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TWENTY FIVE YEARS OF GLOBAL IMBALANCES

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**INTERNATIONAL MACROECONOMICS
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Abstract

As international capital markets expanded in breadth and depth after the middle 1990s, global current account imbalances also expanded markedly. Some have linked the origin of the subsequent Global Financial Crisis (GFC) to these global imbalances. This essay proposes answers to four questions about the recent history of global imbalances. Why did global imbalances expand after the mid-1990s? What circumstances and concomitant factors provide clues about the origins of the GFC? If one accepts that a mono-causal story about the GFC based on global imbalances is inaccurate, how should one view the potential threats from excessive global imbalances today? And finally, what policy implications follow?

JEL Classification: N/A

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The modern floating exchange rate era that began in 1973 naturally falls into two stages. The second of these – roughly speaking, the last 25 years – saw a marked expansion of global current account imbalances.

The first stage of the floating-rate era, ending somewhere in the mid-1990s, was a period of adjustment to the new international monetary regime. Financial markets underwent liberalization – internationally as well as domestically – and international trade expanded as well, while central bankers learned how to manage inflation in a world of national fiat currencies. The period's end is marked by the foundation of the World Trade Organization (WTO) and the 1994-95 Mexican crisis, the latter labeled “the first 21st-century crisis” by then IMF Managing Director Michel Camdessus.

The second 21st-century crisis arrived even before the 21st century did, in the form of the 1997-98 Asian crisis. The Asian crisis was notable in that several of its victims succumbed despite the absence of the garden-variety macroeconomic imbalances – such as big public deficits – that IMF economists and others normally had viewed as red flags. This facet of the crisis certainly influenced academic thinking (witness the celebrated Kaminsky and Reinhart 1999 analysis of twin banking and currency crises) but also pointed to the dawn of a new, second stage within the post-1973 era. That stage, covering roughly the last 25 years, is characterized by hyper-financialization, greater exchange rate flexibility on the part of many emerging market economies, and a decisive shift of Asian growth leadership from Japan to China, especially after China's accession to the WTO. Subramanian and Kessler (2013) characterize developments in international trade, including rapidly expanding global value chains, as “hyperglobalization.” The forces unleashed after the mid-1990s led to the Global Financial Crisis (GFC) of 2008-09, a crisis with long-lived repercussions that we still feel today.

As noted above, one notable feature of the second period of floating was a significant widening of global current account imbalances. They roughly tripled in extent in the decade after 1995 – as illustrated in Figure 1 – and have remained higher despite retracting from the peak they reached prior to the GFC. That global imbalances had the *potential* to widen is not surprising, given financial-market development, after the mid-1990, including further financial opening, after the mid-1990s. Controversy remains, however, over both the causes of these imbalances and their potential causal role in the GFC. On one side is the view, expressed by U.S. Treasury Secretary Henry Paulson as he was leaving office in 2009, that global imbalances originating in the emerging markets were the root cause of the global crisis.¹ Others (such as Obstfeld and Rogoff 2009) have argued that this view is incomplete and deflects too much blame from other critical factors.

¹ See Krishna Guha, “Paulson says crisis sown by imbalance,” *Financial Times*, January 1, 2009, at <https://www.ft.com/content/ff671f66-d838-11dd-bcc0-000077b07658>

The debate raises at least four questions:

- Why did global imbalances expand after the mid-1990s?
- What circumstances and concomitant factors provide clues about the GFC's origins?
- If one accepts that a mono-causal story about the GFC based on global imbalances is inaccurate, how should one view the potential threats from excessive global imbalances today?
- What policy implications follow?

Without trying to be fully thorough or rigorous, I will outline my take on the answers.

The Rise of Global Imbalances

Figure 1 shows that on the deficit side, the expansion of global imbalances after the mid-1990s was primarily about a growing U.S. deficit (which eventually reached 6 percent of U.S. GDP). In a justly famous speech, Bernanke (2005) argued for “locating the principal causes of the U.S. current account deficit outside the country's borders ...”

In Bernanke's telling, in a global capital-market equilibrium, higher net saving by emerging and developing economies (EMDE) – precautionary saving by Asian emerging economies after their crisis, bigger surpluses of oil exporters as the price of oil rose – needed to be matched by bigger U.S. deficits. What mechanism induced the United States to save less and invest more? Initially responsible was a run-up in equity prices. After those crashed, the main driver became a fall in real interest rates that, among other effects, fueled a house-price and residential investment boom. Figure 2 shows how real 10-year Treasury rates first rose after the Asian crisis, returning to their long-term decline as recession set in during 2001. Figure 3 displays a similar pattern for the short-term “natural” policy rates, r^* , as calculated by Holston, Laubach, and Williams (2017).

Figure 4 provides another way to visualize the dramatic widening of the U.S. external deficit after the mid-1990s. Where are the counterpart widening surpluses? The figure (top panel) shows that overall, deficits of non-oil exporting EMDEs (including China) do start to rise at the Asian crisis, but the extent of increase is dwarfed by the rise in the American deficit. More important is the increase in oil exporters' surpluses. For Asian countries specifically (bottom panel), we can see that East Asian surpluses apart from those of China and Japan indeed rose after the Asian crisis, whereas China's surplus begins to ascend later, in the mid-2000s, reaching about 0.6 percent of global GDP in 2008. Yet, there are multiple counterpart surpluses relationships to the U.S. deficit, and one of the biggest single counter-weights to the U.S. deficit on the surplus side came from oil exporters.

Their surpluses were driven, however, by steeply rising global oil prices – as shown in Figure 5.² But U.S. real activity, financial conditions, and its own oil production are critical determinants of conditions in the world oil market. I therefore find it implausible to visualize oil prices as emanating entirely from outside U.S. borders to influence the country’s current account.

Instead, the U.S. deficit reflected domestic as well as global forces – global forces coming from non-U.S. advanced economies, not just EMDEs – all of which helped set the stage for the GFC.

Background to the Global Financial Crisis

Oil prices, oil surpluses, and bigger current account deficits on the part of several advanced economies (not just the United States) were driven by common factors: very loose global financial conditions, enabled by generally accommodative monetary policies but also by financial deregulation, innovation, and a global reach for yield and safety that contributed to widespread housing-market booms.

True, one component of this, though likely not the most important one, was the EMDE foreign reserve accumulation that Bernanke (2005) noted, (see Figure 6). During the 1998-2008 period, intervention tended to be associated with wider surpluses for countries purchasing foreign exchange. But as Bernanke, Bertaut, DeMarco, and Kamin (2011) and Bayoumi (2017) document, the U.S. housing bubble also drew fuel from European banks’ purchases of asset backed securities. In the euro area, French and German banks (among others), perceiving low sovereign and no currency risk within a permissive regulatory environment, recycled global funding into peripheral euro area economies such as Spain, Ireland, Portugal, and Greece. That lending financed housing or sovereign debt bubbles and big external deficits (Hale and Obstfeld 2016). Similar dynamics played out in the Baltics.

A symptom of global financial ease during the 2000s, coupled with ongoing deregulation and innovation, was an explosion of gross two-way capital flows across borders. Figure 7 shows the pattern of *gross* international financing corresponding to the *net* international financing needs illustrated in Figure 1. Starting in the mid-1990s gross flows begin to expand markedly, reaching unprecedented proportions on the eve of the GFC. Tellingly, the vertical axis scale needed to chart gross flows in Figure 7 is a full order of magnitude greater than the scale needed in Figure 1: the bare minimum capital flows needed to finance current account imbalances would have been only a tenth of the flows that actually took place.

² In the early 2000s measured world surpluses surged above world deficits: in other words, a substantial global discrepancy, a “missing deficit,” emerged. Missing deficits tend to be positively correlated with oil prices. The discrepancy could be related to some countries understating the cost of oil imports.

In theory, gross two-way flows fulfill economic functions beyond the financing of current account imbalances, notably, asset swaps that enable international portfolio diversification and risk sharing. We do not have economic or financial models, however, that can easily rationalize gross flows that were persistently such a big share of global GDP in the run-up to the crisis (Figure 7).

Much of the asset churning was likely driven by tax avoidance strategies or by regulatory arbitrage, exemplified by the European surge into American mortgage-related assets (for example, see Acharya and Schnabl 2010). These developments were a symptom of the financial distortions that ultimately helped to power the U.S. current account deficit.

Following their sharp expansion starting in the mid-1990s, gross external positions leveled off after the global financial crisis – at least in the aggregate (Figure 8). An increasing fraction of gross external positions represents foreign direct investment (FDI), although as Lane and Miles-Ferretti (2018) document, much of this so-called “FDI” reflects, not risk sharing or greenfield investment, but claims on offshore financial centers driven by tax minimization strategies (Figure 9).

Risks from Excess Global Imbalances

Twenty-first century crises have largely been balance-sheet crises, driven more by predetermined vulnerabilities (currency and maturity risk) than by the risk that the flow financing for the current account deficit goes away. Correspondingly, the gross flows in Figure 7 –far exceeding the net financing needs in Figure 1 – represent potentially fragile balance sheet positions that could threaten financial stability, with severe macroeconomic consequences.

Why, then, worry about even outsized current account imbalances? One reason is that an excessive flow deficit may be one symptom of an underlying buildup of stock vulnerabilities. Generally easy financial conditions (including lax or badly-designed regulation) will tend to promote leverage, which in turn facilitates divergence between spending and income. The eventual adjustment process can be costlier when it follows bigger prior imbalances. Lane and Milesi-Ferretti (2015), for example, show how countries with bigger current account deficits before the GFC tended to suffer greater demand compression when the crisis struck.

Another reason to worry about excess imbalances, especially if they are persistent, is that they could imply widening international disparities in net external wealth. Although the growth of gross external positions has leveled off for now, the net international investment positions (NIIPs) of international creditors and debtors have grown increasingly divergent (Figure 10). Absent future changes in asset valuations, the IMF projects that this divergence trend will continue (Figure 11).

The tendency for debtors to go ever farther into debt, while creditors accumulate those debts as assets, has been a salient phenomenon, as Figure 12 illustrates for the sample of countries covered in the IMF's annual *External Sector Reports*. Since 2010, countries' cumulative current account balances have been strongly positively related to initial net foreign assets. That propensity leads, however, to a sustainability problem. Eventually, debtor countries will have to bring spending down in line with their intertemporal budget constraints; and the longer the adjustment is postponed, the more likely that the process is abrupt and disruptive. The latter could imply a global deflationary impulse, unless creditor countries just as abruptly decide to spend more.

Currently, low real interest rates encourage debtors to continue borrowing and creditors to accumulate wealth more assiduously as they seek to ensure adequate resources for the future. Higher equilibrium interest rates could create problems if they rise more than underlying economic growth rates. In integrated capital markets, real interest rates depend on global, not just national, growth; and our projections at the IMF are that future growth prospects for advanced economies are relatively subdued. As our *External Sector Report* (IMF 2017) points out, however, big deficits (and surpluses) have also increasingly become concentrated in precisely these slower-growing advanced debtors (and creditors). Down the road, therefore, higher real interest rates could spell trouble for some advanced debtors if the levels of those rates reflect primarily the better growth prospects in lower-income economies.

A possible mitigating factor could be the effect identified by Gourinchas and Rey (2007) for the United States, according to which an unexpected fall in net exports triggers an unexpected capital gain on the NIIP, thereby mitigating the negative effect of the net export innovation. When the *World Economic Outlook* (WEO) examined the generality of this effect more than a decade ago (IMF 2005), it detected some evidence of the Gourinchas-Rey effect for advanced economies, but not for EMDEs. The WEO's 2005 finding was unsurprising in view of the pervasive foreign-currency denomination of EMDEs' foreign liabilities, and the relatively early stage of their integration into world capital markets.

Currency mismatch has declined since the early 2000s, however (Bénétrix, Lane, and Shambaugh 2015), and it appears that the Gourinchas-Rey effect now applies more broadly. This stabilizing force may owe more to domestic asset-price developments than exchange rates. Whatever its source, estimates suggest that it provides only a partial offset to trade balance developments (Adler and Garcia-Macia 2018). Figure 13 (which can be compared with Figure 12) illustrates how the Gourinchas-Rey effect has muted but not eliminated the divergent behavior of NIIPs. Thus, the tendency of current accounts to drive divergence in net foreign assets remains problematic.

A third danger from big and persistent global imbalances, currently quite prominent, is that they may spark trade warfare as deficit countries vainly attempt to counter macroeconomic forces with import barriers. From the Asian crisis through the early 2010s, global current

account surpluses were highly aligned with global foreign exchange purchases (see Figure 14). Indeed, several economies, notably in emerging East Asia, intervened to maintain their currencies at undervalued levels, as did some important oil exporters. Charges of currency manipulation and trade tensions resulted.³

In more recent years, however, global imbalances owe little to foreign exchange intervention by EMDEs, as IMF (2017) observes and as Figure 14 shows. This change is consistent with the greater concentration of imbalances, noted above, within the advanced economy group. While discussion of currency manipulation is therefore muted compared with a few years ago, expect it to return to the fore if the U.S. dollar strengthens in response to Federal Reserve tightening and America's procyclical fiscal expansion. Because of those U.S. macroeconomic prospects, the IMF now projects a bigger U.S. current account deficit in coming years, notwithstanding the U.S. administration's avowed aim of trimming deficits through trade policies. That tension will doubtless be a source of future trade frictions between the United States and the rest of the world. In turn, those frictions may well take a toll on the world economy's growth.

Policy Implications

The analysis yields four main implications for policy:

- Excess global imbalances usually reflect global forces and multiple distortions in many countries, notably including diverse financial-sector distortions. Mono-causal explanations rarely apply. Reducing global imbalances therefore should be a collective effort based on a shared appreciation of the roles individual countries need to play. That's why the IMF monitors external excess imbalances annually, and makes its finding public through the *External Sector Report*.
- Notwithstanding the need for collective action, excess surplus countries still face little that would force them to adjust – outside of the threat of protectionist responses. In contrast, most deficit countries face the risk that lenders will withdraw. The trend of diverging NIIPs thus looks unsustainable. Its end is likely to originate with the external debtors.
- That endgame could be messy. Gross capital flows far exceed the minimal needs of current-account financing. These flows can give rise to balance-sheet vulnerabilities, underlining the need for continuing international financial cooperation (within the Basel Committee, the Financial Stability Board, and other international forums) to

³ In the cases of oil exporters with exchange rate pegs (e.g., Saudi Arabia), causality clearly ran from the price of oil, through the current account, to reserve accumulation. In Asian economies, however – notably China with its capital-control regime – intervention likely did have some causal impact on the current account, though to different degrees in different economies.

address cross-border financial stability risks. Similar cooperation to address socially costly tax minimization strategies and money laundering is richly warranted.

- Economic theory suggests that trade restrictions will do little to alter global current account imbalances, which are primarily macroeconomic phenomena. But protectionism can do great harm to global growth. Stronger multilateral dispute resolution within the rules-based system is the right way to deal with the range of policies that distort trade and tilt the playing field.

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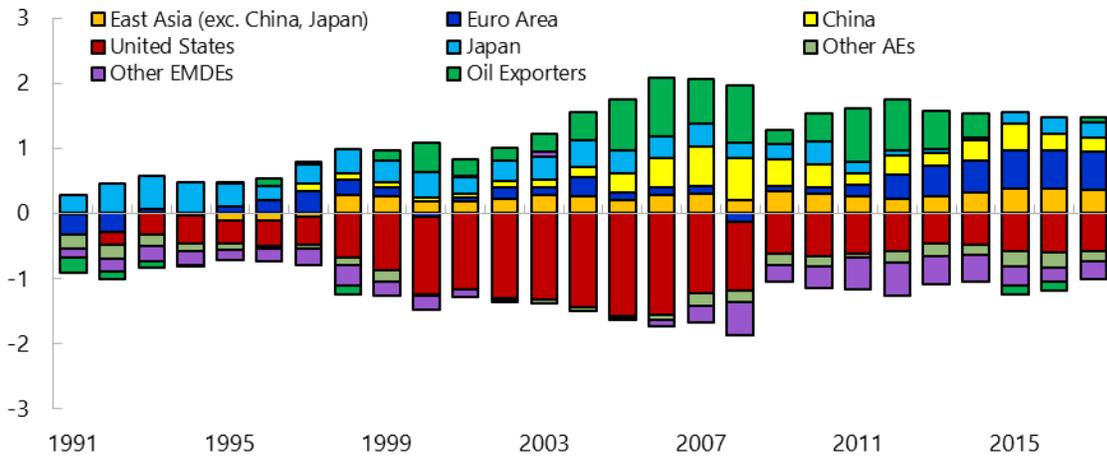
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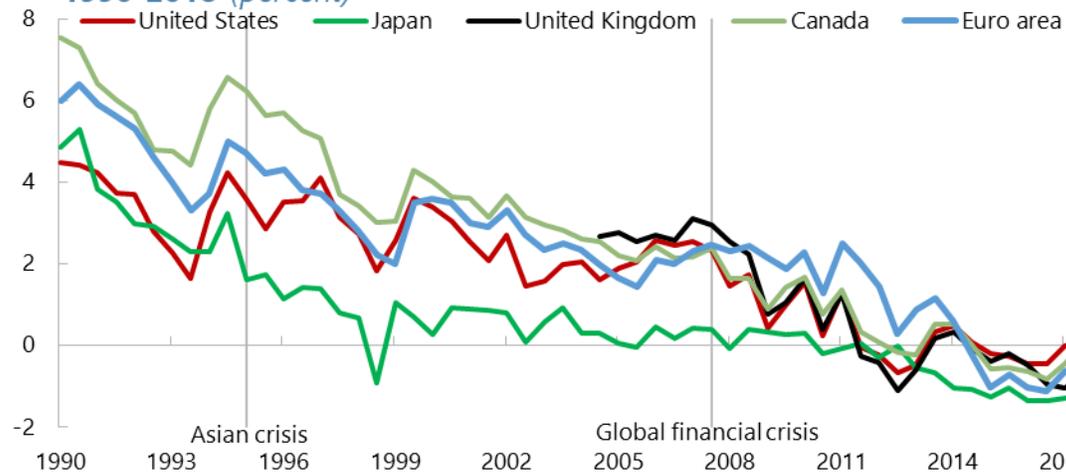
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Figure 1: Global current account imbalances, 1991-2017
(percent of world GDP)



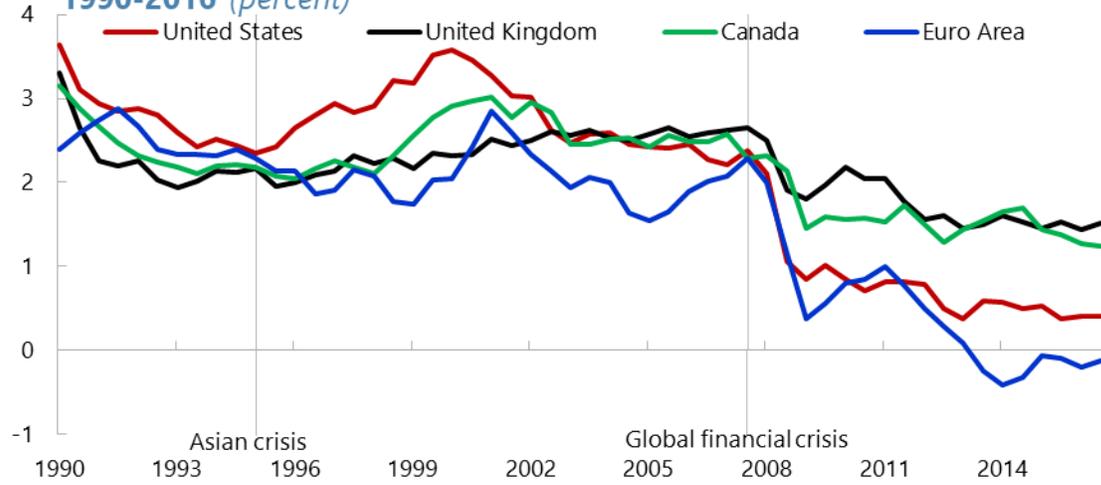
Source: IMF, World Economic Outlook.

Figure 2: Advanced economy real 10-year bond yield, 1990-2018
(percent)



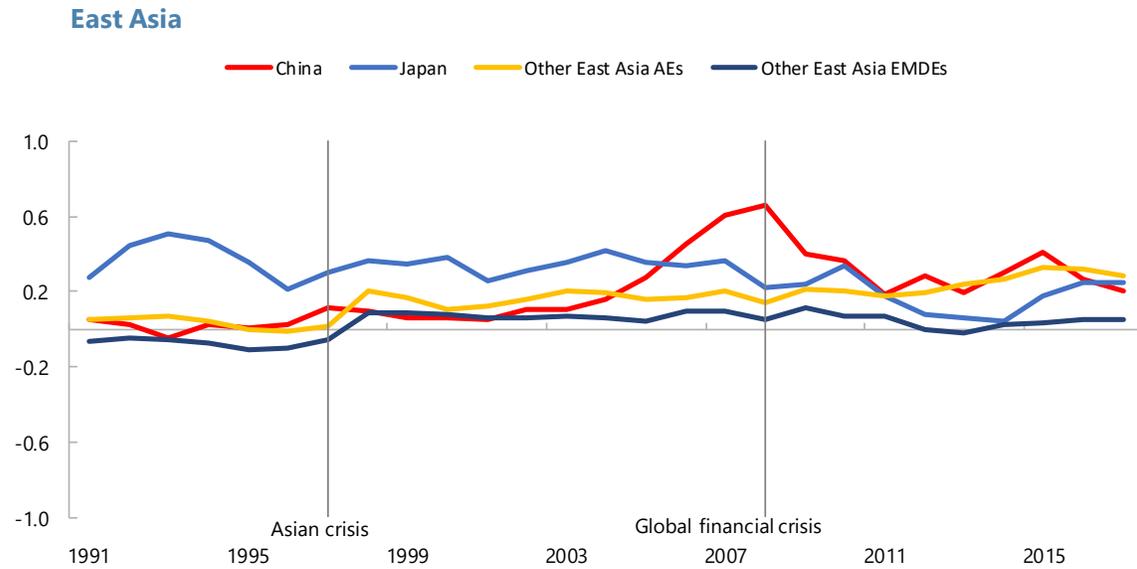
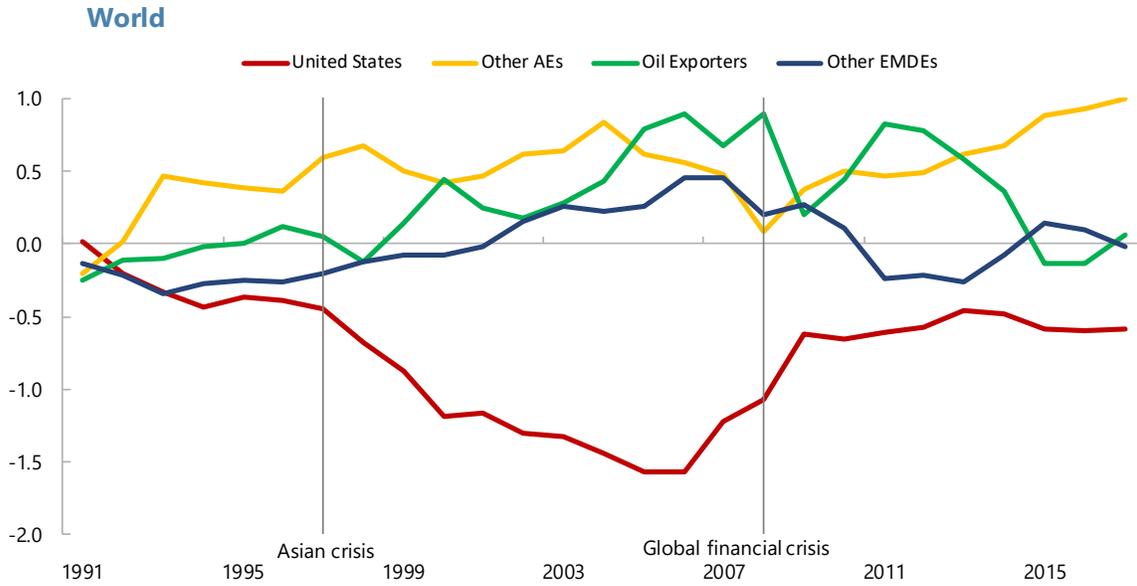
Sources: Consensus Forecasts, and Haver Analytics. For the euro area, the period before 2003 is based on German data.

Figure 3: Advanced economy natural rate of interest r^* , 1990-2016 (percent)



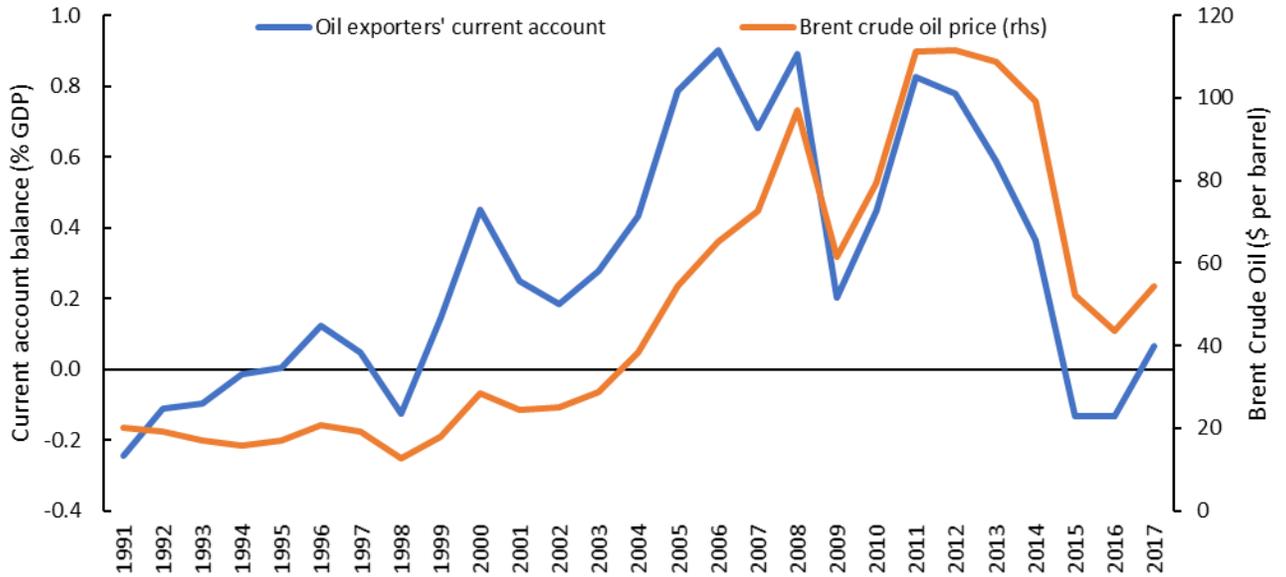
Source: Holston, Laubach, and Williams (2017).

Figure 4: Current account balances, 1991-2017
 (percent of world GDP)



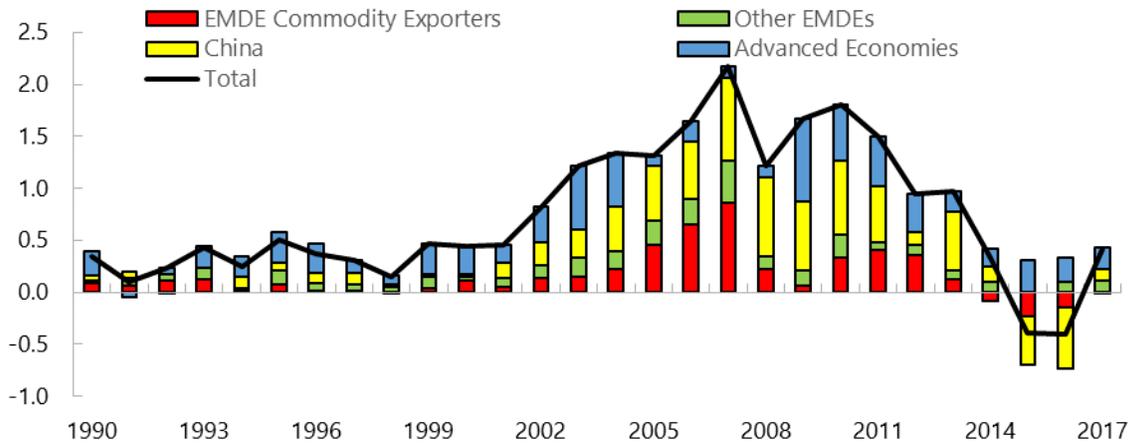
Source: IMF, *World Economic Outlook*. Euro Area: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, and Spain.

Figure 5: World oil price and oil exporters' current account



Source: IMF, World Economic Outlook; Haver Analytics; and IMF staff calculations.

Figure 6: Global reserve purchases by region, 1990-2017
(percent of world GDP)



Source: World Economic Outlook. "Oil Exporters" follows WEO classification and includes Norway. "EMDE Commodity Exporters" follows the classification of Boz, Cubeddu, and Obstfeld (2017)

Figure 7: Global gross financial flows, 1990-2017
(percent of world GDP)

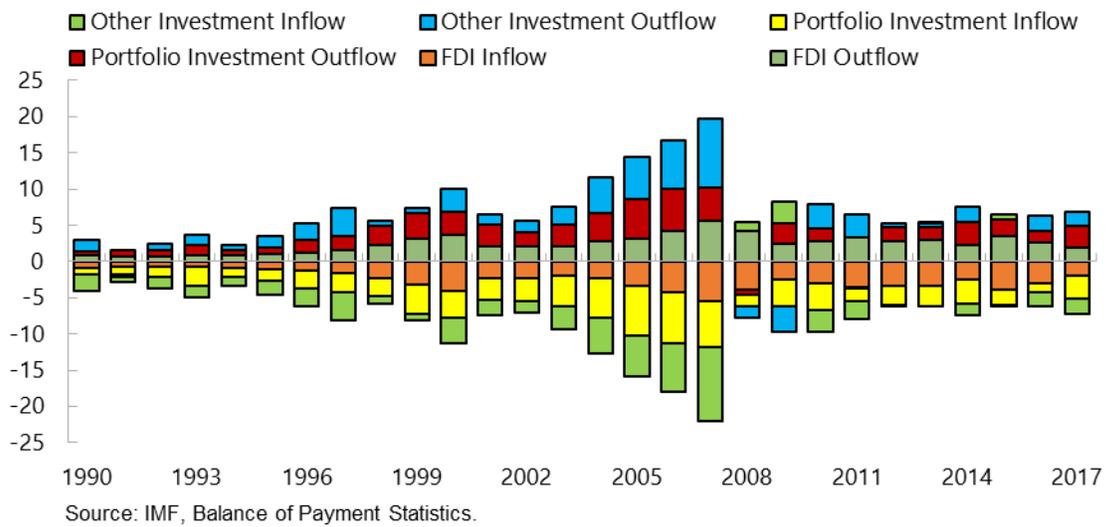


Figure 8: Global investment liabilities stock
(percent of world GDP)

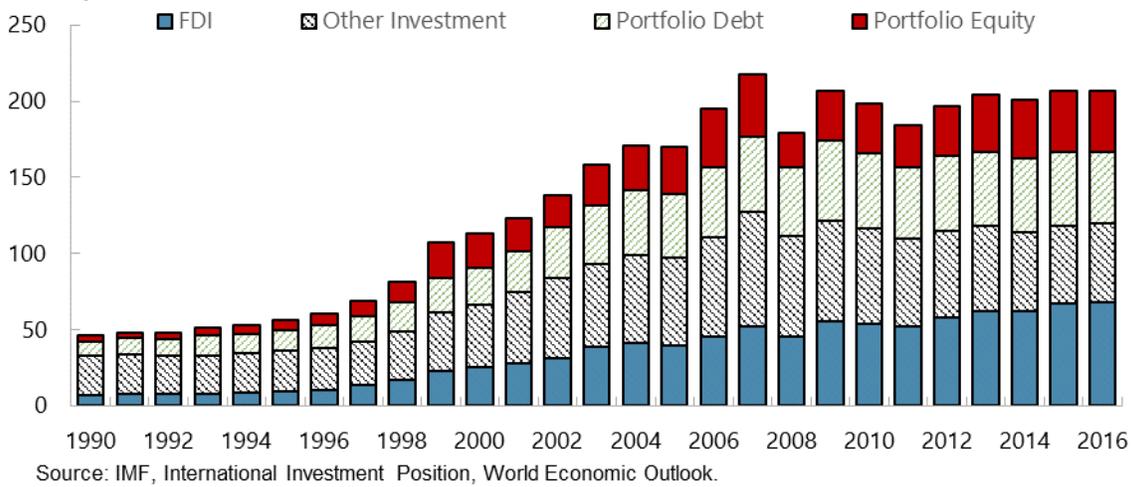


Figure 9: Change in external liabilities and world GDP, 2007-15 (trillions USD)

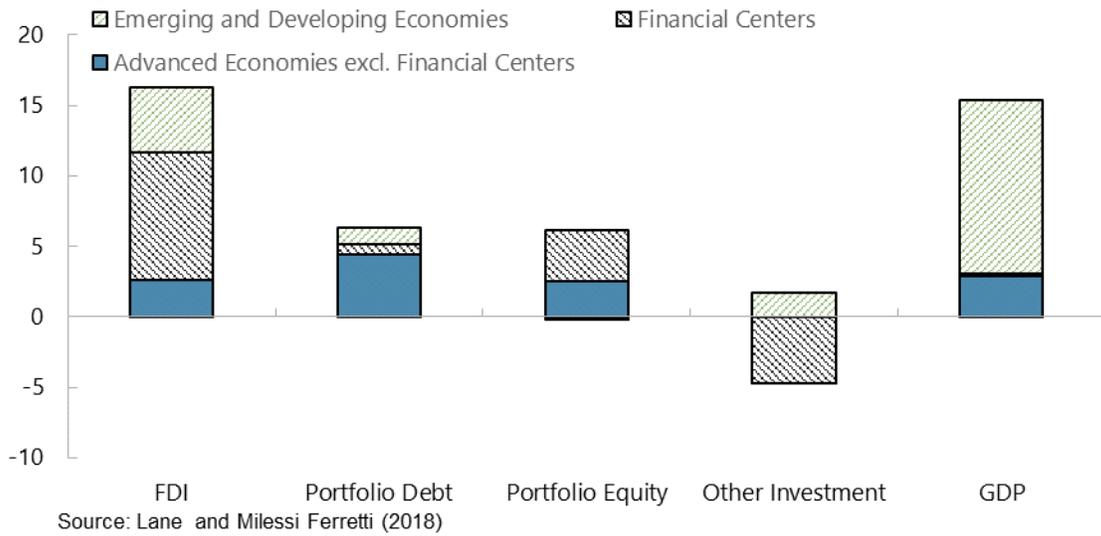
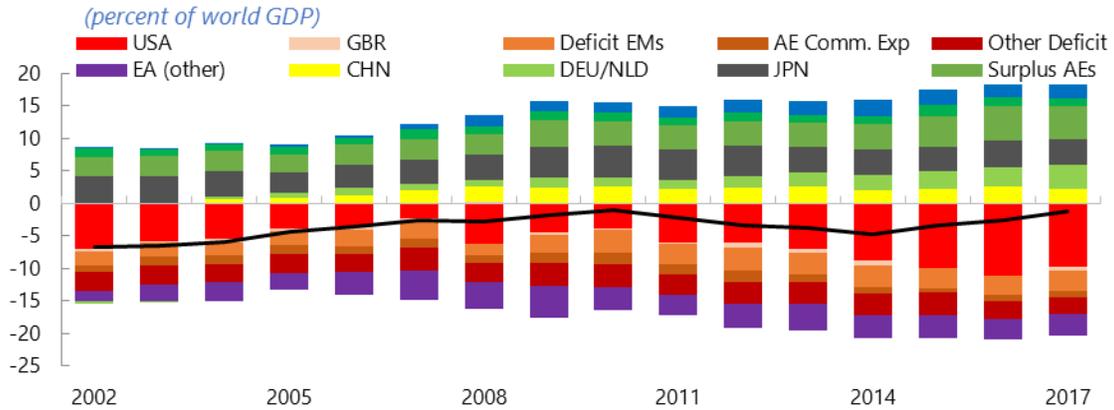
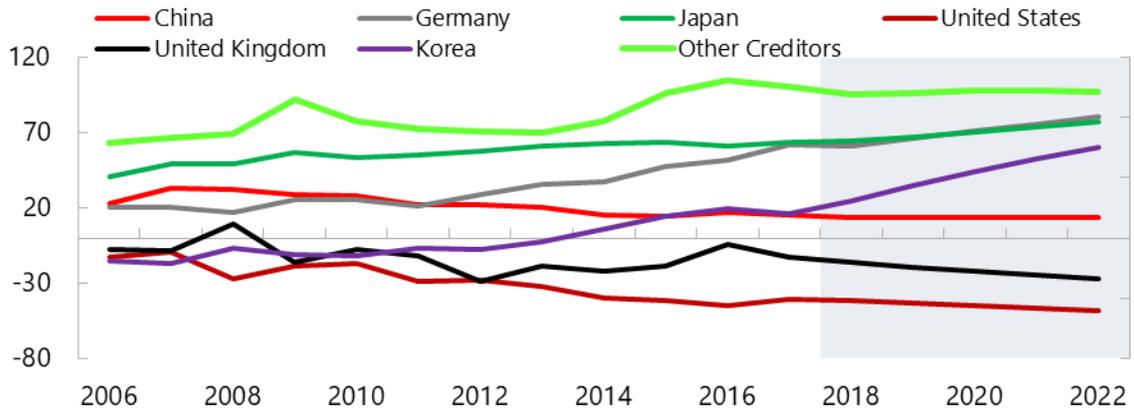


Figure 10: Net international investment position, 2002-17 (percent of world GDP)



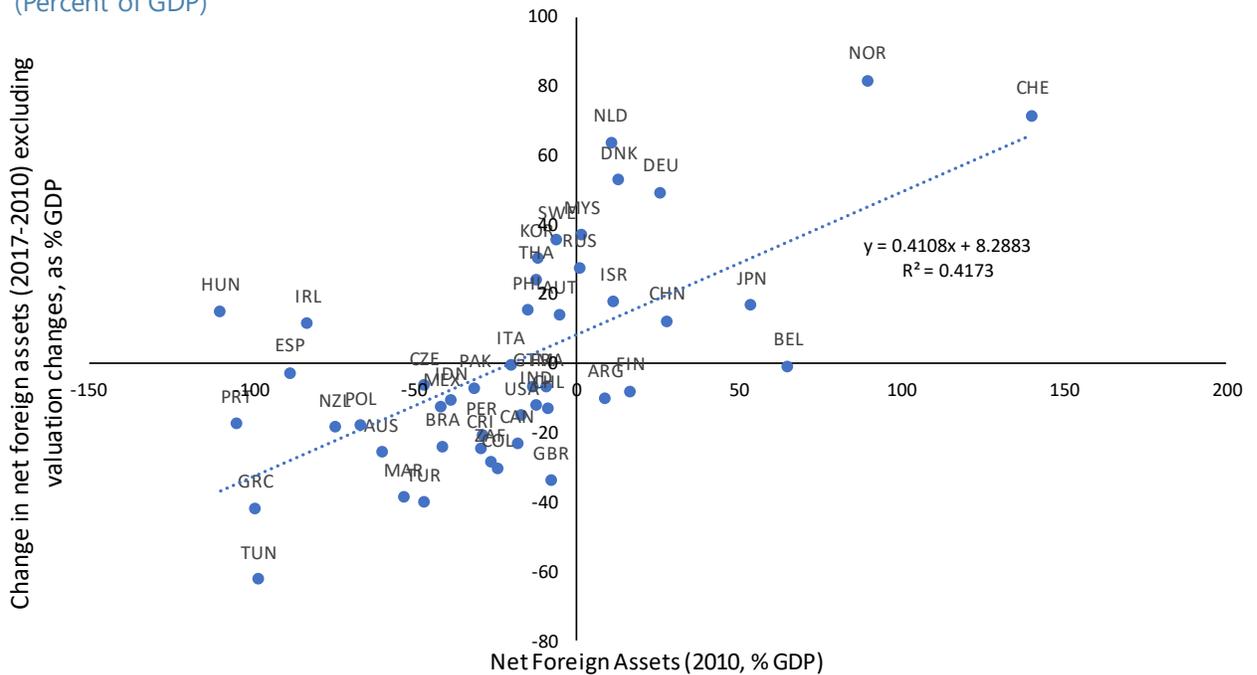
Source: World Economic Outlook and IMF staff calculations. Surplus AEs: Korea, Hong Kong SAR, Singapore, Sweden, Switzerland, Taiwan POC; AE Commodity Exporters: Australia, Canada, New Zealand; Deficit EMs: Brazil, India, Indonesia, Mexico, South Africa, Turkey; Oil Exporters: WEO definition plus Norway.

Figure 11: Selected External Sector Report economies - actual and projected NIIP, 2006-22 (percent of GDP)



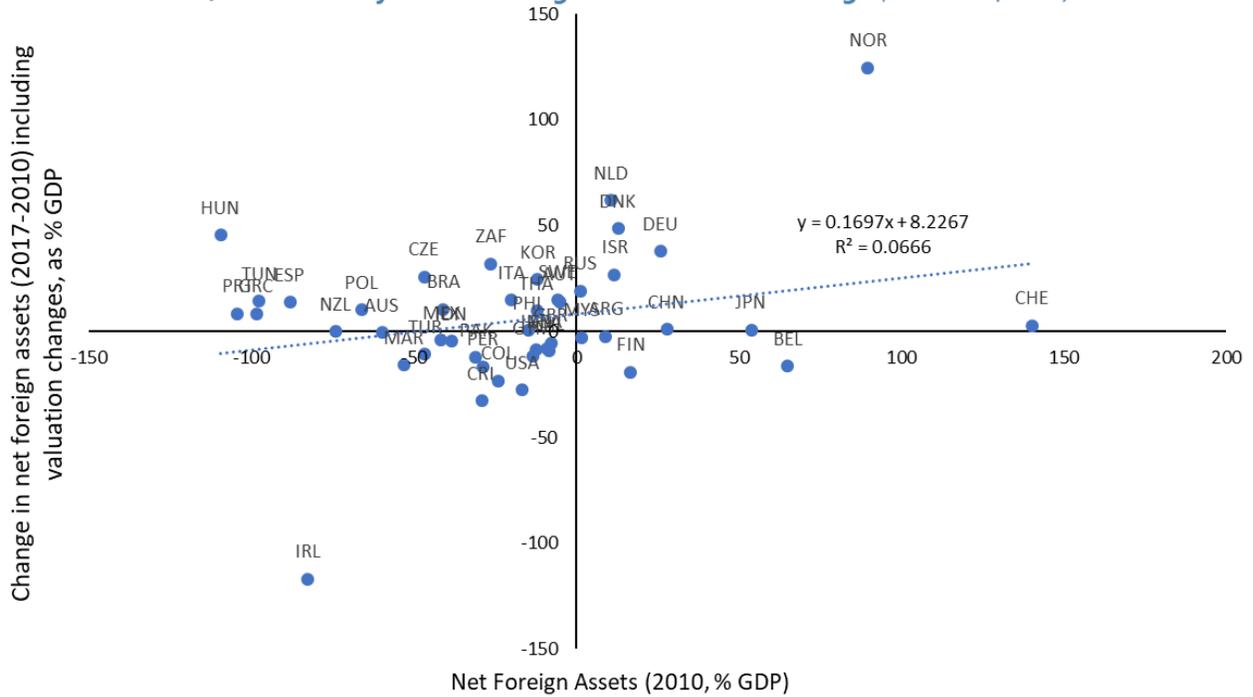
Source: IMF, World Economic Outlook. Shaded area indicates that data are projections. Other creditors: GDP weighted average of key oil exporters and financial centers (Russia, Saudi Arabia, Hong Kong SAR, Singapore, and Switzerland).

Figure 12: Current account behavior has led net foreign asset ratios to diverge (Percent of GDP)



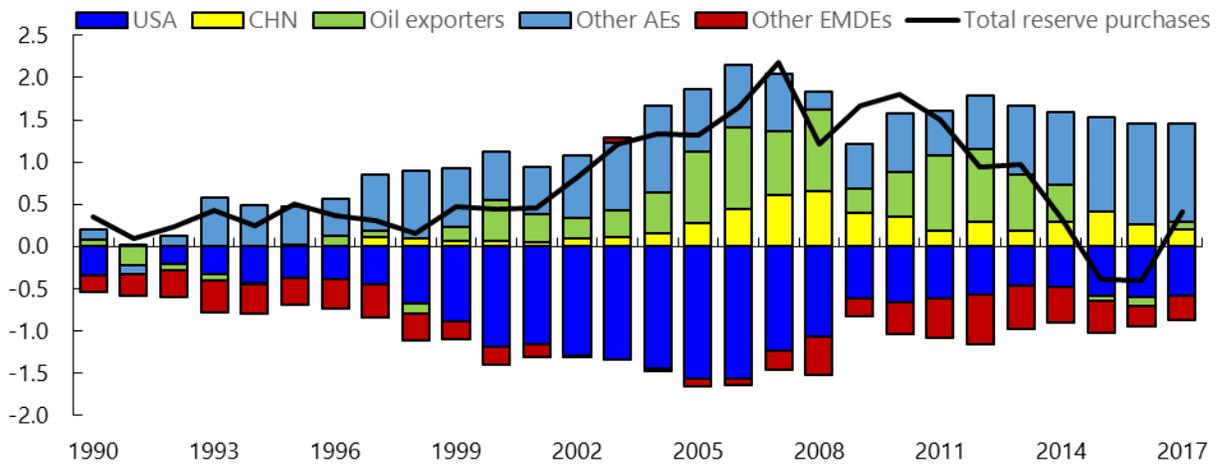
Source: IMF, World Economic Outlook; IMF staff calculations. The vertical axis measures cumulated nominal current accounts between 2010 and 2017, adjusted to reflect the path of nominal income growth.

Figure 13: Valuation effects on net foreign assets have moderated, but not eliminated, the tendency for net foreign asset ratios to diverge (Percent of GDP)



Source: IMF, World Economic Outlook; IMF staff calculations.

Figure 14: Global current account balances and reserve purchases, 1990-2017 (percent of world GDP)



Source: World Economic Outlook.