involve trade-offs. The claims for which the BEA reports its decomposition exclude financial derivatives.

Table 1. Equity Shares in US Foreign Assets and Liabilities, 2015 and 2023

	2015	*2023*
Foreign assets		
Portfolio equity	0.29	0.34
FDI	0.31	0.31
Foreign liabilities		
Portfolio equity	0.16	0.27
FDI	0.17	0.27

Source: External Wealth of Nations database (Milesi-Ferretti 2025b).
Note: Foreign assets exclude official gold holdings.

whereas the share of equities in US external assets has risen more modestly; see table 1. Thus, foreigners are better positioned to gain from out-performance by US stocks—or to lose big if US markets decline.

The current account can be less important than asset prices in driving the NIIP. When this is so, the main channel whereby capital inflows worsen the NIIP is not through a higher trade deficit, but through dollar, bond, and equity appreciation.

III. Three Accounts of the Foreign Origins of US Trade Deficits

As explained earlier, three prominent myths locate the principal sources of US deficits beyond America's borders. The first myth is that US deficits originate mostly in unfair foreign trade practices to which America has exposed itself through ill-advised trade liberalization. On this theory, tariffs provide a ready remedy. A second myth is that the world's desire to hold the dollar as its main reserve currency is a prime determinant of US foreign deficits. One variant of this view, which is entirely false, is that US current account deficits are necessary for foreign official holders to acquire dollars; another variant, of limited quantitative importance but more accurate, is that global dollar preference has asset price effects that make the US deficit bigger. A final myth is that US deficits result entirely from excessive saving by our trade partners, which forces the United States to borrow from them and spend the proceeds on extra imports.

III.A. Commercial Policies

Commercial policies such as import tariffs, export subsidies, and nontariff trade barriers change relative prices or trading opportunities and thereby can affect bilateral trade patterns as well as the fortunes of individual industries. They can also alter the levels of aggregate imports and exports. From these

truths, many trade critics conclude that commercial policies must also have a first-order effect on a country's aggregate trade *balance*. That conclusion relies on a classic fallacy of composition.

At the aggregate level a country's trade balance reflects the difference between its saving and investment or, equivalently, between its output and its absorption. These are macroeconomic variables that may respond to trade restrictions, but not always in ways that push imports to fall by more than exports.

Take the example of a blanket import tariff. One factor limiting any trade balance impact for an economy near full employment, like the United States today, is the economy's overall resource constraint. A tariff raises home demand for domestically produced import substitutes. To a more limited degree, it will also raise the demand for some nontraded goods. What is the source of the corresponding supply? Most likely, the export sector, implying that exports will tend to decline in tandem with imports. This insight is the famous symmetry theorem proved by Lerner (1936).[16]

Lerner derived his result for a nonmonetary economy. But even in a Keynesian setting, if the exchange rate is flexible, a different general equilibrium factor comes into play, as shown by Mundell (1961).[17] The tariff causes a currency appreciation that discourages imports and exports alike, preventing any substantial gain in the trade balance. One can intuit this result in several ways, but Mundell himself might explain it as follows: While the tariff has an incipient expansionary effect on the trade balance and aggregate demand, the resulting upward pressure on the home interest rate causes the currency to appreciate until output has returned to its initial level and the upward interest rate pressure abates.[18] Imports are lower but exports are equally lower and the trade balance is unchanged.

A broad-based tariff can yield significant revenue. If the revenue is used for public debt reduction, the result is a fiscal contraction that raises national saving and the trade balance; see Dornbusch (1987) and Clausing and Obstfeld (2025). This will not be the case if the tariff revenue finances tax cuts, as in current US fiscal planning.

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16. For an updated theoretical treatment, see Costinot and Werning (2019). Lerner gives priority for the discovery to Charles Bastable, Alfred Marshall, and Arthur Pigou.

17. The first writer to observe that trade interventions induce offsetting exchange rate responses was probably Hume (1752, para. 3), who wrote, of countries that impose export prohibitions, "these prohibitions serve to no other purpose than to raise the exchange against them, and produce a still greater exportation." Mundell's (1961) reasoning implies that an export tax weakens a floating currency, also reducing imports.

18. For supportive evidence from the China tariffs of the first Trump administration, see Jeanne and Son (2024).

Figure 6. Major Trade Liberalizations and US Import and Export Shares of GDP
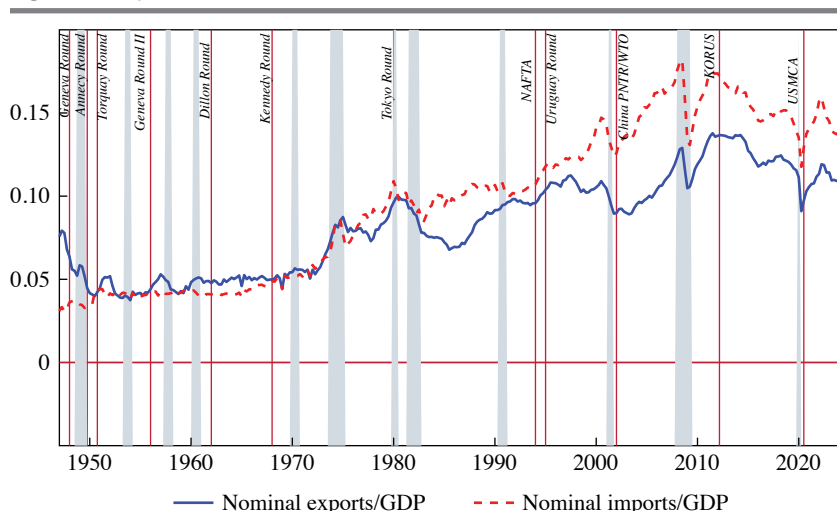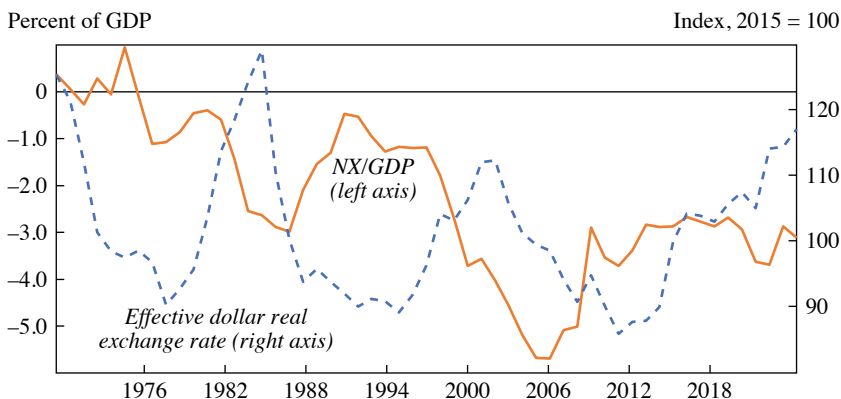

Source: BEA.
Note: Shading indicates NBER recessions.

Figure 6 places the postwar evolution of the US trade balance within the context of major US trade liberalization events. Particularly since the Tokyo Round of the General Agreement on Tariffs and Trade (GATT) that went into effect in 1980, US imports have expanded faster than exports (as a share of GDP), leading to the generally deteriorating trade balance that figure 1 shows. This pattern makes it tempting to blame America's deficits on trade liberalization, yet the record is more consistent with the view that domestic US macroeconomic conditions and policies were the main causal factors.

For example, the unprecedented (at that time) trade deficit that emerged in the early 1980s was associated with an unprecedented real dollar appreciation, shown in figure 7, which in turn was driven by tight monetary policy (the Volcker disinflation) and lax fiscal policy (the Reagan tax cuts and ramp-up in defense spending). Beyond that episode, net exports and the dollar tend to be negatively correlated. As discussed below, however, the years from 2002 through the financial crisis stand out because the trade deficit rose despite a sharply falling dollar, widening even beyond the two years or so for which adjustment lags could be a plausible explanation.

The dollar is generally a strong correlate of the trade balance, sometimes with lags, because unlike a tariff, dollar depreciation (say) subsidizes exports at the same time as it taxes imports (see Farhi, Gopinath, and Itskhoki 2014). In contrast, a tariff may be offset by currency appreciation and through

Figure 7. US Net Exports of Goods and Services and Dollar Real Effective Exchange Rate, 1970–2024 (Annual Data)

Percent of GDP   Index, 2015 = 100

Source: BEA; and OECD, via FRED series CCRETT01USA661N.

various additional channels can reduce exports. However, exchange rates are endogenous variables under a flexible rate regime, and their relationship with the trade balance depends on the exogenous shocks that drive them. For example, a currency appreciation due to a rise in demand for a country's exports could well be associated with a bigger trade surplus. Thus, the exchange rate is not a sufficient statistic for the trade balance, which is driven by other factors—foreign demand, as just mentioned, but crucially, domestic spending.

To gauge the plausibility of charges that trade agreements have been the main drivers of US deficits, consider NAFTA, which entered into force in January 1994, and China's receipt of Permanent Normal Trading Relations (PNTR) status in January 2002, both seeming precursors of widening deficits in figure 6.

As noted above, trade liberalization with NAFTA partners and China should expand bilateral trade with the United States. But if US trade liberalizations led to bigger overall deficits, we would expect to see expanded bilateral deficits with these countries accounting for the bulk of the rise in overall US deficits. Figure 8 considers this prediction. The post-agreement rises in US goods deficits with China, Mexico, and Canada do not come near to accounting for the bulk of the rise in the sum of US goods deficit balances (although the bilateral deficit with China rises sharply after the early 2000s).

The preceding numbers do not include Chinese content entering the United States through imports from third countries. In principle, it is hard

Figure 8. US Trade Balances in Goods with China, Mexico, and Canada, and Sum of Bilateral Deficits with All Trade Partners with Which the United States Is in Deficit, 1992–2023 (Annual Data)

Millions of dollars
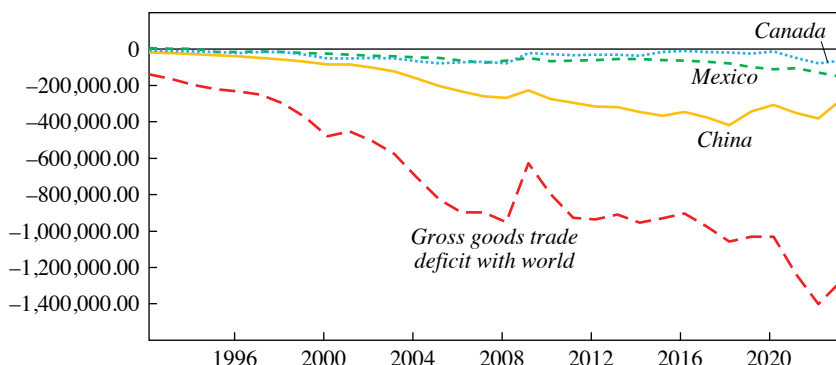
Source: US International Trade Commission.

to see why China's attainment of PNTR would lead to more of its content entering the United States via third countries, rather than less. A rough but conservative empirical check is to suppose that an amount equal to 20 percent of Chinese worldwide exports of intermediate products eventually finds its way into other exports to the United States. Figure 9 compares actual US imports from China and the hypothetical augmented series with total US imports of goods and services. The modification makes little difference.

Econometric analysis of tariff effects on the trade balance is fraught with hazards: Tariffs are responsive to trade balance or growth pressures and hence are endogenous, they may be infrequent in any one country's time series data, and they sometimes move in concert with reciprocal concessions from trade partners. Furceri and others (2022) address the first two of these limitations by applying instrumental variable estimation and exploring industry-level data within a 151-country panel of annual data. Their basic finding is that tariffs have little impact on trade balances and bring about real currency appreciation, in line with the Mundell (1961) prediction.[19]

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19. Other studies find negative effects of tariffs on output and investment, with at best slight positive effects on the trade balance. See, for example, Barattieri, Cacciatore, and Ghironi (2021), Boer and Rieth (2024), Kalemli-Özcan, Soylu, and Yildirim (2025), and McKibbin and Noland (2025).

Figure 9. Hypothetical Impact on Total US Imports from China of Chinese Content Embodied in Third Countries' Exports to the United States, 1995–2020 (Annual Data)

Millions of dollars
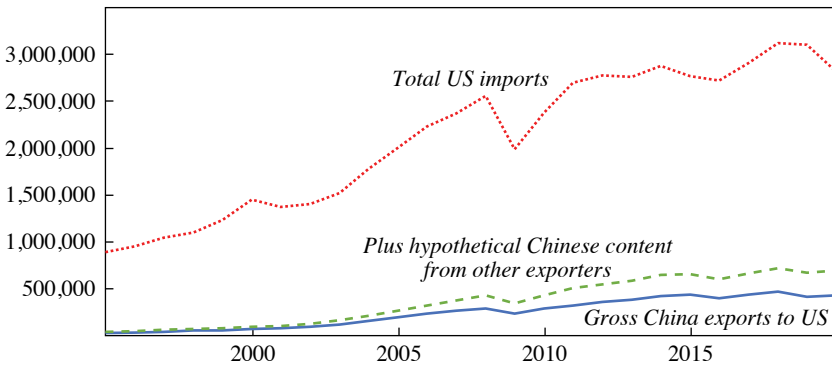
Source: OECD Trade in Value-Added (TiVA) 2023 edition: Principal Indicators; and BEA.

In another relevant study, the International Monetary Fund (2019), using a global gravity model of the web of foreign trade flows, finds that the main drivers of bilateral trade imbalances from the 1990s through 2018 were macroeconomic.

Narratives critical of US trade policy in the 1990s and 2000s focus on import surges, as does the China shock literature. But a key global structural change had a direct impact on US export rather than import-competing industries: China's entry into the World Trade Organization (WTO). Occurring virtually at the same time as its acquisition of PNTR with the United States, China's WTO entry in December 2001 gave it improved market access worldwide, intensifying its competition with many countries, including the world's biggest exporter at the time, the United States. Chinese competition led some buyers to substitute away from US exports; in effect, this was a negative shock to world demand for US exports. Of course, US firms facing China shock import surges at home may well also have faced more intense Chinese competition in foreign markets too, amplifying their US layoffs and plant closures.

Figure 10 shows how WTO entry by China changed the US position in global export markets. The US global export share plummeted over the 2000s, roughly stabilizing after the global financial crisis. Meanwhile, China's share rose. China's export growth was not the only structural change

Figure 10. With WTO Entry in 2001, China's Share of World Exports Grew More Quickly While That of the United States Declined, 1990–2023 (Annual Data)

Percent of world exports
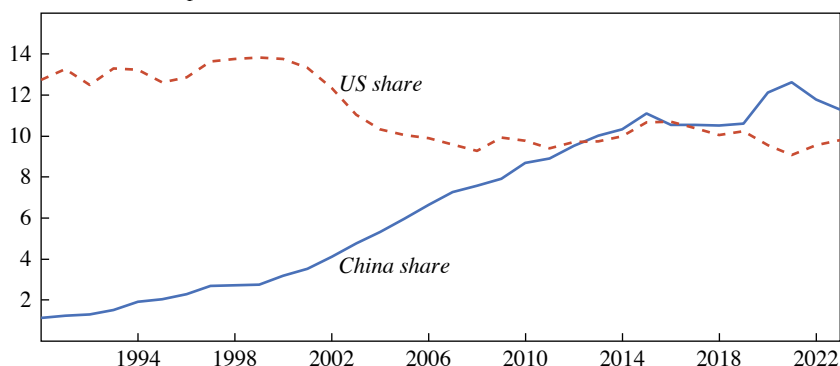
Source: World Bank.

in world trade. Germany's exports more than doubled in dollar terms over the 2000s through the 2008 crisis.[20]

A fall in world demand for US exports is a negative macroeconomic demand shock that worsens the US terms of trade (the purchasing power of exports over imports). Because the terms of trade fall, however, the dollar depreciates (as in figure 7), somewhat or completely offsetting the effect on export volumes. As I will discuss below, US exports in fact rose from 2002 to 2008 as the dollar depreciated. Global GDP growth rates above the US rate (especially when measured in depreciating dollars) also contributed to lowering the US share of world exports during the 2000s.

### III.B. The Dollar's Global Role

The US dollar is the world's overwhelmingly dominant reserve, invoicing, vehicle, anchor, and funding currency.[21] Several theories argue that bigger structural US deficits are the inevitable outcome. One asserts that countries can gain the dollar reserves they wish to hold only by running external surpluses with the United States. In turn, as the world economy grows, growing reserve demand obliges the United States to run persistent deficits. A second

20. World Bank, "Exports of Goods and Services (Current US$)," https://data.worldbank.org/indicator/NE.EXP.GNFS.CD.
21. Bertaut, von Beschwitz, and Curcuru (2023) offer a recent assessment.

Figure 11. US Financial Inflows and Outflows and the Current Account Balance, 2000–2024 (Annual Data)

Billions of US dollars
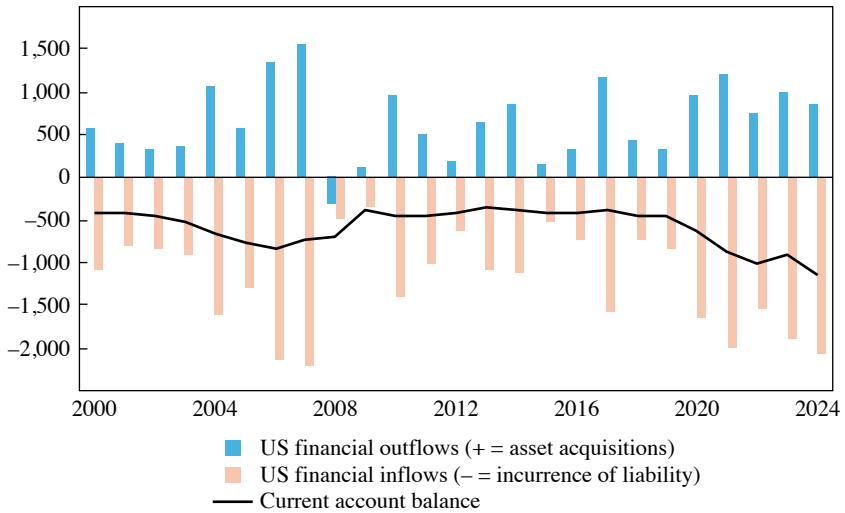
Source: BEA.

group of theories focuses on asset price effects that contribute to US deficits. One of these contends that global dollar demand causes a chronically over-valued dollar. A related claim is that the dollar's status allows the United States to borrow more cheaply abroad, creating a structural deficit.

The idea that the global demand for dollar assets can be satisfied only through US current account deficits is widespread but wrong.[22] The world could alternatively acquire those dollar assets in exchange for *other assets* rather than goods and services.

Figure 11 shows how this process plays out in the data. Foreign acquisitions of US assets (the negative bars, overwhelmingly denominated in dollars) normally exceed the US current account deficit, a possibility because US residents simultaneously acquire high volumes of foreign assets (the positive bars, mostly denominated in foreign currencies). In short, the counterpart payments for foreign purchases of dollar claims on the

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22. Recent examples include Atkinson (2024) and Rappeport (2024). For a critique of this idea, see the arguments in Bordo and McCauley (2019), which I extend in some respects.

United States—and notably foreign central bank purchases of reserve assets like US Treasuries—can reside in the nonofficial financial account rather than the current account.[23]

What about US trade partners that may not be attractive destinations for capital inflows, making foreign residents less willing to acquire their assets? The previous point still applies. In 2023, the Kingdom of Eswatini (formerly Swaziland) had a bilateral trade deficit with the United States but an overall current account surplus.[24] It can use the currencies it earns through its surplus with non-US trade partners to buy dollar reserves, despite its deficit with America. It is also true that countries running current account surpluses with America need not acquire corresponding US assets. China has a bilateral surplus with the United States but since 2017 has, on net, sold US assets (Milesi-Ferretti 2025a). China has been lending to third countries, which in turn finance the US deficit.

Another reason US current account deficits may fall far short of global acquisitions of US dollar assets, including official foreign exchange reserves, is that many dollar claims are claims on non-US residents, for example, banks in London, Singapore, or Hong Kong that deal in offshore currencies.[25]

One indicator of official dollar reserve holdings outside the US jurisdiction is the discrepancy between BEA data on US liabilities to foreign official agencies and the International Monetary Fund (IMF) Currency Composition of Official Foreign Exchange Reserves (COFER) data on reserves reported by member and nonmember countries, which in principle include reserves that are not direct claims on US-resident entities (see also Bordo and McCauley 2019). Some of the BEA official liabilities are not truly reserve assets (for example, they include holdings of sovereign wealth and government pension funds), so figure 12 adds a third, narrower series consisting of the most liquid international reserves, securities held in custody for foreign and international accounts at the Federal Reserve Bank of New York. Many countries that report to the IMF do not give the

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23. See Obstfeld (2024a). Foreigners can also acquire fewer dollar assets than the US current account deficit might suggest—if the United States reduces its global leverage and liquidates its foreign assets to cover the deficit.

24. US International Trade Commission, "DataWeb," under "Trade Balance" for trade flow and "HTS Items" for classification system. https://dataweb.usitc.gov/trade/search/Balance/HTS; and IMF World Economic Outlook database (April 2025).

25. An important force behind the development of the offshore Eurodollar market in London and Paris starting in the 1950s was the desire of Soviet bloc central banks to protect their dollar deposits from possible interdiction by US authorities, a motive that has gained renewed relevance after recent financial sanctions against Russia. See Cooper (1968, p. 119) and Hirsch (1969, p. 149). Communist China also used this strategy.

Figure 12. Global Official Dollar Reserves and US Liabilities to Foreign Official Holders, 1995–2023 (Annual Data)

Millions of dollars
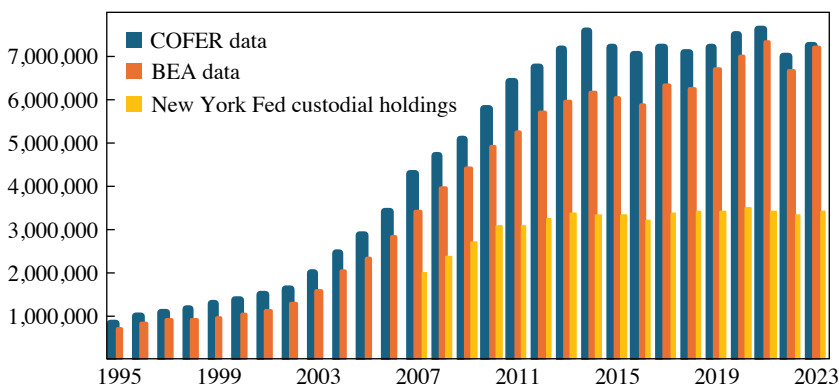
Source: IMF COFER database; BEA; and Board of Governors of the Federal Reserve System, via FRED series WSEFINT1.

Note: The chart shows end-of-year New York Fed custodial holdings. Unallocated COFER reserves are assumed to match the dollar share of allocated reserves.

currency composition of their reserves, so to construct figure 12, I assume that unallocated COFER reserves consist of dollars in the same proportion as allocated reserves—for which the share of dollars reached a low of 58.4 percent in 2023. COFER reserves have uniformly exceeded BEA official liabilities, although the estimated gap has narrowed in the past five years; COFER reserves far exceed the New York Fed's custodial holdings. Figure 12 shows that global dollar reserves, measured by either the COFER measure or the New York Fed's custodial holdings, have been essentially constant in nominal terms for a decade.

Notwithstanding the preceding considerations, Miran (2024) has set out a blueprint for "restructuring the global trading system" built on a central premise that the dollar's status will inevitably lead to growing and ultimately unsustainable current account and trade deficits. He calls this a "Triffin dilemma" following the economist Robert Triffin, who first suggested in the late 1950s that the dollar-gold link central to the Bretton Woods system was doomed:

> In Triffin world, the reserve asset producer must run persistent current account deficits as the flip side of exporting reserve assets. USTs [US Treasuries] become exported products which fuel the global trade system. In exporting USTs, America receives foreign currency, which is then spent, usually on imported goods. America runs large current account deficits not because it imports too

Figure 13. Alternative Measures of Global US Dollar Foreign Exchange Reserves as Shares of US Nominal GDP, 1995–2023 (Annual Data)

Fraction of US GDP
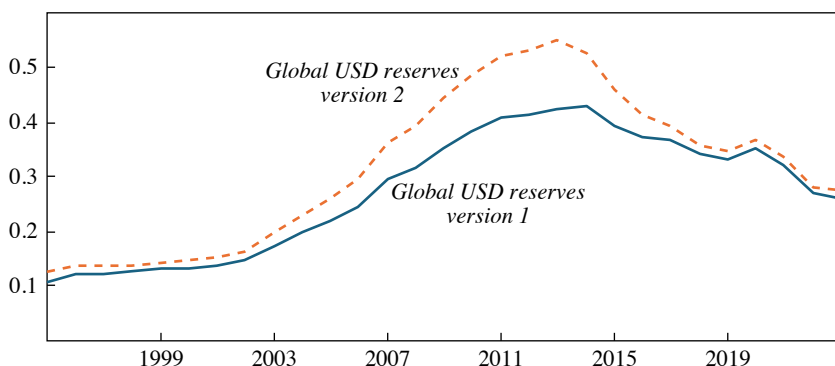
Source: IMF COFER database and BEA.

Note: Version 1 assumes that unallocated COFER reserves are invested in US dollars in the same proportion as allocated reserves. Version 2 assumes that all unallocated reserves are invested in US dollars.

much, but it imports too much because it must export USTs to provide reserve assets and facilitate global growth. . . .

As the United States shrinks relative to global GDP, the current account or fiscal deficit it must run to fund global trade and savings pools grows larger as a share of the domestic economy. Therefore, as the rest of the world grows, the consequences for our own export sectors—an overvalued dollar incentivizing imports—become more difficult to bear, and the pain inflicted on that portion of the economy increases. (Miran 2024, p. 7)

Apart from its conceptual flaws, Miran's story falls afoul of two basic facts. First, the US share of world GDP at market exchange rates has averaged about 25 percent since around 1990.[26] It may well be destined to fall, but we have not seen it yet. Second, a consequence of the last fact and figure 12 is that the global reserve stock as a fraction of US GDP has fallen sharply. To illustrate, figure 13 shows the ratio to US nominal GDP of two broad measures of nominal dollar reserves based on the COFER data, the one shown in figure 12 (version 1) and an alternative, which assumes that all unallocated reserves are held in US dollars (version 2). The era of accelerating global reserve growth after the late 1990s lasted a decade and a half and has been over for a while. Yet US deficits have not abated: Global dollar

26. IMF World Economic Outlook database (April 2025).

reserve demand cannot explain the ongoing transfer of wealth to foreigners via the US current account deficit.[27]

Although there is no mechanical accounting link whereby global reserve demand feeds one-for-one into the US current account deficit, the dollar's unique global role could operate in another way: by lifting the dollar's value against other currencies compared with its value in a world where it was less in demand. Other things being equal, a stronger dollar would encourage imports, discourage exports, and worsen the trade balance. It could therefore also be a deflationary force on the domestic economy or a drag on manufacturing activity.

A related effect of the dollar's global role could be a liquidity premium that reduces the cost of borrowing in dollars while also strengthening the currency on net (see, e.g., Engel and Wu 2023; Jiang, Krishnamurthy, and Lustig 2021). This potential source of exorbitant privilege could raise net international investment income while reducing net exports because of a stronger dollar and higher consumption and investment spending, with an indeterminate effect on the current account.

Nailing these effects down empirically is challenging. The most widely used approach has been to estimate a cross-country panel model of current account determination, where the independent variables can include demographic factors that influence saving, government fiscal positions, resource endowments, net foreign assets, and per capita real income, among other potential drivers. In such a framework, one could hope to capture the effect of the dollar's unique role through either a US dummy variable—how different is the United States from other countries—or some constructed variable that captures global dollar demand.

In an example of the former approach, Chinn and Ito (2022, p. 11) put the average additional US deficit associated with the dollar's singular status at about 2 percent of the country's GDP. This is roughly the same as Rachel and Summers's (2019, p. 16) estimate of the fall in the US saving-investment balance due to a 100 basis point reduction in national borrowing costs, based on conventional interest elasticities of saving and investment.

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27. In his famous book, Triffin (1960) worried that foreign official dollar reserves had grown so large that the United States could not redeem them all in gold at the promised price of 1/35 oz. per dollar. He did not see foreign demand for dollar reserves as driving an inevitable US trade or current account deficit, contrary to Feldstein (2013, p. 119). Triffin viewed the United States as a structural capital exporter to a reconstructing and developing world and advocated a US current account surplus big enough to cover net capital outflows without further growth in potential foreign claims on the limited US gold stock.

The IMF's External Balance Assessment (EBA) methodology is similar in spirit to the Chinn and Ito (2022) approach, although its goal is to assess current account "norms" based on desirable settings for policy variables such as the fiscal deficit. The 2018 vintage of the EBA model explicitly estimated the effect on the norm of a country's currency share in international reserves, finding that "for each 10 percentage points of global reserves held in its currency, a country's current account balance is weakened by about 0.3 percent of GDP" (Cubeddu and others 2019, p. 9). With the dollar comprising about 60 percent of international reserves, the implied additional US current account deficit is around 1.8 percent of GDP, not far from the preceding Chinn and Ito (2022) estimate. However, the 2022 EBA provisionally dropped the reserve currency variable for the current account norm, as it had lost statistical significance in the underlying econometric model.[28]

Because a reserve currency privilege reduces the investment income drain due to a negative NIIP, an estimate that it weakens the current account implies that it weakens net exports even more. The finding is consistent with equation (4) above: A country that earns a premium on its external position can repay its net foreign debt with smaller net export surpluses over time. In present discounted value, it can consume more while producing less.

While these considerations suggest that the dollar's global role induces a bigger deficit, they could just as well imply a smaller surplus. The euro area has a trade surplus despite issuing the world's second most important reserve currency. Moreover, the dollar's global role—which confers aggregate gains on the United States—derives not only from preferences and needs that foreigners impose on a passive America, but from institutions of US origin (such as a consistent rule of law, independent monetary policy, and deep, open financial markets) that also underpin American prosperity.

An additional factor strengthening the dollar in the past has been currency manipulation by some US trade partners.[29] When a single small country intervenes in the foreign exchange market to weaken its currency deliberately against the dollar, that need not move the dollar's cross exchange rates with other currencies such as the euro and yen. Undervaluation thus will pertain to a range of currencies and any negative impacts on trade

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28. The two vintages of the EBA model are reviewed in Cubeddu and others (2019) and Allen and others (2023).

29. For overviews, see Bergsten and Gagnon (2017) and Gagnon (2020).

partners' foreign balances will be spread across all of them roughly in proportion to their trade shares. It is not only the US deficit that will rise.[30]

If many countries simultaneously buy dollars, however, this can strengthen the dollar relative to major foreign currencies, leading to a disproportionate negative impact on the US trade balance. Estimates by Gagnon and Sarsenbayev (2021) suggest that this factor has been a significant determinant of the US deficit in some years (notably close to the global financial crisis).[31]

Those who blame US deficits partly on foreign currency manipulation thus have a point, although foreign official dollar purchases do not feed one-for-one into US deficits and estimates like those of Gagnon and Sarsenbayev (2021) leave big current account gaps that are not explained by dollar exchange holdings abroad. Figure 13 shows why this effect has lost importance over time and has been more minor this decade.

If foreign manipulation (or dollar reserve holding otherwise motivated) induces a nominal dollar appreciation, this might not translate into a permanent real appreciation without offsetting government support (fiscal or monetary) of domestic demand. However, ascribing much of US fiscal deficits to this channel is highly implausible.

III.C. Foreign Capital Inflow as the Primary Causal Factor

In an influential book, Klein and Pettis (2020, p. 214) assert that "the persistence of the American current account deficit can only be explained by excessive savings abroad and the US role in absorbing these excess savings." Pettis (2024) contends that foreign saving finds its way to the United States in the form of capital inflows, forcing the country to run current account deficits:

> And because the United States has given up control of its capital account, it has no choice but to be a persistent net importer of foreign capital.

30. If one insists that an official purchase of a currency leads to a corresponding surplus with the currency's issuer, absurd conclusions may follow. Thus, Pettis (2013, p. 173) supposes that if any country intervened in foreign exchange by buying the IMF's Special Drawing Rights (SDR) basket rather than dollars, it "would be forcing the corresponding deficit not just onto the U.S. economy, but also onto those of other countries (according to the currency component of the SDR)."

31. The methodology of Gagnon and Sarsenbayev (2021) is in the same family as that of Chinn and Ito (2022) and the IMF EBA initiative. Gagnon and Sarsenbayev find that on average over 1986–2018, foreign official dollar holdings are associated with an additional −1.2 percent of GDP effect on the US current account.

It is important to understand that this is not because the United States needs foreign capital but rather because foreigners need a safe place to absorb their excess savings. As long as foreigners prefer to acquire U.S. assets in exchange for their surpluses and are able to force the United States into a net capital account surplus, the United States must run a current account deficit. (paras. 61–62)

Economists such as Aliber (2024) have expressed variants of this view.[32]

This description of the world is partially right because in an integrated world economy, changes in saving and investment abroad as well as foreign shifts in demand for US assets affect the US balance of payments. But it is wrong to assert that shocks originating within the US economy are not also important, or that the United States is the helpless victim of external forces and lacks effective policy levers to offset foreign shocks.

The basic theoretical framework for understanding the global transmission of saving and investment shocks was set out by Metzler (1968). Imagine a world of two regions, Home (H) and Foreign (F), with free international borrowing and lending in a real bond indexed to a single global consumption and investment good. In each country, saving S is an increasing function of the domestic real interest rate r, while investment I is a decreasing function of r. If the two regions are prevented from trading, the capital market in each will settle at an autarky equilibrium interest rate r^{aut} at which saving equals investment, $S(r^{\text{aut}}) = I(r^{\text{aut}})$.

Figure 14 describes a global equilibrium. Because its residents are relatively less frugal or its investment opportunities are more attractive, Home has a higher autarky interest rate than Foreign ($r_{\text{H}}^{\text{aut}} > r_{\text{F}}^{\text{aut}}$). In the global equilibrium, Home borrows from Foreign and the common interest rate $r^* = r_{\text{H}}^* = r_{\text{F}}^*$ at which Home's desired borrowing (and current account deficit), $I_{\text{H}}(r^*) - S_{\text{H}}(r^*)$, equals Foreign's desired lending (and current account surplus), $S_{\text{F}}(r^*) - I_{\text{F}}(r^*)$, lies between the two autarky rates.

This simple model has a clear implication that developments in Foreign will affect the current account of Home. Figure 15 shows the outcome if Foreigners decide to save more at every interest rate—inducing a rightward shift in the Foreign saving schedule. Global saving rises, the world interest

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32. Pettis's (2024) inference is that durable reduction in the US current account and trade deficits requires the United States to levy a tax on foreign borrowing. The idea of a capital inflow tax was codified in a 2019 US Senate bill cosponsored by Senators Tammy Baldwin and Josh Hawley, which would have amended the Federal Reserve Act and tasked the Fed with targeting the US trade deficit through a "market access charge on certain purchases of United States assets" leading to a "trade-balancing exchange rate." The bill's text is available at Congress.gov, "S.2357–Competitive Dollar for Jobs and Prosperity Act," https://www.congress.gov/bill/116th-congress/senate-bill/2357/text?loclr=cga-bill&mc_cid=ef4ba9849b&mc_eid=%5B88323f6801%5D.

Figure 14. Determining Global Equilibrium Interest Rate and Current Account Balances in a Two-Region World Economy
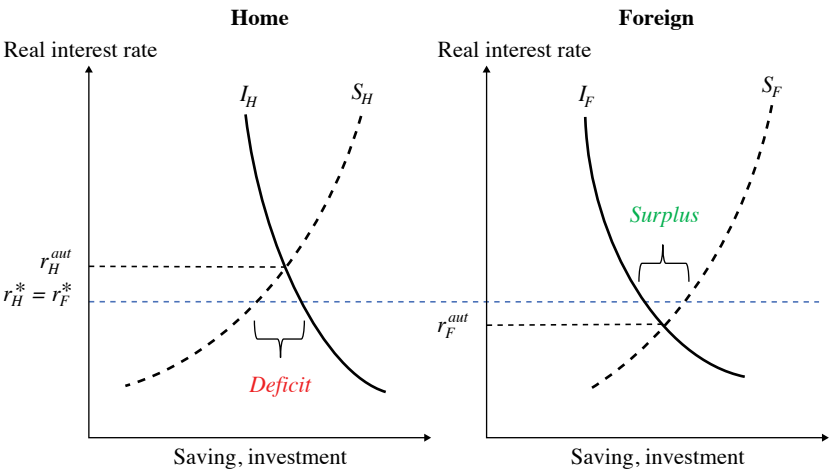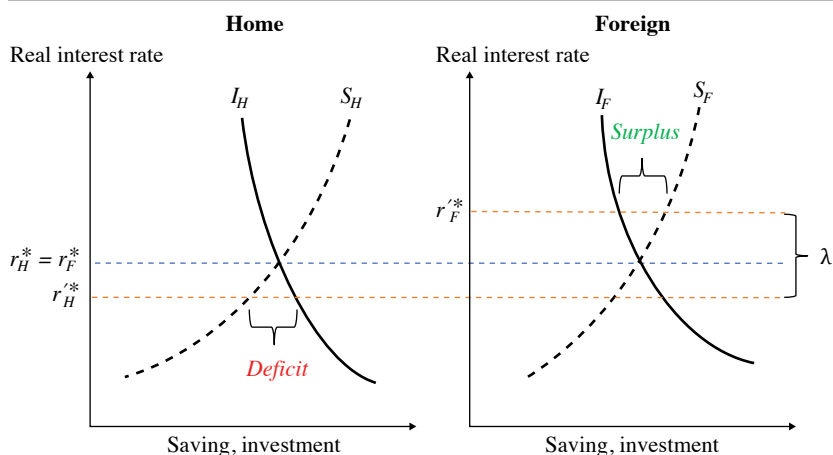

Source: Author's illustration.

Figure 15. Effects of a Rise in Foreign Saving on Global Equilibrium Interest Rate and Current Account Balances
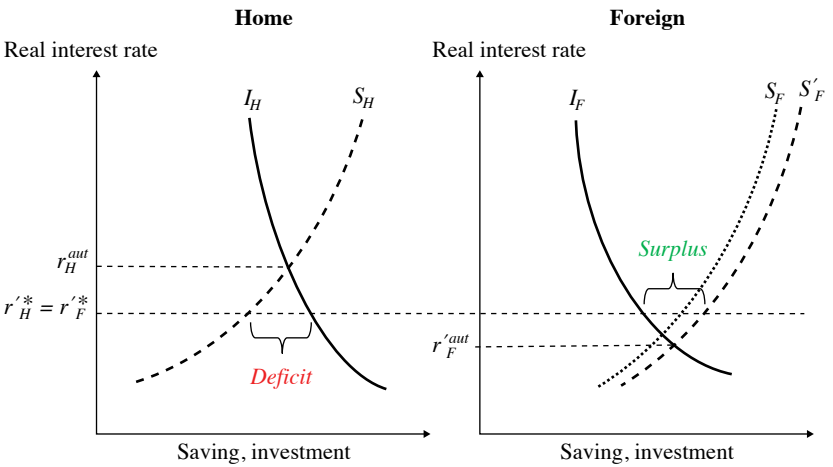
Source: Author's illustration.

Figure 16. Effects of a Global Portfolio Preference λ Shock in Favor of Home Liabilities

Source: Author's illustration.

rate falls, Foreign's surplus rises, and Home's current account deficit rises equally. The rise in capital outflows from Foreign must equal the rise in capital inflows to Home, and indeed the exogenous impulse driving those inflows comes from abroad. But Home has policy tools to reduce unwelcome capital inflows (even without taxing them). A tighter fiscal policy that raises national saving, for example, would shift the Home saving schedule to the right, reducing Home borrowing from Foreign and the world interest rate. Were this contractionary domestically, the central bank could lower its policy interest rate.

The more general point is that capital inflows are determined not just by saving flows originating abroad, but also by domestic factors. As another example, a leftward shift of the Home saving schedule raises the Home current account deficit and capital inflows and raises domestic and global interest rates. But although equilibrium still implies that the rise in Home capital inflows equals the rise in Foreign capital outflows, it would be wrong to conclude that the former are caused by the latter. In this case, Foreign capital is pulled in, not pushed in from abroad.

In figure 15, an increase in Home's deficit accompanies a rise in global saving. However, shifts in asset preferences can affect Home's current account balance even when total world saving remains unchanged. Figure 16 shows the result when Foreign lenders develop a portfolio preference, denoted by a liquidity premium λ, for securities issued by Home. In this case, asset market equilibrium holds when $r_H^* = r_F^* - \lambda$, and the preference

change will cause Home to run a bigger deficit and Foreign to run an equally bigger surplus. Because saving rises in Foreign and falls in Home, total global saving (and investment) may rise or fall but is unlikely to change much.

Applied to the United States, the implication is that higher current account deficits may originate abroad but may also stem from domestic factors and respond to domestic policies. They may or may not be related to changes in world saving. Allocating any historical change to foreign and domestic sources raises difficult identification problems, but an exclusive focus on foreign shocks does not fit the data. The US experience in the late 1990s and 2000s is an important case study.

IV. Revisiting the US Current Account Deficits of 1998–2008

The years from 1998 to 2008 saw US trade and current account deficits bigger than any seen before or since, along with an unprecedented expansion of global imbalances generally. The US goods and services trade deficit for the year 2006 reached 5.5 percent of GDP (figure 1) and the current account deficit reached 5.9 percent.[33] In 2007, China's current account surplus attained an astounding 9.8 percent of its GDP.[34]

The decade continues to throw a long shadow over current trade policy debates. As the trade deficit ballooned, the seasonally adjusted share of manufacturing employment in the nonfarm sector fell from 14.1 percent in January 1998 to 9.5 percent in December 2008, representing a loss of 4.8 million manufacturing jobs.[35] Cheap imports from China hit some American heartland communities especially hard—the China shock. The negative collateral effects, including those on wages, continue to fuel resentment against China and are often linked to its trade surpluses.[36] Finally, the decade ended with the global financial crisis, which complicated adjustment to earlier trade dislocations and is blamed by some on capital inflows "imposed" on the United States from abroad. These, it has been claimed, powered the US trade deficit and deindustrialization.

Narratives that place most blame for these events outside the United States and especially on China have a long tradition and remain prevalent, even

33. BEA, "International Transactions," https://www.bea.gov/data/intl-trade-investment/ international-transactions; and "National GDP & Personal Income," https://www.bea.gov/ itable/national-gdp-and-personal-income.

34. IMF World Economic Outlook database (April 2025).

35. Bureau of Labor Statistics, "All Employees, Manufacturing," retrieved from FRED series MANEMP; and "All Employees, Total Nonfarm," retrieved from FRED series PAYEMS.

36. On impacts of trade with China, see, for example, Autor, Dorn, and Hanson (2013), Ebenstein and others (2014), and Pierce and Schott (2016).

among those who agree that macroeconomic factors rather than US trade liberalization or foreign commercial policies are the prime drivers of US deficits. Ben S. Bernanke, then a Federal Reserve governor, offered the most influential analysis in his well-known "global saving glut" speech of March 2005, which located "the principal causes of the U.S. current account deficit outside the country's borders" (Bernanke 2005, para. 3).[37]

Hanson's (2024) review of Lighthizer (2023) illustrates the persistence of Bernanke's account:

> The US trade deficit did rise from 1998 to 2008, before dropping back to 1999 levels in the early 2010s. The cause was not the WTO, but the 1997 Asian financial crisis, after which Asian central banks substantially increased their holdings of foreign reserves, primarily by purchasing US Treasury bills. That resulted in the United States having a bigger capital account surplus, meaning that more capital was flowing into the United States than was flowing out. The United States offset that account surplus by importing more than it exported. The US trade balance was affected because US Treasury bills remained the foreign asset of choice for central banks around the world, which pushed up the value of the dollar, making imports cheaper and US exports more expensive, causing a large trade deficit. (Hanson 2024, pp. 170–71)

While this narrative of how US deficits in 1998–2008 were imported is compellingly simple, it also sits uneasily with several macroeconomic facts about the period. A more accurate story suggests that the factors fueling the largest US deficits of the 1998–2008 decade were made in America rather than imported.

IV.A. *Evidence from Global Imbalances*

A first basic check is to look at the global counterpart surpluses to US deficits. Figure 17 shows how global imbalances have evolved since the mid-1980s, with each bar representing a country or country group's net surplus or deficit.[38] The statistical discrepancy in the global current account

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37. Contemporary observers who likewise saw the US deficit as being determined by foreign desire for US assets include Cooper (2001) and Dooley and Garber (2005).

38. For country groups' gross surpluses and deficits (that is, with no netting of balances within the groups), see figure 1 in Obstfeld (2024b). The higher dispersion of imbalances after the 1990s may well owe to lower trade costs, as argued by Eaton, Kortum, and Neiman (2016), Reyes-Heroles (2016), and Alessandria, Bai, and Woo (2024). However, lower trade costs largely affect the sizes of the responses to fundamental determinants of imbalances, rather than the signs. Reduced international financial frictions likely also played a role. Tariffs are one form of trade friction. However, the finding that a higher tariff may mute the impact of some shocks need not imply that imposing a tariff—a shock in its own right—will shrink a preexisting trade imbalance.

Figure 17. Net Global Current Account Imbalances, 1986–2024 (Annual Data)

Percent of world GDP
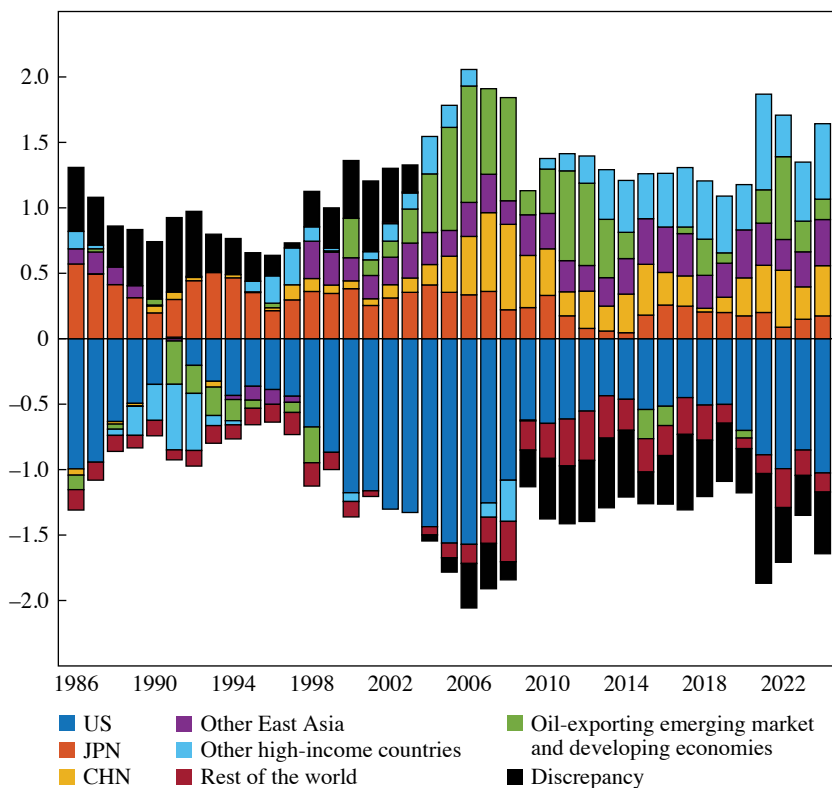
Source: IMF World Economic Outlook database (April 2025) with China data before 1997 from the World Bank World Development Indicators.

is caused by measurement errors in balance of payments statistics. It is the missing current account surplus (when positive) or deficit (when negative) that would make the sum of all countries' current account balances equal to the theoretical value of zero. Global imbalances expanded sharply in the 1998–2008 decade before retracting in 2009. At their height, in 2006, gross global imbalances reached nearly 3 percent of global GDP. As figure 17 shows, the dominant fact of 1998–2001 (when the expansion began) is the rise of the US deficit. No measured imbalances on the surplus side of the ledger, including those of "Other East Asia" (which includes newly industrialized Hong Kong, Korea, Singapore, and Taiwan), are comparable.

These data would be enough to rule out the Asian crisis countries as a major driver of US deficits (except perhaps in 1998) but for the unexplained global discrepancy that also begins to grow after 1997, reaching a peak in 2001. At the global level, through 2003 there was a missing current account surplus that cannot be attributed reliably to any set of countries. It seems unlikely that the discrepancy is entirely due to unreported surpluses of Asian crisis countries and China, but there is no way to be sure.

The net surplus of oil-exporting emerging market and developing economies becomes a more significant counterpart of the growing US deficit starting in 2003. China joins only in 2005. It is also in 2005 that the missing global surplus becomes a sizable missing global deficit, as the discrepancy's sign flips.

Inspecting the pattern of global imbalances leads to three tentative conclusions: Asian crisis countries are unlikely to have played the dominant role in the US deficits of 1998–2008; oil surpluses are a consistently big counterpart of US deficits after about 2003; and Chinese surpluses become significant but not until later in the decade. A caveat, however, is that the global current account discrepancy early in the decade makes it hard to identify precisely the counterpart surpluses to the United States' position as the historically massive US deficit emerges.

IV.B. *Evidence from Interest Rates and Equity Prices*

The simple Metzler (1968) model of global capital market equilibrium oversimplifies by assuming that real interest rates must be equalized globally. Most important, expected changes in real exchange rates drive a wedge between national interest rates, as do differences in currency risk, issuer preference (as in figure 16), or more tangible barriers to cross-border financial flows. Nonetheless, world real interest rates trend together and should generally move together in response to major shocks to saving and investment, regardless of country of origin.[39]

If a growing US deficit is being driven by growing foreign saving, we should also observe falling US real interest rates. Figure 18 shows the rate on ten-year Treasury Inflation-Protected Securities (TIPS). The rate actually rises in the immediate wake of the Asian crisis, until an abrupt fall over 2000–2002. Then, from mid-2002 through mid-2007, there is little net fall in the TIPS rate, even as the US current account deficit expands.

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39. For the case of differing national consumption mixes and variable real exchange rates, see Obstfeld (2020). On trends in global real interest rates, see Obstfeld (2025).

Figure 18. Ten-Year TIPS Interest Rates, 1997–2009 (Monthly Data)
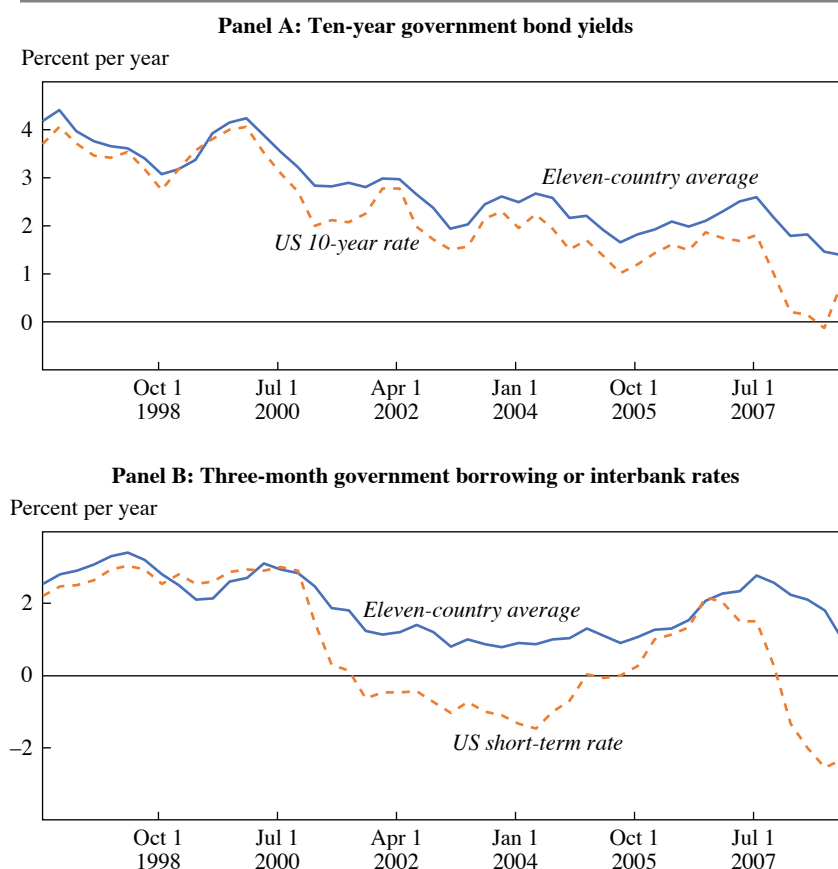
Percent per year
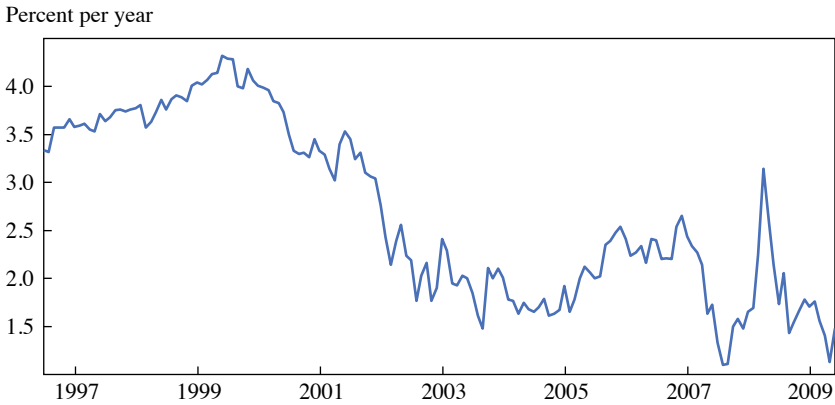
Source: Finaeon (Global Financial Data).

Expectations-adjusted nominal yields tell a similar story. Figure 19 shows real long- and short-term yields in the United States compared with the unweighted average of eleven other industrial countries.[40] Panel A, for long-term government rates, shows little net fall in the US rate between 2001 and mid-2007. Moreover, the US rate is consistently below the average of foreign rates. If foreign capital were surging into the United States, we might expect the dollar to appreciate in real terms, setting up the expectation of a longer-term depreciation and raising the US real rate relative to foreign rates (as in Obstfeld 2020). However, the gap could also indicate a strong global preference for US bonds.

Panel B of figure 19 shows short-term real rates. The most striking feature of this chart is the huge gap between US and foreign rates, with US rates becoming substantially negative from mid-2001 through the end of 2004. Comparing panels A and B, the very low rates in panel B seem too low to be explained entirely by a liquidity preference for dollar bonds and more plausibly reflect a more accommodative Federal Reserve policy stance compared with central banks abroad.

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40. Data come from Obstfeld (2025). Inflation expectations are proxied as in that paper. Nominal short-term yields are three-month interbank or Treasury rates. The foreign countries are Australia, Canada, France, Germany, Italy, Japan, New Zealand, Spain, Switzerland, Sweden, and the United Kingdom.

Figure 19. Long- and Short-Term Real Interest Rates for the United States Compared with the Unweighted Average of Eleven Other Industrial Countries, 1997–2008 (Quarterly Data)

Panel A: Ten-year government bond yields

Panel B: Three-month government borrowing or interbank rates

Source: Obstfeld (2025).
Note: The US rate in panel B is the three-month Treasury bill rate.

What about other financial assets? If capital was rushing to the United States in the 2000s and elevating asset prices in all categories, one would expect US equities to outperform foreign equities. As figure 5 shows, however, the mid-2000s saw relative asset price performance in the United States and abroad *add* to US external assets, suggesting that US foreign assets appreciated relative to US foreign liabilities before translating price gains into dollar terms. Equity price data support this inference.

Figure 20. Equity Prices for United States and Rest of World, 1997–2008 (Annual Data)

Index, 2002 = 100
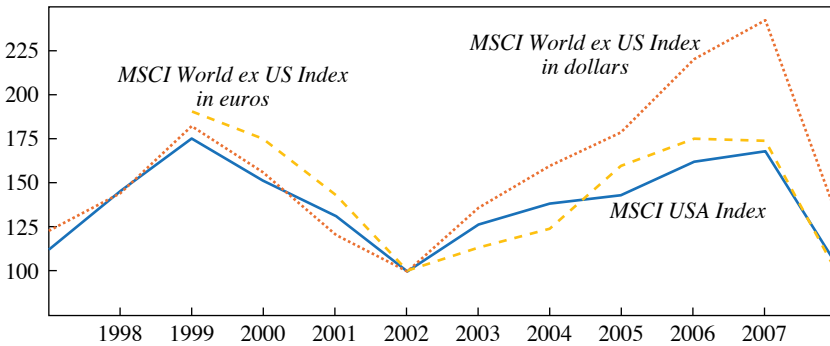
Source: Morgan Stanley Capital International (MSCI) USA Index and World ex USA Index (in dollars and euros), via Datastream.

Contrary to the experience since the global financial crisis during which US equity has strongly outperformed, equity markets abroad did better over much of 2002–2008. Figure 20 shows this advantage emerging after 2004 when foreign equities are valued in euros; foreign equities look even more attractive when valued in dollars because the dollar depreciated strongly.[41] The dollar's steep fall starting in 2002 is another important indicator, however, that an account of US deficits driven entirely by foreign capital inflows cannot be complete.

IV.C. The Dollar's Long Slide, Exports, and Imports

Proponents of the global saving glut theory posit that foreign demand for US assets strengthened the dollar, helping to drive the trade balance more deeply into deficit. A flip side of higher global saving was a flood of low-priced exports from China and other industrializing economies, which forced the Fed to keep interest rates low. The behavior of the dollar over 1998–2008 suggests a more nuanced account.

Figure 7 shows the dollar's nominal effective exchange rate. The dollar started rising in the mid-1990s following the Clinton-Rubin strong dollar pivot and continued until the second quarter of 2002, possibly consistent

41. This chart is inspired by figure B.1 in Atkeson, Heathcote, and Perri (2023). See also Milesi-Ferretti (2021).

Figure 21. US Imports and Exports, Raw and Value-Added Bases, 1990–2024 (Annual Data)

Fraction of GDP
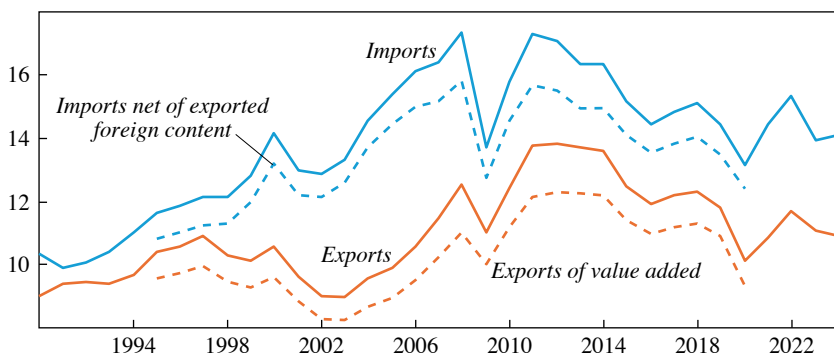
Source: BEA and OECD Trade in Value-Added (TiVA) 2023 edition: Principal Indicators.

with increases in foreign investors' demand for dollars as in the saving glut theory. But then it began to depreciate markedly, a process that continued through the third quarter of 2008. Returning to figure 5, dollar depreciation and net gains on the US equity position caused the US NIIP to *improve* over 2004–2007 despite record ongoing current account deficits.

The dollar's lengthy depreciation phase is inconsistent with the claim that foreign capital inflows continued to bid up the dollar, expanding the US trade deficit by making US exports less competitive and imports cheaper for US consumers.

The reality is that after falling from 1997 (when they were 11.1 percent of GDP) to around 9 percent of GDP in 2002–2003, US exports began to expand strongly and steadily (to 12.4 percent of GDP in 2008) until the Lehman Brothers failure threw the global economy into a tailspin. The US net export deficit grew nonetheless because imports rose even more quickly than exports. Figure 21 shows that imports rose sharply after 2002 despite the dollar's depreciation.

This was also a period when global value chains expanded, raising gross exports and imports more than their value-added counterparts. However, US exports did not expand mostly because more intermediate imports were embodied in exports. Figure 21 also reports value-added exports and imports for 1995–2020 computed using the Organisation for Economic Co-operation and Development's (OECD) Trade in Value-Added (TiVA) data. Rising exports were not artifacts of rising global value chains.

Further insight comes from looking separately at the evolution of trade prices and quantities. The ratio of nominal net exports to nominal GDP can be written as:

$$\frac{NX}{Py} = \frac{P_X x}{Py} - \frac{P_M m}{Py},$$

where y, x, and m are real GDP, exports, and imports and P, P_X, and P_M are their dollar prices (which I take to be the GDP, export, and import deflators below). With zero subscripts denoting initial values, a useful accounting breakdown of quarterly changes in NX/Py into relative prices (in terms of the GDP deflator) and quantities (real trade volumes relative to real GDP) is:

$$\Delta\left(\frac{NX}{Py}\right) = \left(\frac{x_0}{y_0}\right)\Delta\left(\frac{P_X}{P}\right) + \left(\frac{P_{X,0}}{P_0}\right)\Delta\left(\frac{x}{y}\right)$$

$$- \left(\frac{m_0}{y_0}\right)\Delta\left(\frac{P_M}{P}\right) - \left(\frac{P_{M,0}}{P_0}\right)\Delta\left(\frac{m}{y}\right) + \text{interactions}.$$

Above, higher import prices always reduce the trade balance because the accounting formula ignores the behavioral response of the import quantity demanded (m). The latter reduces m and reduces $P_M m = M$ when the price elasticity of import demand is greater than one.

Figure 22 shows the individual price and quantity contributions to NX/Py, cumulating changes from the first quarter of 1992 through the last quarter of 2012. There are several takeaways:

(1) Real exports/GDP grow steadily after early 2002 (coincident with dollar depreciation).
(2) But real imports grow more quickly starting early 2002, despite dollar depreciation.
(3) Import prices fall (relative to the GDP deflator) through 2002:Q1 but afterward rise until the global financial crisis (coincident with dollar depreciation). The causes are the dollar's fall and a global upswing following the dot-com collapse, driven by abundant global liquidity.
(4) The value effect of import price declines makes the trade deficit grow less quickly (reducing the dollar cost of a given import volume) but rising import prices starting in early 2002 increase the deficit, other things equal.
(5) Relative export prices are relatively flat over 2002–2007, even as relative import prices rise, so the US terms of trade worsen.

In short, the data contradict claims that a strong dollar reduced exports after early 2002 or that falling import prices drove the accompanying import

Figure 22. Forensic Breakdown of US Trade Deficit Components, 1992–2012 (Quarterly Data)

Percentage points of GDP
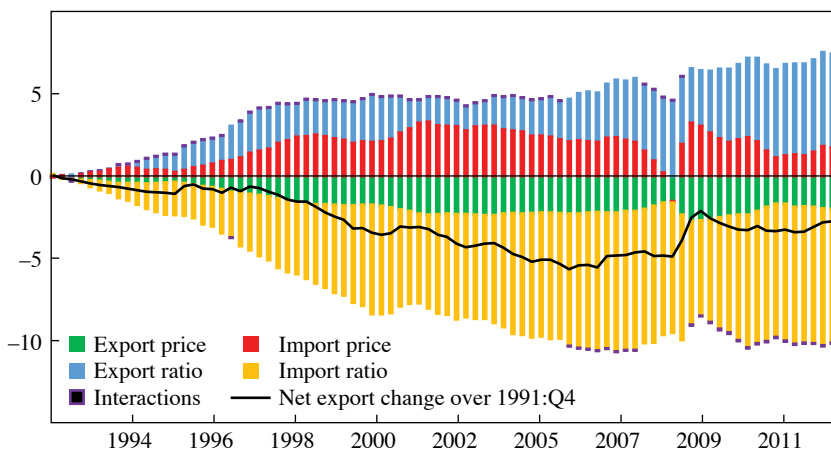
Source: BEA, via FRED series A020RD3Q086SBEA, A021RD3Q086SBEA, GDPDEF, EXPGS, IMPGS, and GDP.

surge. Rising US spending fueled import growth despite rising import prices; exports rose but could not keep up.

IV.D. A More Complex Narrative

Theories that paint the United States as the helpless recipient of global capital inflows and cheaper foreign goods do not stand up against the data for the 2000s, notably for the 2002–2008 period when the US deficit reached record highs and the US housing bubble began in earnest, culminating in a massive crisis. A more complex narrative better fits the facts. Certainly international factors mattered, but domestic factors were important too, and at times more important.[42]

From 1998 to 2002, the global saving glut theory has more plausibility: The dollar at least continues to appreciate (figure 7), which could represent increased foreign demand from East Asian countries and others, as modeled by Blanchard, Giavazzi, and Sa (2005).[43] However, global saving falls as a

42. This account is consistent with that given by Obstfeld and Rogoff (2010) but updates for subsequent research and experience. Rajan (2010) and Chinn and Frieden (2011) offer broadly consistent analyses with an emphasis on political factors.

43. Blanchard, Giavazzi, and Sa (2005) develop a dynamic portfolio balance model of the dollar.

fraction of world GDP from 1998 to 2002 according to IMF data.[44] While US real interest rates do fall from 2000 to 2002 (after rising between 1998 and 2000), this is more immediately linked to the dot-com collapse, its global effects, and the Fed's efforts to stave off recession, which themselves cannot be explained by a (nonexistent) increase in global saving. Instead, we are mostly seeing an investment collapse. One can argue that the dot-com crash created an ex ante surplus of global saving over global investment, resolved by a fall in global interest rates. But that is different from a rise in precautionary saving by emerging economies. Moreover, the dominant trigger—the collapsing tech bubble—was hardly external to the United States.

From 2002 to 2008, the global saving glut theory of the US deficit looks even less convincing owing to the dollar's depreciation up until the financial crisis (although IMF data do show global saving rising by 2.4 percentage points between 2002 and 2008, the net contribution all due to emerging markets). An alternative narrative consistent with the dollar's fall suggests that, over that period, capital was to a large degree *pulled* into the United States from abroad rather than *pushed* in by elevated global saving with nowhere to go but America. Three interacting factors, two of them largely homegrown, led Americans to spend and borrow, issuing dollar bonds in global markets and pushing the dollar to weaken: (1) easy financial conditions and the real estate bubble; (2) US fiscal and monetary policy; (3) foreign safe asset demand, including official dollar purchases, which held down US interest rates; and (4) in addition, a major global structural shock also contributed to dollar depreciation, with a likely negative effect on the US trade balance: China's entry into the WTO.

FINANCIAL CONDITIONS AND THE REAL ESTATE BUBBLE The US credit and housing boom of the 2000s owed to financial market innovations that made it easier for borrowers—mortgage borrowers in particular—to issue dollar debt. These innovations include the rapid growth in nontraditional mortgages, derivative financial instruments, and looser lending standards due to the spread of the originate-to-distribute lending model. Banks piggybacked on these developments to increase their leverage.[45] The Commodities Futures Modernization Act of 2000 directly promoted looser derivatives regulation.

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44. See figure 11 in Obstfeld (2025) but recall the earlier caveat about data gaps (the global discrepancy) for this period. Global saving rises afterward through the global financial crisis, but real interest rates do not fall, suggesting rightward shifts in both the saving and investment schedules at the global level. Figure 17 above shows that higher emerging oil exporter revenues were a likely driver of the global saving increase. These surpluses, in turn, were driven by high global growth and loose liquidity conditions.

45. See, for example, Jaffee and others (2009).

Housing appreciation, in turn, further loosened collateral constraints, fueling more credit expansion and consumption, some via equity extraction. Net private saving fell from 7.3 percent of GDP in 2002 to 4.5 percent in 2007. At the same time, gross residential investment surged from 4.8 percent of GDP in 2001 to a peak of 6.6 percent in 2005, while gross private non-residential investment flatlined over the same period.[46]

Easy financial conditions prevailed between 2002 and mid-2007, and generally, easy financial conditions are associated with a weak dollar.[47] Furthermore, higher dollar debt issuance directly drives the dollar down, other things being equal.[48] To be sure, housing appreciation and easy financial conditions were widespread globally, but each country had its own story. For example, housing bubbles in the euro area owed to the launch of the single currency at the start of 1999, which eased financial conditions in peripheral countries and helped drive housing appreciation (see Giavazzi and Spaventa 2010). The United States stood out for the deterioration of lending standards that accompanied its housing boom (Rajan 2010), a result of government policy and distorted incentives in financial markets.

Across countries, there was a negative correlation between current account balances and housing appreciation in the 2000s (see Obstfeld and Rogoff 2010, pp. 154–55), but this reflects bidirectional causality. While capital inflows could, in principle, have been the primary driver of the housing bubble in the American case, supporting evidence is scant. In an extensive empirical study, Favilukis and others (2013) document the empirical weakness of links between capital inflows to the United States and home prices. Researchers have also drawn inferences from economic models. Ferrero (2015) argues that US credit and preference shocks are the main reason for

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46. BEA, "Table 5.1. Saving and Investment by Sector" and "Table 1.1.5. Gross Domestic Product."

47. In Obstfeld (2024b), I show the strong tendency of the dollar to depreciate when US bank lending standards, as measured in the Fed's Senior Loan Officer Opinion Survey (SLOOS) on Bank Lending Practices, ease. Further related evidence is in Obstfeld and Zhou (2022). Other indicators of financial conditions beyond the SLOOS point to exceptional financial ease from 2002 to mid-2007, for example, the Federal Reserve Bank of Chicago's national financial conditions indexes and the Office of Financial Research Financial Stress Index.

48. In Obstfeld (2024c), I model this linkage and its connection to the housing market and financial innovation. My model is based on portfolio balance exchange rate models like those of Kouri (1983) and Blanchard, Giavazzi, and Sa (2005) and a housing finance collateral assumption, as in Iacoviello (2005). Mac Mullen (2025) presents a model in which US government debt issuance weakens the dollar due to portfolio balance effects. He displays a striking positive correlation since 1980 between US debt relative to the rest of the world, a weaker dollar in real terms, and US net exports. In his data, the early 2000s are exceptional in that the dollar weakens over a prolonged period without a substantial rise in net exports.

the negative correlation between home prices and the current account. Like Favilukis and others (2013), he attributes the housing bubble to relaxed US borrowing constraints and standards. In contrast, Justiniano, Primiceri, and Tambalotti (2014) find that in their model, capital inflows explain a quarter to a third of the increase in US home prices and household debt in the 2000s—a finding that still attributes most of the home price and debt surge to other forces. Jørgensen (2023) builds a dynamic macroeconomic model that explains US housing inflation in 2000–2002 as the product of a global saving glut but links the subsequent price rises up to 2006 to looser US borrowing constraints and the resulting dollar debt issuance. The model also captures the steadily growing US current account deficit between 2000 and 2006, together with the dollar's appreciation in the first phase of this period and its depreciation in the second phase.

Even if the net capital inflows central to the saving glut story did not cause the housing boom but instead in large measure reflected the boom, gross foreign capital inflows to housing finance, themselves financed by capital outflows from the United States, played an important role in easing US financial conditions further (see Acharya and Schnabl 2010; Bernanke and others 2011; Shin 2012).[49] Liquidity was ample globally, but given the dollar's global role, a Federal Reserve policy of low interest rates helped to bring that about.

US FISCAL AND MONETARY POLICY Sizable tax cuts in 2001 and 2003 provided a tailwind to the current account deficit. Net government saving dropped from 1.2 percent of GDP in 2000 to −5.1 percent of GDP in 2003, before slowly recovering through 2006.[50]

Even after the positive fiscal impulse moderated, private spending continued rising, fueled in part by home price appreciation. The proposition that accommodative Federal Reserve policy added to financial ease and supported the bubble's emergence and growth is contested. Studies such as those by Jarociński and Smets (2008) and by Jordà, Schularick, and Taylor (2015) suggest that monetary policy had a significant effect on home prices. Dokko and others (2011) argue that while low interest rates raise home prices, the US increases in the 2000s were far greater than what the historical correlation between home prices and interest rates would suggest. They attribute the divergence to innovations in housing finance. Those who argue that interest rates have little impact on home prices also implicitly deny a

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49. Figure 4 shows how US gross foreign assets and liabilities both rose sharply after shrinking due to the Asian crisis and dot-com recession.

50. BEA, "Table 5.1. Saving and Investment by Sector."

Table 2. Unemployment Gap and Consumer Price Inflation, 2001–2008

Year	Unemployment gap (p.p.)	Inflation (%)
2001	0.45	2.8
2002	0.83	1.6
2003	0.81	2.3
2004	0.42	2.7
2005	−0.04	3.4
2006	−0.58	3.2
2007	−0.22	2.9
2008	1.85	3.8

Source: Bureau of Labor Statistics, CBO, and World Bank, all via FRED.

Note: Fourth-quarter unemployment rate (series UNRATE) less noncyclical unemployment rate (series NROU) and annual Consumer Price Index inflation rate (series FPCPITOTLZGUSA).

major channel through which capital inflows are supposed to ignite housing booms, namely, by bringing about lower interest rates.[51]

Less debatable is that the Fed's stance did nothing to restrain the housing market froth. It certainly contributed to the dollar depreciation that began in 2002, reinforcing the impact of higher dollar debt issuance by US residents. Figure 19, panel B, shows that US short-term real rates fell below foreign rates at the start of 2001, and the gap widened steadily until shortly before the Fed began its hiking cycle in June 2004. Only late in 2006 did US real short rates converge with those of other industrialized economies.

An important question is whether monetary policy might have been too loose, as several Fed critics have argued. The rate was arguably too low from a financial stability perspective, but that was not the immediate target for monetary policy. After the brief US recession of 2001, the Fed held interest rates low in the face of a "jobless recovery" and fears of entering into Japanese-style deflation (Bernanke 2010). Raising rates might therefore have been contractionary and deflationary. The counterfactual is hard to prove. Unless one assumes that deflationary expectations had already set in, the real policy interest rate was negative and far below standard estimates of neutral or natural interest rates for that period, the lowest of which is about 1 percent (see Obstfeld 2025, fig. 21). In any event, the Fed somewhat overshot: Unemployment fell below the Congressional Budget Office's (CBO) noncyclical rate of unemployment in mid-2005 while inflation rose steadily from its 2002 level of 1.6 percent (see table 2). The very

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51. See the discussion of the housing sector, capital inflows, and interest rates in Bernanke (2010).

high inflation of 2008, soon to be swept away by the financial crisis, alarmed policymakers at the time. It was a worldwide phenomenon driven by booming commodity prices.

Low import price inflation could be a channel for foreign developments to influence US monetary policy and therefore the housing market. As figure 22 shows, however, overall US import prices were rising from early 2002. The causes were the dollar's fall and a global upswing following the dot-com collapse, driven by abundant global liquidity. The relative price of imports from China did fall sharply—creating the China shock— but given their still limited presence in the import price deflator, this did not offset rising relative prices for other imports (see figure 23). Studies around that time from the Federal Reserve and the Bank of Canada suggest that until the late 2000s, the influence of Chinese exports on US and global inflation was small (see Kamin, Marazzi, and Schindler 2004; Côté and de Resende 2008).[52]
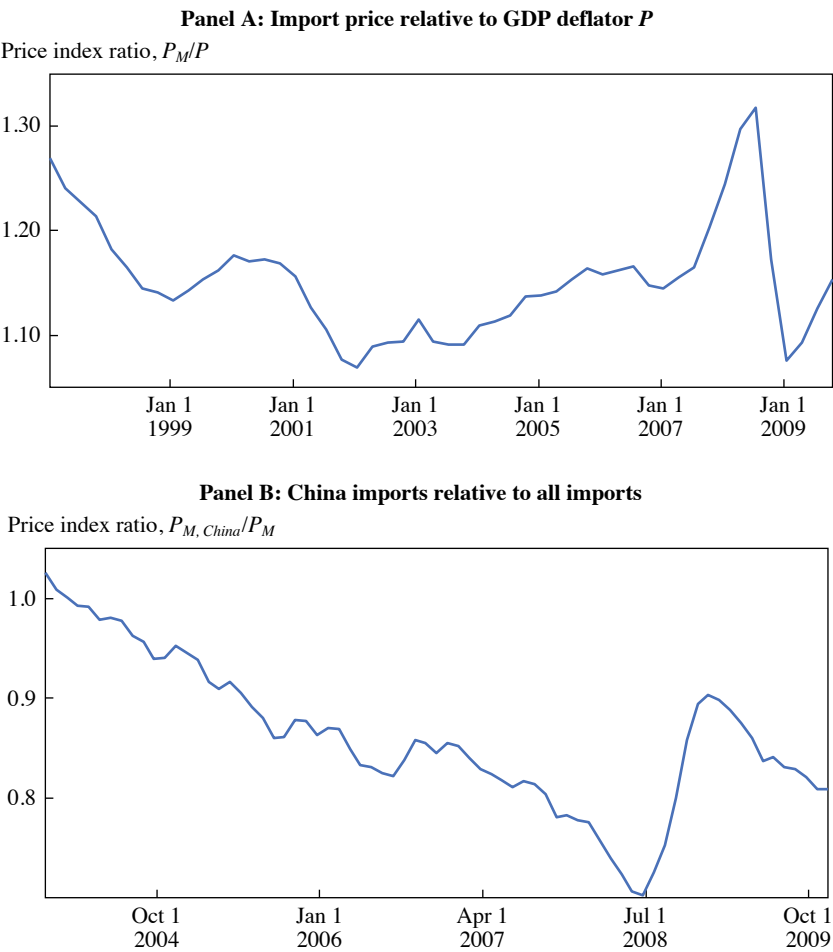
FOREIGN SAFE ASSET DEMAND The Metzler (1968) model predicts that a reduction in Home saving—a leftward shift of the saving schedule in figure 14—will raise domestic interest rates as it widens the current account deficit. If a US consumption and borrowing boom caused the deficit to widen in the 2000s, US interest rates therefore should have risen. Yet long-term real rates stayed fairly flat (see figures 18 and 19, panel A).

Figure 16 suggests how a simultaneous fall in US saving and rise in foreign preference for US assets could have this effect. When occurring together, a fall in Home saving and a rise in global preference for Home assets have opposite effects on the Home interest rate but parallel additive effects on the deficit.

One source of preference for US assets was foreign demand for dollar reserves (figures 12 and 13). Potentially, that demand better than doubled between 2002 and 2008, with holdings reaching a level between 32 and 40 percent of US GDP. Private sector demand for safe assets also played a role (Caballero, Farhi, and Gourinchas 2008). Fed policy aimed at keeping short-term interest rates low was another (domestic) source of demand for US bonds. While foreign official demand for safe dollar assets pushed in the direction of a stronger dollar, easy Fed policy (coupled with forward guidance) and a surge in dollar borrowing by US households were stronger drivers of the exchange rate.

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52. Figure 9 suggests why the inflation impact was small for the United States, although other US trade partners may have lowered export prices in response to Chinese competition.

Figure 23. Relative Deflators for All Import Prices and Imports from China
(Quarterly and Monthly Data)

Panel A: Import price relative to GDP deflator *P*

Price index ratio, P_M/P

Panel B: China imports relative to all imports

Price index ratio, $P_{M, China}/P_M$

Source: BEA and Bureau of Labor Statistics.

CHINA'S WTO ACCESSION As discussed earlier, this development, while perhaps not greatly lowering global inflation, was a negative shock to the global demand for US exports, and likely to the trade balance. The shock was bigger because Chinese policies, including undervaluation of the renminbi, state aid to exporters, and suppression of domestic consumption, lowered export prices. In this sense, higher Chinese saving directly influenced US trade—although the exchange rate effect was opposite to what the capital inflow surge central to Bernanke's (2005) account would imply.

IV.E. Summary

The record trade and current account deficits that the United States experienced between 1998 and 2008 have multiple interacting causes, foreign and domestic. For the 2002–2008 period of the biggest housing bubble, domestic forces played a major role.

In a textbook Keynesian model, the trade balance depends—apart from exogenous technology and preference shocks—on domestic absorption (which raises imports and may limit exports), foreign absorption (which raises exports), and the real exchange rate (which shifts global demand toward domestic goods when the home currency depreciates).

Between 1998 and 2001, the dollar strengthened, discouraging exports and encouraging imports, and the world economy slowed. Unsurprisingly, the US trade balance deteriorated.

Between 2002 and 2008, the picture is more complex. China's WTO entry was an important exogenous negative shock to the global demand for US exports, but owing to the dollar's strong depreciation, exports rose on net. Generally buoyant world demand helped. How, then, could the US trade balance have become so deeply negative?

The answer must depend on the rise over this period of two key US absorption components, consumption and real estate investment, largely driven by the housing bubble. The resulting rise in import demand seems too large, however, to be explained entirely by a stable relationship between absorption and imports. It is possible that a US preference shift in favor of imports also occurred. With overall import prices rising relative to the GDP deflator, import spending as a share of absorption rose from 12.5 percent in 1999 and 13.7 percent in 2000 to 16.5 percent in 2008.[53] Figure 21 suggests that this shift cannot be explained by expanding global value chains over that period, as imports net of exported foreign content also rose sharply.

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53. BEA, "National GDP & Personal Income," https://www.bea.gov/itable/national-gdp-and-personal-income.

V. Conclusions and Implications

On April 2, 2025, shortly after this paper's presentation at the Spring 2025 *Brookings Papers on Economic Activity* Conference, President Trump announced a schedule of so-called reciprocal tariffs.[54] These country-specific tariffs—paused a week later after adverse financial market reactions—were "calculated as the tariff rate necessary to balance bilateral trade deficits between the U.S. and each of our trading partners" (USTR 2025, p. 1). President Trump's accompanying statement left no doubt as to his motivation. Claiming that over decades, "our country has been looted, pillaged, raped, and plundered by nations near and far, both friend and foe alike," he concluded that "chronic trade deficits are no longer merely an economic problem; they're a national emergency that threatens our security and our very way of life" (Trump 2025).

Among the ills blamed on US trade deficits, two stand out. One is the charge that deficits cause deindustrialization, harming workers and stifling manufacturing sector innovation. The second is that deficits transfer wealth to our trade partners, including those who are strategic competitors. Putting these together, trade deficits are held to drain America of its manufacturing jobs and its treasure. These concerns motivate current White House actions aimed at reducing trade deficits. Because trade policies at home and abroad are not primary drivers of US trade deficits, unless tariffs are so high as to choke off most trade, they are unlikely to reduce deficits much—except if they induce a US recession more severe than those the tariffs induce abroad. Tariffs will raise prices to consumers and penalize export firms, which are especially dynamic and productive (see, e.g., Bernard and others 2007; Atkin, Khandelwal, and Osman 2017).

Even more ineffective and harmful are attempts to compress US bilateral trade deficits one by one. Unless US spending is brought into line with output, bilateral measures amount to a game of whack-a-mole, with deficit reduction vis-à-vis one bilateral partner being matched by bigger deficits or smaller surpluses elsewhere. Other things being equal, increases in US saving—either through policies that raise the very low US personal saving rate or measures to narrow the unsustainable US federal budget deficit—are prerequisites for external deficit reduction and desirable on their own merits. China could raise its residents' welfare while also contributing constructively to reducing global current account imbalances, were it to change

features of its own policy framework that suppress domestic consumption (Gourinchas and others 2024).

It is precisely because tariffs need not close the gap between spending and output that they need not reduce the demand for nontradable services, without which the labor necessary to expand manufacturing is unavailable. Tariff proponents argue that foreign manufacturers will expand plant and equipment in the United States if excluded from the domestic market by tariffs, but standard macroeconomic models imply that tariffs, especially those that fall on intermediate goods, lower the return to capital in the United States and therefore have the net effect of driving capital abroad. That is also the conclusion of the classic microeconomic analysis of Mundell (1957).

Critics of trade deficits also cite the transfer of US wealth abroad. Why doesn't the large US net external liability induce a compression of spending that reduces the trade deficit, as in the gold-specie-flow mechanism that Hume (1752) first expounded nearly three centuries ago? One reason is that consumption spending depends on overall wealth, not just net external wealth, and the former has grown apace even as liabilities to foreigners have grown. Excluding government bond holdings, overall US private sector wealth in 2023 was about six times as big as the absolute value of the NIIP (UBS 2024).[55] Deficits that fund productive home investment increase total national wealth.

Concerns about the large negative US NIIP sometimes focus on risks of a funding crisis, but the overall NIIP is the wrong variable for assessing this. Equity liabilities, portfolio and FDI, are self-liquidating and not subject to default. Furthermore, US external assets cannot automatically be used to repay debts—the owners are not necessarily the same as the external debtors.

A more reliable measure of default or crisis risk would be the US *gross* debt liability to foreigners, which at the end of 2023 stood at 82 percent of GDP (Milesi-Ferretti 2025b). Among US foreign debtors, the biggest by far is the US federal government, and there also resides the biggest risk. Were fiscal deficits to grow so that markets demanded much higher interest rates on Treasury debt, the result could cascade through the US financial system with unpredictable effects.

Developments in US asset markets following President Trump's tariff announcements, including higher Treasury yields and notable dollar depreciation, sparked widespread discussions of the risks of financial crisis.

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55. A more detailed analysis of the implications would take account of the highly unequal distribution of wealth in the United States.

The dollar's fall stands in sharp contrast to the currency *appreciation* that theoretical models predict a tariff will cause. However, the US trade policy process of 2025 has been far from the clean, one-off permanent tariff that the models assume. Tariffs have been announced, withdrawn, and reintroduced, sparking significant foreign retaliation or retaliation threats. Policy uncertainty and political pressure on the Fed have raised US asset risk premia, another factor behind dollar depreciation.[56] Observers increasingly question the durability of the dollar's central international status. Finally, professional forecasters' recession probabilities rose after January 2025 in light of President Trump's trade warfare, jumping markedly after the April 2 tariff announcement before declining subsequently as the administration pursued negotiations with trade partners. If the president's approach to reconfiguring US trade relationships succeeds in reducing the overall trade deficit significantly, a US recession will be the most likely reason.

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56. For example, see the analysis in McKibbin, Hogan, and Noland (2024).

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Comments and Discussion

COMMENT BY

BRENT NEIMAN
This paper by Maurice Obstfeld catalogs forces contributing to the persistent US trade deficit, discusses the repercussions of the deficit, and evaluates policies—including tariffs—that aim to eliminate the deficit. It was presented at the *BPEA* conference on March 27, 2025. Within a week, on April 2, the White House announced "reciprocal" tariffs that, if implemented, would increase US tariffs to their highest levels in more than a century. To authorize these tariffs, the administration invoked the International Emergency Economic Powers Act and cited "large and persistent annual U.S. goods trade deficits" as evidence of the conditions that "constitute an unusual and extraordinary threat" to US national security.[1]

Following the White House announcement, global stock markets collapsed. Academics, business leaders, and other constituents publicly expressed concerns regarding the assessment of the emergency and desirability of the reciprocal tariffs as a proposed remedy. Many of their arguments are found and elaborated in Obstfeld's analysis. Though many of the tariffs remained in place at the time of writing, some of the larger rates

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proposed on April 2 were put on a "pause" until early July. Obstfeld's piece has been unusually and extraordinarily timely and constructive.

Below, I start by summarizing some of the paper's new facts and key contributions. I then ask: How unusual is it for a country to run a persistent long-term deficit and how confidently should economists stand in their view that higher tariffs do not reduce deficits? I conclude my comments with brief thoughts on the possibility of the administration turning to international cooperation, along the lines of the 1985 Plaza Accord, to adjust exchange rates and close deficits.

OBSTFELD'S FOUR GOALS Obstfeld states that the paper has four goals. In pursuit of those goals, he introduces or emphasizes a number of facts that caused me to update my views.

The first goal is to clarify how deficits relate to net foreign assets. I had not realized that the cumulated US current account balance has been below (i.e., more negative than) the US net international investment position (NIIP) since 2020. Obstfeld also highlights how the share of equity in the foreign portfolio of US assets shifted over the past decade from about one-third to more than one-half. These facts suggest potentially large changes in the future dynamic properties of the US NIIP relative to most of our experience since 1975, when the United States started running a persistent deficit.

The second and third goals are to demonstrate why deficits need not be associated with trade liberalization, dollar dominance, or gross official inflows, and to emphasize the particular salience of domestic drivers of the deficit during 1998–2008. Obstfeld helpfully stresses that post-liberalization increases in bilateral deficits with China, Mexico, and Canada account for only a small share of the total US trade deficit in goods. Further, I was unaware that global reserve holdings of US dollars have been declining as a share of US GDP since 2014. Both of these simple analyses are insufficient on their own to fully dispel common myths about the US deficit. But the analyses constructively poke large holes in the most basic, and oft repeated, versions of those myths.

The fourth goal is to comment on recently enacted international economic policies, particularly the reciprocal tariffs. Here, I also agree with the author's assessments but will elaborate in what follows on three key issues related to these policies and their motivation.

HOW UNUSUAL IS THE PERSISTENCE OF US DEFICITS? An underlying presumption in most discussions of the US trade deficit is that its persistence is unusual or unnatural. After all, countries borrow by running deficits, and standard theory suggests they should with some frequency pay off that borrowing (or start lending) by running surpluses. If the persistent US deficits

are empirically exceptional, then they warrant an exceptional theoretical explanation, such as an appeal to the special standing of the US dollar or a claim that the world specifically targets the United States with unfair treatment.

It is underappreciated, though, that when it comes to goods trade, it is very common to run persistent trade deficits.[2] To show this, I downloaded data on goods trade balances from the International Monetary Fund (IMF) International Trade in Goods by Partner Country (IMTS) data set, formerly Direction of Trade Statistics (DOTS), and kept data from 1975 onward, about when the US trade balance turned persistently negative. I considered all countries with data for at least forty-three of the forty-nine possible years, as the data run through 2023 and I wanted to include a large cohort that entered in 1981.

Figure 1 is a histogram that shows how frequently countries run persistent trade deficits. To understand the figure, start by considering the United States. It has forty-nine years of data, with complete entries from 1975 through 2023; 1975 is the only year without a goods trade deficit. The US value on the *x*-axis for the percentage of years with a deficit, therefore, equals 0.98 (= 48/49), a value highlighted by the dashed vertical line toward the right side of the plot.

Of the 153 countries with data on goods trade balances, seventy-one have deficits for at least 90 percent of the years they are in the sample, that is, a highly persistent goods deficit. These seventy-one are the countries represented by the rightmost bin of the histogram, and the United States is one of them. In having a persistent goods deficit, the United States shares company with a bit less than half of the other countries, including large economies like India and the United Kingdom as well as smaller economies like Guatemala and Türkiye. In this simple sense, running a persistent goods deficit is not an exceptional state of affairs.

Even if one (reasonably) rejects the comparison of the United States with developing or emerging market countries, the basic observation remains. Among advanced or large economies, having persistent goods deficits is a surprisingly common condition. Figure 2 shows the same analysis as figure 1 but run on a sample that only includes the thirty economies with sufficient data and that are classified by the IMF as advanced plus five of

2. The deficits referenced to motivate the administration's April 2 reciprocal tariffs were (bilateral) deficits in goods, more narrow than the broader trade deficit that includes both goods and services. Robert Lighthizer, the US trade representative during President Trump's first term in office, recently defended such a focus when he said, "The services numbers are really bogus" (Council on Foreign Relations 2025).

Figure 1. Histogram of Economies Based on Share of Years Since 1975 with a Goods Trade Deficit

Number of countries

Percent of years since 1975 with a trade (in goods) deficit
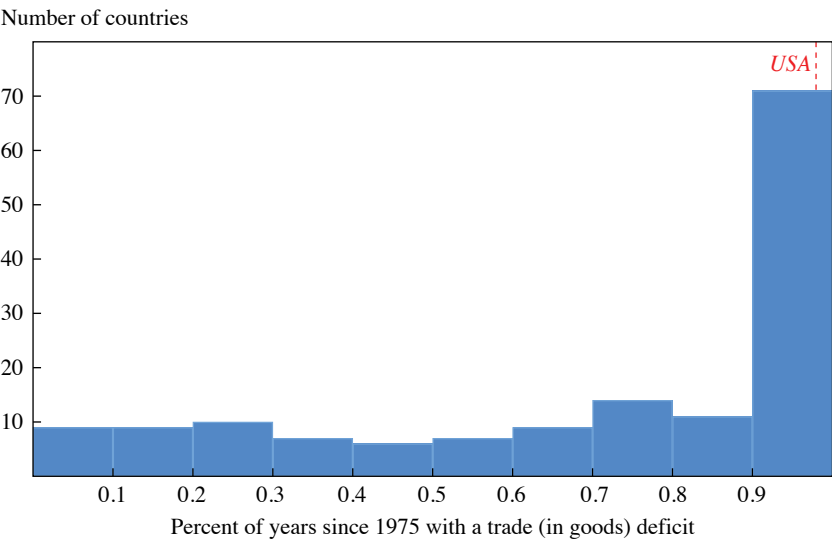
Source: Author's calculations based on the IMF IMTS data set (formerly DOTS).

Figure 2. Histogram of Advanced Economies and Five BRICS Economies Based on Years Since 1975 with a Goods Trade Deficit

Number of countries

Percent of years since 1975 with a trade (in goods) deficit
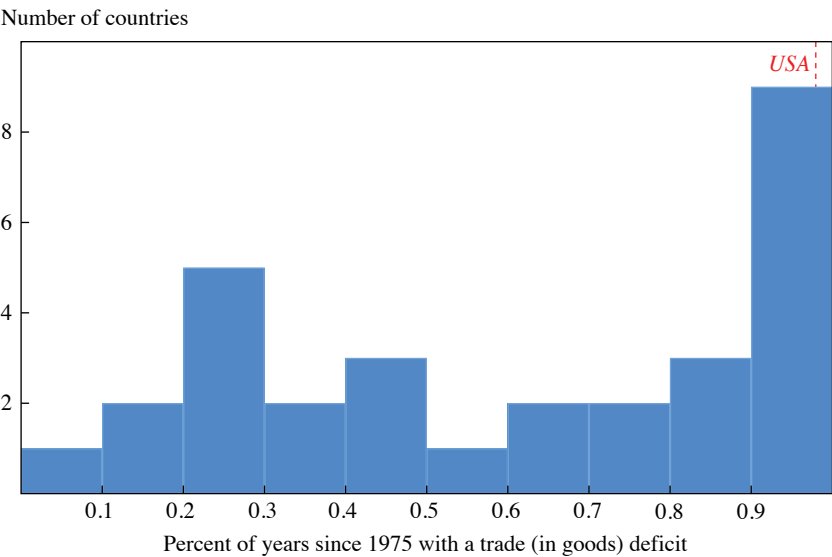
Source: Author's calculations based on the IMF IMTS data set (formerly DOTS).

the BRICS countries (Brazil, Russia, India, China, and South Africa). Nine of the thirty—nearly one-third—of those economies have persistent goods deficits, including Israel, Hong Kong, and Spain.

This analysis falls well short of proving anything about the determinants of the persistent US trade deficit, but suggests caution in attributing the deficit to anything particularly special or rare about the United States, such as its status as the unique issuer of the globally dominant currency. More mundane but powerful factors that can be present in many countries, including demographic or productivity trends, say, continue to warrant consideration as possible drivers of the persistent US deficit.[3]

SHOULD WE BE *THAT* CONFIDENT THAT TARIFFS WON'T REDUCE THE DEFICIT? A common view among economists is that trade policy has limited or no ability to reduce trade deficits. For example, on March 11, 2025, a survey conducted by the Kent A. Clark Center for Global Markets at the University of Chicago Booth School of Business asked experts whether they agreed that "matching US import tariffs to the tariffs, value-added taxes and non-tariff barriers imposed on US goods by other countries would substantially reduce the US trade deficit."[4] Some experts expressed uncertainty, but essentially no one expressed agreement. Weighted by confidence, more than half expressed disagreement or strong disagreement. Relatedly, a number of public statements and opinion pieces casually reference Lerner symmetry or say, more or less, that because trade balances reflect the gap between a country's saving and investment, tariffs aren't relevant, without explaining further. Obstfeld is careful in explaining his logic but reaches a similarly confident judgment and says that "the overall US trade deficit . . . will not respond strongly to new tariffs."

I fully agree with the author's (and the broader profession's) view that higher tariffs (all else equal) lead to exchange rate appreciation and foreign retaliation, both of which should bring down exports together with imports. And I also wouldn't typically expect tariffs to have a major impact on desired saving and investment. So my best guess would also be that tariffs will not meaningfully reduce the deficit. But I'm *much* less confident. I worry about placing too much emphasis on that particular critique. Rather, I view the more robust and consequential point to be that broad tariffs

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3. The analysis would not produce as many persistent deficit economies if, in addition to goods, services were included. For example, persistent goods deficit countries like the United States or Spain often run services surpluses driven by large exports of tourism, education, and business services.

4. Kent A. Clark Center for Global Markets, "Tariffs, Reciprocal and Retaliatory," survey, March 11, 2025, https://kentclarkcenter.org/surveys/tariffs-reciprocal-and-retaliatory/.

impose significant economic costs and are a suboptimal tool (relative, say, to other taxes that more efficiently raise revenues) for the purpose of trade deficit reduction.

To what do I owe my lack of confidence? Why might increasing tariffs possibly reduce deficits? The theoretical case is made in Obstfeld and Rogoff (2001), Obstfeld's seminal "Six Puzzles" paper written with Ken Rogoff. Their key observation was that, just as trade frictions (like tariffs) reduce the gains from intratemporal trade, they also reduce the gains from intertemporal trade. So just as higher trade costs should reduce imports and exports, they also should reduce the magnitude of the gap between them. In fact, one of the puzzles they showed that could potentially explain trade frictions was the Feldstein and Horioka (1980) puzzle, which points out that current account imbalances are relatively small!

A number of papers, including Reyes-Heroles (2016) and Eaton, Kortum, and Neiman (2016), suggest the quantitative salience of the Obstfeld and Rogoff (2001) mechanism. Even more relevant for this issue is Lorenzoni (2019), which compares the effect of an increase in tariffs on the trade deficit in two distinct theoretical environments. In the first, a somewhat standard model where US deficits reflect a desire to smooth intertemporal consumption, higher tariffs do reduce the deficit. By contrast, a second environment features foreign agents that derive utility directly from holding US-provided safe assets. This environment features a steady-state US deficit that need not change with higher tariffs provided: (1) The tariffs are permanent, (2) foreign countries fully retaliate, and (3) wealth effects from valuation changes on net foreign assets are small. Such conditions, and the primitive assumption that foreigners will always have a special demand for US assets, of course, need not hold.[5]

LESSONS FROM THE PLAZA ACCORD FOR MAR-A-LAGO? In addition to tariffs, the possibility of a coordinated dollar depreciation has also received attention (including in the working draft of Obstfeld's paper) as another possible policy the current administration may use to try to reduce the deficit. Predictions abound about a possible "Mar-a-Lago Accord" (named after the president's Florida residence), perhaps cut from the mold of the Plaza

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5. Helpfully, within the past month, a number of new working papers have been distributed that shed further light on this issue. Itskhoki and Mukhin (2025) highlight the relevance of net foreign asset exposures in dictating the extent to which tariffs alter trade deficits. Costinot and Werning (2025) show that permanent tariffs can reduce trade deficits depending on properties of the Engel curves for imported and exported goods. Auclert, Rognlie, and Straub (2025) and Ignatenko and others (2025) also analyze the implications of tariffs on trade balances and other macroeconomic aggregates.

Accord, where in 1985 the United States coordinated with France, Germany, Japan, and the United Kingdom and depreciated the dollar.

Much of the public discussion of this possibility is too facile given what we learn and teach in basic international finance classes. Policymakers can manage the *nominal* exchange rate, but not the *real* exchange rate, over the long run. If sticky prices mean that a onetime unexpected nominal depreciation increases the relative price of imports and decreases the relative price of exports, this should lead to inflationary pressures that persist until the real exchange rate returns to the path it would have been on absent the nominal depreciation. Policy-driven realignments of nominal exchange rates can only lead to persistent realignments of real exchange rates if the new levels are consistent with macroeconomic fundamentals.

To see what happened in 1985, figure 3 plots the nominal and real exchange rate trajectories before and after the Plaza agreement, where an increase in each series captures a depreciation relative to the US dollar.[6] The coordinated nominal dollar depreciation in 1985 does appear to be followed by persistent real exchange rate adjustments in all cases. It could be that: (1) Pre-Plaza, real exchange rates were inconsistent with fundamentals; (2) post-Plaza, there was coordination on fiscal or structural macroeconomic policies; or (3) standard models suggest faster adjustment than what we see in the world. A more serious analysis would be needed to make progress on which combination of these three explanations is most likely, though the figure does show that the scale and speed of the nominal dollar appreciation in the five years preceding 1985 far exceed that in the run-up to 2025. If the first explanation played a key role in the persistence of the Plaza-induced real dollar depreciation, we may not expect a similar nominal intervention at this point in time to result in as persistent a real effect.

Further, figure 3 shows that the real value of the dollar, at least relative to these four countries' currencies, is at similar levels in 2025 as it was in 1985, on the eve of the Plaza Accord. Some commentators have marshaled this as evidence of the need for a Mar-a-Lago Accord today. But it is not at all clear that the benchmark of relative purchasing power parity— where real exchange rate levels should, over the long run, remain bound or unchanged—is the most useful one on which to base this judgment. An alternative, the Balassa-Samuelson model, posits that long-run trends in

6. The exchange rate data are monthly and their levels are normalized to equal one at the end of September 1985. The exchange rate series for France and Germany are chained to connect values of the franc and deutsche mark with the euro.

Figure 3. Nominal and Real Exchange Rate Paths for France, Germany, Japan, and the United Kingdom versus the United States
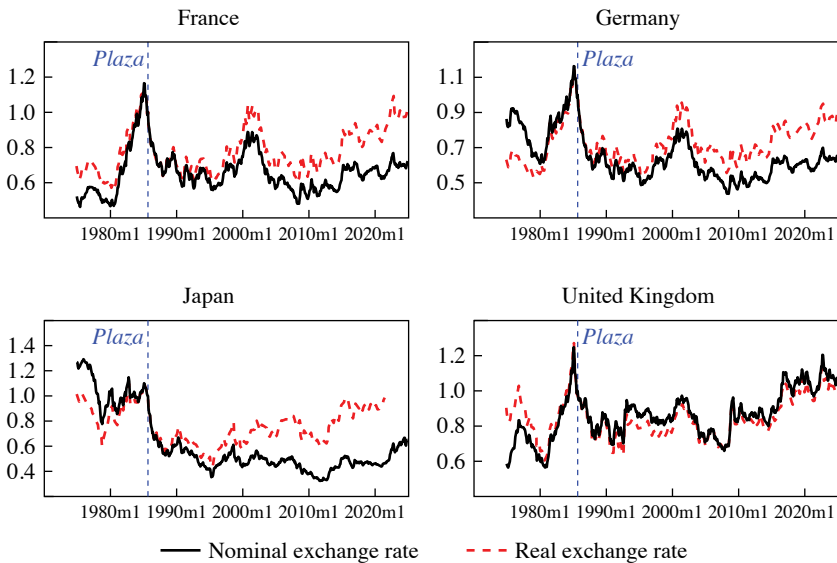
Source: Author's calculations based on exchange rate data from the Federal Reserve Bank of St. Louis's FRED series EXUSEU, EXFRUS, EXGEUS, EXJPUS, and EXUSUK, as well as Consumer Price Index data from the Organisation for Economic Co-operation and Development (OECD).

relative productivity growth should lead to long-run trends in real exchange rates, perhaps consistent with the steady upward path since 2010.

CONCLUSION This paper is incredibly timely, well-written, and useful for a broad audience. Obstfeld catalogs how trade deficits fit into our country's balance sheet and characterizes the forces that have likely contributed to and resulted from the deficits. And he comments on recent policies—particularly tariffs—that aim to close the deficits. I agree with the author's core points and would guess they are consistent with the views held by a large majority of academic economists.

One suggestion is that we at least consider the possibility that the persistence of the US trade deficit does not result from anything exceptional about the US economy, such as the role of the dollar. After all, a large number of other countries similarly run persistent deficits, at least in goods trade, which appears to be the current administration's focus.

Another suggestion is to increase the standard error bands around the profession's typical assessment that tariffs have only limited implications for the deficit. Theory offers the possibility of how they might be more

strongly connected. Further, the scale and reach of the recently announced tariffs stand out relative to the more limited prior experiences analyzed in existing empirical studies. Those of us who think a very large and very broad increase in tariffs will do much more harm than good, even if they were to eliminate the deficit, may wish to shift our emphasis onto that message.

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COMMENT BY

FABRIZIO PERRI[1]   I have rarely seen a more timely paper than this work by Maurice Obstfeld. With his usual nose for relevant and important issues, Obstfeld wrote this paper way before the White House brought the trade deficit and tariffs onto the first page of the world news. The first contribution of this paper, as I see it, is to stress that trade deficits and tariffs are not necessarily as tightly connected as has been argued by the current administration.[2] Tariffs do make foreign goods more expensive for domestic residents but do not necessarily reduce trade (or current account) deficits, as the current account is the result of intertemporal investment/ consumption decision relative to the income profile of the residents of a country. Another important insight from the paper is that, in an economy at full employment, like the one United States is in currently, the link between tariffs and job creation is tenuous. Supporters of tariffs use the very influential China syndrome work (Autor, Dorn, and Hanson 2013) to argue that imposing tariffs on China will bring jobs back to many communities that have lost these jobs to import competition. Obstfeld points out that while tariffs may shift jobs to sectors competing with imports, with the economy close to full employment, those jobs must come from elsewhere in the economy, implying offsetting job losses. Although the trade literature has extensively examined the microeconomic impact of tariffs, there has been, so far, relatively less work on their broader macroeconomic effects. The change in trade policy that took place on April 2, 2025, has brought tariffs and trade deficits to the forefront of the macro debate, and one can argue that this paper by Obstfeld got things started.[3] The objective of this discussion is to present a simple extension of a standard textbook framework of international macroeconomics that allows us to assess how tariffs affect trade deficits, net foreign asset position, jobs, and the response of key variables to future shocks. The overall objective is to build and expand on the work of Obstfeld, providing more light on the myths and realities surrounding the causes of trade deficits and their connection with tariffs.

A TEXTBOOK FRAMEWORK   The framework I use to discuss the macro implications of tariffs is a simple extension of the standard international

    2. See the note issued by the Office of the United States Trade Representative (2025).

    3. Recent contributions include, among others, Waugh (2019), Barattieri, Cacciatore, and Ghironi (2021), Bergin and Corsetti (2023), Bianchi and Coulibaly (2025), Auray, Devereux, and Eyquem (2025), Auclert, Rognlie, and Straub (2025), Itskhoki and Mukhin (2025), and Kalemli-Özcan, Soylu, and Yildirim (2025).

business cycle setup of Backus, Kehoe, and Kydland (1994). I extend the standard setup along two dimensions. First, as a big motivation for tariffs is to increase jobs in sectors that are competing with imports, I will introduce, in each country, a sector that produces a good that is vulnerable to foreign competition and therefore benefits from tariffs. Second, I will introduce, in a simple way, international equity diversification, so that the setup can speak not only about the impact of tariffs on trade deficits but also on net foreign asset positions, through valuation effects.

Consider a two-country (home and foreign) symmetric economy where, in each country, competitive firms produce, using capital, labor, and a constant returns to scale technology, two varieties of two intermediate goods, aluminum (a) and bricks (b). Home firms produce varieties a and b, while foreign firms produce varieties a^* and b^*. Good a is the dominant good for home, in the sense that home firms have higher total factor productivity (TFP) in producing a than in producing b, while good b is the dominant good for foreign firms, which have higher productivity in producing b^* than a^*. The following equations describe the production of the four intermediate varieties in the two countries:

$$y_{a,t} = e^{z_t + \gamma} k_{a,t-1}^{\alpha} l_{a,t}^{1-\alpha}$$

$$y_{b,t} = e^{z_t} k_{b,t-1}^{\alpha} l_{b,t}^{1-\alpha}$$

$$y_{b^*,t} = e^{z_t^* + \gamma} k_{b^*,t-1}^{\alpha} l_{b^*,t}^{1-\alpha}$$

$$y_{a^*,t} = e^{z_t^*} k_{a^*,t-1}^{\alpha} l_{a^*,t}^{1-\alpha},$$

where $y_{j,t}$, $l_{j,t}$, and $k_{j,t-1}$, with $j = a, b, a^*, b^*$, represent output, labor, and installed capital for each of the four varieties, z_t and z_t^* are country-specific productivity shocks, and $\gamma > 0$ is the parameter that determines the productivity advantage of the home country in producing good a (and of the foreign country in producing good b). Each variety produced in the two countries is either destined for domestic use ($d_{j,t}$) or for export in the other country ($x_{j,t}$) so the following equations hold:

$$y_{a,t} = x_{a,t} + d_{a,t}$$

$$y_{b,t} = x_{b,t} + d_{b,t}$$

$$y_{a^*,t} = x_{a^*,t} + d_{a^*,t}$$

$$y_{b^*,t} = x_{b^*,t} + d_{b^*,t}.$$

In each country, another set of competitive firms operates constant returns to scale technologies to combine all four varieties to produce country-specific final goods F_t and F_t^*. The technologies are described by:

$$F_t = \left(G\left(d_{a,t}, x_{a*,t} \right) \right)^{\theta} \left(G\left(d_{b,t}, x_{b*,t} \right) \right)^{1-\theta}$$

$$F_t^* = \left(G\left(d_{b*,t}, x_{b,t} \right) \right)^{\theta} \left(G\left(d_{a*,t}, x_{a,t} \right) \right)^{1-\theta},$$

where the parameter $\theta > 0$ captures the importance of each intermediate in the production of the final good and $G(d, x)$ is a CES function of the following form:

$$G\left(d, x \right) = \left[\omega d^{\frac{\sigma-1}{\sigma}} + \left(1 - \omega \right) x^{\frac{\sigma-1}{\sigma}} \right]^{\frac{\sigma}{\sigma-1}}.$$

The parameter σ governs the elasticity of substitution between varieties, which is assumed to be larger than one, capturing the fact that home and foreign varieties of the same good are relatively easy to substitute in the production of the final good. The parameter ω governs the degree of home bias and is assumed to be larger than 0.5, capturing an import share that is typically less than 50 percent. Notice that sector b at home (and sector $a*$ abroad) is vulnerable to foreign competition: The variety it produces can be easily ($\sigma > 1$) substituted with the foreign variety $b*$, which is also produced more efficiently (as b is the dominant sector in the foreign country).

The final goods are used for consumption (c) and investment (i) in each of the two intermediate sectors so that:

$$F_t = c_t + i_{a,t} + i_{b,t}$$

$$F_t^* = c_t^* + i_{a*,t}^* + i_{b*,t}^*.$$

Moving now to prices, the price of the domestic final good F_t is normalized to one, while the price of the foreign final good in terms of the domestic final good (the real exchange rate) is denoted by e_t. Prices (at the dock, i.e., before tariffs are levied) of each of the four varieties relative to the final good in each country are denoted by $\chi_{j,t}$ and $\chi_{j,t}^*$ with $j = a, b, a*, b*$.

Firms' problem and tariffs. Intermediate goods firms operate the capital stocks, which are owned by domestic and foreign households. Their problem is standard, as they maximize the present discounted value of payouts. Here I write only the problem of firms producing variety a, as the problems

of the producers of the other varieties are similar. Firms choose employment $l_{a,t}$ and investment $i_{a,t}$ to solve:

(1)
$$\max_{l_{a,t}, i_{a,t}} \mathbb{E} \sum_{t=0}^{\infty} M_{a,t} \, p_{a,t}$$

s.t.

$$p_{a,t} = \chi_{a,t} \, y_{a,t} - w_{a,t} \, l_{a,t} - i_{a,t}$$

$$y_{a,t} = e^{z_t + \gamma} k_{a,t-1}^{\alpha} l_{a,t}^{1-\alpha}$$

$$z_{t+1} = \rho_z z_t + \varepsilon_{z,t}$$

$$k_{a,t+1} = \left(1 - \delta\right) k_{a,t} + i_{a,t}$$

$$k_{a,-1}, z_0 \text{ given}$$

where $p_{a,t}$ is the payout (in units of the home final good) of domestic firms that produce the a variety, $M_{a,t}$ is the stochastic discount factor the firms use to value future payouts, $w_{a,t}$ are wages (in units of the home final good) received by workers in the a sector, $\rho_z > 0$ is a parameter capturing the persistence of country-specific productivity shocks, $\varepsilon_{z,t}$ is a zero mean normally distributed shock, and δ is the depreciation rate of capital. Firms producing the final good also have a standard static problem for each period t, and again for brevity, here we write the problem of the home firms, as the problem of foreign firms is symmetric:

(2)
$$\max_{d_{a,t}, x_{a^*,t}, d_{b,t}, x_{b^*,t}} F_t - d_{a,t} \chi_{a,t} - d_{b,t} \chi_{b,t} - \left(1 + \tau_t\right)\left(x_{a^*,t} \chi_{a^*,t} - x_{b^*,t} \chi_{b^*,t} \right)$$

s.t.

$$F_t = \left(G\left(d_{a,t}, x_{a^*,t}\right) \right)^{\theta} \left(G\left(d_{b,t}, x_{b^*,t}\right) \right)^{1-\theta},$$

where τ_t is the tariff rate imposed by the home country on all its imports. All agents in the model expect domestic tariffs to follow an autoregressive process of the form:

$$\tau_t = \rho_\tau \tau_{t-1} + \varepsilon_{\tau,t},$$

where $\rho_\tau > 0$ captures the expected persistence of tariffs and $\varepsilon_{\tau,t}$ is a zero-mean normally distributed shock.

Households. Both countries are inhabited by infinitely lived households, which derive utility from consumption and disutility from labor,

and supply labor to firms in both sectors and receive wage payments in exchange. Households also hold a fixed, diversified portfolio of claims to the capital of the intermediate producing firms that each period deliver payouts $p_{j,t}$ with $j = a, b, a^*, b^*$. Consistent with data, I assume that this portfolio is biased toward firms of their own country and denote with the parameter $\lambda > 0.5$ the share of firms of their own country owned by households. Households also receive tariff revenues and trade internationally a one-period bond B_t (denominated in units of the domestic good) at price q_t. The problem of domestic households can then be written as:

$$(3) \qquad \max_{c_t, l_{a,t}, l_{b,t}, B_t} \mathbb{E} \sum_{t=0}^{\infty} \beta^t \left[\log\left(c_t\right) - \left(l_{a,t} + l_{b,t}\right)^2 \right]$$

s.t.

$$c_t + q_t B_{t+1} = w_{a,t} l_{a,t} + w_{b,t} l_{b,t} + \lambda\left(p_{a,t} + p_{b,t}\right)$$
$$+ \left(1 - \lambda\right)\left(e_t p^*_{a^*,t} + e_t p^*_{b^*,t}\right)$$
$$+ \tau_t \left(x_{a^*,t}\, \chi_{a^*,t} + x_{b^*,t} \chi_{b^*,t}\right) + B_t$$

$$B_0 = 0,$$

where β is the households' discount factor. The assumption that $\lambda > 0.5$ implies that the majority of the intermediate firms are owned by households of their own country, so I assume the stochastic discount factor that firms use to value future payouts is simply the stochastic discount factor of households in their country so that:

$$M_{a,t} = M_{b,t} = \beta^t \frac{c_0}{c_t}$$

$$M_{a^*,t} = M_{b^*,t} = \beta^t \frac{c_0^*}{c_t^*}.$$

Finally, the net foreign asset position (NFA_t) for the home country is given by:

$$NFA_t = \left(1 - \lambda\right)\left(e_t\left(k_{a^*,t} + k_{b^*,t}\right) - k_{a,t} - k_{b,t}\right) + B_t.$$

Equilibrium. An equilibrium for this economy is standard. It is a sequence for all prices, quantities, tariffs, and productivities, such that given prices and expectations of tariffs and productivities, consumers solve

Table 1. Parameter Values

Symbol	Name	Value
α	Capital exponent in production	0.36
β	Discount factor	0.98
δ	Depreciation of capital	10%
θ	Exponent on home good	0.55
λ	Home bias in firm ownership	0.6
ω	Weight on domestic varieties	0.65
γ	Productivity gap	20%
σ	Elasticity of substitution between home and foreign varieties	3
ρ_τ	Persistence of tariffs	0.9
ρ_z	Persistence of productivity	0.95

Source: Author's calculations.

problem (3), firms solve problems (1) and (2), all markets clear, and paths for tariffs and productivities are consistent with expectations. Given parameter values and realization of shocks, equilibrium paths can be computed using standard linearization techniques.

Parameterization. A period in the model is one year. All values of the parameters are reported in table 1.[4] Most parameter values are standard in this literature. Here I briefly discuss the parameters that are more important for determining trade flows and the impact of tariffs. The parameters θ and γ determine the size of the dominant sector in each country. I set $\theta = 0.55$ and $\gamma = 20\%$, and these values imply a size of the dominant sector that is around 60 percent of value added in each country. These choices imply that the larger size of the dominant sector is due both to preferences ($\theta > 0.5$ implies that in each country the intermediate dominant good has a larger share in the production of the final good) and to productivity ($\gamma > 0$ implies that in each country, TFP in the production of the dominant good is higher). I set $\omega = 0.65$ so to get an overall trade share of around 15 percent. I set the elasticity of substitution between home and foreign varieties to three. This relatively high value is chosen so as to give tariffs a better chance to create more jobs in the sector vulnerable to foreign competition. The parameter λ is set to 0.6 to reflect a share of US equity owned by foreigners of around 40 percent (Atkeson, Heathcote, and Perri 2025). Finally, as it is clear from the policy discussions and trade negotiations in early 2025, there is large uncertainty regarding the parameter ρ_τ, namely, the persistence of the tariff shock. In the first experiment I will set it to 0.9, implying that tariffs have a half-life of about six years, and in the second experiment I will consider a scenario in which tariffs are permanent.

4. Codes used to run the experiments are available on the Brookings website.
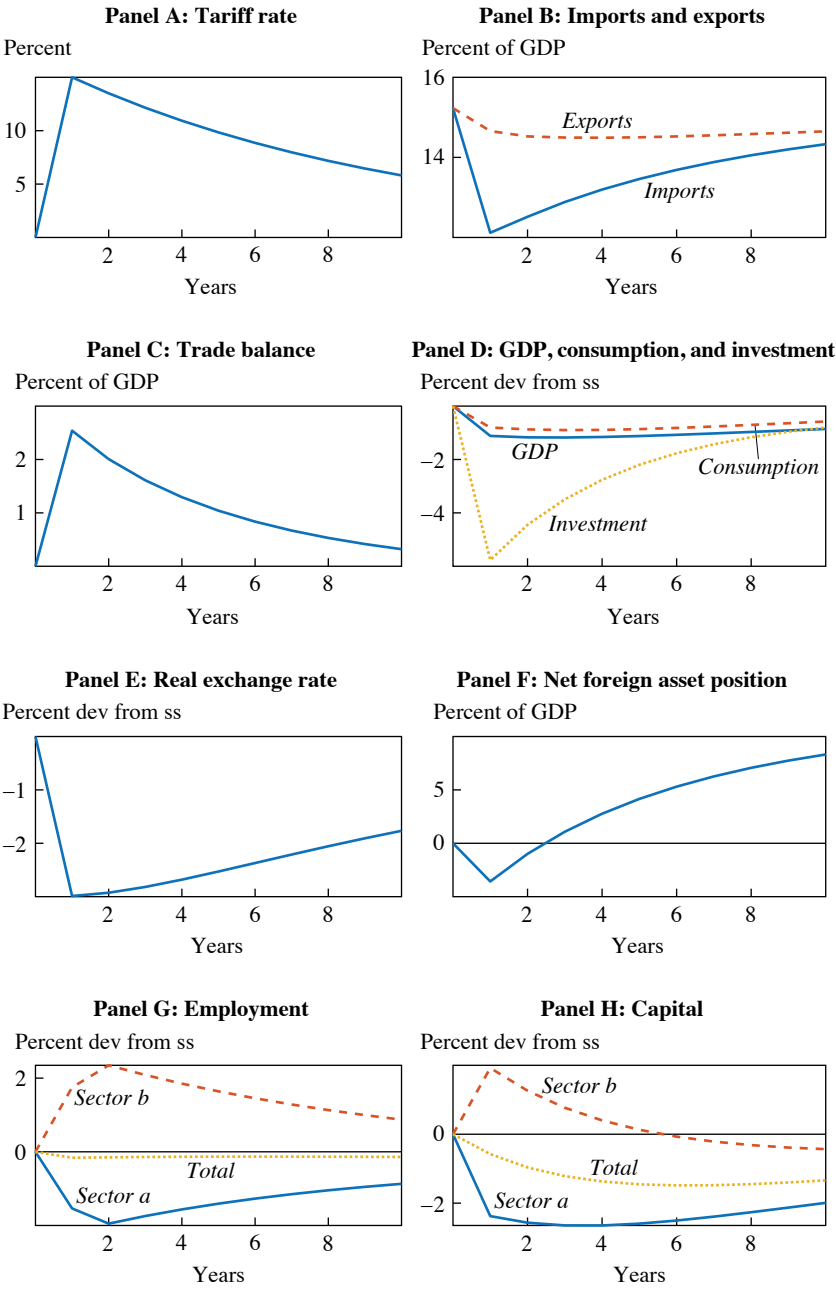
EXPERIMENTS I am now in the position of analyzing the impact of tariffs in this standard international macro setup.

Unilateral increase in tariffs. I will first consider a unilateral persistent increase of tariffs by the home country, from zero to 15 percent, and discuss its impact on the external balance of the home economy and on the employment outcomes, which are the main stated objectives of the implementation of the 2025 US tariffs. The results are presented in figure 1.

Panel A shows the expected path of tariffs after the initial shock is realized, showing that tariffs are expected to fall but to remain elevated for a number of years. Panel B shows that tariffs cause a sharp fall in imports and a milder fall in exports. Tariffs make the foreign varieties more expensive at home, so firms producing the final good substitute the imports with domestic varieties. This in turn makes domestic varieties more expensive on the international markets and foreign final producers use less of those, leading to a decline in exports. Since the decline in imports is larger than the decline in exports, panel C shows that the trade balance improves by about 3 percent of GDP. To understand the economics behind the trade balance improvement, it is useful to consider panel D, which shows the response of GDP, consumption, and investment. As the tariffs distort the efficient allocation of resources domestically, home GDP falls. Consumption also falls, albeit slightly less than GDP, due to standard consumption smoothing behavior. However, the driver of the current account is, as is well understood, investment. Domestic producers want to cut production during the periods when tariffs are high and the economy is inefficient, and they want to resume production later. This gives rise to a large drop in investment, which results in a trade surplus. So, as Obstfeld stresses in his paper, tariffs affect the trade surplus not because they make foreign goods more expensive but because they, temporarily, reduce the desire to invest in the domestic economy much more than they reduce output. Panel E plots the impact on the real exchange rate. As tariffs redirect demand of the final good producers toward domestic varieties, which are more intensively used at home, they drive up their international price and drive appreciation of the real exchange rate. The appreciation of the exchange rate creates a negative valuation effect for the home country, as it reduces the value of its holdings of foreign capital. So, on impact, tariffs cause a decline of the home net foreign asset position. Over time, however, due to the accumulated trade surplus (which drives an increase in the domestic bond position B_t), the net foreign asset position turns positive (see panel F). Finally, panels G and H show the reallocation impact of the tariffs. As the home country is mainly an importer of variety $b*$, which can be substituted

Figure 1. Impact of Tariffs on the Home Economy

Panel A: Tariff rate

Percent

Panel B: Imports and exports

Percent of GDP

Panel C: Trade balance

Percent of GDP

Panel D: GDP, consumption, and investment

Percent dev from ss

Panel E: Real exchange rate

Percent dev from ss

Panel F: Net foreign asset position

Percent of GDP

Panel G: Employment

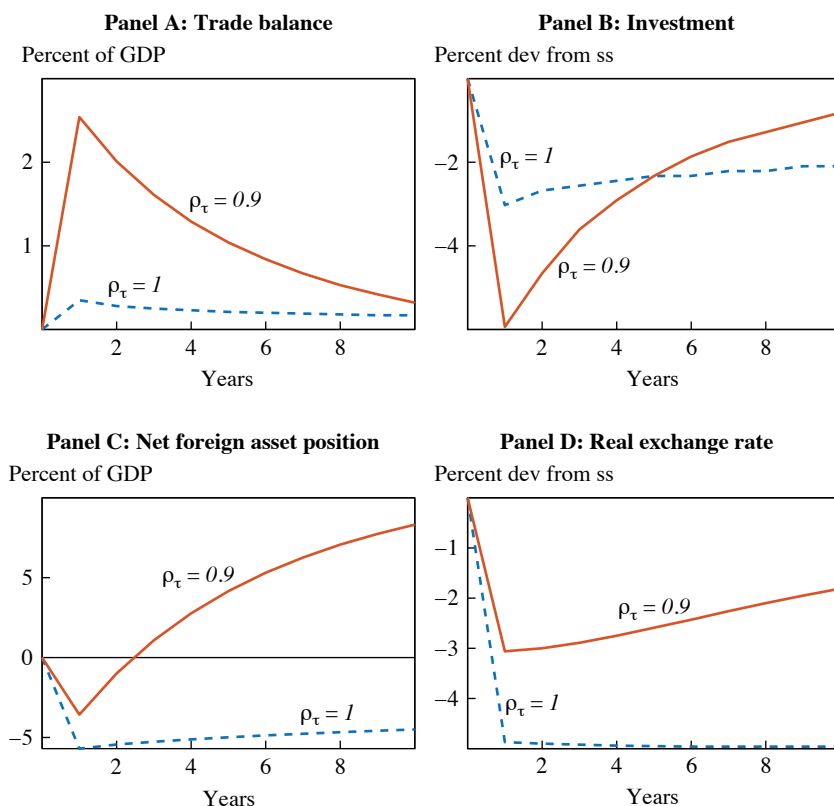Percent dev from ss

Panel H: Capital

Percent dev from ss

Source: Author's calculations.

with domestic variety *b*, the tariff leads to reallocation of labor and capital from sector *a* (which is the sector that also exports more) to sector *b*. Note, however, that the overall employment effect is negative, as higher tariffs induce reallocation from the more efficient *a* sector to the less efficient *b* sector, making the overall economy less productive and leading to overall decline in employment and capital. To sum up, a unilateral tariff shock is similar to a negative productivity shock for the home country. It reduces overall output of home goods, increases their prices, reduces employment and investment, and improves the trade balance. If the reduction of the trade deficit and the increase in employment in the less efficient sectors (vulnerable to foreign competition) are explicit policy goals, then tariffs do the job; however, results shown here highlight that achieving these objectives comes at the cost of reducing employment in other sectors of the economy and overall reduction of employment, investment, consumption, and output in the country that adopts the tariff.

Next I use the framework to present two additional results on the impact of tariffs on trade deficits. The first regards the importance of the persistence of tariffs, and the second regards deficit responses to shocks, with or without tariffs.

The role of tariff persistence. The positive impact of tariffs on trade deficits is driven by the fact that temporarily high tariffs induce a temporary large fall in home investment and a corresponding increase in the desire of saving in the international bond. If tariffs are, and are perceived to be, permanent, then they cause a more muted response of trade balance and a persistently negative impact on the net foreign asset position. Figure 2 illustrates the response of trade balance (panel A), investment (panel B), net foreign asset position (panel C), and real exchange rate (panel D) to tariffs in the baseline case (as in figure 1) and in the case with permanent tariffs ($\rho_\tau = 1$). Panel A shows that the response of the trade balance is much more muted when tariffs are permanent. The reason for the muted response is that when tariffs are permanent, the home country does not want to temporarily drop investment, only to resume it later when tariffs are gone. It just wants to do a smaller but more persistent reduction in investment (see panel B). With permanent tariffs, the economy moves to a new steady state with lower efficiency, and the home country will have slightly lower capital and slightly more international bonds. Interestingly, panel C shows that the persistence of tariffs is also very important for the response of the net foreign asset position. In the case of nonpermanent tariffs ($\rho_\tau = 0.9$), initial negative valuation effects on the net foreign asset position are offset over time by positive trade balances and by depreciation

Figure 2. The Role of Tariff Persistence

Panel A: Trade balance

Percent of GDP

$\rho_\tau = 0.9$

$\rho_\tau = 1$

Years

Panel B: Investment

Percent dev from ss

$\rho_\tau = 1$

$\rho_\tau = 0.9$

Years

Panel C: Net foreign asset position

Percent of GDP

$\rho_\tau = 0.9$

$\rho_\tau = 1$

Years

Panel D: Real exchange rate

Percent dev from ss

$\rho_\tau = 0.9$

$\rho_\tau = 1$

Years

Source: Author's calculations.

of the domestic currency after the first period. In the case of permanent tariffs, both the positive trade balances (panel A) and the real exchange rate depreciation are much smaller (see panel D), so the impact of tariffs on the net foreign asset position is persistently negative. Besides the persistence of tariffs, there is another important factor that limits the impact of tariffs on trade imbalance, namely, retaliation. From the discussion so far, it should be clear that tariffs improve the trade balance only when they increase the saving motive of home households relative to that of foreign ones. In the event of foreign retaliation (that is, the case in which $\tau_t^* = \tau_t$ for every t), the model can be used to show that saving motives in both countries increase, so overall there is no impact on trade balance but only a reduction in the world interest rate.
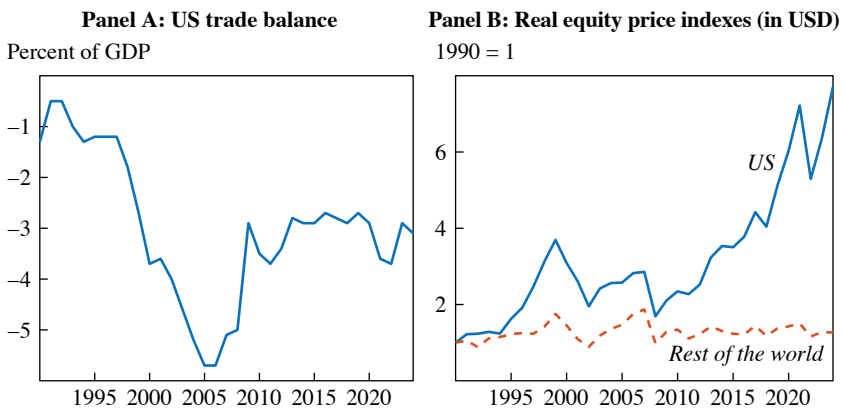
Trade deficit responses with high tariffs. Although a tariff war by itself might not impact trade balance, some have argued (see Alessandria, Bai, and Woo 2024; Krugman 2024) that bilateral tariffs (in general, openness to trade) might be important in determining the trade balance response of the economy to standard shocks. To analyze this issue, I consider the trade balance response to a standard domestic productivity shock (z_t in the model). Figure 3 plots the response of trade balance (panel A) and investment (panel B) in a version of the economy where tariffs are always zero ($\tau_t^* = \tau_t = 0$ for every t) and in a version of the economy where the home and foreign countries are in a trade war and tariffs are set to a positive constant level ($\tau_t^* = \tau_t = \bar{\tau}$ for every t) so that the trade share in the steady state is only one-half of the one in the baseline (no tariff) case (7.5 percent instead of 15 percent). The figure shows that, without tariffs, a productivity shock implies the standard response: an investment boom partly financed by a negative trade deficit. In an economy with higher tariffs, the response is directionally similar but more muted, as the home economy borrows less internationally and increases investment by less. High tariffs, making international trade more costly, make it harder to use the trade balance to allocate resources to the more productive country. So, overall it can be argued that tariffs will reduce future imbalances in response to shocks, but at the cost of a less efficient world economy.

CONCLUSION One important lesson from many years of research in international macroeconomics is that current account deficits are tightly connected to investment.[5] Panel A of figure 4 shows that the United States has run a significant trade deficit for all of the period from 1990 to 2024. Panel B shows the performance of the US equity market and equity markets in the rest of the world over the same period. The panel shows that the US equities have outperformed equities in the rest of the world by a factor of six. It is obviously hard to assess all the causes of the US equity market boom, but it is reasonable to believe that two important drivers were the two US-centered technological innovations that happened during those years, namely, the internet and artificial intelligence (AI). It is also reasonable to say that the US investment has had an important role in developing and diffusing these innovations, and that the borrowing that the United States has done internationally made it easier for US firms and households to finance this investment.

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5. This point was established early by Sachs (1981).

Figure 3. Responses to a 1 Percent Productivity Shock

Panel A: Trade balance

Percent of GDP

Panel B: Investment

Percent dev from ss
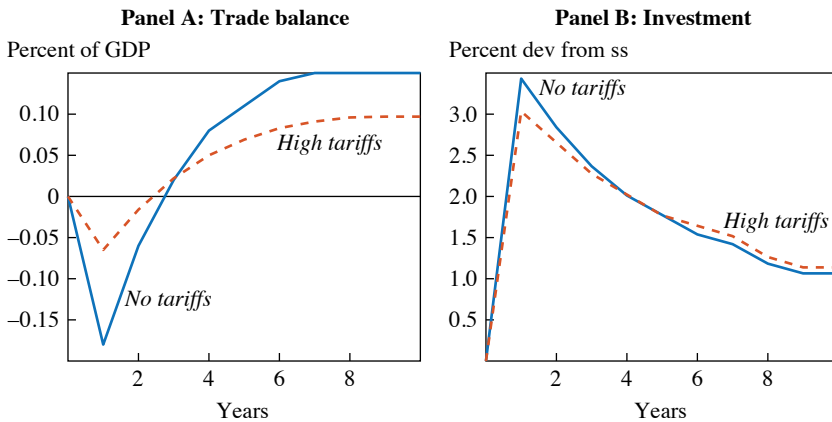
Source: Author's calculations.

Figure 4. Current Account and Equity Performance

Panel A: US trade balance

Percent of GDP

Panel B: Real equity price indexes (in USD)

1990 = 1

Source: Bureau of Economic Analysis; MSCI USA Index; and MSCI All Countries World Index (ACWI) excluding United States.

Note: The US trade balance data are from Bureau of Economic Analysis, "Table 1.1. U.S. International Transactions." The MSCI ACWI comprises stock market indexes (including large and midcap stocks) for twenty-two developed economies and twenty-seven emerging markets, weighted by market capitalization, in US dollars, both deflated by the US Consumer Price Index.

Tariffs, by making it harder for countries to run current account imbalances to finance investment, have the potentially damaging consequence of dampening future investment and technological innovations. In a world of deep international equity diversification, this would be a loss not just for the United States but for the global economy.

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GENERAL DISCUSSION   Kenneth Rogoff emphasized Obstfeld's claim that the global savings glut does not align with the trade balance peak in the mid- to late 2000s. Anecdotally, Rogoff noted that at the International Monetary Fund, when a country experiences a surge in capital inflows, the initial inquiry often focuses on changes in bank regulation; this did not occur in the case of the United States. He reflected on his discussions with Alan Greenspan, who concluded that the demand must be due to the efficiency of US markets and their ability to spread risk. Interestingly, Rogoff added that Greenspan had done research linking the US current account to borrowing for second homes but did not explore the issue further. Lastly, Rogoff remarked that significant shifts in the trend may be a reflection of underlying factors such as technological developments.

Robert Gordon reflected on the basic concept that the trade deficit depends on the difference between national saving and national investment. Gordon further noted that, given the US total imports of around $4 trillion annually, a 25 percent effective tariff would generate $1 trillion in revenue for the government, which would affect national savings.[1]

Obstfeld agreed that high tariff rates could translate into significant revenues but emphasized that the result would largely depend on the elasticity of trade and the macroeconomic effects of the tariffs. Furthermore, Obstfeld pointed out that higher tariff revenues wouldn't automatically translate into lower levels of the federal deficit and higher national saving, as the Trump administration plans to use revenues to partially cover an extension to the 2017 Tax Cuts and Jobs Act and other tax reductions.[2] Obstfeld agreed that if the United States imposes a prohibitively high tariff, trade will be extinguished and so saving will necessarily have to equal investment. Therefore, tariffs at an extreme level must impact the trade balance and the current account. He therefore supported the point

1. Bureau of Economic Analysis, "Imports of Goods and Services [IMPGS]," retrieved from FRED, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/IMPGS.

2. Howard Gleckman, "Trump's Tariffs Will Raise Much Less Than He Expects," *TaxVox*, April 8, 2025, Tax Policy Center, https://taxpolicycenter.org/taxvox/trumps-tariffs-will-raise-much-less-he-expects.

that economists should not be too dogmatic about tariffs and deficits. He summarized that the three main perspectives on the trade deficit are: (1) saving minus investment, (2) output minus absorption, and (3) exports minus imports. While tariffs could affect any of these factors, the direction and the net effects are unclear. Obstfeld stated that tariff uncertainty will likely dampen consumption and investment, ultimately decreasing output. He also pointed out that removing the US security umbrella from Europe could prompt Europe to increase its defense spending overall and specifically on US defense exports. Obstfeld contended that both cases represent suboptimal, yet the most likely, policy channels to affect the trade balance. Reflecting on a paper with Rogoff, Obstfeld noted that the presence of trade frictions dampens the effects of shocks, but it remains unclear whether the same outcome occurs if the shock itself is the rise in trade friction.[3]

On jobs, Steven Davis highlighted the utility of constructing a coherent version of the Trump administration's trade arguments. Proponents of high tariffs on manufacturing imports do not share the view that we live in a full-employment environment. In fact, the employment rate among less educated, working-age men has been declining for decades. Manufacturing has been seen, correctly at one time, likely incorrect now, as an important source of jobs for this demographic. Davis argued that the Trump administration overlooks service sector jobs, instead focusing on the workforce affected by technology and globalization. He suggests that the Trump administration's view is that we can use tariffs to increase manufacturing jobs and boost labor force participation among less educated, working-age men without harming other sectors.

Şebnem Kalemli-Özcan stressed that the Trump administration's tariff policies to increase manufacturing jobs ignore modern value chains. She pointed out that much of modern trade occurs vertically through value and supply chains, where intermediate goods are traded between countries, and that the impact of tariffs on modern and complex automotive supply chains is difficult to predict. Obstfeld concurred and commented that tariffs on intermediate goods like steel and aluminum would severely harm US exporters and likely be contractionary.

Gordon brought up Fabrizio Perri's trade model in Perri's discussant remarks, disagreeing that tariffs would reallocate US workers to manufacturing. Gordon referenced a recent paper by David Autor and coauthors, which shows that manufacturing job losses in Midwest small towns are

3. Maurice Obstfeld and Kenneth Rogoff, "The Six Major Puzzles in International Macroeconomics: Is There a Common Cause?" *NBER Macroeconomics Annual 2000*, 15 (2001): 339–412.

largely permanent.[4] While some towns revived, the same jobs didn't return, and displaced workers moved into disability or premature retirement.

Linda Tesar commented that the China shock papers effectively identify a clean shock, but it's relatively small if we compare the number of jobs lost to the number of new jobs created monthly in the US economy. Tesar noted that firms encounter frequent shocks, including those related to exchange rates, and that reversing most job losses, attributed minimally to trade, is unlikely to be successful.

Wendy Edelberg commented that President Trump likely believes the trade deficit is a subsidy to other countries without considering that the United States receives goods in exchange. She pondered whether President Trump believes the United States will enter autarky, experience short-term economic pain, but ultimately develop an incredibly productive manufacturing sector that is globally demanded. Edelberg reflected that President Trump has announced and threatened tariffs but also similarly rescinded them, hence it may remain a lurching policy. Stan Veuger disagreed, sharing that he thought full autarky was inconsistent with the Trump administration's revenue scores. Veuger questioned whether all policy statements from the Trump administration needed to be rationalized.

Abigail Wozniak emphasized narrative in conveying important research and reflected on the discussion of the China shock literature. The instinct of the broader public is that the reverse will bring the jobs back. Wozniak suggested this narrative is more effectively countered by offering a new perspective. A different title for the paper, "The US Trade Deficit: Three Myths and One Reality," could help communicate a fresh narrative. Obstfeld agreed that trade-related narratives were important and that the dynamism of the US export sector and its role in postwar trade liberalization should be highlighted.

Gordon commented on the cycle of foreign investment in the United States, pointing out the value of the US stock market as a percentage of GDP is much higher than Europe. He suggested that the dollar's attractiveness leads to investment, driving stock prices up, and the cycle repeats; however, this virtuous cycle has limits, such as a high price-to-earnings ratio.

Joe Beaulieu noted that, in the short run, the focus is on tariffs' impact on exchange rates and economic adjustments; in contrast, the long term is more complex, as nothing remains constant. Beaulieu emphasized how

4. David Autor, David Dorn, Gordon H. Hanson, Maggie R. Jones, and Bradley Setzler, "Places versus People: The Ins and Outs of Labor Market Adjustment to Globalization," working paper 33424 (Cambridge, Mass.: National Bureau of Economic Research, 2025).

erratic policies might affect long-term demand for US assets and the role of the US dollar—changes in the US dollar's significance could have a substantial impact on trade and current account deficits.

Kalemli-Özcan pondered whether the Trump administration's policies were actually about depreciating the dollar. Obstfeld responded that if tariffs fail, there is a good chance we will see pressure for depreciation via the Federal Reserve or a so-called Mar-a-Lago Accord. He noted that contractionary economic forces would lower long-term Treasury yields and support dollar depreciation and that, unlike tariffs, dollar depreciation would also serve as an export subsidy.