GROUP OF TWENTY

GLOBAL IMBALANCES

Prepared by Staff of the

INTERNATIONAL MONETARY FUND*

*Does not necessarily reflect the views of the IMF Executive Board.

CONTENTS

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EXECUTIVE SUMMARY

Aggregate current account surpluses and deficits narrowed in the aftermath of the global financial crisis but have remained relatively stable in recent years. At the same time, these imbalances are increasingly concentrated in advanced economies (AEs), as key emerging markets and developing economies (EMDEs) have either experienced a narrowing in their surpluses or their deficits. These developments reflected a combination of domestic policies and cyclical factors, with exchange rates generally playing a supporting role.

Meanwhile, external creditor and debtor positions have continued to increase. At 40 percent of world GDP, the sum of net creditor and net debtor positions is now at a historical peak and four times larger than in the early 1990s. The continued increase of net asset and liability positions took place against the backdrop of persistent (even if narrowing) current account imbalances, with valuation effects in the form of exchange rate and asset price movements playing a mitigating role in most cases, with the United States being an important exception.

Risks from the current configuration of global imbalances are generally contained, but continued vigilance and policy action are required. While the increased concentration of deficits in reserve currency AEs lowers near-term financing risks, a re-escalation of trade tensions could negatively impact global growth and trade, with knock-on effects on global risk aversion. This could affect the external debt service capacity of some EMDEs, especially those reliant on foreign demand and financing. Over the medium term, in the absence of corrective actions trade tensions could persist and the resulting divergence in external stock positions could trigger disruptive adjustments in large debtor economies that could spill over to creditor economies.

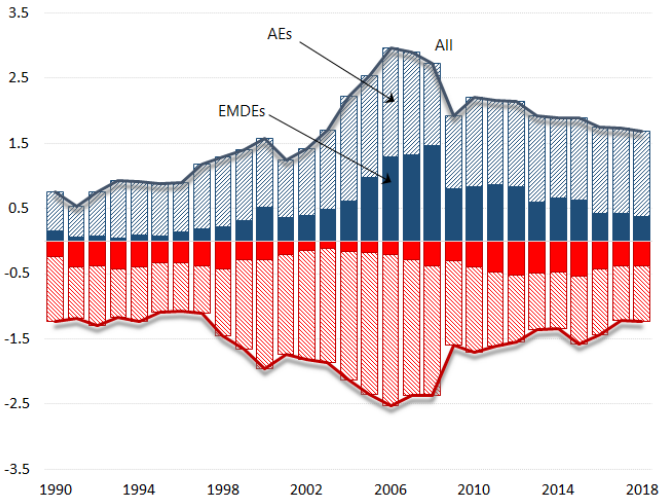
Reducing excess external imbalances in a growth-friendly manner requires a collective effort by both excess deficit and surplus economies. With output near potential in most systemic countries, a well calibrated macroeconomic policy mix is necessary to support rebalancing. Deficit countries can help by adopting growth-friendly fiscal consolidation, while surplus economies should seek to reduce imbalances by deploying available fiscal space and avoiding overreliance on accommodative monetary policies. While, in general, removing structural policy distortions is a desirable policy goal, careful sequencing and tailoring is needed to achieve global rebalancing. Many surplus countries have scope for reforms that encourage investment and discourage precautionary saving, including by further liberalizing the service sector and widening the coverage of social safety nets, where appropriate. Mitigating risks for deficit countries calls for reforms that increase labor market flexibility and improve competitiveness, including by strengthening the skill base of workers. Protectionists policies should be avoided as they are harmful for both domestic and global growth.

The Fund will continue to strengthen its analysis and understanding of the underlying drivers of global imbalances, including how exchange rates impact the current account and its components, the role of structural factors, including those related to corporate behavior, in explaining the evolution and persistence of imbalances, and the measurement challenges posed by multinational activities. Ongoing work in a few of these areas will be showcased in the forthcoming 2019 External Sector Report.

EVOLUTION OF GLOBAL FLOW AND STOCK IMBALANCES

1. After narrowing in the aftermath of the global financial crisis (GFC), global current account surpluses and deficits have remained broadly unchanged in recent years although they have become increasingly concentrated in advanced economies (AEs). Aggregate current account surpluses and deficits have hovered around 3½-4 percent of global GDP in recent years, and while they are well below the pre-crisis peak of 6 percent, they remain high from a historical perspective (Figure 1). The recent stability of aggregate current account balances masks a rotation of aggregate surpluses and deficits towards AEs.

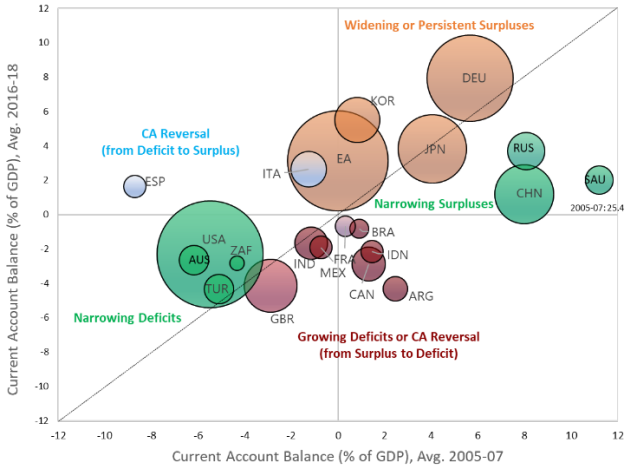
Figure 1. Global Current Account Imbalances, 1990-2018
(in percent of World GDP)



Sources: World Economic Outlook (WEO) and IMF staff calculations.

- Surpluses in China and oil exporting countries have narrowed significantly since 2005-07, while current account balances of euro area countries and some advanced Asian economies have either expanded or remained persistently high (Figure 2). The increase in the euro area's current account balance reflects both needed adjustments in debtor countries and larger surpluses in creditor countries (Germany, the Netherlands).

Figure 2. Selected Economies: Changes in Current Account Imbalances, 2005-18 1/

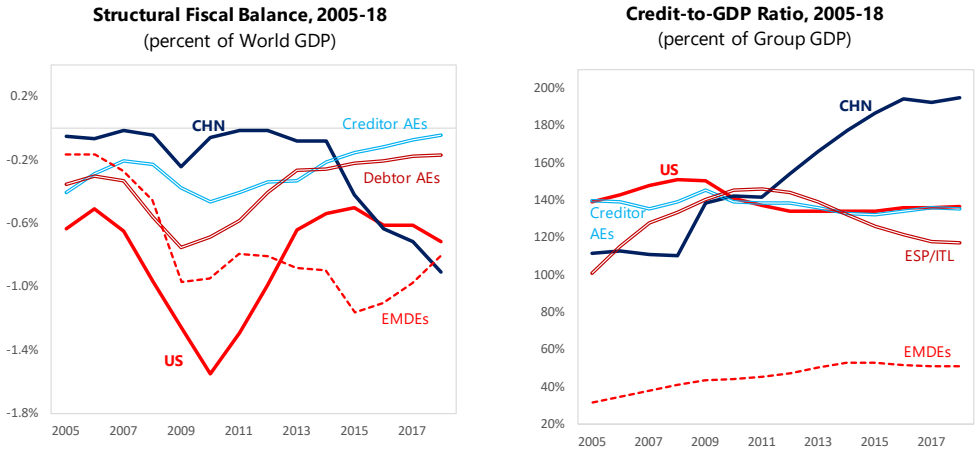


Sources: WEO and IMF staff calculations.
Note: The size of the bubble depends on the current account balance in USD in absolute terms, taking the 2016-2018 average.
1/ Chart includes G-20 economies, Spain as a permanent invitee, and the euro area.

- Meanwhile, although overall deficits are down since the GFC, they are now increasingly concentrated in the United Kingdom and the United States. Taken as a whole, deficits of key G20 emerging and developing economies (EMDEs, namely Argentina, Brazil, India, Indonesia, Mexico, South Africa and Turkey, have been generally unchanged since 2007, although behavior has varied notably during the post-crisis period.

2. The narrowing and rotation of global surpluses and deficits reflects a combination of macroeconomic policies and cyclical factors. Fiscal policy and the credit cycle have been key drivers of current account dynamics since the crisis (Figure 3). In the aftermath of the GFC, the coordinated fiscal policy impulse helped to offset private deleveraging, which was especially sharp in deficit economies. However, since 2013, divergent fiscal policy stances and credit cycles in key economies contributed to the rotation of imbalances towards AEs. Specifically, sharply lower surpluses in China reflected a sizable easing of fiscal and credit policies, while the rise in the euro area surplus reflected a combination of tight fiscal policy in most member countries and continued private sector deleveraging in peripheral debtor economies. Meanwhile, renewed fiscal easing in the United States and tighter fiscal and credit policies in EMDEs following the Taper Tantrum episode contributed to the recent concentration of deficits in AES. Finally, the sharp reduction in world energy prices since 2013 helped to underpin the reduction in current surpluses of oil exporting EMDEs.

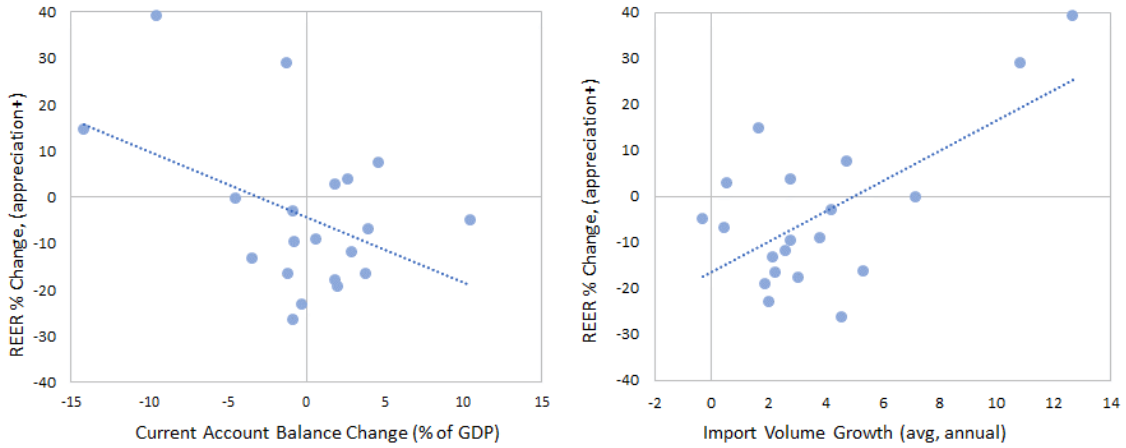
Figure 3. Selected Economies: Fiscal Balances and Private Credit, 2005-18 1/



Sources: BIS, WEO and Staff calculations.
EDMEs include Argentina, Brazil, India, Indonesia, Mexico, South Africa, and Turkey. Creditor AEs includes Germany, Japan and Korea. Debtor AEs includes France, Italy, and Spain (from euro area) as well as Australia, Canada, and United Kingdom. Italy and Spain are only shown in credit trends to emphasize role of private sector deleveraging in these economies.

3. Real exchange rate movements have generally supported these current account trends, with foreign exchange intervention playing a much more muted role since the crisis (see IMF, 2018). For example, the large reduction in China's current account surplus, from above 10 percent of GDP in 2007 to 0.4 percent in 2018, was accompanied by a cumulative 35 percent real appreciation of the renminbi over this period. Similarly, the increase in the overall euro area current account balance, from close to zero percent of GDP in 2007 to a surplus of 3 percent of GDP in 2018, was accompanied by a cumulative 10 percent real depreciation of the euro during this period. That said, while cumulative real exchange rate changes since 2007 have been generally associated with changes in current account balances, which were especially driven by changes in import volumes, the relationship exhibits a great

Figure 4. Selected Economies: Current Account and Import Volume Growth vs. REER Changes, 2007-18 1/

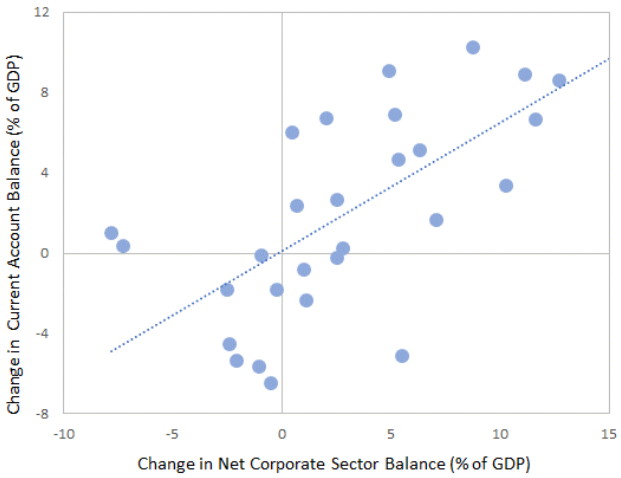


Sources: IMF, INS and WEO databases and IMF staff calculations.
1/ Includes all G20 economies (except Argentina), plus Spain (permanent invitee) and the overall euro area.

deal of heterogeneity in part reflecting country-specific factors (Figure 4). Ongoing analysis suggests that the role of exchange rates in facilitating current account adjustment depends on various factors, including the extent of integration into global value chains and invoicing in foreign dominant currencies (see paragraph 17).

4. Corporate savings and investment trends contributed to the rise and persistence of surpluses in some AEs. While the saving-investment balance of the corporate sector has improved across AEs since the mid-1990s (Gruber and Kamin, 2016), this trend has been especially strong among key surplus economies, including Germany, Japan, and Korea (Figure 5). Moreover, the rise in corporate saving has supported the improvement in overall current account balances, especially during the post-crisis period, at a time when public sector saving-investment balances also improved. The rise in net corporate saving of AEs reflect a series of factors, including lower wage compensation, dividends payments, and domestic investment, although further research is needed to ascertain the extent to which these trends reflect policy distortions (see Box 1 on Corporate Saving). In particular, there is a need to better understand whether the concentration of wealth and firm ownership increases the degree of co-movement between aggregate and corporate saving.

Figure 5. Selected Economies: Net Corporate Saving Balance vs. Current Account Balance, 1997-2016
(in percent of GDP) 1/

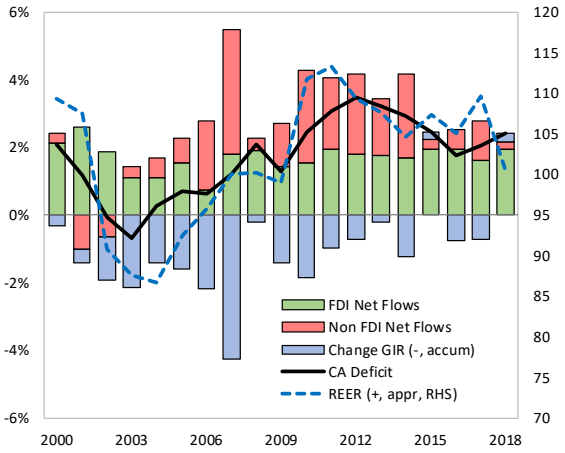


Sources: IMF WEO, OECD National Accounts and IMF staff calculations.
1/ Based on sample of 30 advanced and emerging economies for which sectoral data are available.

5. Recent trade policy actions do not appear to have materially affected overall imbalances, although they have come at a cost to global growth and trade. The trade dispute between China and the United States has led to higher tariffs on about 40 percent of U.S. imports from China (US$250 billion), and a similar share of Chinese imports from the United States (US$110 billion). Recent analysis (IMF 2019a) suggests that while tariffs on Chinese goods may have reduced the U.S.'s bilateral trade deficit with China, the overall U.S. current account deficit remained largely unchanged in part due to trade diversion effects. Meanwhile, higher tariffs and uncertainty related to trade tensions are likely to have detrimental effects on productivity and employment if they were to persist (see Box 2 on Bilateral Trade). Specifically, simulations suggest that an across-the-board tariff increase to 25 percent between the U.S. and China would lead to GDP losses of ¼ percent of GDP in the U.S. and 1¼ percent of GDP in China, although these effects could be larger if accompanied by market sentiment and confidence effects (see IMF 2018c, Scenario Box 1).

6. Current account deficits of key EMDEs have fluctuated in the post crisis period, on account of volatile financing conditions, which were largely driven by growth differentials with AEs and associated U.S. dollar movements (IMF, 2016). Following the post-GFC Quantitative Easing programs in key AEs, capital inflows accelerated, currencies appreciated, and current account deficits widened, in key G20 EMDEs (Figure 6). However, these trends started to reverse following the 2013 "Taper Tantrum" episode as AE-EMDE growth differentials narrowed and the prospects of AE monetary normalization gathered strength. Current account deficits have narrowed since, especially in the more vulnerable economies (Argentina, Turkey) which have also observed much weaker currencies. It is worth noting, that net (and gross) Foreign Direct Investment (FDI) flows have been far more stable than portfolio and other investment flows, as the latter are more sensitive to global financial conditions and U.S. dollar movements (see also Avdjiev et al., 2018).

Figure 6. Selected EMDEs: Net Capital Inflows and REER, 2007-18
(in percent of GDP) 1/

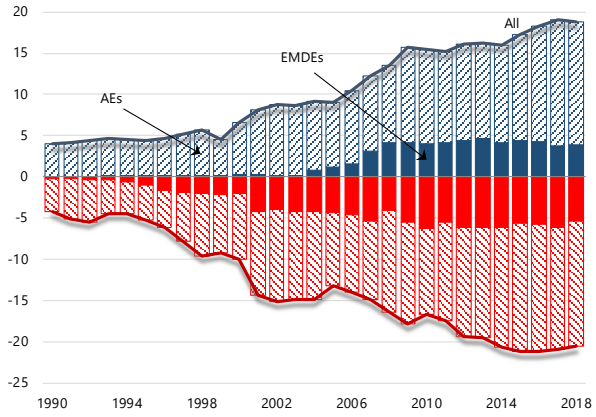


Sources: WEO and IMF staff calculations.
1/ Includes Argentina, Brazil, India, Indonesia, Mexico, South Africa, and Turkey. Weighted average (share of GDP and REER Index).

7. Meanwhile, net stock imbalances have continued to widen as current account surpluses and deficits remain concentrated in creditor and debtor countries, respectively. At 40 percent of world GDP, the world's Net International Investment Position (NIIIP), the sum of net creditor and net debtor positions, is now at a historical peak and four times larger than in the early 1990s (Figure 7). The widening of stock positions has been partly mitigated by valuation effects in most cases, both in the form of exchange rate and asset price movements (Figure 8). An important exception to this pattern has been the United States, with current account deficits and valuation losses over the same period primarily linked to the cumulative U.S. dollar appreciation and higher U.S. equity prices (see

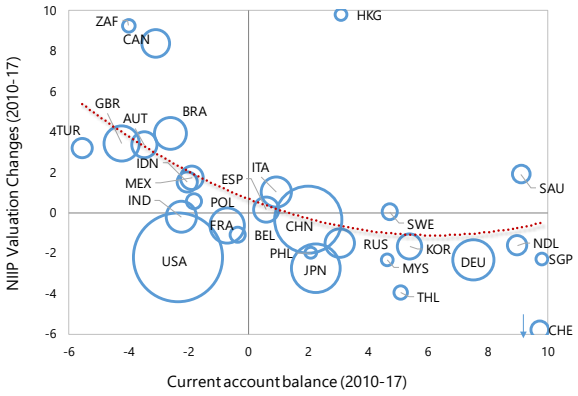
Adler and Garcia-Macia, 2018). The widening of stock positions has led to an increase in primary income credits and debits in some cases, although historically low global interest rates may have dampened this effect (see Box 3 on Income Balance).

Figure 7. World Net International Investment Positions, 1990-2018 *(in percent of World GDP)*



Sources: WEO, Lane and Milesi-Ferretti dataset, and IMF staff calculations.

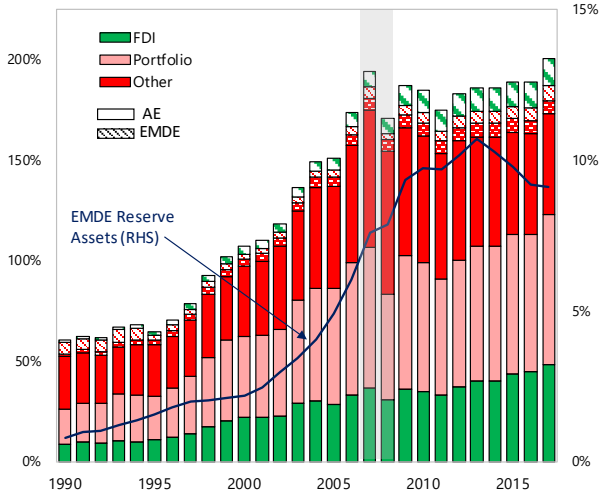
Figure 8. Selected Economies: Current Account and Valuation Changes, 2010-17 *(in percent of World GDP)*



Sources: WEO, Lane and Milesi-Ferretti dataset, and IMF staff calculations.
1/ For methodology see Adler and Garcia-Macia (2018).

8. Similarly, gross stock positions have continued to grow, despite some volatility after the GFC. While the crisis slowed the rapid pace of financial integration of previous years, total external liabilities reached about 200 percent of world GDP in 2018, double the amount observed in 1998 (Figure 9).

Figure 9. World Gross External Liabilities, 1990-2017 *(in percent of World GDP)*



Sources: IMF's *Financial Flows Analytics (FFA)* database and IMF staff calculations.
Note: shaded area denotes the Global Financial Crisis.

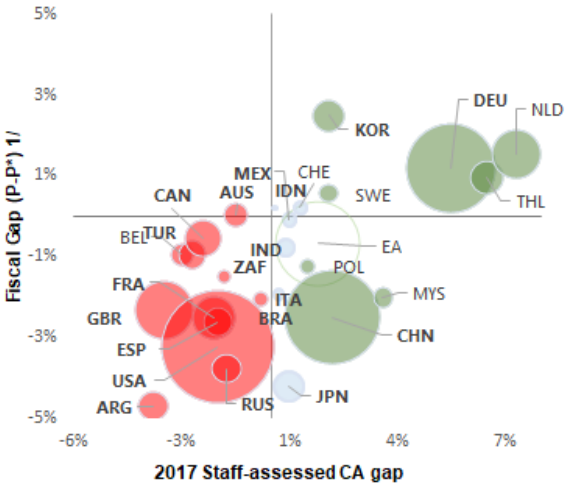
- Among AEs, cross-border FDI positions have continued to increase, unlike portfolio and other investments, reflecting mainly an expansion of positions vis vis-à-vis financial centers consistent with the increased complexity of activities of large multinational corporations (Lane and Milesi-Ferretti, 2017), while cross-banking activity has slowed.
- Financial integration in EMDEs has continued to increase further (up 10 percentage points of world GDP since 2018), driven by an increase in cross-border FDI and non-FDI positions, with total liabilities reaching about 30 percent of world GDP. Corporate leverage and overall external debt in EMDEs are at historical peaks, including foreign currency credit (BIS, 2018). On the asset

side, EMDE reserve assets, after rising sharply through 2013, have declined slightly in recent years (both as a share of world GDP total and non-FDI liabilities), mainly driven by China and consistent with the reduced importance of foreign exchange intervention in global current account dynamics.

DISTINGUISHING HELPFUL FROM EXCESSIVE GLOBAL IMBALANCES

9. Global current account surpluses and deficits can be economically warranted. Often, current account surpluses and deficits are appropriate, or even necessary. For example, countries with rapidly aging populations may need to accumulate external savings that they can draw from when their workers retire (see IMF, 2019b), while young and rapidly growing economies with ample investment opportunities but scarce domestic capital benefit from foreign funding.

Figure 10. Selected Economies: CA Gaps vs. Fiscal Policy Gaps, 2017 *(in percent of GDP)* 1/



Source: IMF External Sector Report (2018).
Note: Countries in bold denote G-20 members plus Spain (permanent invitee).
1/ The fiscal gap is measured as the domestic component of the policy gap. The dot size is proportional to the absolute value of estimated excess current account balances (in percent of World GDP) Green (red) dots correspond to positive (negative) gaps. Broadly-in-line current accounts are depicted in blue.

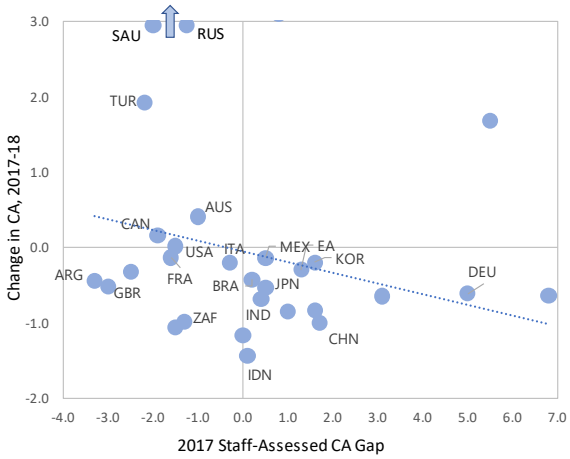
10. However, there are times when global imbalances reflect macroeconomic distortions and financial vulnerabilities. This will generally be the case when a country's current account surplus or deficit is excessive relative to the level implied by its fundamentals and desirable policies. To derive benchmark levels (or *norms*) that can help determine what constitutes an excessive current account and real exchange rate level for each country, the IMF uses a multilaterally-consistent model-based framework (see Cubeddu and others, 2019 for the latest vintage of the IMF's *External Balance Assessment* methodology). Model-based estimates are combined with analytically-grounded judgment to arrive at multilaterally-consistent external assessments, which are presented in the forthcoming *External Sector Report* (ESR), with the aim of identifying policies that both deficit and surplus countries can adopt to reduce excess global imbalances.

11. About 40 percent of global current account balances in 2017 were excessive and traced to undesirable policy settings (IMF, 2018). Regarding the role of fiscal policies in explaining excess surpluses and deficits (Figure 10), some countries with tighter-than-desirable fiscal stances observed higher-than-warranted current account balances (e.g. Germany, Korea), while others where fiscal consolidation is necessary over the medium term observed lower-than-warranted current account balances (e.g. Argentina, France, Spain, United Kingdom, the United States). Other macroeconomic policies, such as insufficient public health spending played a role in explaining excess surpluses in

some cases (China, Korea), while easy credit was in part responsible for excess deficits in others (Canada, Turkey). Moreover, structural policies can help explain the persistence of external imbalances, with product market distortions generally constraining innovation and investment and labor market distortions holding back competitiveness. That said, policies have a role to play even in countries with external positions that are deemed to be in line with fundamentals, as macro-structural policy distortions can often have offsetting effects on a country's external position (e.g. a weaker-than-desired fiscal balance combined with high barriers to entry that constrain business investment).

12. Developments in 2018 were consistent with a minor narrowing of excess surpluses and deficits as well as their further concentration in advanced economies. Current accounts have generally moved in the direction of closing external imbalances between 2017 and 2018, with the large reduction in China's surplus generally matched by lower deficits in some advanced and emerging economies as well as higher balances in oil exporting countries (Figure 11). In the United States, despite a very expansionary fiscal policy and output rising above potential, the current account deficit was generally unchanged, largely reflecting increases in domestic oil production. A full assessment will be included in the forthcoming 2019 ESR, which will take into account the extent to which the observed narrowing of imbalances reflected cyclical factors (e.g. energy prices rose in 2018) and domestic policies.

Figure 11. Selected Economies: 2017 Staff-Assessed CA Gap vs. Change in Actual CA 2017-18
(in percent of GDP)

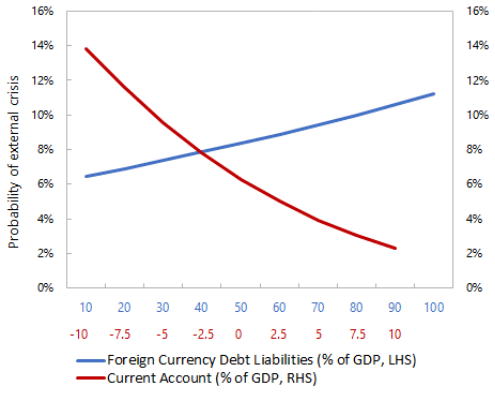


Sources: WEO, INS, 2018 External Sector Report, and IMF staff calculations.
Note: G-20 members plus Spain (permanent invitee) are highlighted.

RISKS FROM PERSISTENT IMBALANCES

13. While the concentration of global deficits in AEs reduces near-term financing risks, vulnerabilities persist in some EMDEs. With deficits concentrated in reserve currency-issuing AEs, global imbalances do not present an imminent threat. That said, a re-escalation in trade tensions (or a disorderly Brexit outcome) with knock-on effects on commodity prices and global risk aversion could affect the external debt service capacity of some EDMEs, especially those highly reliant on foreign demand and financing. Fund analysis suggests that the size of the current account balance and

Figure 12. Model-Predicted Probability Margins 1/



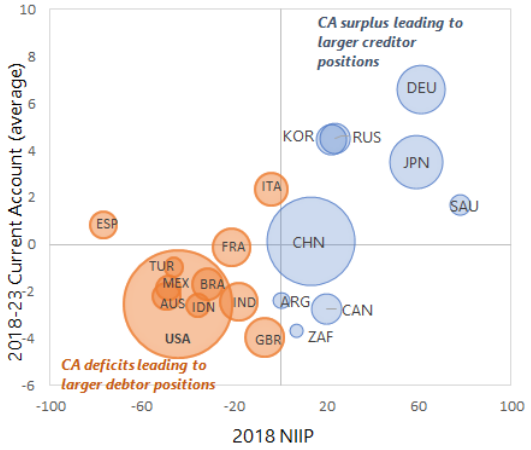
Source: IMF staff estimates.
1/ Y-axis shows external crisis probability conditional on foreign currency debt liabilities and current account levels, with other covariates constant.

composition of the IIP impact the likelihood of external crises. Specifically, preliminary estimates suggest that an increase in foreign-currency denominated debt liabilities from 50 to 100 percent of GDP (all else equal) would increase the probability of a large and costly external crisis by 3 percentage points (Figure 12), while large current account deficits are also associated with a higher probability of an external crisis. Similarly, higher exposure to foreign currency debt increase the likelihood of an external crisis or sudden stop, although reserve assets can act as a mitigating factor (for more see Box 4 on NIIP Risks).

14. In the absence of corrective actions, trade tensions could become entrenched and stock imbalances could widen further, making the global economy more vulnerable down the road. The continued persistence of surplus and deficits could lead to a further increase in credit and debtor positions (Figure 13), and raise the likelihood of a disruptive adjustment in large debtor economies with global spillovers, as was the case following the GFC. How stock imbalances will evolve depend on a series of factors and is especially sensitive to the policy assumptions underpinning the current account projections.

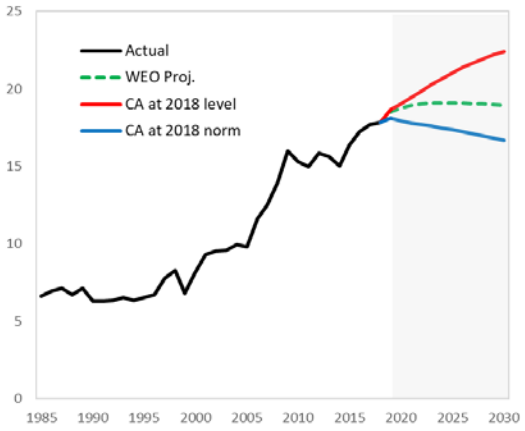
- To illustrate three scenarios are considered (Figure 14). Under *baseline policies* consistent with the April 2019 World Economic Outlook (WEO), stock imbalances are projected to remain generally unchanged over the medium term, despite a modest rise in the U.S. current account deficit. However, under a *passive policy scenario*, which assumes unchanged current account balances as a share of GDP over the projection period, creditor and debtor positions would expand by an additional 5 percentage points of World GDP by 2030.[1] It is only under an *active policy scenario*, where countries' current account balances are set to their staff-assessed norms, that creditor and debtor positions would close (by about 2 percentage points of World GDP by 2030).

Figure 13. G20 Economies: 2018 NIIP vs. Current Account Balances, 2018-23,
(in percent of GDP) 1/



Source: WEO and IMF staff calculations.
1/ Dot sizes proportional to GDP in USD.
Note: Chart includes G-20 economies and Spain as a permanent invitee.

Figure 14. Selected Creditor Economies: Net International Investment Position, 1985-2030
(in percent of GDP)



Source: WEO and IMF staff calculations.

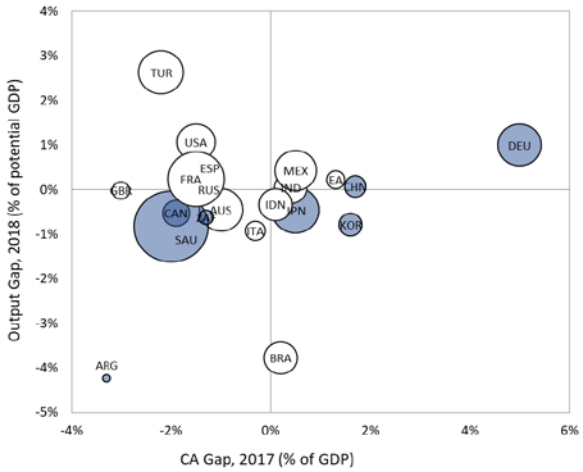
[1] In the baseline policies simulation, the current account is projected to stay constant at its 2023 value through 2030. It is worth noting that simulations do not assume valuation effects, and as such may understate the actual impact on

- That said, there are other scenarios where creditor and debtor positions could expand even further. For instance, a sharp slowdown in China, absent of an orderly deleveraging process, could also lead to a rapid widening of global imbalances, possibly triggering further trade actions. In EMDEs, a prolonged period of benign financing conditions could lead to a surge in capital inflows, and additional borrowing by governments and/or corporates, that would sow the seeds of future distress when monetary policy conditions normalize in AEs (see Box 4, and Bruno and Shin, 2018).

POLICIES TO REDUCE EXTERNAL IMBALANCES

15. G-20 surplus and deficit countries need to adopt carefully calibrated macroeconomic policies to reduce excess imbalances. In recent years, output gaps have closed for most G-20 countries, while external gaps have not (Figure 15). In general, deficit countries should move forward with growth-friendly fiscal consolidation, while surplus economies should deploy available fiscal space and avoid overreliance on accommodative monetary policies. In deficit countries where credit growth remains strong, macroprudential policies may need to be tightened to help slow down domestic demand growth and reduce imbalances.

Figure 15. G20 Economies: Output Gaps and Current Account Gaps, 2017-18
(in percent of GDP) 1/



Source: WEO, 2018 *ESR* and IMF staff calculations.
1/ Bubble area is proportional to the country's NFA level in percent of GDP. Blue (white) bubbles denote creditor (debtor) positions. Chart includes G-20 members and Spain as a permanent invitee.

16. Structural reforms also have an important role to play to boost potential growth and address external imbalances. Boosting potential growth will require policies that incentivize higher private investment, particularly in those countries where demographics are weighing on potential growth and reducing incentives for domestic investment. While, in general, removing structural policy distortions is a desirable policy goal (see Banerji and others, 2017), careful sequencing is needed to achieve global rebalancing (see IMF, 2018b; and Cubeddu and others, 2019). Surplus countries could prioritize reforms that encourage investment and discourage excessive savings by curtailing subsidies to SOEs (China), expanding the social safety net (China and Korea), incentivizing R&D spending and ensuring financing for investment in innovative activities and deregulating the service sector (China, Germany, and Japan). Higher wage growth in euro area surplus countries maybe be needed to facilitate rebalancing. Meanwhile, deficit countries could focus on reforms that reduce labor costs and improve competitiveness, including by strengthening the skill base of workers (Canada, France, United Kingdom and United States). In the euro area, efforts to make the currency union more resilient (e.g., banking and capital markets union,

stock imbalances (e.g. under active policies, exchange rate movements would likely support a narrowing of stock positions). Simulations only cover ESR creditor economies.

fiscal capacity for macro stabilization) remain of essence to avoid a reemergence of disorderly intra-euro area imbalances.

17. Exchange rate flexibility should continue to support external adjustment, notwithstanding varying effects across countries. Ongoing analysis suggests that key features of international trade, especially greater integration into global value chains and invoicing in foreign, dominant currencies, may have a bearing on the responsiveness of gross flows to exchange rates, with weaker export responses and greater external adjustment through imports, especially in the short run. This work will be featured in the forthcoming 2019 ESR. Sluggish export responses point to the need of supporting exchange rate flexibility with other macro-structural policies in the short-run, including measures to lessen capacity constraints, such as improving infrastructure to facilitate exports (i.e. roads, ports, logistical support). Easier access to credit and lower regulatory barriers for SMEs should also facilitate export responses to exchange rate movements. In some cases, excessive exchange rate volatility and/or disorderly movements in exchange rates can have adverse implications for economic and financial stability.

18. Vulnerabilities associated with external stock imbalances require careful monitoring. Given the rapid rise on corporate indebtedness in many EMDEs, currency and maturity mismatches need to be monitored carefully (BIS, 2018 Annual Report, IMF 2019 April GFSR), while efforts to reduce vulnerabilities continue. Special attention should be given to: (i) reducing foreign currency-denominated debt through targeted macroprudential policies; (ii) encouraging more inward FDI by ensuring equal treatment between domestic and foreign investors; and (iii) deepening financial markets, including aiding the development of FX hedging instruments. In some EMDEs, measures to reduce fiscal debt and external vulnerabilities should be supplemented by efforts to build bank capital and liquidity buffers. More generally, an integrated approach in response to external shocks is needed, where the complementarities and tradeoffs between monetary policy, foreign exchange intervention, macroprudential policies, and capital flow management measures are appropriately considered (see IMF Managing Director's April 2019 GPA).

19. Protectionist and trade policies that target bilateral trade balances are likely to be ineffective and impose substantial efficiency costs. Countries should avoid using tariffs to target bilateral trade balances as these are unlikely to affect aggregate imbalances and are costly in terms of domestic growth and employment, with negative global spillovers. Instead, focus should also be given to reviving liberalization efforts and strengthening the multilateral rules-based trading system, including promoting trade in services, where gains from trade are substantial but barriers remain high.

20. Data collection efforts should be strengthened to account for the growing complexity of multinational cross-border activities. With greater integration in finance and trade—reflecting, in part, the growing role of multinational corporations—measurement of external positions has become more challenging as the boundaries between residents and non-residents, and the corresponding attribution of income across countries, have become blurred. These issues are particularly relevant for financial centers (countries with large gross assets and liabilities) and tax havens (whose statistics are disproportionally impacted by profit shifting practices). To ensure the proper measurement and assessment of external positions, national statistics agencies need to

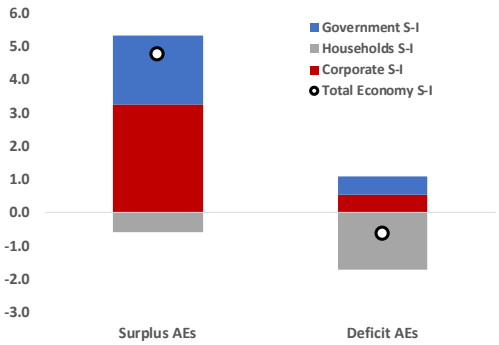
strengthen their data collection and collaboration efforts (see 2019 European Commission which finds large bilateral statistical discrepancies on income and service balances). The Fund is spearheading efforts, together with other international organizations, to ensure Global Value Chains and Special Purpose Entities are properly reflected in the measurement of external positions.

21. The IMF's surveillance of external imbalances will remain key for monitoring global risks and coordinating appropriate policy actions. Despite narrowing imbalances since the global financial crisis, risks from lingering imbalances in some countries and growing stock positions remain. Rigorous and evenhanded analysis of external positions are of essence to promote growth-friendly policy actions by both excess surplus and deficit countries to rebalance the global economy. The Fund remains committed to continue strengthening the analysis of external imbalances and its drivers, including to ensure the EBA methodology evolves by drawing on the latest advances in the literature and lessons learned in the implementation process. Moreover, further efforts are necessary to address data gaps to monitor more accurately the evolution of external positions.

Box 1. Corporate Saving in Advanced Economies

From a sectoral perspective, differences in net saving (saving minus investment, S-I) behavior of the corporate sector can explain over half of the divergence in overall current account balances between surplus and deficit AEs (Figure 1). While net corporate saving has risen across all AEs (red bar), it has been more pronounced in surplus economies. Surplus AEs have also observed higher public net saving (blue bar) and a smaller offsetting role by households (grey bar), the latter suggesting there may be impediments for households to "pierce the corporate veil", possibly linked to wealth inequality and firm ownership structures.

Figure 1: AEs: Change in current account by sector, 1995-2017 1/ (percentage points of GDP)

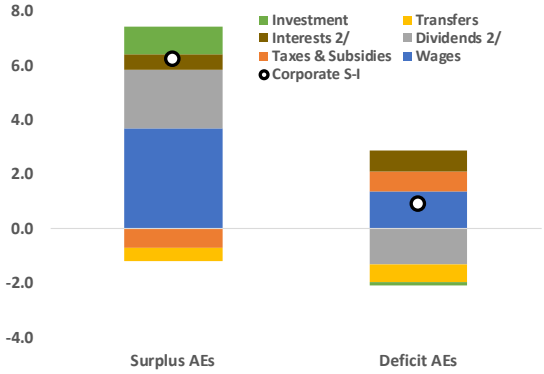


Source: IMF WEO, AMECO database, OECD National Accouncts dataset and Fund staff calculations.
1/ Surplus (deficit) AEs are those that ran surpluses (deficits) in 2008.

These differences in net corporate saving largely reflect differences in labor compensation, dividend payments, and investment (Figure 2). Meanwhile, interest payments and taxation appear to have played a more limited direct role in explaining the differences in corporate saving between surplus and deficit AEs (see also Dao and Maggi, 2018), even though taxation may also affect incentives (see below).

Labor compensation. While labor shares (blue bar) have fallen across most AEs, these declines have been strongest in AEs with faster rising corporate saving (see also Chen, Karabarbounis and Neiman, 2017). The shift in income from workers (with high marginal propensities to consume) to shareholders (with low marginal propensities to consume) can depress aggregate consumption, imports, and raise the current account (Behringer and van Treeck, 2018). However, the extent to which the decline in labor shares reflect technological progress (see Dao and others, 2017) or labor market institutions is an open question. On this point, Ciminelli, Duval, and Furceri (2018) find that the erosion in job protection legislation may have partly contributed to a decline in labor shares (15 percent on average), while IMF (ESR, 2018) finds that an easing of employment protection can improve the current account; the latter is in line with Redeker (2019), who finds reduced union density and workers' bargaining power increase net corporate saving.

Figure 2: AEs: Change in corporate saving-investment balance, 1995-2017 (percentage points of corporate value-added)



Source: IMF WEO, AMECO database, Chen et al (2017) online database, OECD National Accouncts dataset and Fund staff calculations.
2/ Dividends (net) include retained earnings on FDI, interests (net) include income from insurance policies and rents.

Dividends. The rise in corporate saving has been strongest in countries with more pronounced shifts away from dividend payouts (gray bar) and towards retained earnings and share buybacks (Gutierrez and Philippon, 2016), due to changes in tax incentives in some cases. These trends may have contributed to current account dynamics, as risk-averse agents tend to choose to consume more out of actual income (dividends) than out of latent income in the form of retained earnings (see Baker, Nagel and Wurgler, 2006).

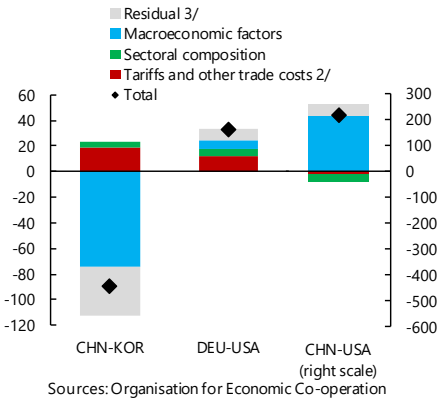
Investment. Declines in investment (green bars) have been strongest among surplus AEs, although it is unclear whether these reflect weaker future growth prospects (Gruber and Kamin, 2016) or more binding investment barriers (IMF, ESR 2018).

The extent to which the rise in corporate saving reflects policy distortions remains work in progress and will require tailored analysis at the country level. In fact, other aspects related to the distribution of wealth and firm ownership could also be important in understanding the link between corporate saving and the current account. Specifically, if the rise in corporate profits are concentrated among wealthy households with low propensities to consume, aggregate private saving may co-move stronger with corporate saving.

Box 2. Bilateral Trade Balances and the Role of Tariffs

Large and rising bilateral trade balances have come under scrutiny lately, as some policymakers are concerned they may reflect asymmetric obstacles to trade. Recent analysis has shown, however, that their evolution is the result of macroeconomic forces and that resorting to bilateral tariffs to target a specific bilateral balance is likely to be both ineffective and disruptive to global trade and growth (see IMF 2019a). Tariff-induced changes in a bilateral trade balance tend to lead to offsetting changes in balances with other partners through trade diversion, with little or no impact on a country's aggregate trade balance. At the same time, tariffs have important negative effects on output, employment, and productivity for the countries directly involved and also for other countries linked through global value chains.

Figure 1. Contributions to Changes in Bilateral Trade Balances, 1995-2015 1/
(Billions of US dollars)



Sources: Organisation for Economic Co-operation and Development, Trade in Value Added database; and IMF staff calculations.
Note: Data labels use International Organization for Standardization (ISO) country codes.
1/ Average value 2010-2015 minus average value 1995-1999.
2/ This includes tariffs and free or preferential trade agreements.
3/ The residual is the sum of the model residuals plus the approximation error.

Macroeconomic forces, not tariffs, drove bilateral trade balances. A decomposition exercise using a standard trade model shows that over the past two decades, most of the changes in bilateral trade balances were explained by changes in macroeconomic factors of both trading partners (Figure 1). These factors include fiscal policies and credit cycles, and in some cases also foreign exchange intervention and supply-side policies (e.g., subsidies to exports or production that affect similarly trade with all partners). In contrast, bilateral tariffs played only a small direct role, reflecting their already low levels in most countries in the mid-1990s and the fact that reciprocal tariff reductions had offsetting effects on bilateral trade balances.

Analysis of episodes of overall trade balance reversals suggests that targeting a particular bilateral trade balance is of little consequence. Adjustments in specific bilateral trade balances do not necessarily lead to adjustments in the overall trade balances, but changes in the overall trade balance tend to be matched by proportional changes across trading partners. This suggests that, absent changes in macroeconomic conditions, changes in a country's bilateral balances simply result in compensating adjustments in other bilateral balances.

But tariffs are costly for macroeconomic outcomes. While the impact of tariffs on trade balances was modest over the period of analysis, large and permanent changes in tariffs shaped the international organization of production. And indeed, since the mid-1990s the significant decline in both tariffs and other trade costs (for example, transportation costs) has gone together with an increase in the extent and complexity of global value chains. This increased integration of production has not only led to specialization and productivity improvements, but also to greater risk of international spillovers from trade policy.

Box 2. Bilateral Trade Balances and the Role of Tariffs (Concluded)

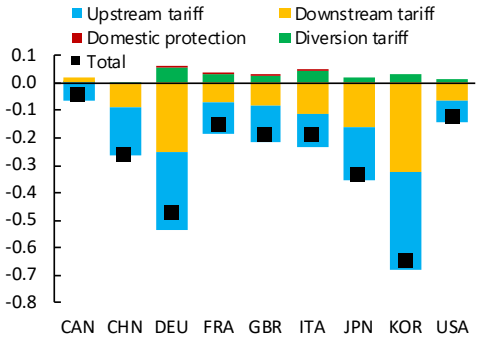
Specifically, an increase in tariffs would have ripple effects far beyond any bilateral pair of countries, with detrimental effect on output, jobs, and productivity for both the countries directly affected and for others up and down the global value chain. Simulations (which do not account for any feedback effects) suggest that the negative effect of a generalized 1 percentage point increase in manufacturing tariffs is larger today than it would have been in the mid-1990s (Figure 2). In countries like Germany and Korea, who are particularly highly integrated into manufacturing supply chains, the difference is especially large.

Any further escalation of trade tensions would also be costly at the country and global level. Different simulations using general equilibrium models and involving an illustrative scenario with a 25-percentage point increase in bilateral tariffs on all goods traded between US and China show output losses in both countries, but also at the global level (Figure 3). The effects would be larger the impact of trade tensions on confidence and financial markets were considered. Moreover, sectoral reallocations from the repositioning of global value chains would imply sizeable job losses in specific sectors in both countries. The change in the aggregate trade balance of both countries would, however, be negligible: following the increase in bilateral tariffs, each country's demand is diverted to other trading partners, benefitting countries such as Mexico, Canada and to a lesser extent east Asia.

These findings suggest two main policy conclusions. First, discussion of external balances is rightly focused on macroeconomic determinants of trade and current account balances. Second, broad-based multilateral reductions in tariff and non-tariff barriers will benefit trade and, over the longer term, improve macroeconomic outcomes.

Figure 2. Illustration of the Effect of a 1 Percentage Point Generalized Tariff Increase on Real Value Added 1/

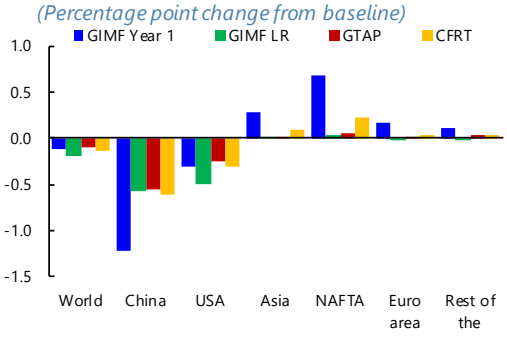
(Percent of GDP)



Source: IMF staff estimates.
Note: Data labels use International Organisation for Standardization (ISO) country codes.
1/ Effects are partial equilibrium estimates based on a country-sector level analysis. The figure shows the change in the simulated tariff spillovers between 1995 and 2011, the last year for which such an exercise is possible given data constraints. 2011 is a good approximation of current global value chain links because most of the growth in global value chain integration took place before 2011.

Figure 3. Macro Effects from a 25 Percent Increase in Tariffs Affecting all US–China Trade: Real GDP 1/

(Percentage point change from baseline)

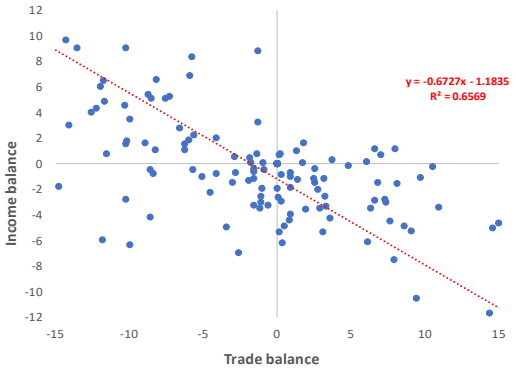


Source: IMF calculation using the model in Caliendo and others (2017).
Note: CFRT = Caliendo and others (2017) model; EA = euro area; GIMF = Global Integrated Monetary and Fiscal model; GTAP = Global Trade Analysis Project; LR = long run; NAFTA = North American Free Trade Agreement. In the figure, *NAFTA* is NAFTA countries excluding US and *Asia* is Asian countries excluding China.
1/ Effects are simulated from three general equilibrium models: GIMF, GTAP, and CFRT.

Box 3. The Income Balance and the Current Account

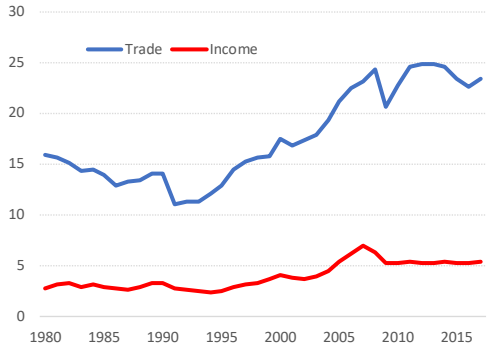
The current account summarizes a country's intertemporal saving and investment decisions. As such, it is mainly driven by a range of fundamentals and policies affecting production, consumption and investment, along with shifting external conditions. The main components of the current account are the trade balance and the net factor income balance, although their relative importance also varies depending of fundamentals and policies (past and present). For example, the primary income balance tends to be more positive in richer, faster aging economies that have accumulated net external assets to provide for consumption at old age. The opposite is true for younger and faster growing economies who must pay returns on their stock of foreign borrowing. Of course, other factors affect the net income balance, including the composition and risk profile of assets and liabilities and safe-haven status of currencies. Similarly, countries with a large population living abroad (due to conflicts or lack of domestic employment opportunities) will tend to have positive secondary income balances from migrants' remittances. Often, there is a negative relationship between the trade and income balance (Figure 1), as countries may need to run trade surpluses to meet external debt service obligations, while others run trade deficits as they start dissaving and put to use the income on assets held abroad.

Figure 1: Trade Balances vs. Income Balances, Average 2012-16
(in percent of GDP)



Trade still holds a predominant role at the country and global level, although the income balance has risen alongside financial and labor integration. Gross trade flows (defined as the sum of exports and imports) continue to exceed gross income flows (primary and secondary income credits and debits). The widening of stock positions since the 1990s have led to an increase in total income as percent of world GDP, although the relative importance of trade and income has been generally unchanged, as trade openness has also risen, and interest rates have fallen to historic lows (see Figure 2). That said, the distinction between trade and income is becoming less relevant with the growing complexity of multinational operations as location decisions are often driven by taxation and associated profit shifting motives.

Figure 2: Total Trade and Income, 1980-2017
(in percent of World GDP)

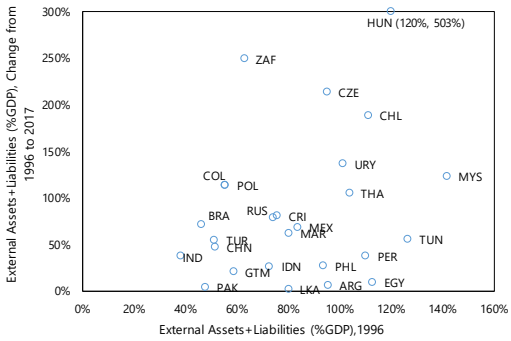


Although trade and income balances are mere components of the current account, certain features of the income balance deserve consideration. The "recorded" income balance may at times not fully reflect net wealth changes, and adjustments for these measurement biases could be required (see Cubeddu and others, 2019). This issue is particularly relevant for financial centers and tax havens, including because of challenges in properly attributing income to the ultimate owner. Overcoming these issues require improved data collection efforts and increased collaboration among national statistical agencies. Finally, the income balance may affect how exchange rates facilitate the adjustment process. For example, a (permanent) depreciation may lead to larger trade adjustments in countries with larger debt service obligations in foreign currency, with the opposite potentially holding true in creditor countries. Further research is needed to better understand how balance sheets and associated income (or debt service) affects how exchange rates impact external adjustment (see Hofmann and others, 2019).

Box 4. IIP Structure and External Financing Risks

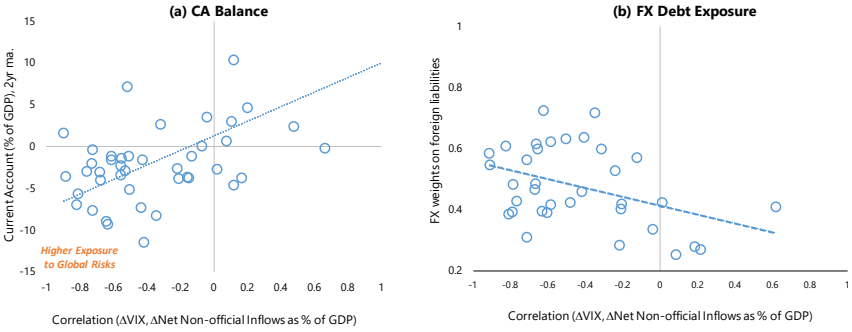
Financial integration in EMDEs has risen substantially over the last two decades, posing new challenges. External balance sheets (sum of assets and liabilities) have increased by an average of 85 percentage points of GDP since 1996, yet this trend has varied substantially across countries and has tended to be the strongest in emerging European and Latin American economies. Although integration can in principle improve risk sharing and the ability to absorb shocks, it can also pose risks depending on the size and composition of liabilities, currency mismatches, as well as the depth of domestic financial markets.

Figure 1: Size of EMDE External Balance Sheets



Financial integration has made EMDEs more prone to shifts in global sentiment, although the impact varies depending on external fundamentals. Specifically, private capital net inflows to EMDES are more sensitive to spikes in global risk aversion (x-axis) in countries with higher current account deficits (Figure 2a), higher FX debt exposure (Figure 2b) and net external debt (not shown). The sensitivity of capital flows to the VIX appears to have grown with financial integration.

Figure 2: Selected EMDEs, Sensitivity of Private Flows to Global Risk Aversion vs. Flow and Stock Imbalances, 2009-17



Sources: BIS, FFA, Haver Analytics, and IMF staff calculations.

Guarding against a sudden stop or external crisis requires carefully monitoring different aspects of flow and stock imbalances. Findings based on a probit model (estimated using data for 70 countries, between 1991-2016) to study the relationship between external balance sheets and episodes of sudden stops with large output declines and external crises[1] suggest that: (i) IIP currency composition matters, with higher foreign currency shares in gross external debt increasing the likelihood of sudden stops and external crises; (ii) foreign reserves assets can decrease the likelihood of external crises, although with diminishing returns; (iii) higher current account deficits increase the likelihood of external crises, while overvalued REERs increase the likelihood of sudden stops. Finally, financial deepening reduces the likelihood of both sudden stops and external crises.

1/Sudden stops are episodes where net private capital inflows are either: (i) 1.5 standard deviation below their mean and the annual decline is 0.75 standard deviations from the previous year, or (ii) have declined by at least 3 pps of GDP relative to the previous year and 2 pps from two years before. A large output decline is an episode where real GDP growth, relative to its past 5-year historical average, is in the bottom 5th percentile of the distribution (across time and across countries). An external crisis is an episode of private or public external debt default/restructuring or an IMF-supported program. Regression also includes standard controls used in the literature (see Catao and Milesi-Ferretti, 2014).

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