World Economic and Financial Surveys

External Sector Report

Tackling Global Imbalances amid Rising Trade Tensions

JUL 18

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INTERNATIONAL MONETARY FUND

2018 EXTERNAL SECTOR REPORT

June 28, 2018

KEY POINTS

Overall global current account surpluses and deficits remained broadly unchanged, at about 3¼ percent of world GDP in 2017, with growing concentration in advanced economies. About 40-50 percent of last year's global current account balances were deemed excessive (that is, not explained by countries' fundamentals and desirable polices). *Higher-than-desirable* balances prevailed in the euro area (driven by Germany and the Netherlands), other advanced economies (Korea, Singapore, Sweden), and China, with their contributions to excess global imbalances depending both on the size of their economies and their own imbalances. *Lower-than-desirable* balances remained concentrated in the United States, the United Kingdom, some euro area debtor countries, and a few vulnerable emerging market economies (Argentina, Turkey).

Large and sustained excess external imbalances in the world's key economies—amid policy actions detrimental to external balances—pose risks to global stability. The fiscal easing currently underway in the United States is leading to a tightening in monetary conditions, a stronger US dollar, and a larger US current account deficit. In the near term, these trends risk aggravating trade tensions, and the resulting faster tightening of global financing conditions, which could prove even more disruptive for emerging market economies, especially those with weak external positions. Over the medium term, sustained deficits, leading to widening debtor positions in key economies, could constrain global growth and possibly result in sharp and disruptive currency and asset price adjustments. Meanwhile, asymmetries in competitiveness among euro area members, if unaddressed, pose risks to the currency block and the global economy; while persistent unbalanced domestic demand in China could result in an abrupt growth slowdown and a resurgence of its excess external imbalances.

With limited policy space and normalizing cyclical conditions, policies need to be carefully sequenced and calibrated to achieve domestic and external objectives. In countries with weaker-than-warranted external positions and full employment, actions to strengthen public and private sector balance sheets should take priority, while monetary normalization proceeds gradually. In economies with stronger-than-warranted external positions and fiscal space, a less-restrictive fiscal stance would help promote external rebalancing. In the euro area, where accommodative monetary conditions remain necessary to support the return of area-wide inflation to its target, further banking, fiscal, and capital markets integration would also help to boost investment and reduce the currency area's excess external imbalance. As cyclical policies are unwound gradually and policy space is rebuilt, well-tailored structural policies will need to play a more prominent role in tackling excess global imbalances. In general, reforms that encourage investment and discourage excessive saving (for example, through reduced entry barriers and stronger social safety nets) are necessary in excess surplus countries, while focus on reforms that reduce labor costs and improve competitiveness are more appropriate in excess deficit countries.

Finally, protectionist policies should be avoided as they are likely to have significant deleterious effects on domestic and global growth, while limited impact on external imbalances. Surplus and deficit countries alike should work toward reviving liberalization efforts and strengthening the multilateral trading system—particularly to promote trade in services, where gains from trade are substantial but barriers remain high.

The IMF's Seventh ***External Sector Report*** presents a multilaterally consistent assessment of the largest economies' external sector positions and policies. This report, along with the companion ***Individual Economy Assessments***, integrates analysis from the IMF's bilateral and multilateral surveillance to provide a consistent assessment of exchange rates, current accounts, reserves, capital flows, and external balance sheets. This year's edition also includes a **Technical Supplement** describing the latest ***Refinements to the External Balance Assessment Methodology*** (key input to external assessments).

Together with the World Economic Outlook and Article IV consultations (both with their heightened focus on spillovers), this Report is part of a continuous effort to assess and address the possible effects of spillovers from members' policies on global stability and to monitor the stability of members' external position in a comprehensive manner. The report and associated external assessments are based on data and IMF staff projections as of June 22, 2018.

This report was prepared in consultation with the External Sector Coordinating Group comprising Luis Cubeddu (Chair), David Robinson (AFR), Paul Cashin, Mariana Colacelli, Sonali Jain Chandra, Kenneth Kang (APD), Alfredo Cuevas, Julie Kozak (EUR), Catherine Pattillo, Abdelhak Senhadji (FAD), Tim Callen (MCD), Gaston Gelos, Ratna Sahay (MCM), Jonathan D. Ostry (RES), Tam Bayoumi, Martin Kaufman, Varapat Chensavasdijai (SPR), Venkateswarlu Josyula, Carlos Sánchez-Muñoz (STA), and Nigel Chalk, Antonio Spilimbergo (WHD).

Gustavo Adler and Pau Rabanal led the preparation of the report. The report draws on contributions from Emine Boz, Mai Dao, Swarnali Hannan, Callum Jones, Signe Krogstrup, Nan Li, Carolina Osorio-Buitron (all RES), and inputs from Russell Green, Shakill Hassan, Yevgeniya Korniyenko, Huidan Lin, Yinqiu Lu, Pablo Morra, Silvia Sgherri, Misa Takebe (all SPR) and country teams. It also benefited from the overall guidance of Maurice Obstfeld and Jonathan D. Ostry. Excellent research and editorial assistance was provided by Kyun Suk Chang, Deepali Gautam, Jane Haizel, Jair Rodriguez, Zijiao Wang (all RES) and Rachelle Blasco (SPR).

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I. OVERVIEW

1. The 2018 *External Sector Report* (ESR) discusses the evolution of and outlook for global external balances and provides an overview of the external assessments of a globally representative set of economies for 2017. This overview complements the assessments of external balances of 30 systemic economies detailed in the accompanying *Individual Economy Assessments*, providing a global view, identifying global patterns and discussing potential policies to address excess imbalances from a multilateral perspective (see also Box 1). The report is organized as follows: *Section II* documents recent trends in external flows (that is, current account balances), stock positions (that is, international investment positions) and exchange rates. *Section III* presents the normative assessment of external balances (see key definitions in Box 1) and *Section IV* discusses the outlook and policy recommendations. In light of the material developments since the end of 2017, the report pays particular attention to the outlook and risks stemming from excess external imbalances and related policies. Finally, *Section V* discusses the potential impact of trade costs (frictions and policy barriers) on external balances, and argues in favor of reviving liberalization efforts, especially in services and investment, where barriers remain relatively large.

Box 1. External Assessments: Objective and Concepts

Current account deficits and surpluses can be beneficial from both an individual-country and global perspective. Countries' abilities to run current account deficits and surpluses at different times are essential for absorbing country-specific shocks and facilitating a globally efficient allocation of capital. Some countries may need to save through current account surpluses (for example, due to aging populations); their saving finances other countries that may need to borrow via current account deficits (for example, to import capital and foster growth). Similarly, countries facing temporary positive (negative) terms-of-trade changes may benefit from saving (borrowing) to smooth out those income shocks. Thus, nonzero external balances can be desirable from both the individual-country and global standpoints.

Current account balances are deemed *excessive* if they depart from the levels *consistent with fundamentals and desired policies*.

- The **current account *gap,*** or ***excess imbalance***, is the difference between the actual current account (stripped of cyclical and temporary factors) and the level assessed by IMF staff to be consistent with fundamentals and desirable medium-term policies (or "***norm***"). This staff-assessed gap reflects policy distortions vis-à-vis other economies identified in the External Balance Assessment (EBA) models as well as other policy and structural distortions not captured by the model. A current account balance that is *higher* (*lower*) than that implied by fundamentals and desired medium-term policies corresponds to a positive (negative) gap. Eventual elimination of such gaps is desirable, although there may be good reasons for a temporary gap, and/or for adjusting gradually. Calling a current account gap ***high (low)*** is another way to say it is positive (negative).
- Assessments also include a view on the **real effective exchange rate** (REER)—normally consistent with the assessed current account gap, except when marked REER movements are not yet fully reflected in the current account, due to lagged effects. A positive (negative) **REER gap** implies an overvalued (undervalued) exchange rate. REER gaps do not necessarily predict future exchange rates and may occur in any economy, including those with floating exchange rates.

Although the overall assessment of a country's external position hinges on the current account and the REER, it takes other indicators into consideration. These include the financial account balance, the international investment position, reserve adequacy, and other competitiveness measures, such as the unit-labor-cost REER. The overall **external position** is judged to be ***weaker* (*stronger*)** than warranted by fundamentals and desired policies when the current account gap is negative (positive) and/or the REER is deemed overvalued (undervalued). Assessments strive to be **multilaterally consistent**, meaning that *negative* staff-assessed current account/REER gaps in some economies are matched by *positive* staff-assessed gaps in others.

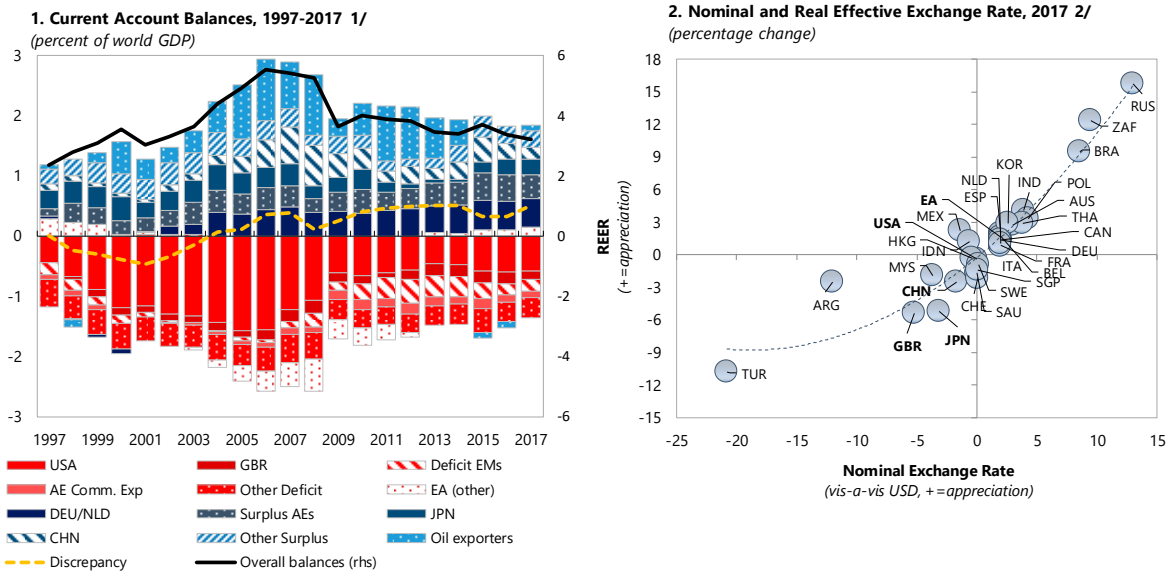
II. EVOLUTION OF EXTERNAL POSITIONS

This section documents the recent evolution of global current account balances, exchange rates, and stock positions, with emphasis on developments during 2017. It highlights how progress in reducing global balances has stalled since 2013, and discusses the underlying drivers of the recent reconfiguration and concentration of surpluses and deficits in advanced economies (AEs). The discussion in this section is descriptive and does not yet take a view on whether, or where, adjustments are necessary. Normative assessments, identifying excess imbalances, are provided in Section III.

2017 Developments

2. Global current account balances were broadly unchanged in 2017, with minor shifts cementing the reconfiguration that has emerged since 2013 (see Table 1). Overall global balances—defined as the absolute sum of surpluses and deficits—remained at about 3¼ percent of world GDP in 2017 (Figure 1, panel 1). Last year's small changes relative to 2016 continued the trend in recent years of greater concentration of surpluses and deficits in AEs. On the surplus side, China's current account balance continued its gradual decline, largely offset by a rising surplus in Japan—against the backdrop of a depreciating yen—a further increase in current account balances of euro area debtor countries, and a resurgence of surpluses in oil-exporting countries on the back of recovering oil prices. On the deficit side, the United States continued to be the main global borrower, accompanied by growing current account deficits in some emerging market economies (Argentina, India, Turkey). These deficits were partially offset

Figure 1. Evolution of Current Account Balances and Exchange Rates



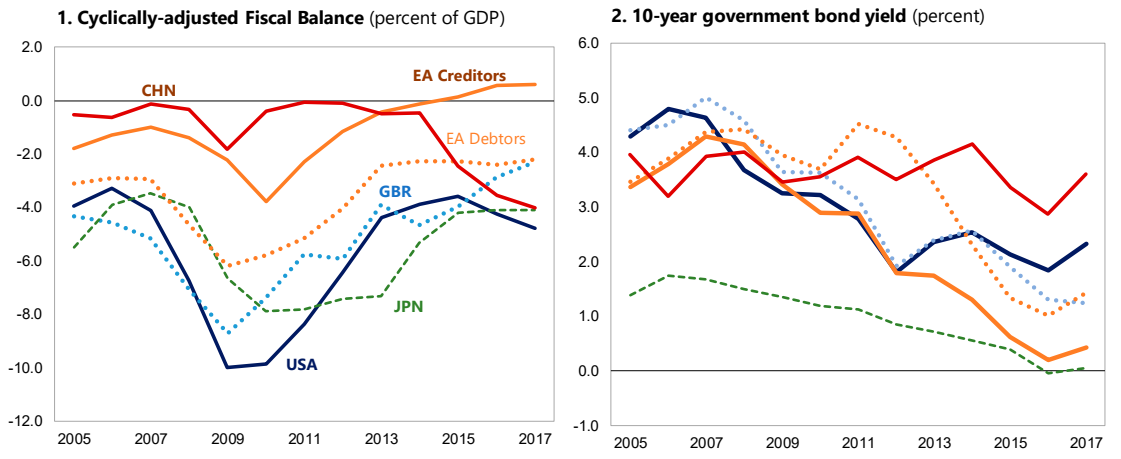
Sources: World Economic Outlook, *International Financial Statistics*, Global Statistics Database and IMF staff calculations.
1/ Overall balance is the absolute sum of global surpluses and deficits. Surplus AEs: Hong Kong SAR, Korea, Singapore, Sweden, Switzerland, Taiwan POC; AE Commodity Exporters: Australia, Canada, New Zealand; Deficit EMs: Brazil, India, Indonesia, Mexico, South Africa, Turkey; Oil Exporters: WEO definition plus Norway.
2/ 2017 average relative to 2016 average.

by smaller deficits in the United Kingdom—supported by further sterling depreciation—and in some large commodity-exporting economies (Australia, Brazil, Canada, Mexico, South Africa) thanks to strengthening commodity prices. Against the backdrop of a generalized pickup in global trade, trade tensions intensified during 2017, with generally minor concrete actions, but significant fears of escalation (some already in play in 2018).

3. Most exchange rates displayed relatively moderate movements over 2017 despite some intra-year volatility (Figure 1, panel 2). Uncertainty about monetary policy prospects led to intra-year volatility across major currencies, although year-average movements generally were small. Noticeable exceptions were the real depreciations of the British pound, reflecting continued Brexit-related uncertainty; the yen, reflecting interest rate differentials vis-à-vis the United States; and the renminbi, owing to capital outflow pressure in the earlier part of the year. Among emerging and developing economies (EMDEs), large real appreciations registered by Brazil, Russia, and South Africa, supported by stronger commodity prices and a better political environment in some cases, partly unwound the cumulative depreciations of previous years. Meanwhile, the Turkish lira depreciated sharply due to a vulnerable external position and uncertain political environment.

4. As discussed in earlier *External Sector Reports*, the broadly unchanged landscape of overall global balances since 2013 masks an important reconfiguration. Global surpluses and deficits have become increasingly concentrated in AEs, as China and oil exporters have seen their current account surpluses narrow and the deficits of some EMDEs (for example, Brazil, India, Indonesia, Mexico, South Africa) have shrunk. Key drivers of this reconfiguration were the sharp drop earlier this decade in oil prices, which have recovered somewhat after bottoming out in 2016, and the gradual tightening of global financing conditions reflecting prospects for monetary policy normalization in the United States. Also at work have been asymmetries in demand recovery and the associated policy responses in systemic economies (Figure 2). After 2013, higher or persistently large surpluses in key advanced economies (for example, Germany, Japan, the Netherlands) were underpinned by relatively weaker domestic demand,

Figure 2. Systemic Economies: Fiscal Stance and Long-term Nominal Interest Rates, 2005-17 [1/]

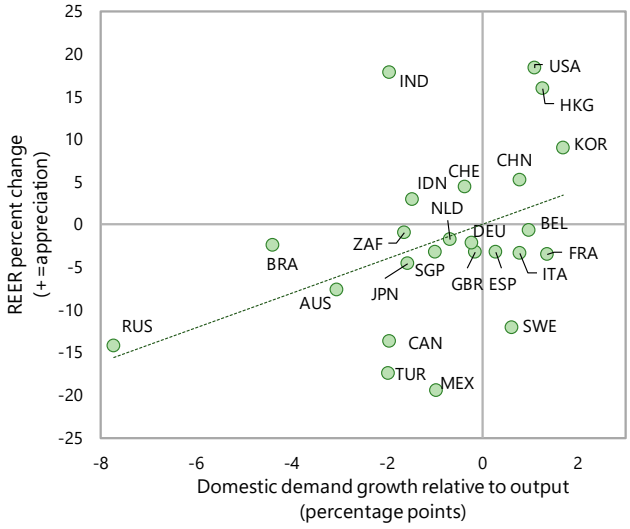


Sources: WEO and IMF staff calculations.
1/ EA groups include ESR countries only. GDP-weighted averages are reported.

constrained by fiscal consolidation efforts—necessary in some cases, given compressed fiscal space. Meanwhile, higher or persistent current account deficits in other AEs (United Kingdom, United States) reflected a stronger recovery in domestic demand, supported by some recent fiscal easing. Meanwhile, the narrowing of China's underlying current account surplus was supported by a marked relaxation of fiscal and credit policies, masking lingering structural problems and causing a buildup of domestic vulnerabilities. These asymmetries in demand strength have also led to differences in monetary policy (as seen by the evolution of longer term nominal bond yields) and currencies.

5. Real exchange rate movements have generally supported the reconfiguration of global balances (Figure 3). Since 2013, real currency appreciations have been associated with a pickup in domestic demand (relative to output), contributing to widening of the US current account deficit and narrowing of surpluses in China and Korea. In contrast, real currency depreciations have been associated with weaker domestic demand (relative to output) in some EMDEs (Brazil, Mexico, Russia, Turkey) and AEs (Australia, Canada), leading to higher current account balances, despite weaker terms of trade in some cases.

Figure 3. Relative Demand Growth vs. REER Changes, 2013-17



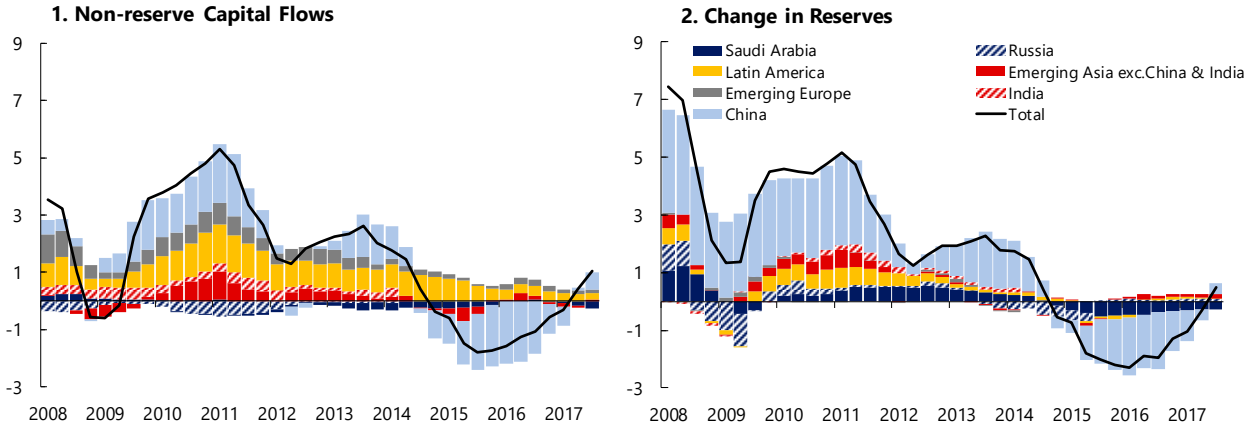
Sources: WEO and IMF staff calculations.

6. Capital flows to most EMDEs remained subdued, amid a resurgence of inflows to China (Figure 4)**.**

- Net non-reserve flows to EMDEs continued to be dominated by developments in China, which experienced a gradual reversal from sizable outflows and reserve sales in 2015-16 to renewed inflows and some reserve accumulation in late 2017, following improving domestic and external conditions as well as tight enforcement of capital flow management measures.

Figure 4. Selected EMDEs: Capital Flows and Reserve Accumulation, 2012-17

(Percent of group GDP, four-quarter moving average)



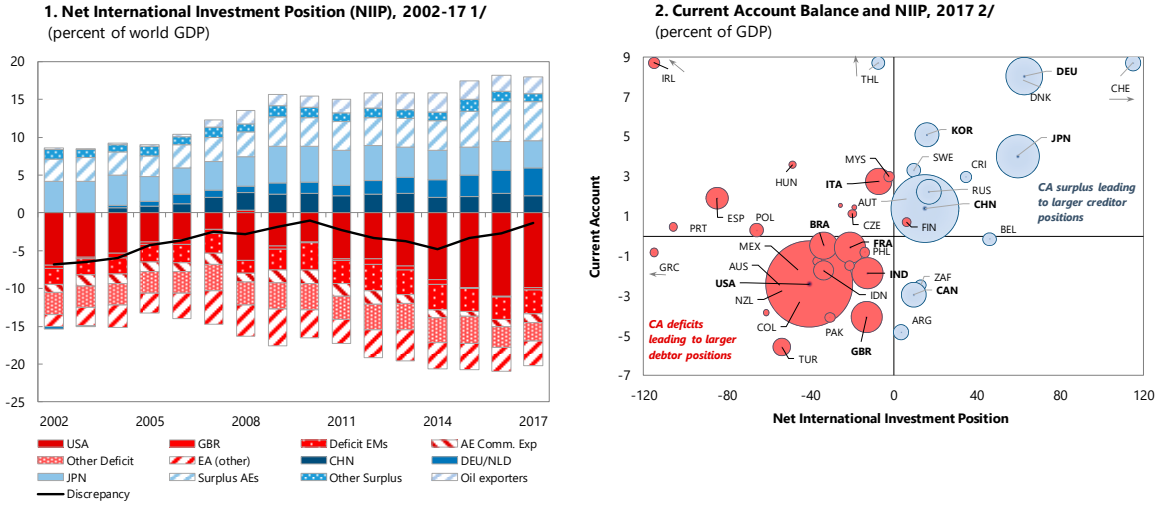
Sources: International Financial Statistics and IMF staff calculations.

- In most other systemic EMDEs, capital inflows and reserve accumulation remained subdued relative to earlier years, reflecting primarily slowly tightening global financial conditions; although some frontier market economies gained substantial reserves. Despite posting a current account surplus, Saudi Arabia experienced reserve losses as capital outflows continued.

- In some advanced economies and financial centers (Hong Kong SAR, Singapore, Switzerland), the pace of reserve accumulation accelerated during 2017, supported by large current account surpluses.

7. Global stock positions stabilized in 2017, mainly owing to valuation effects (Figure 5). At the global level, the growth of stock positions took a pause in 2017, despite a continuation of current account deficits in debtor countries (with the notable exception of euro area debtor countries) and of current account surpluses in creditor countries. A slight narrowing of overall debtor positions in 2017 was driven mostly by the United States, whose international investment position improved because of valuation changes linked to a weakening of the US dollar from the end of 2016 to the end of 2017 (which reduced the value of mostly dollar-denominated debt liabilities relative to mostly foreign-currency-denominated debt assets). [1] This was matched by smaller creditor positions in a few countries (most notably China) also reflecting mainly valuation changes. The above-mentioned narrowing of stock positions was offset by the expansion of debtor positions in some AEs (Canada, United Kingdom) and the creditor positions of others (Germany, Hong Kong SAR, the Netherlands, Singapore, Switzerland), the latter driven by sizable current account surpluses and favorable valuation effects.

Figure 5. External Stock and Flow Positions, 2002-17



Sources: World Economic Outlook and IMF staff calculations.
1/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.
2/ Dot sizes proportional to US$ GDP.

III. ASSESSMENTS OF EXTERNAL POSITIONS

This section presents an overview of how observed external balances align with the levels consistent with medium-term fundamentals and desired policies. It also briefly summarizes the process for arriving at the external assessments, including the use of the refined econometric model to underpin this year's

[1] Although the U.S. dollar's year-average value was the same in 2017 as in 2016, the currency depreciated by about 6½ percent in real terms between the end of 2016 and the end of 2017. It is the latter change that matters for computing IIP valuation changes, as these are based on year-end positions and asset prices.

assessments. The configuration of excess external imbalances and the contributions from key policy distortions are also discussed.

8. External assessments compare actual external balances with those that are consistent with medium-term fundamentals and desired policies. This process, also summarized in an earlier IMF blog, involves combining numerical inputs from statistical cross-country models with country-specific judgment based on the IMF staff's knowledge and insights regarding each economy gained during the Article IV consultation process. To arrive at estimates of external balances consistent with medium-term fundamentals and desired policies (that is, "norms"), IMF country teams rely on the numerical benchmarks of the various External Balance Assessment (EBA) models—although greater weight continues to be given to the current account model, because real exchange rates tend to be more volatile and difficult to explain econometrically.[2] This year, as is done periodically, the EBA models were refined to reflect insights gained since the previous (2015) round of changes. Refinements entailed extending the estimation period and aimed at better capturing the role of certain fundamentals (demographics, institutions, and potential current account measurement biases), macroeconomic policies (foreign exchange intervention, credit excesses) and structural features could play in driving current account dynamics (for more details, see Box 2 and the *2018 External Sector Report—Refinements to the External Balance Assessment Methodology—Technical Supplement*). While the refinements led to important improvements in the models, the models cannot capture every aspect of current account dynamics and, thus, should be treated only as numerical benchmarks for IMF staff assessments. Analytically grounded and transparently presented IMF staff judgment remains essential in arriving to a multilaterally consistent set of assessments. Considering estimation uncertainties, assessments are presented in ranges, which generally vary with the model standard errors and country-specific features.

9. IMD staff-assessed current account norms for 2017 vary considerably across countries, with relatively small changes over time, in most cases (see Tables 2 and 3). EBA model-based current account norms were generally positive in AEs. These positive norms reflected their higher income per capita and lower growth prospects, hence lower returns on capital (making them exporters of capital); their higher longevity and share of prime-aged savers (requiring them to save more than others); and need for tighter policies, especially fiscal (to address their generally higher public debt levels and future old-age commitments). Mirroring these features, current account norms are negative for most EMDEs—reflecting their higher growth potential, lower income per capita, and younger populations. Norms also varied within these groups depending on their institutional strength (which constrains their ability to borrow and invest), whether they issue reserve currencies (which allows them to finance larger external deficits), and the presence of non-renewable exports (where intergenerational equity considerations tend to increase optimal saving). In some cases, country-specific judgment was applied to arrive at staff-assessed (final) *current account norms*. External financing risk (Brazil, India, Spain, Turkey) or country-specific demographic features not fully captured in the model (for example, uncertainty about the effect of migration on national saving in Germany and high mortality risk in Indonesia and South Africa) were

[2] These models estimate the average historical relationship between current accounts or real exchange rates and a set of country fundamentals and policy variables from a panel of 49 countries for the period 1986-2016. See IMF Working Paper 13/272 and the 2015 EBA Refinements Technical Background Note for a full description of the EBA methodology and earlier refinements, respectively.

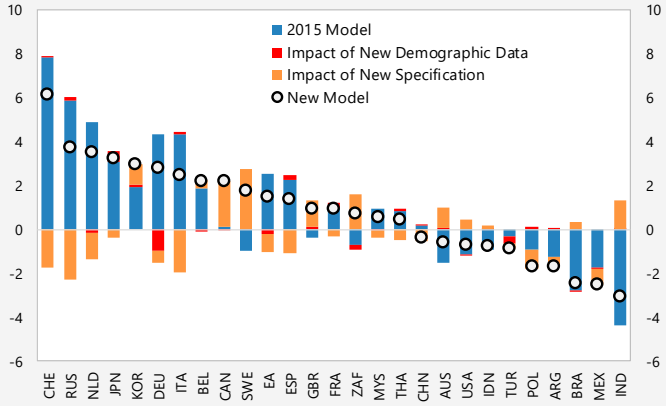
taken into consideration. In other cases, adjustments to the *cyclically adjusted current account* addressed measurement biases (Canada, South Africa, Switzerland, United Kingdom), temporary factors related to political uncertainty and not captured by the model (Russia, Thailand), and delays in investment plans financed by EU funds (Poland).

Box 2. Implications of Refinements to the External Balance Assessment Model[1]

This box presents the implications of key methodological refinements on the estimated and IMF staff-assessed current account norms across the ESR sample.

External Balance Assessment (EBA) estimates: The distribution of EBA estimated norms was broadly unchanged following the refinements, with model-implied surpluses in most AEs and deficits in most EMDEs. That said, changes were nontrivial in some cases (see Box Figure 2.1), reflecting (1) refinements in the modeling of financial centers (Netherlands, Switzerland); (2) the new demographic specification aimed at disentangling compositional from longevity effects (Germany, Italy, Spain, and Sweden); and (3) changes in the institutional risk (Canada, Russia) and credit excess (Germany, Sweden) proxies. Demographic data updates played a role in some key cases (highlighted in red), including in Germany where recent migration flows suggest more favorable population dynamics. The median norm moved by -0.4 percent of GDP, although changes were somewhat smaller (-0.3 percent of GDP) for the key systemic economies. Changes in the EBA-estimated current account norms are comparable in size and distribution to the refinements undertaken in 2015, which introduced nonlinearities in the modeling of demographics.

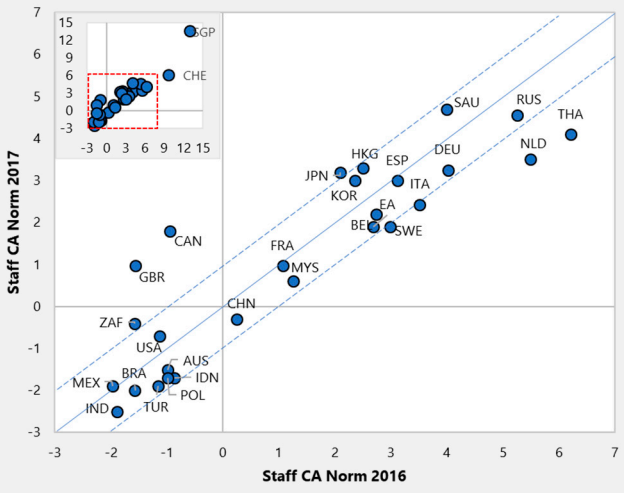
Box Figure 2.1. ESR Economies: EBA Current Account Norms 2017
(in percent of GDP)



Sources: IMF Staff Estimates

Staff-assessed norms: Changes in EBA numerical estimates, however, did not necessarily translate into equivalent changes in staff-assessed norms (see Box Figure 2.2). In some cases, refinements reduced the need for staff adjustments because the new model addressed shortcomings with the previous specification (for example, demographics for Sweden). In other cases, necessary outside-the-model adjustments were identified and implemented (for example, Switzerland due to measurement; South Africa due to demographics). Changes in *staff-assessed* norms between 2016 and 2017 were largest in countries where there was some reassessment in the context of the refinements about: (1) the role of certain fundamentals (for example, Germany and Italy due to demographics); (2) factors affecting the underlying current account (Netherlands due to measurement, Thailand due to political uncertainty); and (3) past staff adjustments (for example, adjustments for structural distortions and offshoring were eliminated for Japan). Staff's views in many of these areas (that is, demographics, measurement, structural policies), however, will continue to evolve with further analysis.

Box Figure 2.2. ESR Economies: Evolution of Staff-Assessed Current Account Norms
(in percent of GDP)



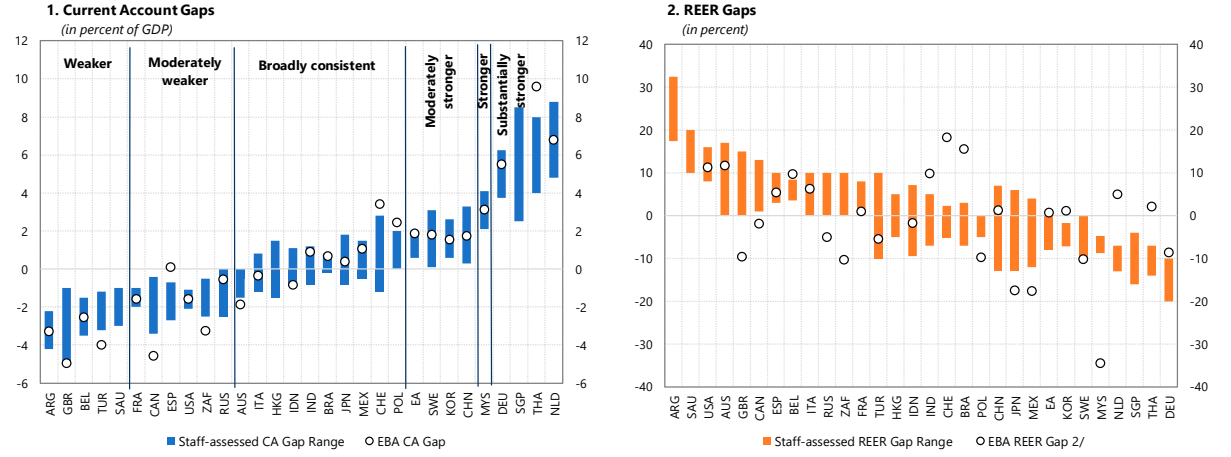
Sources: IMF Staff Estimates.

[1] Prepared by Pau Rabanal and Zijiao Wang.

10. Despite some shifts in staff-assessed norms and cyclically adjusted current account balances, the configuration of excess external imbalances remained broadly unchanged (see Figure 6 and Tables 2 and 3):

- **Stronger positions:** External positions were deemed "*substantially stronger*" than justified by medium-term fundamentals and desirable policies (current account gaps of more than 4 percentage points of GDP) in Germany, the Netherlands, Singapore and Thailand; "*stronger*" (2 to 4 percentage points of GDP) in Malaysia; and "*moderately stronger*" (1 to 2 percentage points of GDP) in China, Korea, and Sweden. The euro area as a whole was assessed to be "*moderately stronger,*" compared with a *broadly-in-line* assessment last year. This overall assessment reflects wider positive current account gaps in some countries (Germany, Netherlands) and narrower negative gaps in others (France, Italy, Spain).
- **Weaker positions:** Conversely, external positions were assessed to be "*weaker*" (negative current account gaps in the range of 2 to 4 percent of GDP) in Argentina, Belgium, Saudi Arabia, Turkey and the United Kingdom; and "*moderately weaker*" (1 to 2 percent of GDP) in Canada, France, Russia, South Africa, Spain and the United States. A wide spectrum of excess external imbalances among euro area members, ranging from negative current account gaps (Belgium, France, Spain) to sizable positive gaps (Germany, Netherlands), underscores continued and marked asymmetries in competitiveness within the common currency area.
- **Changes since 2016:** Despite relatively unchanged overall excess imbalances, there were some underlying shifts: narrower imbalances in some economies offset wider imbalances in others. Narrowing positive gaps in some economies, because of lower observed surpluses (Korea, Sweden) and higher staff-assessed norms (Japan), were generally offset by widening positive gaps in others, because of higher observed surpluses (Netherlands) and somewhat lower staff-assessed norms (China, Germany, the Netherlands). Meanwhile, the narrowing of negative gaps in some economies (Australia, France, Italy, Saudi Arabia, Spain), was offset by widening negative gaps in others (mainly United States).

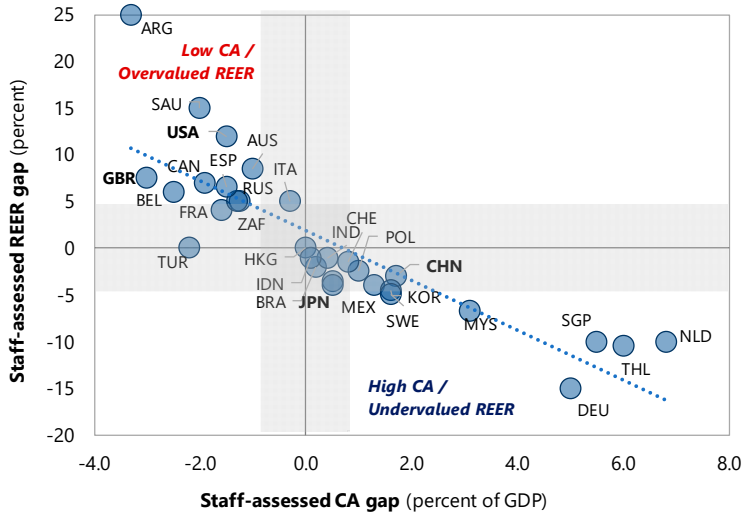
Figure 6. Staff-assessed and EBA Estimated Current Account and REER Gaps[1/]



Source: IMF Staff assessments.
1/ Sorted by the mid-point of the staff-assessed gap. Hong Kong SAR, Saudi Arabia and Singapore do not have EBA estimates. For Saudi Arabia, the current account gap reflects a fiscal policy gap.
2/ EBA REER gap is defined as the average of index- and level-based regressions (see details in 2018 External Sector Report--Refinements to the External Balance Assessment Methodology--Supplemetary Information).

11. REER and current account assessments generally mapped closely to each other. Exchange rate assessments continued to be based, for the most part, on staff's views of the current account gap, mapped into exchange rates by using trade elasticities estimated separately (Figures 6 and 7). In general, countries with current account balances that were higher (lower) than warranted by fundamentals and desirable policies were deemed to have undervalued (overvalued) exchange rates. In a few cases, discrepancies between the current account and exchange rate assessments reflected rapid exchange rate movements that were deemed temporary or not yet fully reflected in the current account (because of lags in the transmission of exchange rates to trade volumes and prices). China's real exchange rate remained broadly in line amid a positive current account gap, which has narrowed and is projected to narrow further over time as the renminbi's real appreciation of recent years continues to permeate to the current account. Other examples include Turkey, where the sharp lira real depreciation in 2017 is not yet reflected in a lower current account deficit, and Italy, where the current account balance rose to a level consistent with fundamentals and desirable policies as the current stance of the financial cycle (featuring still-high nonperforming loans and weak bank profitability) masks lingering competitiveness and structural concerns.

Figure 7. Staff-assessed Current Account and REER Gaps, 2017 1/



Source: IMF staff calculations.
1/ Gray bands depict broadly-in-line ranges for CA and REER gaps. REER gap based on 2017 average REER.

12. Factors driving excess external imbalances vary across countries, although some common patterns can be identified. Staff-assessed gaps can be decomposed into "*identified policy gaps*" and "*other gaps*" (or the residual). The former refers to differences between actual and desired policies in the medium term, when output gaps are expected to be closed (Table 4), and reflect domestic policy gaps *relative* to those of the rest of the world. Policy gaps for fiscal, public health spending, foreign exchange intervention, capital flow management, and credit policies are captured within the EBA model. *Other staff-assessed gaps* are interpreted as reflecting primarily distortions to saving and investment decisions that are not explicitly modeled in the EBA model. Overall, while positive (negative) *identified policy gaps* are associated with positive (negative) current account gaps, in some prominent cases, *identified policy gaps* fall significantly short of explaining excess external imbalances (Figure 8). In these circumstances, assessments need to rely on country-specific insights and complementary analysis to ascertain the role of other distortions, especially *structural policies*, in driving excess external imbalances. Complementary tools were developed in the context of this year's refinements to shed light on the potential role of product and labor market policies (see Box 3 and the *2018 External Sector Report—Refinements to the External Balance*

Assessment Methodology—Technical Supplement), although country-specific insights remain necessary to properly tailor the structural policy advice.

Box 3. Understanding Excess Imbalances: The Role of Structural Factors[1]

This box summarizes the complementary tools that have been developed (in the context of the refinements) to shed light on the relationship between excess imbalances and structural policies in labor and product markets.

Conceptual framework: The removal of distortions associated with product market and labor market policies are generally geared toward increasing the productive capacity of the economy, but they also affect the current account in the short to medium term (Obstfeld and Rogoff, 2006; Cacciatore and others 2016a, 2016b), through the

- *Productivity channel:* Changes in structural policies increase investment opportunities, resource availability and productivity. These reforms improve the current account if output increases more than domestic demand, and productivity gains are mainly in the tradable sector.
- *Price-competitiveness channel*: More wage flexibility may increase the current account through competitiveness gains. More goods market flexibility reduces the price-setting power of firms, but it could have an inflationary general equilibrium effect—stemming from the entry of new firms and increased labor demand—that hurts competitiveness and reduces the current account.
- *Uncertainty channel:* Reforms that reduce uncertainty should increase firm investment, but their effect on precautionary saving and, thus, the current account is ambiguous (Gosh and Ostry, 1997).

Empirical approach: Lack of proper time and country coverage prevents including structural indicators directly into the External Balance Assessment (EBA) models. As an alternative, staff used available structural indicators from the Organisation for Economic Co-operation and Development (OECD) and World Economic Forum (WEF) for a subset of countries or years to examine their relationship with the estimated unexplained residual from the EBA current account Model. The focus is on understanding the extent to which the unexplained gaps are affected by product market and labor market regulatory deviations from best practice, while identifying policies that help reduce both domestic structural gaps and excess current account imbalances.

Findings and application (Box table): In line with the literature, both empirical (Jaumotte and others, 2010; Cheung and others 2013; IMF 2017; and Kerdrain and others 2010) and theoretical (Cacciatore and others 2016a,b), the results based on OECD data suggest that reducing burdens in the "licenses and permits system"—a type of product market regulation—can help reduce a country's current account balance as investment by new firms rises, and their additional demand for labor puts upward pressure on wages and reduces competitiveness. Meanwhile, addressing certain labor market rigidities by easing employment protection laws can improve the current account through competitiveness gains as firms are more able to adjust labor inputs and costs, including as a result of changes in the bargaining power of the employed. Comparable results hold for WEF de facto measures of product and labor market rigidities, which indicate that the current account balance falls with a reduction in procedures to start a business, yet improves with better cooperation in labor-employer relations. Rigidities in product market regulations can help explain the *positive* residuals in key economies (Germany, Japan, Korea), while distortions in labor markets can explain negative residuals in others (Italy, South Africa). These complementary tools provide multilaterally consistent results that serve to guide policy recommendations, which will continue to rely on country-specific insights to properly tailor the advice. These tools will continue to be refined as experience is gathered and data availability constraints are eased.

Empirical Results

Dependent variable: EBA-CA residual

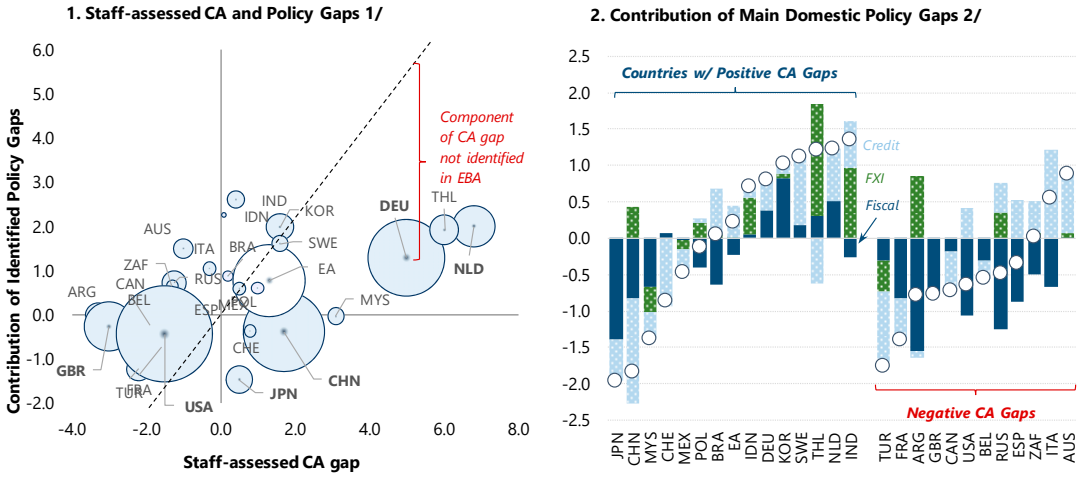
	OECD	WEF
	(1)	(2)
PMRs: LPS *(+ = more burdens)*	0.0049**	
LMRs: EPL *(+ = stricter regulations)*	-0.0048**	
PMRs: SBP *(+ = more procedures)*		0.0242**
LMRs: CLER *(+ = more cooperation)*		0.0508***
Number of Observations	374	533
R-squared	0.026	0.053
Number of countries	24	49

* significant at 10%; ** significant at 5%; *** significant at 1%

[1] Prepared by Carolina Osorio-Buitron. For a more detailed discussion, see *2018 External Sector Report—Refinements to the External Balance Assessment Methodology—Technical Supplement*.

- In many countries with ***higher-than-desirable current account balances*** (such as Germany, Korea, Netherlands, Sweden, Thailand), a fiscal stance that is tighter than desirable contributed, while other macroeconomic policies played a role elsewhere (for example, insufficient health spending in Korea; foreign exchange purchases in Thailand).[3] Meanwhile, in China, positive contributions from insufficient health spending and renewed reserve accumulation were largely offset by continued fiscal and credit policies that were undesirably loose from a medium-term perspective. Meanwhile, product market regulations that inhibit firms' entry because of hurdles to starting a business appear to have held back investment in a number of these economies (Germany, Korea, Malaysia).
- At the other end, looser-than-desirable fiscal policy contributed significantly to the ***lower than warranted current account balances*** of large AEs (France, Spain, United Kingdom, United States) and some EMDEs (Argentina, Russia, South Africa, Turkey), while easy credit contributed to negative current account gaps in others (Canada, France, Turkey). Similarly, labor market regulations that increase labor costs through strict employment protection appear to have contributed to weak competitiveness in some of these cases.
- In some countries ***without excess external imbalances***, certain policies offset each other, masking underlying structural issues. In Japan, for example, while easier-than-desired fiscal policy has likely helped to contain the current account surplus, it seems to mask the effect of underlying product market distortions that hold back investment. In other economies (Brazil, Italy), lower-than-desirable credit, amid weak investment, pushed up current account balances, masking underlying competitiveness problems that pushed the current account in the opposite direction.

Figure 8. Policy Gap Contributions to Current Account Gaps, 2017
(Percent of GDP)

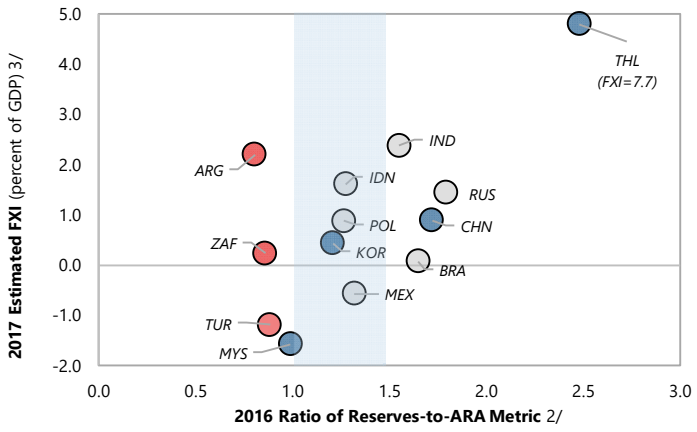


Sources: IMF staff calculations.
1/ Dot size proportional to external imbalances in percent of world GDP. Contribution of (domestic and external componets of) identified policy gaps to current account gap, based on estimated EBA coefficient and staff-assessed desirable policies.
2/ Domestic component of identified policy gap only.

[3] The overall positive-fiscal-gap contribution also reflects looser-than-desired policies in the rest of the world, including in excess deficit economies such as the United Kingdom and the United States.

13. Foreign exchange intervention remained muted during 2017, except in a few cases.[4] Continuing the trend observed in previous years (see IMF 2017), foreign exchange intervention played a limited role in driving excess external imbalances during 2017, with some exceptions. Among ESR economies, Thailand stands out as having purchased a significant amount of reserves (and forward contracts) despite having more-than-adequate reserves and a higher-than-desirable current account balance (Figure 9). Reserve accumulation was also sizeable in India despite adequate levels of reserves, although consistent with preserving current account balances that were broadly-in-line. Meanwhile, after two years of marked decumulation, and accompanying the unwinding of short forward positions, China recorded a minor net positive accumulation of reserves in 2017. Foreign exchange purchases by Argentina and South Africa in 2017 reflected their need to build up buffers and contain further appreciation of already overvalued currencies. In the case of Turkey, the fall in FX reserves was offset by increased gold holdings.

Figure 9. Estimated FXI and Reserve Adequacy, 2016-17 1/



Sources: IMF staff calculations.
1/ Blue, gray and red dots denote higher-than-desirable, broadly-in-line and lower-than-desirable 2017 current account balances, respectively.
2/ Metric based on gross reserves. Adjusted for capital flow management measures (China, Malaysia, South Africa and Thailand) and commodity exporter buffer (Russia).
3/ Estimates of FXI, which are subject to uncertainty, are based on BOP reserve flows plus changes in off-balance sheet FX positions, as reported in BOP statistics and the *International Reserves and Foreign Currency Liquidity Template*. Excludes estimated interests on reserves, which are based on a 1 percent yield and are consistent with the median reported yields by EBA countries. FXI estimates for Malaysia may reflect valuation changes.

A Global View of Excess Imbalances

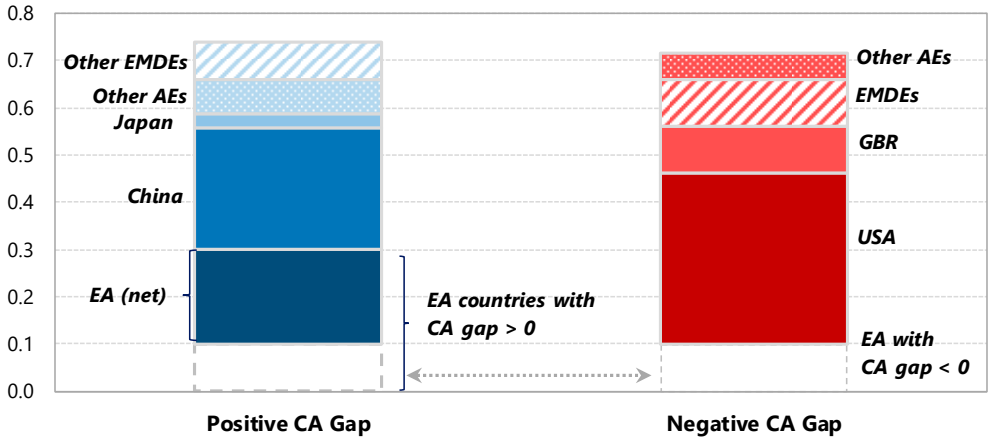
14. Overall current account excess imbalances remained unchanged, and concentrated in a few large economies, in 2017 (Figure 10). Global current account gaps remained relatively unchanged at about 1½ percent of global GDP in 2017, indicating that about 40-50 percent of global surpluses and deficits cannot be traced to fundamentals and desirable policies. Lower-than-desirable current account

[4] The analysis is based on staff estimates and subject to a margin of error. Access to timely, accurate and comprehensive FXI data is key for Fund bilateral and multilateral surveillance. The publication of FXI data is also desirable as a matter of transparency and good policy, as it would allow increasing the understanding and credibility of macroeconomic policies and frameworks.

balances were concentrated in AEs: namely the United Kingdom, the United States and a few vulnerable EMDEs (Argentina, Turkey). Meanwhile, higher-than-desirable current account balances were concentrated in the euro area, other AEs (Korea, Singapore, Sweden) and China. Japan's small positive current account gap—while within the broadly-in-line range—contributed to global current account gaps. Excess external imbalances of euro area member countries continue to explain a significant share of excess global imbalances.

Figure 10. Global Current Account Gaps, 2017 [1/]

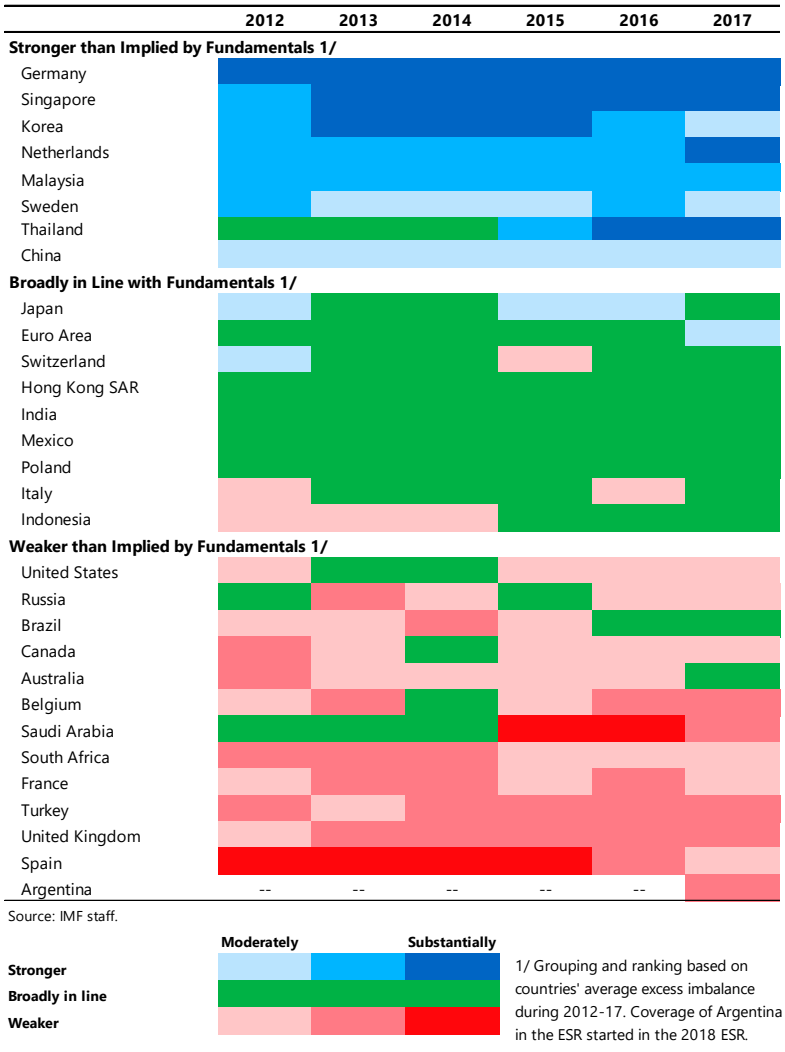
(Percent of world GDP)



Source: IMF staff calculations.
1/ Only ESR countries are included, and systemic 5 economies reported individually. EA economies with positive (negative) CA gaps include Germany and the Netherlands (Belgium, France, Italy and Spain).

15. Persistence of excess external imbalances—especially on the surplus side—continues to be a feature of the global landscape (Figure 11). The same set of economies, especially on the side of positive excess imbalances, has displayed sizable excess external imbalances for much of the post-global financial crisis period. Higher-than-desirable current account balances have been recorded for a sustained period in northern European (Germany, Netherlands, Sweden) and Asian (China, Korea, Malaysia, Singapore) countries, although positive gaps narrowed somewhat in some (China, Korea, Malaysia, Sweden). Meanwhile, on the side of negative excess imbalances, more reconfiguration has occurred in the past and remains under way. Narrowing negative gaps in some EMDEs (Brazil, India, Indonesia, Mexico), debtor euro area countries (France, Italy, Spain) and key oil exporters (Saudi Arabia) were more than offset by higher negative gaps in key AEs (mainly United States). The constellation and evolution of excess external imbalances suggest that price adjustment mechanisms remain weak, notably for surplus countries, and that policy actions have been generally inappropriate or insufficient.

Figure 11. ESR Assessments, 2012-17 [1/]



Source: IMF staff.

1/ Grouping and ranking based on countries' average excess imbalance during 2012-17. Coverage of Argentina in the ESR started in the 2018 ESR.

IV. DEVELOPMENTS SINCE 2017, OUTLOOK AND POLICIES

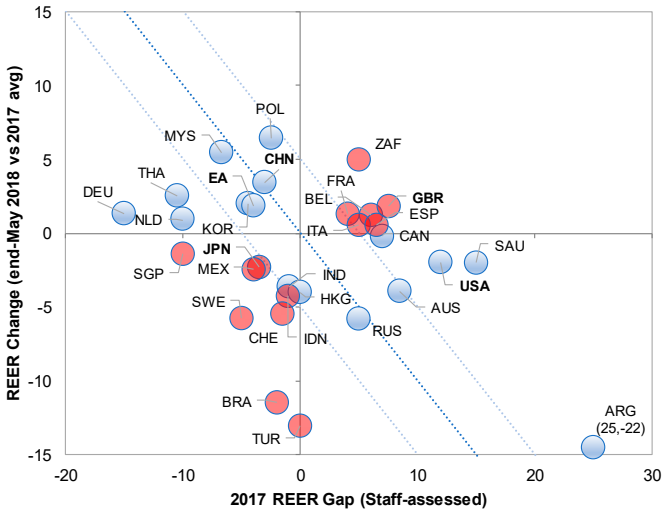
This section discusses external developments since 2017, as well as prospects for the evolution of external balances and risks emanating from them. Policy actions to address excess external imbalances are discussed, both from an individual and multilateral perspective.

Developments since 2017 and outlook

16. Until recently, most major currencies had moved in a direction consistent with reducing excess external imbalances (Figure 12). These shifts generally reflected changes in growth prospects and associated policy responses in key systemic economies, although currency movements since April 2018—dominated by the strengthening of the US dollar—could instead aggravate future excess global imbalances.

- **Systemic currencies:** Against a backdrop of some narrowing in interest rate differentials among key systemic economies, and partly reflecting changing fundamentals, REER movements through May 2018 (relative to the 2017 average) appeared supportive of reducing some systemically important external gaps, with US dollar weakness, mirroring strengthening of the euro and renminbi.[5] However, conditions remain very fluid, as weaker-than-anticipated growth in the euro area and Japan, and stronger prospects for US monetary policy tightening have led to sharp US dollar appreciation since April. Political uncertainties, especially in Italy, have recently weakened the euro further, exacerbating previous trends.

Figure 12. 2017 REER Gap vs. REER Changes in 2018 [1/]
(Percent)



Sources: INS, and IMF staff calculations.
1/ Blue (red) dots correspond to currencies that have moved in a direction consistent (inconsistent) with closing 2017 REER gaps.

- **Other currencies:** Several EMDEs have witnessed sizable currency movements since 2017 against the backdrop of a tightening in external financing conditions, escalating trade tensions, and domestic political uncertainties in some cases. Depreciation pressure has been greatest in economies with larger excess external imbalances, including in Argentina and Turkey, where currency shifts should gradually support the narrowing of their weak external positions (see Box 4 on the recent EMDE volatility). Meanwhile, moderate real currency appreciations in some Asian economies (Korea, Malaysia, Thailand) have been consistent with those countries' needs to narrow their excess surpluses.

17. Under baseline policies, current account surpluses and deficits are projected to further widen and concentrate in AEs. A significant share of global imbalances, especially surpluses, is stationed in economies where limited exchange rate flexibility constrains relative price adjustment, arguably contributing to sustaining imbalances over time. Under current policies, the United States would become an even more important contributor to global current account deficits because of its projected fiscal easing (Figure 13; Box 5), with a likely resulting increase in surpluses of other countries. Meanwhile, current account surpluses are also projected to further rotate toward AEs, primarily as China's contribution to global current account surpluses is expected to fall by nearly half over the medium term. Surpluses in northern Europe and advanced Asia are expected to persist and possibly widen, partly reflecting relatively tight fiscal policy in these economies and further loosening fiscal policy in key trading partners, namely the US. The strengthening of oil prices will likely play a more muted role than in the past, primarily because the US current account has become less sensitive to energy price movements (see Box 6). Uncertainties persist over the implications of tighter global financial conditions for EMDEs, although

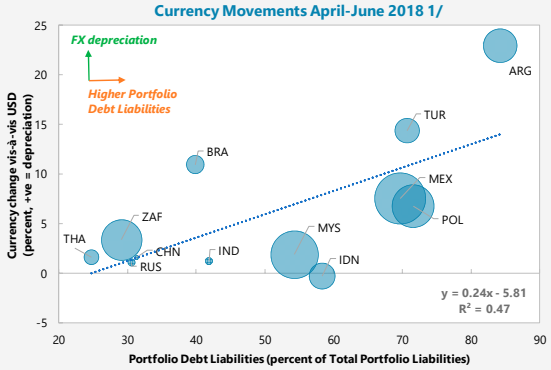
[5] Meanwhile, the yen has been stable over the same period, while the British pound has strengthened somewhat, following its sharp depreciation during 2016-17, reflecting market perceptions of improved prospects of an orderly Brexit.

countries with vulnerable external positions—such as Argentina and Turkey, whose currencies have already weakened substantially—would likely observe demand contraction and a consequent reduction in their deficits.

Box 4. Recent Financial Market Volatility in Key EMDEs: Role of External Fundamentals[1]

Recent volatility: EMDEs have witnessed considerable financial market volatility since April 2018. Against the backdrop of rising US interest rates, an appreciating US dollar, and rising vulnerabilities in some countries, some EMDE currencies have come under pressure, with the Argentine peso and Turkish lira being among the hardest hit, despite foreign exchange intervention.[1] Other asset classes (credit default swap spreads, equities) came under pressure, and exchange-traded funds and mutual funds experienced outflows (notably in Indonesia, Malaysia, and Poland). Relative to the 2013 taper tantrum episode, the recent sell-off took place in a more supportive global context, with falling global risk aversion and a smaller rise in emerging market bond spreads. Commodity prices, especially the price of oil, rose during the recent sell off, partly shielding commodity exporters (Russia), while hurting others (Turkey).

Box Figure 4.1. Selected EMDEs: Portfolio Debt Liabilities and Currency Movements April-June 2018 1/

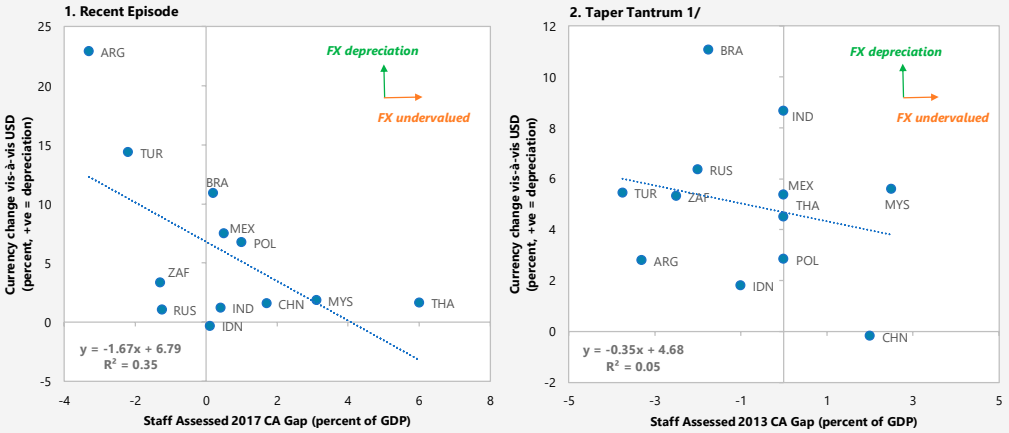


Sources: Haver, Balance of Payments and International Investment Position Statistics.
1/ Dot size is proportional to portfolio debt liabilities as a share of GDP.

Role of fundamentals: EMDEs with weaker fundamentals and policy frameworks have been most affected. This has been particularly true for countries with weaker external positions, reflecting a combination of high external financing needs, low reserve adequacy, large nonresident participation in local bond markets, and unhedged foreign currency exposure. The composition of external liabilities has mattered too, as countries with a higher share of portfolio debt liabilities faced significantly more pressure (see Box Figure 4.1). Fundamentals appear to have been a more important driver of asset price movements during the recent volatility episode than during taper tantrum, where EMDEs were hit more indiscriminately (see Box Figure 4.2).

Policy response: Policy responses have varied, although near-term actions have focused on raising policy rates, most notably in Argentina and Turkey, with foreign exchange intervention in some cases. Between late April and late May, Argentina and Turkey raised policy rates by 1275 basis points and 300 basis points, respectively, and foreign exchange reserves declined, in both cases. In general, countries with excess current account deficits will need to adopt a credible policy package involving growth-friendly fiscal consolidation, including to reduce excess reliance on monetary policy. Improving the composition of the international investment position also remains of essential to limit currency and maturity mismatches. Exchange rate flexibility will help buffer the shocks, although where reserves are adequate foreign exchange intervention could be considered to deal with disorderly market conditions.

Box Figure 4.2. Selected EMDEs: External Position and Currency Movements, Recent Episode and 2013 Taper Tantrum



Sources: Haver and IMF Staff estimates.
1/ For Argentina, 2017 CA gap is used in both the charts.

[1] Prepared by Swarnali Ahmed Hannan and Kyun Suk Chang. The recent volatility episode refers to the period April 23-June 6, 2018. That said, some countries (Argentina and Turkey) started facing some market pressure earlier. For comparability, a 45-day window (starting May 22, 2013) is used when looking at the taper tantrum episode.

Box 5. Tax Reform and the US Current Account[1]

The Tax Cuts and Jobs Act (TCJA), passed in December 2017, represents a significant change in the US tax system, with repercussions that go well beyond US borders. Its potential impact on the US current account balance can be thought of as operating along three dimensions or channels:

International business provisions (compositional effects): The TCJA changes the way the US tax system interacts with other jurisdictions. Previously, the US taxed worldwide income of US multinationals on repatriation with a nonrefundable credit for foreign taxes paid and a tax liability that was deferred until dividends were paid from the foreign subsidiary to the US parent. The TCJA moves the system toward a territorial system, excluding from US taxation business income that is earned abroad, via three provisions:

- *Global intangible low-taxed income (GILTI):* To lessen the tax advantage afforded to profits accruing in low-tax jurisdictions, a minimum 10.5 percent corporate tax rate on the aggregate income of offshore subsidiaries of US corporations is imposed.
- *Base erosion and anti-abuse tax (BEAT):* To prevent base erosion through transfer pricing and the holding of intellectual property offshore, a minimum tax is imposed on certain multinational companies with annual gross receipts higher than US$500 million, which is equivalent to the larger of: (1) a fixed percentage of "modified" taxable income that treats as income deductions claimed for cross-border payments to affiliates that are not related to goods trade (essentially encompassing service payments, interest, rents and royalties) or (2) the regular net tax liability under the normal corporate income tax base (with exceptions for research and development and other specific credits).
- *Foreign derived intangible income (FDII).* FDII reduces from 21 to 13.125 percent the corporate tax rate for income arising from the sale of goods or services to non-US parties in excess of an amount equivalent to 10 percent of tangible assets. While GILTI and BEAT are the "sticks" applied to multinationals for taking their operations outside the US, FDII is the "carrot" for keeping their operations in the US.

The TCJA provides significant disincentives to producing and booking income outside the US, thus helping improve the US trade balance. However, it is unlikely to materially affect the US current account balance. Reduced profit booking outside the US will likely translate into lower investment income recorded in the income balance—that is, dividends and retained earnings from foreign subsidiaries—of a magnitude likely commensurate with the reduced profits booked abroad. Retaliatory actions by key low-tax jurisdictions may, however, mitigate the impact of the US reforms on the composition of the current account balance.

Domestic business provisions (efficiency effects): Domestic provisions in the TCJA, which effectively lower business tax rates, could affect the US current account through changed incentives to invest domestically:

- *Lower statutory and pass-through business tax rates:* The TCJA lowered the federal statutory rate on incorporated businesses from 35 to 21 percent—bringing the US rate closer to the median tax rate of other OECD countries—and introduced a deduction for pass-through entities that file taxes under personal income (effectively lowering the top marginal rate from 39.6 percent to 29.6 percent).
- *Accelerated investment expensing:* The TCJA shifted from a system of bonus depreciation (that allowed for a front-loaded write-off of 50 percent for certain types of corporate capital spending) to a system of full expensing of various forms of new and used tangible property (with a recovery period of less than 20 years). This immediate write-off applies to investment through the end of 2022, with the extent of expensing gradually falling during 2023-27.

The permanent cuts in the business rates may have a positive effect on the current account in the long term through increased domestic production capacity and exports. However, these are likely to be small since the new system is overall not assessed to be notably more efficient than the previous one). The accelerated investment provision is temporary and leads to a short-term stimulus and current account deterioration, but would not have any long-term effects on output and the current account.

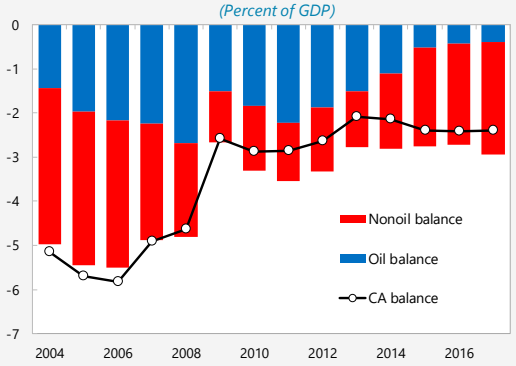
Overall implications (stimulus and compositional effects): The TCJA is a reform law in nature. However, its business and personal provisions combined also involve a sizable near-term tax cut of 1¼ percent of GDP. With the US economy operating near potential, this fiscal stimulus is projected to have limited impact on output. Nonetheless, provided there are no retaliatory actions by US trading partners, it will still lead to a measurable deterioration of the current account in the near term. Over the medium term, the impact of the TCJA on the current account is expected to be mostly compositional—an improvement in the trade balance that would broadly wash out a weakening in the income balance.

[1] Prepared by Ali Alichi (WHD).

Box 6. The Energy Revolution and the US Current Account Balance[1]

Evolution of external balances: Global balances, after peaking in 2006-07, corrected sharply in the years following the global financial crisis and have remained generally unchanged since 2013. Similar trends apply to the United states whose current account deficit has fluctuated around 2½ percent of GDP in recent years, well below the precrisis 6 percent deficit. A major force behind these trends has been energy commodities—whose prices boomed in the mid-2000s to later collapse in 2015 as the United States entered a new era of energy abundance (see Box Figure 6.1).

Box Figure 6.1. US Oil and Nonoil Current Account Balance, 2004-17
(Percent of GDP)



Sources: US Energy Information Administration and World Economic Outlook.

US shale gas revolution: High natural gas prices in the mid-2000s spurred innovation in the gas upstream sector, which led to the adoption of hydrofracking and directional drilling techniques. These allowed tapping vast amounts of shale gas reserves that were unprofitable before. Since the early 2000s, U.S. shale gas production has seen a 20-fold increase—making the United States the largest natural gas producer in the world and a net exporter of natural gas. Cheap and abundant natural gas also displaced coal from power generation, reducing energy imports. These technological improvements spread to the oil upstream sector and have resulted in a sharp increase in U.S. shale oil production. This surge in U.S. production contributed to the excess supply of oil, which eventually led to the collapse of oil prices in 2014.

US current account implications: The US energy deficit narrowed from an average of 2.5 percent of GDP in 2005-07 to a balance of nearly 0.3 percent in 2015-17 (see Box table). About two-thirds of this improvement (1.4 percent of GDP) can be attributed to an increase in shale oil production and exports of refined products, with the fall in oil prices playing only a minor role. Given today's production structure, a $20 increase in oil price, all else equal, would lead to at most a 0.1 percent of GDP increase in the US current account deficit, although the impact could be even smaller (or positive), assuming price changes lead to higher natural gas and shale oil production. In a much-changed landscape of energy independence, the US trade balance has become largely insulated from energy price changes, and going forward higher world energy prices may improve the US trade balance.

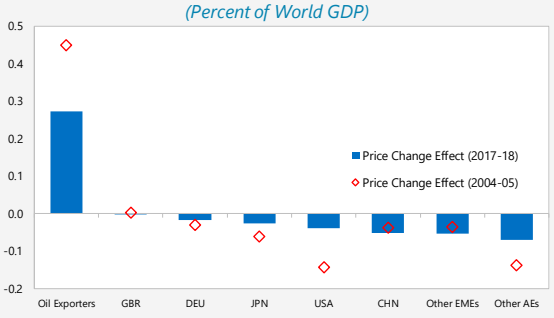
Decomposition of Changes in US energy balance, 2005-17 1/
(percent of GDP)

	Avg. 2015-17 vs. Avg. 2005-07
Oil price effect	0.14
Oil quantity effect	1.39
Natural gas price effect	0.03
Natural gas quantity effect	0.16
Coal price effect	0.01
Coal quantity effect	0.02
Total	1.75

Source US Energy Information Administration and World Economic Outlook.
1/ Average energy balances for 2005-07 and 2015-17 are calculated using average prices and quantities during those periods. The changes are shown as ratios of the average GDP between 2005 and 2007. Petroleum products and crude oil are included in oil category.

Global implications: The projected absolute real annual world oil price increase for 2018 is similar in magnitude to that observed between 2004 and 2005 ($16-$17). Assuming unchanged net import oil volumes (which is reasonable given the low price-elasticity of oil consumption), the projected oil price increase would generate a substantial wealth redistribution from net oil importers to oil exporters (see Box Figure 6.2). The impact on global imbalances, however, will likely be more modest than during earlier episodes. IMF staff analysis suggests that both lower global oil intensity use and the US energy revolution may imply that the oil price increase will have a milder wealth redistribution effect relative to the mid-2000s period. In particular, the redistribution of wealth from the United States and other oil-exporting advanced economies towards major oil exporters (Russia, Saudi Arabia) could be much smaller. Further research on the global implications of these recent trends is of the essence.

Box Figure 6.2. Price change effect on oil balance 1/
(Percent of World GDP)



Sources: International Energy Agency, Global Assumptions and World Economic Outlook.
1/ Price change effect is calculated using following formula: ((Crude Oil Price_t - Crude Oil Price_t-1) * volume of net exports_t-1)/World GDP_t-1. Country sample includes EBA countries, non-EBA ESR countries and other major crude oil exporters. Crude oil price is a simple average of three spot prices provided by Global Assumptions database. Due to a restriction in the coverage of IEA database, quantity of oil (crude oil + oil products) net exports from 2016 (or 2015) is used to calculate 2017-18 price change effect. Oil exporters include NOR, RUS, SAU, IRN, NGA, VEN, ARE, IRQ, KWT, LBY, KAZ, AGO, DZA, OMN and QAT.

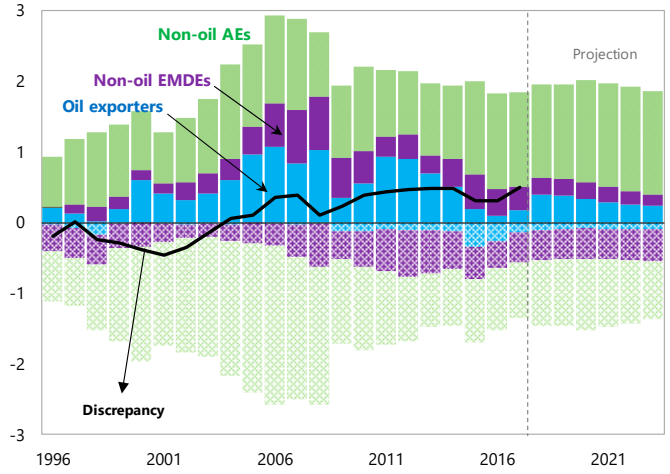
[1] Prepared by Akito Matsumoto and Andrea Pescatori, with research assistance from Kyun Suk Chang and Lama Kiyasseh.

18. Meanwhile, global stock positions will continue widening. Absent valuation changes, net international investment positions (NIIPs) are projected to continue expanding as sustained current account surpluses remain in the largest creditor economies, and deficits in debtor economies.

- **Creditors:** Particularly marked are the projected expansions of the NIIPs of Germany, Japan, Korea, the Netherlands, and other northern European countries. China's NIIP will continue to grow in relation to global GDP, yet is expected gradually to fall in relation to its own GDP as sustained current account surpluses are more than offset by high GDP growth. Meanwhile, the NIIPs of many oil exporters are projected to expand moderately.

Figure 13. Evolution of Current Account Balances, 1996-2023 1/

(Percent of GDP)



Sources: WEO and IMF staff estimates.
1/ Projections assume constant global discrepancy (prorated among surplus economies).

- **Debtors:** Widening external creditor positions in the above-mentioned economies will be mirrored primarily by increased external indebtedness of the United Kingdom and the United States, where negative NIIPs are expected to reach 30 and 50 percent of GDP, respectively, over the next five years. This widening is expected to be accompanied by a narrowing of debtor positions of euro area countries (for example, Italy, Spain) owing to sustained current account surpluses. Debtor positions of some large EMDEs (Brazil, Indonesia, Mexico, Poland) will likely remain stable over the medium term.

19. Persistent excess external imbalances—amid weak automatic adjustment mechanisms and key policy actions contrary to stabilizing external positions—pose risks to the global economy, with distinct implications over the short and medium terms.

- **Short term: *Tighter global financing conditions and protectionism.*** With a closed output gap, the fiscal impulse from the US tax reform could lead to a faster monetary tightening than currently envisaged.[6] Ensuing US dollar appreciation would combine with strong demand to further widen the US current account deficit and the corresponding surpluses in other economies, possibly intensifying the US administration's approach to reducing its deficit through trade measures. New trade barriers and possible retaliatory actions could derail global growth, with likely only limited impact on excess

[6] Excess global imbalances could also widen as the normalization of monetary conditions raises the costs of sustaining net external debtor positions (for example, those of the United Kingdom, United States, etc.) and the returns on net external creditor positions (China, Germany, Japan, Netherlands, etc.). Associated valuation changes could, however, offset some of the impact on stock positions.

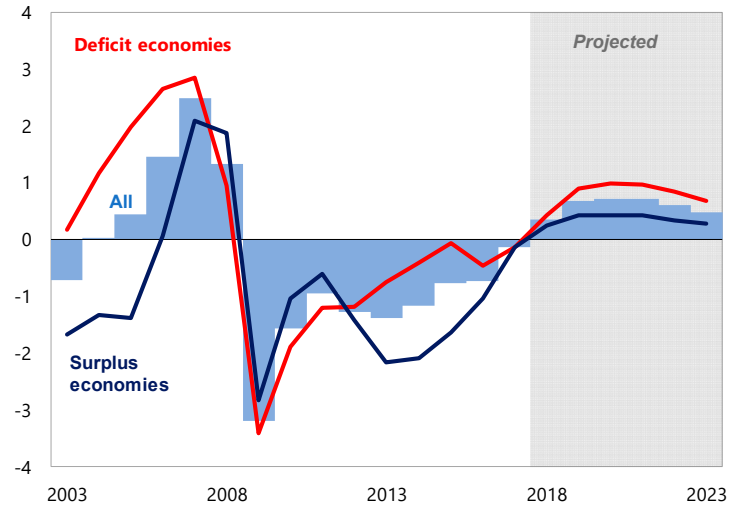
(continued)

global imbalances (see Section V),[7] Adverse balance sheet effects in many EMDEs from an even more rapid pace of US dollar appreciation and tightening of financing conditions could lead to disruptive adjustment, especially in countries where external balances and balance sheets are weak.

- **Medium-term: *Disorderly adjustment.*** Continued reliance on demand from debtor countries (most notably, the United States) could constrain global growth going forward as debtor positions grow and become a drag on spending. Weakening stock positions could also lead to sharp and disruptive currency and asset price movements over the medium term as debt limits are approached and spending therefore falls abruptly. High and rising public debt levels exacerbate these risks. Sustained competitiveness asymmetries within the euro area, if unaddressed, would lead to protracted subpar demand growth, or a resurgence of unsustainable deficits, posing serious risks to the currency union and the global economy. Meanwhile, if not properly tackled, unbalanced domestic demand in China, which has been overly reliant on credit and investment, could culminate in an abrupt growth slowdown and a resulting resurgence of large external surpluses. The latter, in turn, could be met with stiff protectionist responses.

20. With the global economy operating at or above potential, macroeconomic policies will need to be properly sequenced and calibrated to achieve domestic and external objectives (Figure 14; Table 5). Surplus and deficit countries alike will need to normalize policies and rebuild policy space in a manner consistent with addressing excess external imbalances. In particular:

Figure 14. Evolution of Output Gaps, 2003-23 [1/]
(Percent of potential GDP)



Sources: WEO and IMF staff calculations.
1/ GDP-weighted averages per group. Only ESR countries are reported.

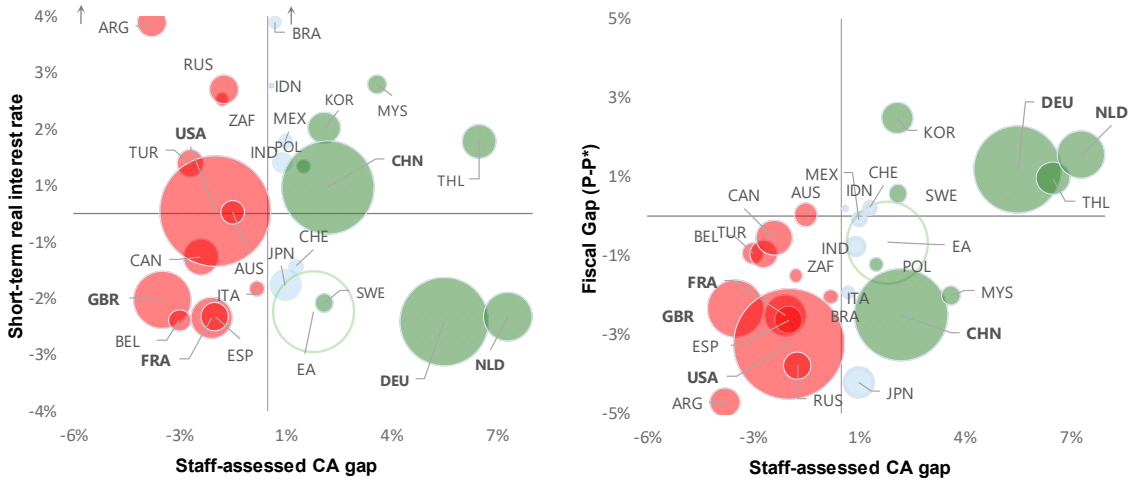
- Most economies with ***weaker-than-warranted*** external positions need fiscal consolidation over the medium term (Figure 15), so in general, strengthening fiscal positions should be a priority. In key advanced economies (Canada, United Kingdom, United States), policies should be calibrated with a bias toward rebuilding fiscal space while protecting the most vulnerable segments of the population. Monetary normalization should proceed gradually in line with inflation objectives. In euro area debtor economies (France, Italy, Spain) growth-friendly fiscal consolidation will remain necessary to support the process of internal devaluation and strengthen external stock positions. In some cases (Canada, Turkey), keeping domestic credit in check would also facilitate external rebalancing. In some EMDEs with weak external positions, more ambitious and credible medium-term fiscal consolidation programs will be necessary

[7] See also analysis in Box 6 of the *2017 External Sector Report*.

(Argentina, Turkey), not only to reduce excess external imbalances, but also to stem capital outflows and reduce reliance on restrictive monetary policies. Flexible exchange rates should help support the adjustment process, while countries with adequate foreign reserve buffers should limit intervention to address disorderly market conditions.

- In economies with ***stronger-than-warranted*** external positions and fiscal space, but without independent monetary policy (Germany, Netherlands), a more expansionary fiscal stance and policies to foster domestic credit growth would facilitate external rebalancing, including through real exchange rate adjustment, while monetary conditions remain somewhat accommodative to support demand in other currency union member countries. In other economies with stronger-than-warranted external positions and fiscal space (Korea, Thailand) looser fiscal policy would help to close negative output gaps. In China, a gradual tightening of fiscal and credit policies, necessary to reduce growing domestic vulnerabilities, should be accompanied by reforms to reduce precautionary saving and overcapacity in certain sectors.
- In some countries with ***broadly-in-line*** external positions, policies will need to be carefully calibrated to avoid the emergence of excess external imbalances. In Japan, the fiscal consolidation necessary over the medium term should be accompanied by structural reforms to boost investment and prevent a further rise in the current account surplus (see ¶21), while monetary policy remains accommodative to facilitate reflation. Similarly, fiscal consolidation in some high-debt EMDEs (Brazil, India) should be met with reforms to boost investment and further improve the composition of external financing.

Figure 15. ESR Economies. Current Account Gaps and Policy Stance, 2017 [1/]



Sources: IMF staff calculations.
1/ Excludes non-EBA economies (Hong Kong SAR, Saudi Arabia, Singapore). Real short-term rates based on 1-year ahead inflation expectations. Fiscal gap measured as domestic component of the policy gap. Dot size proportional to absolute value of excess current account balance (percent of world GDP). Green (red) dots correpond to positive (negative) gaps. Broadly-in-line current accounts depicted in light blue.

21. Structural reforms will need to play a greater role to address excess external imbalances. With both surplus and deficit countries needing to rebuild policy space, structural reforms will be central to tackling excess global imbalances. Addressing product- and labor-market distortions is desirable in all

countries, but product-market reforms that remove unnecessary burdens from starting a business in high-current-account-surplus countries and labor-market reforms that reduce labor costs in high-current-account-deficit countries would support the reduction of excess global imbalances.[8] Specifically,

- Economies with ***stronger-than-warranted external positions*** should focus their efforts on reforms to reduce excess saving, through safety net and pension reforms (China, Germany, Malaysia, Korea, Netherlands, Thailand) and policies to facilitate household balance sheet repair (Netherlands). Reducing entry barriers, including to boost investment, especially in the service sector (Germany, Korea, Thailand), reducing obstacles to residential investment (Sweden) and boosting public investment (Germany, Thailand) would also help reduce excess surpluses. Policy actions to tackle high and rising corporate saving would be desirable, although further analysis is needed in identifying the precise underlying distortions (see Box 7).
- Meanwhile, reducing market frictions that increase labor costs could help improve competitiveness in countries with ***weaker-than-warranted external positions***. Policy interventions could include enhancing schooling and training (France, United States) and broadening the skill base and labor force, including through immigration policies (United Kingdom, United States). Reforming wage bargaining mechanisms to moderate wage growth and better align wages with productivity gains (France, Italy) and reducing labor market segmentation (Spain) could help in some cases. Policies that strengthen euro area integration on the banking, fiscal, labor and regulatory fronts are necessary to boost investment throughout the currency area and to reduce its external imbalance.
- In some economies with ***broadly-in-line current account balances***, addressing underlying structural distortions masked by other policy gaps would also be important to prevent a resurgence of external excess imbalances. For example, In Japan, efforts are needed to boost wages and reduce entry barriers in some industries, while in Italy improving wage bargaining mechanism and strengthening bank balance sheets are necessary to strengthen competitiveness.

22. Overall, with persistent excess external imbalances and the global economy operating at or above potential, a multilateral approach to sustaining growth and rebuilding policy space is needed. While a move toward regaining policy space ahead of the next slowdown is essential, rebuilding policy buffers must be consistent with sustaining globally balanced growth and tailored to country-specific conditions, including within currency areas. Addressing external imbalances should not come at the expense of growing domestic imbalances. Similarly, allowing currencies to float freely remains of essence to facilitate external adjustment. As discussed in the next section, surplus and deficit countries alike should avoid protectionist policies and instead work toward reducing trade barriers and ensuring a level playing field while maintaining reasonable certainty about the rules of international trade—a key element to fostering global trade, investment, and growth.

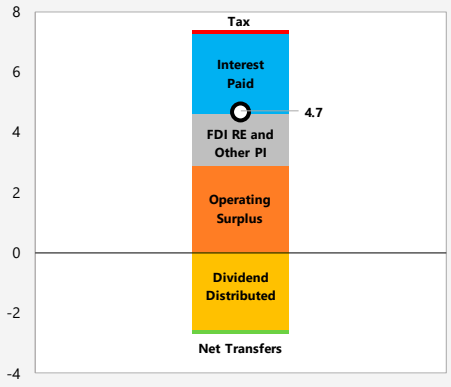
[8] See also Box 7 of *2017 External Sector Report*.

Box 7. Corporate Sector Saving in Current Account Surplus Economies[1]

The 2017 External Sector Report highlighted the role of nonfinancial corporate sector saving in explaining high and persistent current account surpluses in key AEs. This box provides additional details on the sources and uses of corporate saving in key surplus economies with the aim of shedding light on potential policy responses in countries where these surpluses appear excessive.

Sources of nonfinancial corporate sector gross saving: Nonfinancial corporate sector gross saving can be decomposed into corporate profits (gross operating surplus), property income (including income from rent, interest, dividends and net retained earnings from foreign direct investment) minus dividend, interest, and tax payments. Other items such as transfer payments and net social security adjustments are quantitatively small. For all five major AE surplus countries, rising nonfinancial corporate gross saving has been driven by higher profits from both domestic production (aided by lower labor income shares) and expanding foreign operations, as well as lower interest payments. These higher profits have not been matched by higher dividend or income tax payments (see Box Figure 7.1). This trend has continued, albeit at a slower rate, after the global financial crisis, when dividend payments stopped growing with profits, even falling in some cases (for example, Germany).

Box Figure 7.1. Surplus Economies: Changes in NFC Savings, 1995-2016 *(Percentage of GDP)*



Sources: OECD National Accounts Dataset, Country Authorities, IMF WEO and Staff calculations.
Notes:. Chart shows GDP-weighted average of 5 surplus countries: Germany, Netherlands, Japan, Korea and Denmark. FDI RE is Net Retained Earnings on FDI. Other PI (Property Income) consists of investment income on financial assets and net rent receivable.

Uses of nonfinancial corporate gross saving: Corporate saving in excess of investment (that is, corporate net lending) can be used to buy back shares, pay down debt, or acquire financial assets. While all uses have been relevant in different countries and years, simple regressions using flow of funds and sectoral financial accounts data for surplus countries show that the accumulation of cash has been the most salient *use* of corporate net lending. The correlation between net lending and cash holding has been particularly strong in Germany and the Netherlands (see Box table and Box Figure 7.2).

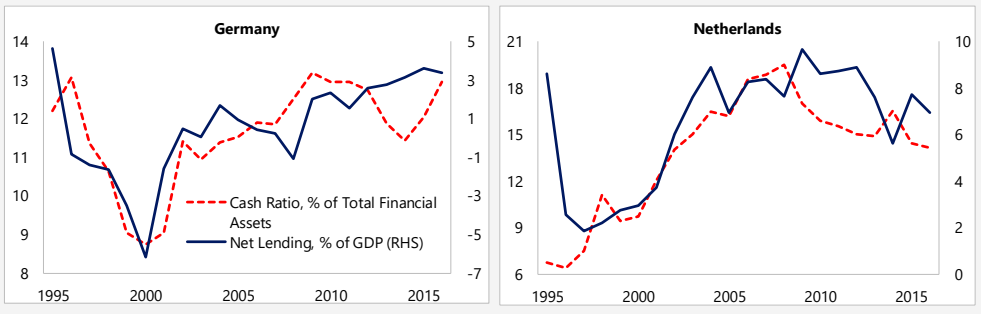
Top Surplus Countries: Use of Net Lending

Dependent Variable: NFC Net Lending/GDP		
	(1)	(2)
Cash	0.139**	0.383**
Equity assets	-0.014	0.133**
Loan/Debt assets	0.262***	0.146
Debt repayment	0.222**	0.136
Share buyback	0.330*	0.373
Number of Observations	63	63
R-squared	0.586	0.553

* significant at 10%; ** significant at 5%; *** significant at 1%
Notes: Column 1 is pooled, column 2 within-country regression. Cash, equity and loan/debt assets are in percent of total financial assets. Debt repayment and share buyback are net negative transactions in debt and equity liability, in percent of total financial assets.

Policy implications: Understanding the underlying motives for rising net lending and liquidity demand will help formulate policy advice. In addition, the fact that rising nonfinancial corporate saving is reflected in higher current account surpluses suggests that households are not "piercing the corporate veil," as economic theory would predict. While various country-specific characteristics and frictions may explain the corporate veil puzzle, a few policy-related factors have likely contributed to the build-up of high nonfinancial corporate net saving and current account surpluses, including: (1) declining corporate income tax rates and increased profit shifting activity of multinationals (see Zucman 2018), (2) shifts in corporate governance structures that favor retained earnings and share buybacks over dividend payouts or long-term investment (seem for example, Philippon and Gutierrez 2016), and (3) unequal wealth distribution concentrated among households with low propensity to consume (see IMF 2013). Further research is required to better understand the role policies could play in this area.

Box Figure 7.2. Correlation between Cash Ratio and Corporate Net Lending in Germany and Netherlands



Sources: OECD National Accounts Dataset, IMF WEO and Fund Staff calculations

[1] Prepared by Mai Chi Dao and Deepali Gautam.

V. OTHER CONSIDERATIONS: TRADE COSTS AND CURRENT ACCOUNTS

23. Conventional economic wisdom holds that the drivers of external current account balances are primarily macroeconomic in nature: the current account represents the excess of national saving over investment, whose drivers in turn are macroeconomic. The IMF's approach to assessing imbalances reflects this conventional wisdom and the vast theoretical and empirical literature on this topic. Current accounts in the EBA model are pinned down by macroeconomic fundamentals, including demographics, income per capita, and growth prospects, as well as by domestic policies.

24. Trade policies (the topic of this section) can have macroeconomic effects although those effects do not center on the current account balance. Protectionist policies, to the degree they impact macro outcomes, would have deleterious effects on the quantum of trade between nations, and on economic efficiency and productivity over time (Krugman 1982, Sen and Turnovsky, 1989, Ostry and Rose, 1992, Obstfeld, 2016). There might also of course be considerable sectoral allocative effects from trade policies, since such policies by definition favor certain sectors over others. It is difficult, however, to find in the trade literature a well-documented channel through which trade policies of realistic magnitude have quantitatively significant effects on current account or trade balances.

25. The conventional wisdom of the weak linkage between trade policies and current account balances has been challenged recently. The challenge comes from a stream of new models (Barattieri, 2014, Joy and others 2018; Reyes-Heroles, 2016) that have highlighted particular channels (e.g. interest rate channel, wealth effect) through which commercial policies might have transitional effects on saving and investment decisions. The precise impact, however, depends on model specifics and calibration which often require perfect foresight of the evolution of trade policies or substantial rigidities that temper consumption or investment adjustments. The challenge has also come from a policy perspective (Carney 2017, Joy and others 2018), which argues that asymmetries in the reduction of trade policy barriers across sectors (i.e. faster in manufacturing than in services) can partially explain the evolution of global imbalances, as countries specializing in services tend to run lower current account balances due to relatively higher trade policy barriers. Properly addressing this question, however, requires looking at a broad measure of trade costs, which captures all the costs associated with the cross-border movement of goods and services, ranging from tariff and shipment costs to the nontariff barriers. This is necessary since both *natural and policy* barriers to trade have differed markedly across sectors and over time. For example, trade in services is more sensitive to natural inhibiting factors such as geographic distance, and cultural and language differences.

26. This section sheds further light on the empirical impact of broader trade costs (natural and policy-related) on current account outcomes. Whether trade costs in prime export sectors help explain current account balances merits a rigorous investigation that addresses the empirical challenges of measuring trade costs and comparative advantage. Using data on bilateral trade flows and a parsimonious structure from the trade literature (Eaton and Kortum 2002), the analysis infers trade costs and comparative advantage across multiple sectors for a globally representative sample of countries (Box

8).[9] Unlike in existing studies, estimated trade costs can vary between imports and exports, and capture both tariff and nontariff barriers as well as other behind-the-border barriers that are difficult to quantify but potentially pervasive, especially for services. The analysis constructs country-specific trade costs weighted by comparative advantage—that is, aggregate *effective* trade costs—to capture the height of net barriers to countries' natural exports and natural imports. Finally, it uses the recently refined EBA current account model to test whether *effective* trade costs, separately when exporting and importing, are significant drivers of current account balances.

27. Results suggest that *effective* export costs have a statistically significant—but moderate—impact on current account outcomes. Specifically, for the sample period 1986–2009, a 10-percentage point unilateral reduction in aggregate effective export costs for an average country is associated with a current account balance improvement equivalent to ½ percent of GDP. The estimated effects are smaller when looking at the more recent period (2001-14). [10] Effective costs to import have generally statistically insignificant effects. These findings are consistent with theoretical predictions that generally suggest limited effects of trade costs on current account balances, coming mainly through mechanisms that induce transitory fluctuations in income and intertemporal prices. These results are generally robust across several empirical specifications and extensions, including using alternative weights to aggregate bilateral trade costs across partners, excluding countries that are known to engage in state support, or including the unexplained component of the gravity model in the trade costs estimates.

Text Table 1. Trade Costs and the Current Account [1/]

	1986-2009	2001-2014
Effective Exporting Cost	-0.049***	-0.020*
	(0.000)	(0.079)
Effective Importing Cost	0.001	-0.012
	(0.945)	(0.333)
R^2	0.65	0.79
N	761	434

Sources: CEPII Gravity Dataset; IMF, EBA data set; Johnson and Noguera (2017) for 1986-2009; and World Input-Output Database 2016 for 2001-14.
1/Uses refined EBA model to estimate impact of effective trade cost on current account. P values are in parentheses. *** p<0.01; ** p<0.05; * p<0.1.

28. However, limitations of the approach entail that the results need to be interpreted with caution. While the estimated trade costs are comprehensive, in that they capture both tariff and nontariff barriers, and the comparative advantage measure is more reliable than other commonly used measures, it also has limitations. In particular, data constraints prevent a separate estimation of import barriers and export subsidies, implying that import costs would be underestimated for countries with significant export subsidies whereas comparative advantage would be overestimated in sectors receiving state support. In addition, the approach does not necessarily capture all barriers to investment that apply to both domestic and foreign firms, which could have a significant impact on current account imbalances (Box 3). Going forward, tackling these limitations require better measures of costs, especially those that pertain to services trade, where trade often requires commercial presence and thus, investment restrictions are more relevant.

[9] A forthcoming IMF Working Paper by Emine Boz, Nan Li and Hongrui Zhang will provide a more detailed exposition of the analysis.

[10] The average effects, however, mask noticeable differences across countries, where trade costs can account for a nonnegligible portion of the negative current account gap in countries with higher-than-average effective costs to export (for example, United States). That said, trade costs appear to influence current account balances especially through natural, rather than policy-related, components.

Box 8. The Methodological Approach to Examining Trade Costs and Imbalances

Challenge: Measuring trade costs and comparative advantage is empirically challenging. Trade costs include all costs associated with the cross-border movement of goods and services, ranging from relatively easy-to-measure expenses for tariffs and goods shipment to the difficult-to-measure nontariff barriers, especially in the case of services (Cerdeiro and Nam 2018). Comparative advantage depends on the differentials between domestic and foreign goods and services prices that would have prevailed had trade been impossible.

Approach: The proposed methodology uses the well-established gravity model established by Eaton and Kortum (2002) to estimate from bilateral trade flows normalized to remove domestic demand effect: (i) a country's export capability; (ii) the toughness of import competition; and (iii) bilateral trade costs, which include both natural barriers (distance, common border or language, colonial relationship) and man-made policy barriers. The approach estimates all three factors simultaneously to reconcile with bilateral trade shares observed in the data.

- The estimated *export capability* is used to proxy productivity and to construct comparative advantage (Hanson, Lind and Muendler, 2016). Specifically, the measurement of comparative advantage involves computing absolute advantage in each sector using the estimated export-specific factors, and normalizing that with country-specific averages across sectors to remove the effects of aggregate growth.
- To infer trade costs, it assumes that for a country without barriers export capability and *import competitiveness* in a sector would be equivalent, since both are driven by productivity and marginal costs. In the event the estimated export capability (relative to a numeraire country) is lower than the estimated relative import competitiveness, it is reconciled by the existence of a positive (relative) import barrier. Under the approach any difference between the export capability and import competitiveness is attributed to the nondiscriminatory import barriers. The estimated nondiscriminatory import barriers are then combined with bilateral trade costs to arrive at the final estimates of the importing costs and exporting costs with a trading partner.
- These estimates are inferred from two alternative data sets on bilateral trade. Johnson and Noguera (2017) provides a balanced panel of bilateral trade in the 1970–2009 period for 37 countries and the 2016 World Input-Output Database covers the 2001–14 period for a similar set of countries. The analysis focuses on agriculture, manufacturing and services.

Arriving at the effective trade cost: Two sets of trade costs are computed for each country and sector--those faced when exporting and those faced when importing--aggregating across trading partners using their respective lagged export and import shares as weights. Country-specific trade costs are weighted by comparative to arrive at the effective trade cost measure, which is meant to reflect the height of barriers on the basis of a country's underlying trade potential. The measure effectively assigns weights based on trade that would have prevailed had there not been trade costs to avoid the underestimation inherent in the standard practice.

Augmenting EBA model: Measures of effective costs to export and to import are then added to the most recent version of the current account model in the EBA as additional explanatory variables, after taking their differences relative to their respective world averages.

29. As to policy implications of course, aside from the potential impact on imbalances, lowering trade costs remains essential to reaping the benefits of trade. While trade costs do not appear to be a key driver of current account imbalances, lower trade costs can boost trade and foster a more efficient allocation of resources and boost productivity by spurring innovation, technology transfer, and competition. Though trade-induced structural change can be costly to those who are dislocated, complementary policies can ease the accompanying adjustment process (IMF/WB/WTO 2017). Resisting protectionist policies, reviving liberalization efforts, and strengthening the multilateral trading system remain essential pro-growth strategies—particularly to promote trade in services, where barriers remain relatively high and potential under-exploited trade gains therefore are likely to be high as well.

30. Looking beyond a narrow focus on tariffs, policies remain necessary to address behind-the-border barriers and distortions as well as reduce the trade-impeding effects of natural factors. Sustained government interventions can distort trade and potentially have protracted effects on resource allocation, and aggregate savings and investment. Further efforts are needed to eliminate these distorting practices, which include state-owned enterprise subsidies, technology transfer requirements, weak investment and intellectual property protection, within a revamped multilateral rules-based trading system. Moreover, natural barriers to trade could be lowered through improved infrastructure, enhanced connectivity to shipping networks, and investment in digital technologies. Such comprehensive efforts would not only promote trade along the intensive margin, but also extend the spectrum of goods and services that can cross borders.

Table 1. Selected Economies: Current Account Balance, 2014-17 1/

	In billions of USD				In percent of World GDP				In percent of GDP			
	2014	2015	2016	2017	2014	2015	2016	2017	2014	2015	2016	2017
Top 15 Surplus Economies in 2017												
Germany	291.0	301.1	297.5	296.4	0.4	0.4	0.4	0.4	7.5	8.9	8.5	8.0
Japan	36.8	134.1	188.1	196.1	0.0	0.2	0.2	0.2	0.8	3.1	3.9	4.0
China	236.0	304.2	202.2	164.9	0.3	0.4	0.3	0.2	2.2	2.7	1.8	1.4
Netherlands	75.9	65.8	65.6	84.8	0.1	0.1	0.1	0.1	8.6	8.7	8.4	10.2
Taiwan Province of China	61.0	74.9	72.8	82.9	0.1	0.1	0.1	0.1	11.5	14.2	13.7	14.5
Switzerland	76.1	77.8	78.1	78.9	0.1	0.1	0.1	0.1	8.5	10.9	9.4	9.8
Korea	84.4	105.9	99.2	78.5	0.1	0.1	0.1	0.1	6.0	7.7	7.0	5.1
Singapore	58.2	56.5	58.8	61.0	0.1	0.1	0.1	0.1	18.7	18.6	19.0	18.8
Italy	41.3	27.8	47.6	53.4	0.1	0.0	0.1	0.1	1.9	1.5	2.6	2.8
Thailand	15.2	32.1	48.2	48.1	0.0	0.0	0.1	0.1	3.7	8.0	11.7	10.6
Ireland	4.3	31.7	10.2	41.9	0.0	0.0	0.0	0.1	1.6	10.9	3.3	12.5
Russia	57.5	67.7	24.4	35.2	0.1	0.1	0.0	0.0	2.8	4.9	1.9	2.3
United Arab Emirates	54.5	17.6	13.2	26.5	0.1	0.0	0.0	0.0	13.5	4.9	3.7	6.9
Denmark	31.5	26.4	22.5	25.5	0.0	0.0	0.0	0.0	8.9	8.8	7.3	7.8
Spain	14.9	13.5	23.8	25.0	0.0	0.0	0.0	0.0	1.1	1.1	1.9	1.9
Top 15 Deficit Economies in 2017												
United States	-373.8	-434.6	-451.7	-466.2	-0.5	-0.6	-0.6	-0.6	-2.1	-2.4	-2.4	-2.4
United Kingdom	-161.4	-150.0	-153.9	-106.7	-0.2	-0.2	-0.2	-0.1	-5.3	-5.2	-5.8	-4.1
Canada	-43.2	-55.9	-49.3	-48.8	-0.1	-0.1	-0.1	-0.1	-2.4	-3.6	-3.2	-2.9
India 2/	-26.8	-22.1	-15.2	-48.7	0.0	0.0	0.0	-0.1	-1.3	-1.1	-0.7	-1.9
Turkey	-43.6	-32.1	-33.1	-47.4	-0.1	0.0	0.0	-0.1	-4.7	-3.7	-3.8	-5.6
Australia	-44.7	-57.8	-39.1	-34.0	-0.1	-0.1	-0.1	0.0	-3.1	-4.7	-3.1	-2.5
Argentina	-9.2	-17.6	-14.7	-30.8	0.0	0.0	0.0	0.0	-1.6	-2.7	-2.7	-4.8
Algeria	-9.4	-27.3	-26.5	-22.1	0.0	0.0	0.0	0.0	-4.4	-16.5	-16.6	-13.0
Mexico	-24.0	-29.8	-23.3	-19.4	0.0	0.0	0.0	0.0	-1.8	-2.5	-2.2	-1.7
Indonesia	-27.5	-17.5	-17.0	-17.5	0.0	0.0	0.0	0.0	-3.1	-2.0	-1.8	-1.7
Egypt	-2.7	-12.1	-19.8	-15.3	0.0	0.0	0.0	0.0	-0.9	-3.7	-6.0	-6.5
France	-27.3	-9.0	-18.5	-14.8	0.0	0.0	0.0	0.0	-1.0	-0.4	-0.8	-0.6
Lebanon	-13.6	-9.6	-11.6	-12.9	0.0	0.0	0.0	0.0	-28.4	-19.4	-23.4	-25.0
Pakistan	-3.1	-2.7	-4.9	-12.4	0.0	0.0	0.0	0.0	-1.3	-1.0	-1.7	-4.1
Oman	4.2	-11.0	-12.3	-11.2	0.0	0.0	0.0	0.0	5.2	-15.9	-18.4	-15.5
Memorandum item:												
Euro Area	332.3	373.3	397.8	442.4	0.4	0.5	0.5	0.6	2.5	3.2	3.3	3.5
Statistical discrepancy	392.5	228.1	239.2	405.7	0.5	0.3	0.3	0.5	0.5	0.3	0.3	0.5
Surpluses (world)	1,563.4	1,506.4	1,506.4	1485.9	2.0	2.0	1.8	1.9	4.1	4.6	4.2	3.9
Surpluses (AEs)	876.9	1004.4	1029.5	1110.8	1.1	1.4	1.4	1.4	4.5	5.8	5.5	5.7
Deficits (world)	-1,149.9	-1,281.6	-1151.3	-1080.2	-1.5	-1.7	-1.5	-1.4	-2.8	-3.0	-2.7	-2.6
Deficits (AEs)	-671.1	-719.0	-722.4	-681.7	-0.9	-1.0	-1.0	-0.9	-2.4	-2.6	-2.6	-2.4

Source: World Economic Outlook and Fund Staff calculations.
1/ Sorted by size (in USD) of surplus and deficit in 2017.
2/ For India, data are presented on a fiscal year basis.

Table 2. ESR Countries: Summary of External Assessment Indicators, 2017

Country	Overall Assessment	Current Account (% GDP)		Staff-Assessed CA Gap (% GDP)			Staff-Assessed REER Gap (Percent)			Int'l Investment Position (% GDP) 1/			CA NFA Stabilizing (% GDP) 2/	CA/REER Elasticity 3/	SE of CA Norm (%) 4/
		Actual	Cycl Adj.	Midpoint	Low	High	Midpoint	Low	High	Net	Liabilities	Assets			
Argentina	Weaker	-4.8	-5.0	-3.3	-4.3	-2.3	25.0	17.5	32.5	4	46	49	0.5	0.13	0.8
Australia	Broadly Consistent	-2.5	-2.4	-1.0	-1.5	-0.5	8.5	0.0	17.0	-55	185	130	-2.7	0.20	1.0
Belgium	Weaker	-0.2	-0.3	-2.5	-3.5	-1.5	6.0	3.5	8.5	46	416	462	1.7	0.42	0.5
Brazil	Broadly Consistent	-0.5	-1.8	0.2	-0.3	0.7	-2.0	-7.0	3.0	-34	75	42	-1.2	0.10	1.1
Canada	Moderately Weaker	-2.9	-2.4	-1.9	-3.4	-0.4	7.0	1.0	13.0	19	203	222	0.4	0.27	1.1
China	Moderately Stronger	1.4	1.4	1.7	0.2	3.2	-3.0	-13.0	7.0	15	43	58	1.6	0.23	1.6
Euro Area 5/	Moderately Stronger	3.5	3.4	1.3	0.6	2.0	-4.0	-8.0	0.0	-1	222	221	-0.4	0.2	0.8
France	Moderately Weaker	-0.6	-0.6	-1.6	-2.0	-1.0	4.0	0.0	8.0	-21	324	302	-0.7	0.25	0.5
Germany	Substantially Stronger	8.0	8.3	5.0	3.8	6.3	-15.0	-20.0	-10.0	60	199	259	1.8	0.23	0.9
Hong Kong SAR	Broadly Consistent	4.3	3.3	0.0	-1.5	1.5	0.0	-5.0	5.0	409	1197	1606	...	...	...
India	Broadly Consistent	-1.9	-2.1	0.4	-0.6	1.4	-1.0	-7.0	5.0	-13	41	28	-2.3	0.17	1.4
Indonesia	Broadly Consistent	-1.7	-1.6	0.1	-1.4	1.6	-1.1	-9.4	7.2	-34	67	33	-2.7	0.18	1.5
Italy	Broadly Consistent	2.8	2.1	-0.3	-1.3	0.7	5.0	0.0	10.0	-7	172	165	-0.4	0.26	0.7
Japan	Broadly Consistent	4.0	3.6	0.5	-0.8	1.8	-3.5	-13.0	6.0	60	124	184	2.8	0.14	1.3
Korea	Moderately Stronger	5.1	4.5	1.6	0.6	2.6	-4.5	-7.2	-1.7	16	78	94	0.9	0.36	0.8
Malaysia	Stronger	3.0	3.7	3.1	2.1	4.1	-6.8	-8.8	-4.8	-2	134	133	0.4	0.47	0.8
Mexico	Broadly Consistent	-1.7	-1.4	0.5	-0.5	1.5	-4.0	-12.0	4.0	-46	101	55	-2.4	0.13	1.4
Netherlands	Substantially Stronger	10.2	10.3	6.8	4.8	8.8	-10.0	-13.0	-7.0	74	1177	1251	2.6	0.74	0.9
Poland	Broadly Consistent	0.3	0.8	1.0	0.0	2.0	-2.5	-5.0	0.0	-65	118	52	-3.2	0.43	0.6
Russia	Moderately Weaker	2.3	3.2	-1.3	-2.5	0.0	5.0	0.0	10.0	17	68	85	0.4	0.26	1.6
Saudi Arabia	Weaker	2.2	...	-2.0	-3.0	-1.0	15.0	10.0	20.0	81	54	135	...	...	...
Singapore	Substantially Stronger	18.8	18.9	5.5	2.5	8.5	-10.0	-16.0	-4.0	248	869	1118	...	...	...
South Africa	Moderately Weaker	-2.5	-2.5	-1.3	-2.3	-0.3	5.0	0.0	10.0	13	148	161	-1.4	0.27	1.3
Spain	Moderately Weaker	1.9	1.5	-1.5	-2.5	-0.5	6.5	3.0	10.0	-85	254	169	-1.8	0.28	0.7
Sweden	Moderately Stronger	3.3	3.6	1.6	0.1	3.1	-5.0	-10.0	0.0	10	283	293	0.4	0.25	1.2
Switzerland	Broadly Consistent	9.8	9.6	0.8	-1.2	2.8	-1.5	-5.3	2.3	127	587	714	8.9	0.53	1.3
Thailand	Substantially Stronger	10.6	10.1	6.0	4.0	8.0	-10.5	-14.0	-7.0	-7	107	100	-0.5	0.64	1.7
Turkey	Weaker	-5.6	-4.8	-2.2	-3.2	-1.2	0.0	-10.0	10.0	-54	80	27	-2.4	0.20	1.9
United Kingdom	Weaker	-4.1	-4.0	-3.0	-5.0	-1.0	7.5	0.0	15.0	-13	535	523	-0.2	0.24	0.7
United States	Moderately Weaker	-2.4	-2.3	-1.5	-2.0	-1.0	12.0	8.0	16.0	-40	183	143	-1.3	0.12	1.0

Sources: IMF World Economic Outlook (WEO), International Financial Statistics (IFS), and Staff assessments.

1/ The NIIP estimates come from WEO. Country team estimates (reported in ESR pages) could differ.

2/ The current account balance that would stabilize the ratio of net foreign assets (NFA) to GDP at the benchmark NFA/GDP level.

3/ Assumed elasticity linking a change in the current account (as percent of GDP) to a change in the REER (in percent).

4/ The standard error of the 2017 estimated current account norms.

5/ The staff-assessed euro area CA and REER gaps are calculated as the GDP-weighted averages of staff-assessed CA and REER gaps for the 11 largest Euro area economies.

Table 3. ESR Countries: Summary of Staff-Assessed Current Account Gaps and Staff Adjustments, 2017
(in percent of GDP)

Country	Actual CA Balance [A]	Cycl Adj. CA Balance [B]	EBA CA Norm [C]	EBA CA Gap 1/ [D=B-C]	Staff-Assessed CA Gap 2/ [E]	Staff Adjustments 3/ Total	Norm	Other	Comments
Argentina	-4.8	-5.0	-1.7	-3.3	-3.3	0.0	...	...	
Australia	-2.5	-2.4	-0.6	-1.9	-1.0	-0.9	-0.9	...	Large investment needs due to its size and low population density
Belgium	-0.2	-0.3	2.2	-2.5	-2.5	0.0	...	...	
Brazil	-0.5	-1.8	-2.4	0.7	0.2	0.5	0.5	...	NIIP/financing risks considerations
Canada	-2.9	-2.4	2.2	-4.6	-1.9	-2.7	-0.4	-2.3	Measurement biases and terms-of-trade; Demographics (updated data)
China	1.4	1.4	-0.3	1.7	1.7	0.0	...	...	
Euro Area 4/	3.5	3.4	1.5	1.9	1.3	0.6	0.4	0.2	See individual country adjustments
France	-0.6	-0.6	0.9	-1.6	-1.6	0.0	...	...	
Germany	8.0	8.3	2.8	5.5	5.0	0.5	0.5	...	Demographics (uncertainty related to large/sudden immigration)
India	-1.9	-2.1	-3.0	0.9	0.4	0.5	0.5	...	NIIP/financing risks considerations
Indonesia	-1.7	-1.6	-0.8	-0.8	0.1	-0.9	-0.9	...	Demographics (high mortality risk)
Italy	2.8	2.1	2.5	-0.3	-0.3	0.0	...	...	
Japan	4.0	3.6	3.2	0.4	0.5	-0.1	...	-0.1	Temporary boost in energy imports following the 2011 earthquake
Korea	5.1	4.5	3.0	1.6	1.6	0.0	...	...	
Malaysia	3.0	3.7	0.6	3.1	3.1	0.0	...	...	
Mexico	-1.7	-1.4	-2.5	1.1	0.5	0.6	...	0.6	Temporary drop in investment (underlying CA)
Netherlands	10.2	10.3	3.5	6.8	6.8	0.0	...	...	
Poland	0.3	0.8	-1.7	2.4	1.0	1.4	...	1.4	Delays in disbursement of EU Funds that hold back public investment
Russia	2.3	3.2	3.8	-0.5	-1.3	0.7	0.7	...	Impact of economic sanctions
South Africa	-2.5	-2.5	0.7	-3.2	-1.3	-1.9	-1.1	-0.8	Demographics (high mortality risk); measurement biases
Spain	1.9	1.5	1.4	0.1	-1.5	1.6	1.6	...	NIIP/financing risks considerations
Sweden	3.3	3.6	1.8	1.8	1.6	0.2	...	...	
Switzerland	9.8	9.6	6.2	3.4	0.8	2.6	...	2.6	Measurement biases
Thailand	10.6	10.1	0.5	9.6	6.0	3.6	...	3.6	Political uncertainty, terms of trade, temporary tourism boom
Turkey	-5.6	-4.8	-0.9	-4.0	-2.2	-1.8	-1.0	-0.7	NIIP/financing risks considerations; Gold restocking
United Kingdom	-4.1	-4.0	1.0	-5.0	-3.0	-2.0	...	-2.0	Measurement biases
United States	-2.4	-2.3	-0.7	-1.6	-1.5	-0.1	...	...	
Hong Kong SAR	4.3	3.3	...	...	0.0	...	...	...	
Singapore	18.8	18.9	...	...	5.5	...	...	...	
Saudi Arabia	2.2	...	...	...	-2.0	...	...	...	
Discrepancy 5/	...	...	...	...	**0.03**	...	...	...	

Source: Fund staff estimates.
1/ Figures may not add up due to rounding effects.
2/ Refers to the mid-point of the CA Gap.
3/ Total staff adjustments include rounding in some cases. Breakdown between norm and other factors (which affect the underlying CA) are tentative.
4/ The EBA euro area current account norm is calculated as the GDP-weighted average of norms for the 11 largest Euro area economies, adjusted for reporting discrepancies in intra-area transactions (which were equivalent to 0.6 percent of GDP in 2017). The staff-assessed CA gap is calculated as the GDP-weighted average of staff-assessed gaps for the 11 largest Euro area economies.
5/ Weighted average sum of staff-assessed CA gaps.

Table 4. Selected ESR Countries: Current Account Regression Policy Gap Contributions, 2017
(in percent of GDP)

	EBA Gap				Fiscal Gap					Public Healh Exp Gap					Private Credit Gap					FXI Gap					Other (K-Controls)	
						Domestic					Domestic					Domestic					Domestic					
	Total 1/	Identified	Dom 2/	Residual	Total 1/	Dom 3/	Coeff	P	P*	Total 1/	Dom3/	Coeff	P	P*	Total 1/	Dom 3/	Coeff	P	P*	Total 1/	Dom 3/	Coeff	P	P*	Total 1/	Dom 3/
Argentina	-3.3	-0.1	-0.5	-3.1	-0.9	-1.5	0.3	-5.9	-1.2	-0.1	0.0	-0.4	6.5	6.5	0.0	-0.1	-0.1	1.0	0.0	0.7	0.9	0.8	2.3	0.0	0.1	0.3
Australia	-1.9	1.4	1.0	-3.2	0.7	0.0	0.3	-1.6	-1.6	0.0	0.1	-0.4	6.6	6.9	0.9	0.8	-0.1	-7.8	0.0	-0.1	0.1	0.8	0.6	0.0	-0.1	0.0
Belgium	-2.5	-0.2	-0.6	-2.3	0.3	-0.3	0.3	-0.9	0.0	-0.1	0.0	-0.4	8.0	8.0	-0.2	-0.2	-0.1	2.3	0.0	-0.1	0.0	0.8	1.4	0.0	-0.1	0.0
Brazil	0.7	0.8	0.4	-0.1	0.0	-0.6	0.3	-6.7	-4.8	0.1	0.2	-0.4	3.3	3.8	0.7	0.6	-0.1	-6.1	0.0	-0.1	0.0	0.8	0.3	0.0	0.0	0.1
Canada	-4.6	-0.3	-0.7	-4.2	0.5	-0.2	0.3	-1.3	-0.7	-0.1	0.0	-0.4	7.0	7.0	-0.5	-0.5	-0.1	5.2	0.0	-0.1	0.0	0.8	0.0	0.0	-0.1	0.0
China	1.7	-0.5	-0.9	2.3	-0.2	-0.8	0.3	-4.0	-1.5	0.4	0.5	-0.4	3.2	4.5	-1.4	-1.5	-0.1	14.0	0.0	0.3	0.4	0.8	1.2	0.0	0.3	0.5
Euro Area 4/	1.9	0.7	0.3	1.2	0.4	-0.2	0.3	-0.8	-0.2	0.0	0.1	-0.4	8.0	8.1	0.5	0.4	-0.1	-7.8	-3.5	-0.1	0.0	0.8	0.0	0.0	-0.1	0.0
France	-1.6	-0.9	-1.2	-0.7	-0.2	-0.8	0.3	-2.5	0.0	0.1	0.2	-0.4	8.3	8.7	-0.5	-0.6	-0.1	5.5	0.0	-0.1	0.0	0.8	-0.1	0.0	-0.1	0.0
Germany	5.5	1.2	0.8	4.3	1.0	0.4	0.3	0.7	-0.5	-0.1	0.0	-0.4	9.5	9.5	0.5	0.4	-0.1	-8.9	-5.0	-0.1	0.0	0.8	-0.2	0.0	-0.1	0.0
India	0.9	2.5	2.1	-1.6	0.4	-0.3	0.3	-6.5	-5.8	0.0	0.1	-0.4	1.4	1.6	0.7	0.7	-0.1	-6.3	0.0	0.8	1.0	0.8	2.5	0.0	0.5	0.7
Indonesia	-0.8	2.1	1.8	-3.0	0.7	0.1	0.3	-2.3	-2.5	0.6	0.7	-0.4	1.2	3.0	0.2	0.1	-0.1	-1.4	0.0	0.4	0.5	0.8	1.7	0.0	0.2	0.3
Italy	-0.3	0.9	0.5	-1.3	0.0	-0.7	0.3	-1.6	0.5	-0.1	0.0	-0.4	6.8	6.8	1.3	1.2	-0.1	-11.8	0.0	-0.1	0.0	0.8	0.1	0.0	-0.1	0.0
Japan	0.4	-1.6	-2.0	2.0	-0.7	-1.4	0.3	-4.1	0.1	-0.1	0.0	-0.4	9.1	9.1	-0.5	-0.6	-0.1	5.5	0.0	-0.1	0.0	0.8	0.3	0.0	-0.1	0.0
Korea	1.6	1.9	1.5	-0.3	1.5	0.8	0.3	2.5	0.0	0.4	0.5	-0.4	4.3	5.5	0.2	0.1	-0.1	-1.3	0.0	-0.1	0.1	0.8	0.7	0.0	-0.1	0.0
Malaysia	3.1	-0.2	-0.5	3.3	0.0	-0.7	0.3	-3.1	-1.1	0.7	0.8	-0.4	2.2	4.1	-0.3	-0.4	-0.1	3.5	0.0	-0.5	-0.4	0.8	-1.2	0.0	0.0	0.1
Mexico	1.1	0.5	0.1	0.6	0.6	0.0	0.3	-2.6	-2.5	0.3	0.4	-0.4	2.9	3.9	-0.3	-0.3	-0.1	3.2	0.0	-0.3	-0.1	0.8	-0.4	0.0	0.1	0.2
Netherlands	6.8	1.9	1.5	4.9	1.2	0.5	0.3	1.0	-0.5	0.2	0.3	-0.4	8.1	8.8	0.8	0.7	-0.1	-6.9	0.0	-0.1	0.0	0.8	-0.3	0.0	-0.1	0.0
Poland	2.4	0.5	0.1	2.0	0.3	-0.4	0.3	-2.2	-1.0	0.1	0.2	-0.4	4.4	5.0	0.1	0.1	-0.1	-0.7	0.0	0.1	0.2	0.8	1.1	0.0	-0.1	0.0
Russia	-0.5	0.6	0.2	-1.1	-0.6	-1.2	0.3	-1.4	2.4	0.6	0.7	-0.4	3.6	5.4	0.5	0.4	-0.1	-3.9	0.0	0.2	0.4	0.8	3.8	0.0	-0.1	0.0
South Africa	-3.2	0.5	0.2	-3.8	0.2	-0.5	0.3	-3.9	-2.4	-0.1	0.0	-0.4	4.2	4.3	0.5	0.4	-0.1	-4.2	0.0	-0.1	0.1	0.8	0.4	0.0	0.0	0.1
Spain	0.1	0.0	-0.3	0.1	-0.2	-0.9	0.3	-2.6	0.0	-0.1	0.0	-0.4	6.3	6.3	0.6	0.5	-0.1	-15.0	-10.0	-0.1	0.0	0.8	0.5	0.0	-0.1	0.0
Sweden	1.8	1.5	1.1	0.3	0.8	0.2	0.3	0.9	0.3	-0.1	0.0	-0.4	8.0	8.0	1.0	0.9	-0.1	-9.0	0.0	-0.1	0.0	0.8	0.1	0.0	-0.1	0.0
Switzerland	3.4	-0.5	-0.9	3.9	0.7	0.1	0.3	0.2	0.0	-0.1	0.0	-0.4	7.4	7.4	-0.9	-0.9	-0.1	9.0	0.0	-0.1	0.0	0.8	0.0	0.0	-0.1	0.0
Thailand	9.6	1.8	1.4	7.8	1.0	0.3	0.3	-0.6	-1.5	0.0	0.1	-0.4	3.2	3.5	-0.6	-0.6	-0.1	6.1	0.0	1.4	1.5	0.8	8.1	0.0	0.0	0.1
Turkey	-4.0	-1.3	-1.7	-2.6	0.3	-0.3	0.3	-3.0	-2.0	-0.1	0.0	-0.4	3.6	3.6	-1.0	-1.0	-0.1	10.1	0.0	-0.5	-0.4	0.8	-1.1	1.7	-0.1	0.0
United Kingdom	-5.0	-0.4	-0.8	-4.6	-0.1	-0.8	0.3	-2.3	0.0	-0.1	0.0	-0.4	7.9	7.9	0.1	0.0	-0.1	0.0	0.0	-0.1	0.0	0.8	0.4	0.0	-0.1	0.0
United States	-1.6	-0.6	-0.9	-1.0	-0.4	-1.1	0.3	-4.8	-1.5	-0.4	-0.3	-0.4	8.9	8.2	0.5	0.4	-0.1	-4.0	0.0	-0.1	0.0	0.8	0.0	0.0	-0.1	0.0

Source: IMF staff estimates.

1/ Total contribution after adjusting for multilateral consistency.

2/ Includes contribution of domestic policy gaps to the identified gap. The total foreign policy gap contribution is constant and equal to 0.4 percent for all countries.

3/ Total domestic contribution is equivalent to coefficient*(P-P*)

4/ The euro area EBA CA gap and policy gap contributions are calculated as the GDP-weighted averages of EBA CA gaps and policy gap contributions for the 11 largest Euro area economies.

Table 5. 2017 Individual Country Assessments: Summary of Policy Recommendations

Country Name	Overall 2017 Assessment	Policy recommendations 1/		
		Fiscal	Monetary	Structural
Argentina	Weaker	Fiscal consolidation to reduce the current account deficit		Implement structural reforms that would increase productivity and competitiveness, and attract FDI
Australia	Broadly Consistent	Gradual, medium-term consolidation	Further monetary accommodation warranted, if growth was on the weak side, or commodity prices fell again	-
Belgium	Weaker	Steady consolidation with labor tax reduction	-	Product and labor market reforms (to address labor market fragmentation), and wage moderation
Brazil	Broadly Consistent	Consolidation (social security reforms and new federal spending cap)		Structural efforts to improve overall competitiveness
Canada	Moderately Weaker	Medium-term consolidation, while increasing public infrastructure investment	Maintaining tight macroprudential policies to ensure financial stability	Improve labor productivity, including by investing in R&D and physical capital, promoting FDI. Diversify export markets, especially into services
China	Moderately Stronger	Support deleveraging by gradually consolidating to bring the primary balance to the debt-stabilizing level	Gradually move toward more transparent, market-based MP framework and ER flexibility, which may require use of FX reserves to smooth excessive volatility	Improve social safety nets; SOE reform and open markets to more competition; create a more market-based and robust financial system; take steps to attract more inward FDI, including by ensuring that foreign investors receive the same treatment as domestic investors
Euro Area	Moderately Stronger	Implement more growth-friendly composition of national fiscal policies. Expand investment in countries with fiscal space. Centralized investment schemes at regional level. Strengthen euro area fiscal capacity for macroeconomic stabilization	Remain accommodative until inflation durably converges to ECB's medium-term price stability objective	Enhance productivity, increase competitiveness; strengthen private sector balance sheets; make currency union more resilient with banking and capital markets union; facilitate relative price adjustments at the national level by enabling greater inflation differentials across euro area members
France	Moderately Weaker	Steady consolidation	-	Enhance productivity; increase competitiveness through labor market reforms and wage moderation
Germany	Substantially Stronger	A more growth-oriented fiscal policy	-	Reforms to foster entrepreneurship, and address aging costs by prolonging working life
Hong Kong SAR	Broadly Consistent	Continue prudent fiscal management	-	Robust and proactive financial supervision; maintain flexible wages and prices.
India	Broadly Consistent	-	Exchange rate flexibility should remain the main shock absorber, with intervention limited to addressing disorderly market concerns	Gradual liberalization of portfolio flows. Ease domestic supply bottlenecks and revamp business climate, improve competitiveness and investment prospects, to attract FDI and boost exports.
Indonesia	Broadly Consistent	Strengthen fiscal position by accelerating tax reforms to boost investor confidence; Keep fiscal deficit below the legal limit	Continued ER flexibility and market-determined bond yields would continue to underpin external stability	Expand social safety nets. Ease non-tariff trade barriers and FDI restrictions. Continue infrastructure investment and strengthen human capital. Deepen financial markets
Italy	Broadly Consistent	Gradual consolidation to maintain investor confidence	-	Implement reforms to better align wages with productivity at the firm level and to strengthen banks balance sheet to unlock investment potential
Japan	Broadly Consistent	Gradual fiscal consolidation anchored by a credible medium-term fiscal framework	Continued accommodative stance by the Bank of Japan to achieve inflation objectives	Adopt measures to boost wages and labor supply, reduce labor market duality, enhance risk capital provision, reduce barriers to entry in some industries, and accelerate agricultural and professional services sector deregulation
Korea	Moderately Stronger	More expansionary fiscal policy to boost domestic demand	ER flexibility with limited intervention to address disorderly conditions	Strengthen the social safety net to lessen incentives for precautionary savings. Address bottlenecks to investment

Source: 2017 Individual External Assessments.

1/ This non-exhaustive list focuses on key recommendations for closing external imbalances.

Table 5. 2017 Individual Country Assessments: Summary of Policy Recommendations (Concluded)

Country Name	Overall 2017 Assessment	Policy recommendations 1/		
		Fiscal	Monetary	Structural
Malaysia	Stronger	Gradual medium-term consolidation	Exchange rate flexibility	Improve social protection; increase public healthcare spending; address structural bottlenecks (labor market skills mismatch; low female participation; weak education quality; further improve physical infrastructure
Mexico	Broadly Consistent	Gradual consolidation	Free-floating ER policy, and use foreign exchange intervention occasionally to prevent disorderly market conditions	Structural reforms to improve competitiveness and strengthen non-oil exports
Netherlands	Substantially Stronger	Expansionary fiscal policy	-	Structural reforms to raise the productivity of small domestic firms, repair household balance sheets, and strengthen the banking system
Poland	Broadly Consistent	Gradual structural fiscal consolidation	Timely monetary policy responses to prevent nascent overheating and other market pressures	Continued reforms are crucial to boost structurally-low private investment and potential growth.
Russia	Moderately Weaker	Use new fiscal rule to reduce impact of oil volatility on non-oil sector; re-allocate from current to capital spending, while leaving space for health spending	-	Structural reforms to invigorate private sector and improve its competitiveness
Saudi Arabia	Weaker	Further consolidation over the short- and medium term	-	Structural reforms to diversify the economy and boost the non-oil tradeable sector over the medium term
Singapore	Substantially Stronger	Higher public investment in physical infrastructure and human capital. More public health spending to reduce precautionary saving	Gradual normalization of monetary policy to support gradual appreciation of the real exchange rate	Structural reforms to improve productivity and domestic investment incentives
South Africa	Moderately Weaker	Preserve debt sustainability, while allowing for greater public investment	Seize opportunities to build-up reserves to deal with FX liquidity shocks	Strengthen education/skills; increase financial inclusion; foster entry into key product markets; accelerate labor and product market reforms
Spain	Moderately Weaker	Reduce the still-sizable structural fiscal deficit	-	Press with additional reforms of the labor market and faster implementation of certain product market reforms
Sweden	Moderately Stronger	Adopt a mildly expansionary fiscal stance consistent with the medium-term surplus target	Continued monetary accommodation to bring inflation back to target and support domestic demand	Facilitate migrant integration into the labor market; reduce household uncertainties around the sustainability of Sweden's strong social model
Switzerland	Broadly Consistent	Move to -and maintain- a structurally-neutral fiscal stance	Foreign currency intervention should be reserved for addressing large exchange market pressures	Reform corporate income tax to encourage SME investment, thereby reducing net saving
Thailand	Substantially Stronger	Boost public infrastructure within available fiscal space	Greater exchange rate flexibility with limited intervention	Strengthen social safety nets, and reduce barriers to investment
Turkey	Weaker	Tighten fiscal and quasi-fiscal policies.	Tighter monetary policy should aim at reanchoring inflation expectations. Further deceleration of credit growth is necessary. Increase net international reserves.	-
United Kingdom	Weaker	Fiscal consolidation with investment in public infrastructure	Maintain financial stability through macroprudential policies	Broaden skill base; improve public infrastructure
United States	Moderately Weaker	Consolidate over the medoim term, while upgrading public infrastructure	-	Enhance schooling and training of workers; strengthen measures to support the working poor; increase labor force growth (including through skill-based immigration reform)

Source: 2017 Individual External Assessments.

1/ This non-exhaustive list focuses on key recommendations for closing external imbalances.

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2018 EXTERNAL SECTOR REPORT—INDIVIDUAL ECONOMY ASSESSMENTS

Prepared by the respective country teams with input from the External Sector Coordinating Group comprising:

Luis Cubeddu (Chair), David Robinson (AFR), Paul Cashin, Mariana Colacelli, Sonali Jain Chandra, Kenneth Kang (APD), Alfredo Cuevas, Julie Kozack (EUR), Catherine Pattillo, Abdelhak Senhadji (FAD), Tim Callen (MCD), Gaston Gelos, Ratna Sahay (MCM), Jonathan D. Ostry (RES), Tam Bayoumi, Varapat Chensavasdijai, Martin Kaufman (SPR), Venkateswarlu Josyula, Carlos Sánchez-Muñoz (STA), and Nigel Chalk, Antonio Spilimbergo (WHD).

Coordinated by: Gustavo Adler, Mai Dao, Swarnali Hannan, and Pau Rabanal (all RES), Varapat Chensavasdijai, Russell Green, Shakill Hassan, Yevgeniya Korniyenko, Huidan Lin, Yinqiu Lu, Pablo Morra, Silvia Sgherri, and Misa Takebe (all SPR). Excellent assistance was provided by Kyun Suk Chang, Deepali Gautam, Jane Haizel, Jair Rodriguez, Zijiao Wang (all RES) and Rachelle Blasco and Reem Disu (all SPR).

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INDIVIDUAL ECONOMY ASSESSMENTS

A. The External Sector Assessments

The external sector assessments use a wide range of methods, including the External Balance Assessment (EBA) developed by the IMF's Research Department to estimate desired current account balances and real exchange rates (see IMF Working Paper WP/13/272 for a complete description of the EBA methodology and Annex I of the 2015 External Sector Report for a discussion of more recent refinements). This year, as is done periodically, the EBA models were refined to reflect insights gained since the last round of changes. Refinements aimed at better capturing the role that certain fundamentals (demographics, institutions and potential current account measurement biases), macroeconomic policies (foreign exchange intervention and credit excesses) and other structural features could play in driving current account dynamics. A full description of the refinements can be found in the 2018 ESR Technical Supplement.

In all cases, the overall assessment is based on the judgment of IMF staff drawing on the inputs provided by these model estimates and other analysis. Since estimates are subject to uncertainty, overall assessments are presented in ranges. The external sector assessments are based on data and IMF staff projections as of June 22, 2018.

The external assessments discuss a broad range of external indicators: the current account, the real effective exchange rate, capital and financial accounts flows and measures, foreign exchange (FX) and reserves, and the foreign asset or liability position.[1] The individual economy assessments are discussed with the respective authorities as a part of bilateral surveillance.

B. Selection of Economies Included in the Report

The 30 systemic economies analyzed in detail in this Report and included in the individual economy assessments are listed below. They were chosen on the basis of an equal weighting of each economy's global ranking in terms of purchasing power GDP, as used in the IMF's *World Economic Outlook*, and in terms of the level of nominal gross trade.

Argentina	India	Saudi Arabia
Australia	Indonesia	Singapore
Belgium	Italy	South Africa
Brazil	Japan	Spain
Canada	Korea	Sweden
China	Malaysia	Switzerland
Euro area	Mexico	Thailand
France	The Netherlands	Turkey
Germany	Poland	United Kingdom
Hong Kong SAR	Russia	United States

[1] 2018 real effective exchange rates (REERs) are estimated based on data available as of June 22, 2018.

C. Domestic and Foreign Policies and Imbalance Calculations: An Example

The thought experiment: A simplified example could help to clarify how policy distortions are analyzed in a multilateral setting and how the analysis can distinguish between domestic policy distortions where a country might need to take action to reduce its external imbalance and those that are generated abroad and where no action by the home country is needed (but where action by others would help reduce the external imbalance).

Take a stylized example of a two-country world.

Country A has a large current account deficit, a large fiscal deficit and high public debt.

Country B has a current account surplus (matching the deficit in Country A), but has no policy distortions.

External imbalances: The analysis would show that Country A has an external imbalance reflecting its large fiscal deficit. Country B would have an equal and opposite surplus imbalance. Country A's exchange rate would look overvalued and Country B's undervalued.

Policy gaps: The analysis of policy gaps would show that there is a domestic policy distortion in Country A that needs adjustment. However, the analysis for Country B would show that there were no domestic policy gaps—instead adjustment by Country A would automatically eliminate the imbalance in Country B.

Individual economy write-ups: While the estimates of the *overall external sector position*—, needed *current account adjustment* and associated *real exchange rate change*—would be equal and opposite given there are only two economies in the world, the *individual economy assessments* would clearly identify the different issues and risks facing the two economies. In the case of Country A, the *capital flows and foreign asset and liability position* sections would note the vulnerabilities arising from international liabilities and the *potential policy* response section of the *overall assessment* would focus on the need to rein in the *fiscal deficit* and *limit asset price excesses*. For Country B, however, if there were no domestic policy distortions the write-up would find no fault with policies and would note that adjustment among other economies would help to reduce the imbalance.

Implications: At the current juncture and going forward, it remains critical to distinguish between domestic and foreign fiscal policy gaps. The elimination of the fiscal policy gap in a systemic deficit country would help reduce surplus imbalances in other systemic economies.

Table 1. Summary of EBA and Staff-Assessed CA Gaps, 2017

(in percent of GDP)

Country	Overall Assessment	Actual CA	Cycl Adj. CA	EBA Norm	EBA Gap 1/	Staff CA Gap 2/	Staff Adjustments [F=D-E] 3/			Staff CA Gap Range	Staff REER Gap	Staff REER Gap Range
		[A]	[B]	[C]	[D=B-C]	[E]	Total	Norm	Other			
Argentina	Weaker	-4.8	-5.0	-1.7	-3.3	-3.3	0.0	...	...	+/-1	25.0	+/-7.5
Australia	Broadly Consistent	-2.5	-2.4	-0.6	-1.9	-1.0	-0.9	-0.9	...	+/-0.5	8.5	+/-8.5
Belgium	Weaker	-0.2	-0.3	2.2	-2.5	-2.5	0.0	...	...	+/-1	6.0	+/-2.5
Brazil	Broadly Consistent	-0.5	-1.8	-2.4	0.7	0.2	0.5	0.5	...	+/-0.5	-2.0	+/-5
Canada	Moderately Weaker	-2.9	-2.4	2.2	-4.6	-1.9	-2.7	-0.4	-2.3	+/-1.5	7.0	+/-6
China	Moderately Stronger	1.4	1.4	-0.3	1.7	1.7	0.0	...	...	+/-1.5	-3.0	+/-10
Euro Area 4/	Moderately Stronger	3.5	3.4	1.5	1.9	1.3	0.6	0.4	0.2	+/-0.7	-4.0	+/-4
France	Moderately Weaker	-0.6	-0.6	0.9	-1.6	-1.6	0.0	...	...	+/-0.5	4.0	+/-4
Germany	Substantially Stronger	8.0	8.3	2.8	5.5	5.0	0.5	0.5	...	+/-1.25	-15.0	+/-5
India	Broadly Consistent	-1.9	-2.1	-3.0	0.9	0.4	0.5	0.5	...	+/-1	-1.0	+/-6
Indonesia	Broadly Consistent	-1.7	-1.6	-0.8	-0.8	0.1	-0.9	-0.9	...	+/-1.5	-1.1	+/-8.3
Italy	Broadly Consistent	2.8	2.1	2.5	-0.3	-0.3	0.0	...	...	+/-1	5.0	+/-5
Japan	Broadly Consistent	4.0	3.6	3.2	0.4	0.5	-0.1	...	-0.1	+/-1.3	-3.5	+/-9.5
Korea	Moderately Stronger	5.1	4.5	3.0	1.6	1.6	0.0	...	...	+/-1	-4.5	+/-2.75
Malaysia	Stronger	3.0	3.7	0.6	3.1	3.1	0.0	...	...	+/-1	-6.8	+/-2
Mexico	Broadly Consistent	-1.7	-1.4	-2.5	1.1	0.5	0.6	...	0.6	+/-1	-4.0	+/-8
Netherlands	Substantially Stronger	10.2	10.3	3.5	6.8	6.8	0.0	...	...	+/-2	-10.0	+/-3
Poland	Broadly Consistent	0.3	0.8	-1.7	2.4	1.0	1.4	...	1.4	+/-1	-2.5	+/-2.5
Russia	Moderately Weaker	2.3	3.2	3.8	-0.5	-1.3	0.7	0.7	...	+/-1.25	5.0	+/-5
South Africa	Moderately Weaker	-2.5	-2.5	0.7	-3.2	-1.3	-1.9	-1.1	-0.8	+/-1	5.0	+/-5
Spain	Moderately Weaker	1.9	1.5	1.4	0.1	-1.5	1.6	1.6	...	+/-1	6.5	+/-3.5
Sweden	Moderately Stronger	3.3	3.6	1.8	1.8	1.6	0.2	...	...	+/-1.5	-5.0	+/-5
Switzerland	Broadly Consistent	9.8	9.6	6.2	3.4	0.8	2.6	...	2.6	+/-2	-1.5	+/-3.8
Thailand	Substantially Stronger	10.6	10.1	0.5	9.6	6.0	3.6	...	3.6	+/-2	-10.5	+/-3.5
Turkey	Weaker	-5.6	-4.8	-0.9	-4.0	-2.2	-1.8	-1.0	-0.7	+/-1	0.0	+/-10
United Kingdom	Weaker	-4.1	-4.0	1.0	-5.0	-3.0	-2.0	...	-2.0	+/-2	7.5	+/-7.5
United States	Moderately Weaker	-2.4	-2.3	-0.7	-1.6	-1.5	-0.1	...	...	+/-0.5	12.0	+/-4
Hong Kong SAR	Broadly Consistent	4.3	3.3	...	...	0.0	...	...	...	+/-1.5	0.0	+/-5
Singapore	Substantially Stronger	18.8	18.9	...	...	5.5	...	...	...	+/-3	-10.0	+/-6
Saudi Arabia	Weaker	2.2	...	...	...	-2.0	...	...	...	+/-1	15.0	+/-5
Discrepancy 5/	...	...	...	...	...	**0.03**	...	...	...	...	...	...

Source: Fund staff estimates.

1/ Figures may not add up due to rounding effects.

2/ Refers to the mid-point of the CA Gap.

3/ Breakdown between norm and other factors (namely temporary or measurement errors) is approximate, and includes rounding in some cases.

4/ The EBA euro area current account norm is calculated as the GDP-weighted average of norms for the 11 largest Euro area economies, adjusted for reporting discrepancies in intra-area transactions (which were equivalent to 0.6 percent of GDP in 2017). The staff-assessed CA gap is calculated as the GDP-weighted average of staff-assessed gaps for the 11 largest Euro area economies.

5/ Weighted average sum of staff-assesed CA gaps.

D. Individual Economy Assessments—by Economy

	Argentina	Overall Assessment
Foreign asset and liability position and trajectory	**Background**. Argentina has historically been a net debtor country. Following the government's debt default in the early 2000s, its net international investment position (NIIP) became that of a net creditor, reaching a peak in 2013. After the current and capital account restrictions began to be lifted in early 2016 and Argentina regained access to international capital markets, the net creditor NIIP fell as significant amounts of new external debt were issued. At end-2017, the NIIP stood at 3.5 percent of GDP, although there has been a re-composition of Argentina's external liabilities toward a greater reliance on portfolio liabilities and other investments, and less on foreign direct investment. Total external liabilities reached US$312 billion, of which US$231 billion (or about 75 percent) corresponded to portfolio and other investments. Also, about half of these total liabilities (US$163 billion) were of the general government and central bank. **Assessment**. Projections of continued current account deficits imply Argentina's NIIP is likely to evolve to a net debtor position over the next few years. The IMF staff estimates a medium-term NIIP of -15 percent of GDP. The vulnerability in the composition of liabilities to capital flow reversals, with portfolio liabilities and other investments increasing their share in total liabilities from around 51 percent in 2012 to 75 percent in 2017, materialized in early 2018. External liabilities are expected to continue to grow because of a continued large public sector financing requirement (alongside limited domestic capital markets), access to international capital markets, and a recovery in FDI. This rise in external liabilities is expected to outpace the accumulation of external assets.	**Overall Assessment**: *The external position is weaker than implied by medium-term fundamentals and desirable policies.* The CA deficit widened in 2017, largely financed by portfolio inflows to finance the fiscal deficit. The growing CA imbalance and reliance on short-term domestic and external financing have laid the conditions for a currency and liquidity crisis in May 2018. This subsequently led to Argentina approaching the IMF for financial support. **Potential policy responses**: The stronger fiscal consolidation announced by the authorities for 2018-20 will help reduce the CA deficit. Together with a stronger framework for inflation targeting (which will lower nominal interest rates over the medium term) and a faster pace in the reduction of official imbalances should reduce upward pressures on the peso. Continued progress in implementing supply-side reforms would increase productivity and competitiveness, attract FDI, and reduce the real exchange rate overvaluation over time.
Current account CA Assessment 2017	**Background**. Argentina's CA deficit has widened significantly in the past two years, largely because of the sharp widening in the trade deficit, including for both goods and services, and rising interest payments. The CA deficit reached 4.8 percent of GDP at end-2017, a level not registered since the early 2000s. The CA deficit is projected to start contracting to around 2 percent of GDP in the medium term (mainly from a fall in the fiscal deficit). **Assessment**. Based on the CA model, Argentina's CA gap in 2017 was estimated at -3.3 percent, owing to a cyclically adjusted CA balance of -5.0 percent and a cyclically adjusted norm of -1.7 percent. Most of the policy gap is attributable to a looser-than-desired fiscal policy, which is partially offset by the positive contribution from FX intervention in 2017 to rebuild reserves. The large negative residual may reflect the remaining distortions in product and labor markets that hinder Argentina's international competitiveness. Staff estimates the cyclically adjusted CA deficit to be 2.3 to 4.3 percent of GDP larger than the level implied by medium-term fundamentals and desirable policies. Actual CA | -4.8 | Cycl. Adj. CA | -5.0 | EBA CA Norm | -1.7 | EBA CA Gap | -3.3 | Staff Adj. | 0.0 | Staff CA Gap | -3.3	
Real exchange rate	**Background**. The average REER remained broadly stable in 2017. Estimates through May 2018 show that the REER has depreciated by 22 percent relative to the 2017 average. The recent nominal depreciation partially offsets the cumulative real appreciation since mid-2016. **Assessment**. Based on the estimates of the CA gap, staff assesses the average REER gap in 2017 to be between 17.5 and 32.5 percent above the level implied by medium-term fundamentals and desirable policies.	
Capital and financial accounts: flows and policy measures	**Background**. The acceleration of the CA deficit over the last two years has been largely financed by portfolio inflows, mainly through an increase in government liabilities. Following the easing of balance of payments restrictions in 2016, capital account openness is now above its 2001 level (before most restrictions began to be imposed), implying greater room for capital mobility. **Assessment**. The increasing reliance on short-term, volatile portfolio flows were creating growing risks to the external balance which materialized in early 2018. The expectation is, with consistent policy implementation, the CA deficit will fall, confidence will return, and these risks will lessen.	
FX intervention and reserves level	**Background**. Argentina moved to a free-floating exchange rate regime in 2016, as a component of its inflation targeting framework. However, the central bank (BCRA) has intervened in the FX spot market in modest amounts to smooth excess volatility. However, in April 2018 the BCRA began intervening significantly in 2018 (selling around USD 10.2 billion in the spot market between March 3 and May 15 and an accumulated USD 2.3 billion in the forward market (as of June 4). Reserves as of June 8 stood at USD 49.6 billion. **Assessment**. Reserve coverage at end-May 2018 was around 76 percent of the ARA metric. Disbursements under the IMF program as well as more limited FX intervention are expected to lead to a steady rise in reserve coverage through time.	

Argentina (concluded)	
	Technical Background Notes

<table>
<tr><th></th><th>Australia</th><th>Overall Assessment</th></tr>
<tr><td>Foreign asset and liability position and trajectory</td><td>Background. Australia has a large negative net international investment position (NIIP), reaching -55 percent of GDP at the end of 2017. Liabilities are largely denominated in Australian dollars, while assets are in foreign currency. Foreign liabilities are composed of around one quarter of FDI, one half of portfolio investment (principally banks borrowing abroad and foreign holdings of government bonds), and one quarter of other investment and derivatives. The NIIP improved in 2017 (by 3 percent of GDP relative to 2016), partly driven by a narrowing of the current account deficit and partly by strong nominal economic growth. The NIIP to GDP ratio is expected to remain around -55 percent of GDP over the medium term.
Assessment. The NIIP level and trajectory are sustainable. The External Stability (ES) approach suggests that the NIIP would be stabilized at around current levels with a CA deficit between 2½-3 percent, which is larger than the cyclically adjusted CA deficit in 2017. The structure of Australia's external balance sheet reduces the vulnerability associated with its high negative NIIP. Since Australia's external liabilities are mainly in Australian dollars and there is a net foreign currency asset position, a nominal depreciation tends to strengthen the external balance sheet, all else equal. The banking sector has a net foreign currency liability position but it is fully hedged. The maturity of banks' external funding has improved since the global financial crisis, and even in a tail risk event where domestic banks suffer a major loss, the government's strong balance sheet position allows it to offer credible support.</td><td rowspan="5">Overall Assessment:
The external position of Australia in 2017 was assessed to be broadly consistent with medium term fundamentals and desirable policies, although the Australian dollar remains somewhat overvalued. The CA deficit in 2017 narrowed to 2.3 percent of GDP, primarily reflecting stronger terms of trade, mainly because of higher coal and iron ore prices. The depreciation of the Australian dollar in real effective terms in 2013-15 has been partly reversed since September 2015, though it remains well below the peaks observed in 2011-13. The depreciation in 2014-15 had reduced much of the prior substantial overvaluation of the Australian dollar.

Potential policy responses:
The Australian dollar remains moderately overvalued, and if growth was on the weak side, or commodity prices fell again, further monetary accommodation would be warranted.

The government's planned gradual, medium-term fiscal consolidation should help narrow the current account deficit by boosting national savings.</td></tr>
<tr><td>Current account</td><td>Background. Australia has run CA deficits for most of its history, reflecting a structural saving-investment imbalance with very high private investment relative to a private saving rate that is already high by advanced country standards. Since the early 1980s, deficits have averaged around 4 percent of GDP. The CA deficit in 2017 narrowed to 2.5 percent of GDP primarily reflecting stronger terms of trade, because of higher coal and iron ore prices in response to measures restricting domestic supply in China, and a ramp-up in new resource exports. Over the medium term, the CA deficit is expected at around 2.5 percent of GDP. This is lower than the historical average of around 4 percent, given the end of the prolonged import-intensive mining investment boom and a lower interest differential on Australian bonds relative to foreign bonds compared with longer-term averages. With over half of Australia's exports going to emerging Asia, a key risk is a sharper than expected slowdown in China resulting in a further sharp decline in commodities prices.
Assessment. The EBA CA regression approach for 2017 estimates a CA norm of -0.6 percent of GDP, with a standard deviation of 0.5. Taking the relative output gaps and the cyclical component of the commodity terms of trade into account, the cyclically adjusted CA for 2017 is estimated to be -2.4 percent of GDP, indicating a CA gap of -1.9 percent of GDP. However, in staff's view, the CA norm of Australia is closer to -1.5 percent of GDP, reflecting traditionally large investment needs due to its size, low population density, and initial conditions. Therefore, the adjusted CA gap for Australia is assessed to be in the range of -0.5 to -1.5 percent of GDP.
<table>
<tr><td>CA Assessment 2017</td><td>Actual CA</td><td>-2.5</td><td>Cycl. Adj. CA</td><td>-2.4</td><td>EBA CA Norm</td><td>-0.6</td><td>EBA CA Gap</td><td>-1.9</td><td>Staff Adj.</td><td>-0.9</td><td>Staff CA Gap</td><td>-1.0</td></tr>
</table></td></tr>
<tr><td>Real exchange rate</td><td>Background. In 2017, Australia's REER appreciated by 2.7 percent relative to the 2016 average. As of December 2017, the REER was some 15 percent above its thirty-year average, consistent with the strengthening of the terms of trade in that period. Estimates through May 2018 show that the REER has depreciated by 4 percent relative to the 2017 average.
Assessment. Considering estimates of the staff-assessed CA gap, the estimated REER gaps, and the gaps implied by the ES approach, staff assesses the REER to be 0 to 17 percent above the level implied by medium-term fundamentals and desirable policy settings. 1/ The recent appreciation of the exchange rate, accompanying an increase in the terms of trade, also suggests that the REER remains somewhat overvalued.</td></tr>
<tr><td>Capital and financial accounts: flows and policy measures</td><td>Background. The mining investment boom has been funded predominantly offshore. Net FDI inflows into this sector have partially offset the reduced need for the banking sector to borrow abroad. As investment in new mining projects winds down, related demand for imports will decrease, buffering the impact on the overall balance of payments. Australia also received large inflows in recent years into bond markets. The weighted average maturity of government bonds is 6.6 years, and has lengthened over time, with 90 percent of the issue maturing by 2027.
Assessment. Credible commitment to a floating exchange rate and a strong fiscal position limit the vulnerabilities.</td></tr>
<tr><td>FX intervention and reserves level</td><td>Background. A free-floater since 1983. The central bank undertook brief but large intervention in 2007–08 when the market for Australian dollars became illiquid (bid-ask spreads widened) following banking sector disruptions in the United States. The authorities are strongly committed to a floating regime, which reduces the need for reserve holding.
Assessment. Although domestic banks' external liabilities are sizable, they are either in local currency or hedged with little or no counterparty risks, so reserve needs for prudential reasons are also limited.</td></tr>
</table>

	Australia (concluded)
Technical Background Notes	1/ The REER index and level models imply an overvaluation of 6 and 17 percent respectively, while the CA gap is consistent with an overvaluation of 5 percent (applying an estimated elasticity of 0.2), and the ES approach suggests the REER is broadly in line.

<table>
<tr><th></th><th>Belgium</th><th>Overall Assessment</th></tr>
<tr><td>Foreign asset and liability position and trajectory</td><td>Background. The net international investment position (NIIP) remains strong at 50 percent of GDP as of 2017Q3 compared with 49 percent a year earlier, reflecting the continued positive net financial wealth of households. Gross foreign assets were large at 488 percent of GDP, inflated by intra-group corporate treasury activities. Gross foreign assets of the banking sector stood at 88 percent of GDP, down considerably from the pre-crisis peak. External public debt was 65 percent of GDP as of 2017Q3, predominantly denominated in euros.

Assessment. Belgium's large gross international asset and liability positions are inflated by the presence of corporate treasury units, without creating macro-relevant mismatches. The remaining risk exposures on the asset side mostly relate to financial sector claims. Risk exposures on the liability side are related to external public debt. Based on the projected current account and growth paths, the NIIP-to-GDP ratio is expected to decline gradually over the medium term. The strongly positive NIIP and its trajectory do not raise sustainability concerns.</td><td rowspan="5">Overall Assessment:
The external position in 2017 was weaker than medium-term fundamentals and desirable policy settings would imply. Further reductions in the labor tax wedge, together with an expected improvement of the investment income balance, point toward a modest strengthening of the external position over the medium term. The strong net international investment position mitigates vulnerabilities associated with the high external public debt.

Potential policy responses:
Steady fiscal consolidation, reductions in labor taxes, and continued wage moderation would help make the external position fully consistent with fundamentals and policy settings. Productivity enhancing structural reforms (especially reforms to address the severe labor market fragmentation) would also be helpful.</td></tr>
<tr><td>Current account</td><td>Background. Since the global financial crisis, the current account has hovered around balance, averaging -0.3 percent of GDP over the period 2008–17. In 2017, the current account recorded a deficit of -0.2 percent of GDP. The stability in the current account balance masks significant movements in the trade and primary income balances. The goods balance moved into a surplus in 2015 for the first time since the crisis, whereas the primary income balance turned negative in 2015, driven by a decline in the investment income balance. The CA is projected to register a small surplus over the medium term, supported by an improving investment income balance as monetary conditions normalize.

Assessment. The EBA model yields a CA gap of -2.5 percent of GDP for 2017, based on a cyclically adjusted CA balance of -0.3 percent (relative to an estimated norm of 2.2 percent). This is within the range estimated by staff for the CA gap of between -3½ to -1½ percent of GDP, which applies a standard range for the CA gap of +/- 1 percent of GDP.

2017 CA Assessment
<table>
<tr><td>Actual CA</td><td>-0.2</td><td>Cycl. Adj. CA</td><td>-0.3</td><td>EBA CA Norm</td><td>2.2</td><td>EBA CA Gap</td><td>-2.5</td><td>Staff Adj.</td><td>0.0</td><td>Staff CA Gap</td><td>-2.5</td></tr>
</table></td></tr>
<tr><td>Real exchange rate</td><td>Background. The REER (both ULC- and CPI-based) appreciated nearly 20 percent between 2000-08. Over the past decade the REER has been more volatile, with wage moderation contributing to an 8 percent depreciation of both the ULC- and CPI-based REER in 2014–15. The ULC-based REER was little changed in 2017 compared with 2016, while the CPI-based REER appreciated by 1.7 percent. Through May 2018, the CPI-based REER has appreciated by a further 1.2 percent relative to the 2017 average, whereas the ULC-based REER has depreciated by 1.9 percent.

Assessment. The EBA model points to an REER overvaluation of between 6 and 14 percent, based on the CPI-based REER index and level models; the REER overvaluation resulting from the EBA CA gap model is somewhat lower. Staff's assessment is an REER overvaluation in the range of 3½ to 8½ percent, using an elasticity of 0.42.</td></tr>
<tr><td>Capital and financial accounts: flows and policy measures</td><td>Background. Gross financial outflows and inflows were on an upward trend during the pre-crisis period as banks expanded their cross-border operations. Since the crisis, these flows have shrunk and become more volatile as banks have deleveraged. In 2017, net financial flows amounted to -0.1 percent of GDP. Short-term external debt accounted for 29 percent of gross external debt as of 2017Q3. The capital account is open.

Assessment. Belgium remains exposed to financial market risks but the structure of financial flows does not point to specific vulnerabilities. The strong NIIP reduces the vulnerabilities associated with the high public debt.</td></tr>
<tr><td>FX intervention and reserves level</td><td>Background. The euro has the status of a global reserve currency.

Assessment. Reserves held by the euro area are typically low relative to standard metrics, but the currency is free floating.</td></tr>
</table>

	Belgium (concluded)
Technical Background Notes	

<table>
<tr><th></th><th>Brazil</th><th>Overall Assessment</th></tr>
<tr><td>Foreign asset and liability position and trajectory</td><td>Background. Brazil's NIIP was -34 percent of GDP at end-2017, slightly weaker than the 2011-16 average (around -30 percent of GDP), mainly due to valuation effects. Over the medium term, the NIIP is projected to strengthen gradually to around -30 percent of GDP, as GDP growth and valuation effects are expected to offset current account deficits (around 1-2 percent). While FDI accounts for about half of all liabilities, the rise in external debt since the global financial crisis (to about 33 percent of GDP and 265 percent of exports) is a source of risk.
Assessment. Brazil's NIIP is comparable to that of its peers. Short-term gross external financing needs are moderate at 7-8 percent of GDP annually. The CA deficit required to stabilize the NIIP at -32 percent is 1.2 percent of GDP.</td><td rowspan="6">Overall Assessment:
Brazil's external position in 2017 was broadly consistent with medium-term fundamentals and desirable policies. The REER appreciated further in 2017 and returned to the level close to 2014 (before large external adjustment). The current account deficit will likely deteriorate in 2018 reflecting an improving cyclical position, including investment.

Potential policy responses:
Efforts to raise national savings are needed to provide room for a sustainable expansion in investment. Fiscal consolidation, including from the new federal spending cap and social security reform, should contribute to boosting net public savings. Structural efforts remain necessary to improve overall competitiveness.</td></tr>
<tr><td>Current account</td><td>Background. The CA deficit narrowed to 0.5 percent of GDP in 2017, owing to the weak domestic demand, especially investment, and strong exports. The CA deficit is expected to widen in 2018 and rise gradually to about 2 percent of GDP in the medium term as private demand recovers, partially offset by the envisaged fiscal consolidation. However, a decline in the terms of trade and a sharp slowdown in trading partner growth remain a downside risk. 1/
Assessment. In 2017, the cyclically adjusted CA was -1.8 percent of GDP, reflecting a still large and negative output gap. EBA estimates suggest a CA norm in 2017 of -2.4 percent of GDP. However, taking into consideration the vulnerabilities associated with negative NIIP position and estimates from the EBA ES approach, staff assess a CA norm between -1.5 and -2.5 percent of GDP. Thus, the CA is assessed to have been broadly consistent with fundamentals and desirable policies.</td></tr>
<tr><td>CA Assessment 2017</td><td>Actual CA | -0.5 | Cycl. Adj. CA | -1.8 | EBA CA Norm | -2.4 | EBA CA Gap | 0.7 | Staff Adj. | 0.5 | Staff CA Gap | 0.2</td></tr>
<tr><td>Real exchange rate</td><td>Background. After the sharp depreciation in 2015-16, the REER (INS) appreciated by about 10 percent during 2017, reflecting improvements in terms of trade and a positive market response to the new government's reform agenda. Estimates through May 2018 show that the REER has depreciated by 11.4 percent relative to the 2017 average.
Assessment. EBA REER index and level methodologies indicate a 9 to 23 percent overvaluation for 2017. Consistent with the CA gap, staff assess the REER to be broadly in line with fundamentals and desirable policies. The estimated REER gap is between -7 and 3 percent.</td></tr>
<tr><td>Capital and financial accounts: flows and policy measures</td><td>Background. Brazil continues to attract sizable capital flows. Net FDI continued to fully finance the CA deficit since 2015 (averaging 3.4 percent of GDP during 2015-17, while CA deficits averaged 1.7 percent.) Despite political uncertainty, net outflows of portfolio debt liabilities declined in 2017, after recording substantial outflows in 2016 (from 1.7 percent of GDP to 0.3 percent of GDP). Interest differentials, still large despite recent monetary easing, the big domestic market, and large external buffers should help to attract inflows. Still, rigidities in budget, banking sector, and labor and product markets, if not properly addressed, may weaken investors' interest.
Assessment. Flows have a favorable risk profile, but tighter global financial conditions, weak implementation of reforms, and political uncertainty remain downside risks to capital flows.</td></tr>
<tr><td>FX intervention and reserves level</td><td>Background. Brazil has a floating exchange rate. Its gross reserves remained broadly constant in 2017, at $374 billion at end-2017, equivalent to 18.2 percent of GDP and around 160 percent of the IMF's composite reserve adequacy metric.
Assessment. The flexible exchange rate has been an important shock absorber. Reserves are adequate relative to various criteria, including the IMF's reserve adequacy metric. The authorities should retain strong buffers, with intervention limited to addressing disorderly market conditions.</td></tr>
</table>

	Brazil (concluded)
Technical Background Notes	1/ Brazil currently features a near zero oil balance; in the short run, oil prices are neutral with respect to the CA. Also, the development of Brazil's offshore oil potential has been drastically cut back and is no longer projected to contribute significantly to export growth.

<table>
<tr><th></th><th>Canada</th><th>Overall Assessment</th></tr>
<tr><td>Foreign asset and liability position and trajectory</td><td>Background. Canada's net international investment position (NIIP) rose from 10.3 percent of GDP in 2016 to 18.7 percent of GDP in 2017, reflecting significant valuation gains on external assets. At the same time, gross external debt remained broadly stable at 115 percent of GDP, of which about a third is short-term. The NIIP is projected to decline in the medium term, in line with sustained, albeit narrowing, current account (CA) deficits.
Assessment. Canada's foreign assets have a higher foreign currency component than its liabilities which provides a hedge against currency depreciation. The NIIP level and trajectory are sustainable.</td><td rowspan="5">Overall Assessment:
The external position in 2017 remained moderately weaker than implied by medium-term fundamentals and desirable policies.

It will take time for the economy to adjust to structural shifts in the allocation of resources, restore lost production capacity, and address productivity underperformance. Recent developments do not suggest a change in the assessment of the external position for 2017.

In the medium term, the external position is expected to strengthen as non-energy exports gradually benefit from improved price competitiveness and investment in services and manufacturing capacity.

Potential policy responses:
Policies to boost Canada's non-energy exports include measures geared at improving labor productivity; investing in R&D and physical capital; promoting FDI; developing services exports; and diversifying Canada's export markets. The planned increase in public infrastructure investment should boost competitiveness and improve the external position over time. A credible medium-term consolidation plan for fiscal policy will also be necessary to support the external rebalancing. Maintaining tight macroprudential policies to ensure financial stability should also support private sector saving.</td></tr>
<tr><td>Current account</td><td>Background. The CA deficit narrowed to 2.9 percent of GDP in 2017 (from 3.2 percent of GDP in 2016), driven by an improvement in the energy trade balance. The CA deficit has been largely financed by portfolio inflows, which have more than offset significant direct investment outflows. The overall change in the CA was underpinned by improvements in both public and private savings-investment balances, with both increasing by around 0.1 percent of GDP in 2017.
Assessment. The EBA estimates a CA norm of 2.2 percent of GDP, and a cyclically adjusted CA gap of -4.6 percent of GDP for 2017. This gap has widened significantly compared with last year, partly reflecting EBA methodological changes. The gap also partly reflects CA measurement issues. 1/ Staff also adjusted the CA gap to better reflect the authorities' demographic projections and current immigration targets, 2/ and a steeper-than-usual discount between Canadian oil prices and international prices. 3/ As such, staff estimates the CA norm to be about 1.8 percent of GDP, with the CA gap between -3.4 and -0.4 percent of GDP.</td></tr>
<tr><td>CA Assessment 2017</td><td>
<table>
<tr><td>Actual CA</td><td>-2.9</td><td>Cycl. Adj. CA</td><td>-2.4</td><td>EBA CA Norm</td><td>2.2</td><td>EBA CA Gap</td><td>-4.6</td><td>Staff Adj.</td><td>-2.7</td><td>Staff CA Gap</td><td>-1.9</td></tr>
</table>
</td></tr>
<tr><td>Real exchange rate</td><td>Background. The real effective exchange rate (REER) appreciated by around 1.5 percent on an annual average basis between 2016 and 2017. Estimates through May 2018 show that the REER has been unchanged relative to the 2017 average.
Assessment. The EBA REER index model points to an overvaluation of 2.2 percent in 2017, while the REER level model points to an undervaluation of around 6 percent. In staff's view, the REER level model could overstate the extent of undervaluation. 4/ Consistent with the assessed CA gap, staff estimates that the real effective exchange rate is overvalued by about 1 to 13 percent relative to medium-term fundamentals and desirable policies. 5/</td></tr>
<tr><td>Capital and financial accounts: flows and policy measures</td><td>Background. The CA deficit in 2017 has been financed by net portfolio inflows (4.9 percent of GDP). Non-resident investors mostly purchased corporate debt securities (59 percent of portfolio net inflows). Foreign acquisition of Canadian equities and government debt securities stood at 10 and 31 percent, respectively. In 2017 foreign direct investment recorded a higher net outflow of 3.3 percent of GDP (2.4 percent of GDP in 2016).
Assessment. Canada has an open capital account. Vulnerabilities are limited by a credible commitment to a floating exchange rate and, while the government is running fiscal deficits slightly less than 1 percent of GDP in the near term, there is strong and credible commitment to fiscal consolidation over the medium term.</td></tr>
<tr><td>FX intervention and reserves level</td><td>Background. Canada has a free-floating exchange rate regime, and has not intervened in the foreign exchange market since September 1998 (except for participating in internationally concerted interventions). Canada has limited reserves but its central bank has standing swap arrangements with the US Federal Reserve and four other major central banks (it has not drawn on these swap lines).
Assessment. Policies in this area are appropriate to the circumstances of Canada. The authorities are strongly committed to a floating regime which, together with the swap arrangement, reduces the need for reserve holding.</td></tr>
</table>

	Canada (concluded)
Technical Background Notes	1/ The statistical treatment of retained earnings on portfolio equity and inflation is estimated to generate a downward bias in the income balance of the current account of the order of 1.7 percent of GDP. 2/ EBA uses UN demographic projections. These differ from the authorities' projections due to methodological differences. The authorities' projections suggest slightly higher population growth and a slightly lower CA norm. The authorities' demographic projections also do not incorporate recent increases in immigration targets, which are assumed to be permanent. Together, these effects are assumed to reduce the EBA estimate of the CA norm by around 0.4 percent. 3/ The price discount between Canadian crude (WCS) and the West Texas benchmark has been $10 per barrel more than its historical average. This amounts to a temporary reduction in oil export prices by around 20 percent and suggests a higher underlying CA position (by around 0.6 percent of GDP). 4/ The approach includes commodity terms of trade rather than oil prices as an explanatory variable, while Canada's REER has mirrored movements in oil prices much more closely than its commodity terms of trade. 5/ The semi-elasticity of the CA with respect to the REER is estimated at 0.27.

	China	Overall Assessment
Foreign asset and liability position and trajectory	**Background**. The net international investment position (NIIP) remains positive, but has declined to 15 percent of GDP by end-2017 after peaking at 33 percent of GDP in 2007. This deterioration is driven by a reduction in the current account (CA) surplus, valuation changes, and sustained high GDP growth. Gross foreign assets (58 percent of GDP by end-2017) are dominated by foreign reserves, while gross liabilities (43 percent of GDP) mainly reflect inward FDI. Reserve assets reached US$3.2 trillion by end-2017 (about 27 percent of 2017 GDP), which is about US$138 billion higher than in 2016. **Assessment**. The NIIP-to-GDP ratio is expected to remain strong, with a modest decline over the medium term, in line with projected CA surpluses. The NIIP is not a major source of risk at this point, as assets remain high—reflecting large foreign reserves—and liabilities are mostly FDI-related. Capital outflow pressures have subsided, partially supported by capital flow management measures (CFMs), and there are currently no substantial net outflow pressures. Nonetheless, these pressures may resurface and trigger a fall in reserves as the private sector seeks to accumulate foreign assets faster than non-residents accumulate Chinese assets.	**Overall Assessment**: *The external position in 2017 was moderately stronger compared with the level consistent with medium-term fundamentals and desirable policies.* This reflects the remaining distortions and policy gaps that affect the saving-investment balance, such as inadequate social spending. While the external position was moderately stronger, the renminbi in 2017 was broadly in line with fundamentals and desirable policies. The difference in assessment is due to the distortions affecting the savings-investment balance, which render the CA less sensitive to REER fluctuations. That said, it is important that China address those distortions and the resulting current account gap decisively—doing so would benefit both China and the global economy. **Potential Policy Responses**: External imbalances have declined considerably since the global financial crisis. Achieving a lasting balance in the external position will require continued progress in closing the remaining domestic policy gaps and addressing distortions. Success will move the economy to a more sustainable growth path, with higher consumption and lower overall saving. This can be achieved through successful implementation of the authorities' reform agenda as well as consistent macroeconomic policies. Priorities include improving the social safety net; SOE reform and opening markets to more competition; creating a more market-based and robust financial system; taking steps to attract more inward FDI, including by ensuring that foreign investors receive the same treatment as domestic investors; and achieving a flexible, market-based exchange rate with a better communication strategy. Continuing the move toward a more market-based and transparent monetary policy framework is a key element in ensuring an orderly transition to an effective float, which may also require use of foreign exchange reserves to smooth excessive volatility. China should seek a negotiated settlement to trade disputes that supports and strengthens the international trading system and the global economy.
Current account	**Background**. The CA surplus continued to decline, reaching 1.4 percent of GDP in 2017 (1.4 percent of GDP cyclically adjusted), about 0.4 percentage points lower than in 2016. This mainly reflects a shrinking trade balance (driven by high import volume growth), notwithstanding REER depreciation. Viewed from a longer perspective, the CA surplus declined substantially relative to the peak of about 10 percent of GDP in 2007, reflecting strong investment growth, REER appreciation, weak demand in major advanced economies, and, more recently, a widening of the services deficit. **Assessment**. The EBA estimate of the current account norm for 2017 was -0.3 percent of GDP and the EBA-estimated CA gap about 1.7 percent of GDP.1/ The remaining total gap is mostly accounted for by the residual, which reflects factors other than policy gaps identified in the EBA model, including distortions that encourage excessive savings. The contribution of identified policy gaps is, on net, largely mutually offsetting: loose fiscal policy and excessive credit growth contribute to narrowing the CA gap, but this is largely offset by inadequate health spending, capital flow management measures (CFMs), and reserves (which widen the CA gap). Overall, staff assesses the CA to be 0.2 to 3.2 percent of GDP stronger than implied by medium-term fundamentals and desirable policies.	

CA Assessment 2017

Actual CA	1.4	Cycl. Adj. CA	1.4	EBA CA Norm	-0.3	EBA CA Gap	1.7	Staff Adj.	0.0	Staff CA Gap	1.7

Real exchange rate	**Background**. In 2017, the average REER depreciated by about 2.5 percent relative to 2016, driven by the depreciation in the NEER (2.2 percent). Estimates through May 2018 show that the REER has appreciated by 3.4 percent relative to the 2017 average. **Assessment**. The 2017 EBA REER index regression estimates China's REER to be 5.3 percent lower than levels warranted by fundamentals and desirable policies— compared with 2.7 percent higher in 2016.2/ However, this assessment is subject to large uncertainties related to the outlook and shifts in portfolio allocation preferences.3/ Overall, staff assesses the REER to be broadly consistent with fundamentals and desirable policies, with the gap being in the range of -13 to +7 percent. The exchange rate is assessed as being in line with fundamentals, amid a moderately stronger CA, due to the low elasticity of China's CA to changes in the REER (0.23). This largely reflects distortions that encourage excessive savings. These savings, along with potential future capital account liberalization and residents' search for diversification, may lead to the resumption of capital outflow pressures and a weaker exchange rate over the medium term.	
Capital and financial accounts: flows and policy measures	**Background**. Net capital outflows declined to US$82 billion in 2017, down from the record highs of US$647 billion in 2015 and US$646 billion in 2016. Net direct investment inflows turned positive in 2017, as FDI inflows remained stable while Overseas Direct Investment declined over 50 percent, reflecting a tightening of CFMs. Net portfolio and other investments also turned positive, but errors and omissions remained negative and persistently high (-1.8 percent of GDP) suggesting that unrecorded capital flows may have evaded the tightening of CFMs. China's capital account remains relatively closed in a *de jure* sense and the authorities have materially increased the enforcement of existing measures to help reduce outflow pressure. More recently, the authorities have loosened some CFMs (such as the reserve requirement on bank's offshore RMB deposits or on bank's FX derivatives positions, both set to zero) and tightened others (such as the limit on overseas RMB withdrawal by payment cards, which now applies on an individual basis and not per card) and have put in place a framework to regulate cross-border financing by financial and non-financial corporations to alter the volume and composition of capital flows. **Assessment**. Over the medium term, the sequence of capital control loosening that is consistent with exchange rate flexibility should carefully consider domestic financial stability. Specifically, the further opening of the capital account is likely to create substantially larger *two-way* gross flows. Hence, the associated balance sheet adjustments and the shifts in market sentiment call for prioritizing the shift to an effective float (while using FX intervention to smooth excessive FX volatility) and strengthening domestic financial stability prior to a substantial further liberalization of the capital account. Efforts should be stepped up to encourage inward FDI, which would generate positive growth spillovers and improve corporate governance standards.	
FX intervention and reserves level	**Background**. FX reserves rose by US$129 billion in 2017 after declining in 2015 and 2016 by US$513 billion and US$320 billion, respectively. Staff estimates suggest that this change mainly reflected valuation changes, return on reserves, and minor net FX purchases accompanying the unwinding of forward positions built in 2016; these estimates are subject to a margin of error which could include no intervention. **Assessment**. Reserves stood at 97 percent of the IMF's composite metric unadjusted for capital controls at end-2017 (down from 106 in 2016); relative to the metric adjusted for capital controls, reserves stood at 157 percent (down from 172 in 2016). The decline of the ratio is driven by higher broad money (M2) growth, external debt, and other liabilities which are driving up the metric. Given that the progress made in capital account liberalization over time was partly reversed by the recent capital account tightening measures, the capital account is considered partially open. Consequently, reserves would be considered adequate in the range indicated by the adjusted and unadjusted metrics. Overall, staff assesses the current level of reserves to be adequate. As the transition to greater flexibility advances, intervention should be limited to smooth excessive volatility.	

	China (concluded)
Technical Background Notes	1/ The current account norm for 2017 (-0.3 percent) is lower than in 2016 (0.2 percent) reflecting methodological changes to the EBA framework, including those to better capture institutional quality and demographic effects. For China, the refined institutional quality measure indicates a lower perception of institutional risk—which could discourage excess savings and encourage investment—as captured by the lower contribution of the corresponding coefficient to the fitted current account (0.8 percent in 2017 vs 2.7 percent in 2016). With changes in the contribution of other variables mostly operating in the opposite direction (including demographics), taken together the refinements in methodology result in an overall reduction of China's CA norm by 0.5 percent of GDP relative to 2016. 2/ The EBA REER Level model estimates a total REER gap of 8.0 percent, with identified policy gaps of -6.9 percent. However, the model fit of the EBA REER Level model is very poor for China. 3/ Shifting expectations about monetary and exchange rate policy, re-assessments of the government's reform agenda, or a desire by residents to diversify into foreign assets can trigger large changes in capital flows and exchange rate pressures, even in the absence of significant changes in fundamentals as captured by the EBA.

	Euro Area	Overall Assessment
Foreign asset and liability position and trajectory	**Background**. The net international investment position (NIIP) of the euro area fell to about -18 percent of GDP by the end of 2008, but has since recovered, reaching around -1 percent by the end of 2017. The rise has been driven by stronger current account balances and modest nominal GDP growth. Growth in both gross foreign asset and liability positions remains low, but relatively steady after sharply slowing in 2008, coincident with the broader global slowdown in international financial flows. Gross foreign positions are now about 221 percent of GDP for assets and 222 percent of GDP for liabilities in 2017. However, net external liabilities remain high in some countries, including Spain and Portugal. **Assessment**. Projections of continued current account surpluses suggest that the NIIP-to-GDP ratio will improve further, at a moderate pace, with the euro area expected to soon become a net external creditor, absent large differences in valuation changes on gross external assets versus liabilities. The region's overall NIIP financing vulnerabilities appear low. Despite improved current accounts, large net external debtor countries still bear a greater risk of a sudden stop of gross inflows.	**Overall Assessment**: *The external position of the euro area in 2017 was moderately stronger than the level implied by medium-term fundamentals and desirable policies. In 2018, the current account surplus is projected to shrink modestly as the region's economic recovery continues.* Imbalances at the national level remain sizeable and progress in reducing them slowed (see individual euro area member country pages). Further adjustment is needed by net external creditors to strengthen domestic demand (reducing surpluses) and net external debtors to raise productivity and competitiveness (raising surpluses or lowering deficits). The euro area's external position may be affected by the UK's eventual exit from the EU and rising trade tensions. These will be assessed in the context of future ESR reports. **Potential policy responses**: Monetary policy should remain accommodative until inflation has durably converged to the ECB's medium-term price stability objective, facilitating relative price adjustments at the national level by enabling greater inflation differentials across monetary union members. Area-wide initiatives to make the currency union more resilient (e.g., banking union, capital markets union, fiscal capacity for macro stabilization) could also reinvigorate investment and reduce savings-investment imbalances at this juncture. At the country-level, efforts are needed to address imbalances, including policies to strengthen private sector balance sheets, structural reforms to enhance productivity and improve competitiveness, and a more growth-friendly composition of national fiscal policies. Countries with stronger-than-warranted external positions should expand investment and promote structural reforms to raise their potential and reduce their current accounts, while those with weaker external positions should continue consolidating to reduce their debt and increase their buffers, while undertaking competitiveness-enhancing reforms. In general, a more balanced policy mix with the implementation of priority institutional and structural reforms at the country level would help to reduce external imbalances, including within the euro area.
Current account	**Background**. The current account (CA) balance for the euro area in 2017 was at 3.5 percent of GDP (cyclically adjusted 3.4 percent), having increased steadily since 2011, when it was close to zero. Most euro area countries are now running current account surpluses (apart from Cyprus, France, Greece, Latvia and Slovakia). Import compression in the aftermath of the crisis and external competitiveness gains from price and wage adjustments have strengthened the current accounts of net external debtors, like Spain and Portugal. Some large creditor countries, such as Germany and the Netherlands, continued to accumulate sizable surpluses, reflecting strong corporate and household saving and weak investment. **Assessment**. The EBA model estimates a CA norm of 1.5 percent of GDP, against a cyclically adjusted CA of 3.4 percent of GDP. This implies a gap of 1.9 percent of GDP. Staff's analysis indicates a higher CA norm, consistent with the assessed external positions of euro area member countries. The higher norm considers the large net external liabilities positions in some countries (e.g. Spain) and reflects uncertainty over the demographic outlook and the impact of the recent large-scale immigration on national savings (e.g. Germany). Considering the uncertainties in the estimates, staff assess the CA gap to be 1.3 percent, with a range of 0.6 to 2 percent of GDP for 2017. This leaves the underlying CA moderately stronger than the level implied by medium-term fundamentals and desirable policies. 1/ 2/	
CA Assessment 2017	Actual CA | 3.5 | Cycl. Adj. CA | 3.4 | EBA CA Norm | 1.5 | EBA CA Gap | 1.9 | Staff Adj. | 0.6 | Staff CA Gap | 1.3	
Real exchange rate	**Background**. The CPI-based real effective exchange rate appreciated by about 1.6 percent from 2016 to 2017, mostly reflecting the gradual strengthening of the euro area's recovery. Weaker inflation in the euro area relative to its trading partners accounts for a real appreciation lower than the nominal appreciation of about 2.1 percent. Estimates through May 2018 show that the REER has appreciated by 2.2 percent relative to the 2017 average. **Assessment**. The EBA index REER model points to an overvaluation of about 2.2 percent in 2017, while the level REER model suggests an undervaluation of about 2.9 percent. On balance, staff assesses the euro area 2017 average real exchange rate gap of -8 to 0 percent, consistent with assessed exchange rates of euro area member countries. As with the CA, the aggregate masks a large degree of heterogeneity in REER gaps across euro area member states, ranging from an undervaluation of 10-20 percent in Germany to overvaluations of 0–10 percent in several small to mid-sized euro area member states. The large differences in REER gaps within the euro area highlight the continuing need for net debtor countries to improve their external competitiveness and for net creditor countries to boost domestic demand.	
Capital and financial accounts: flows and policy measures	**Background**. Mirroring the 2017 CA surplus, the euro area experienced net capital outflows, largely driven by portfolio debt and FDI outflows. These were somewhat tempered by inflows into portfolio equity and loans and other bank-related instruments. The geography of gross capital inflows shifted with the global financial and sovereign debt crises, with inflows from the core euro area economies into the rest of the euro area diminishing. **Assessment**. Capital outflows in portfolio debt and inflows into portfolio equity over the past couple years likely arose in large part from the ECB's monetary accommodation through its asset purchase program, which has lowered yields on debt and spurred interest in equity.	
FX intervention and reserves level	**Background**. The euro has the status of a global reserve currency. **Assessment**. Reserves held by euro area economies are typically low relative to standard metrics, but the currency is free floating.	

	Euro Area (concluded)
Technical Background Notes	1/ The IMF EBA analysis for the euro area covers 11 euro area members, which are Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal, and Spain. The assessments of CA and REER gaps for the euro area are derived from GDP-weighted averages of the assessments of the individual countries listed above. 2/ When applying GDP-weighted aggregation for the euro area, the actual CA and the CA norm are corrected for reporting discrepancies in intra-area transactions, as the CA of the entire euro area is about 0.56 percent of GDP in 2017 less than the sum of the individual 11 countries' CA balances.

	France	Overall Assessment
Foreign asset and liability position and trajectory	**Background**. After averaging near balance in 2000-05, the net international investment position (NIIP) deteriorated during the global financial crisis, and has remained below -13 percent of GDP since 2013, reaching a low of -20 percent of GDP in 2017, largely driven by increases in public sector external debt and by banks' net external liabilities. The moderately negative net position masks large gross positions, particularly for financial (bank and non-bank) institutions, reflecting their global activities. Specifically, the gross asset position has been rising and stood at 289 percent of GDP in 2017, of which banks' non-FDI related assets account for about a third, and other non-bank financial institutions close to another third. More than three-quarters of French bank's foreign assets are in advanced economies (40 percent in other eurozone economies) and 7 percent in large emerging markets. Gross liabilities have also increased, and stood at 309 percent of GDP in 2017, of which external debt is estimated at 194 percent of GDP (of this, the public-sector accounts for 55 percent of GDP, and banks for 87 percent of GDP). Target 2 balances were at -€9.4 billion (-0.4 percent of GDP) at end-2017. **Assessment**. The NIIP is negative but its size and projected stable trajectory do not raise sustainability concerns. However, there are vulnerabilities due to external public debt and banks' financing on the liability side, given significant bank debt maturing in 2018 (€60 billion, or 2.6 percent of GDP) and sizable financial derivatives (about 30 percent of GDP).	**Overall Assessment**: *The external position in 2017 was moderately weaker than that implied by medium-term fundamentals and desirable policy settings. Recent measures to improve competitiveness, including labor tax wedge cuts, CIT tax cuts, and labor and product market reforms are expected to strengthen the external position over the medium term.* **Potential policy responses**: Steady fiscal consolidation and steadfast implementation of planned structural reforms (e.g., apprenticeship and vocational training reforms, as well as other product and service market reforms) would help improve competitiveness, reduce external imbalances, and support long-run growth.
Current account	**Background**. The current account (CA) fell from around balance before the global financial crisis to a deficit of 0.6 percent of GDP in 2017. The CA deficit reflects a persistent trade deficit (of around 1 percent of GDP, on average, since 2012), which has outweighed a positive (but declining) income balance. Over the last year, the CA balance improved by 0.2 percent of GDP on the account of a strong service export growth. **Assessment**. The 2017 cyclically adjusted CA deficit is estimated at 0.6 percent of GDP, compared with an EBA-estimated norm of a surplus of 0.9 percent. On this basis, staff assesses that the CA gap in 2017 was between -2 to -1 percent of GDP. The CA gap is projected to narrow further over the medium run, as recent and planned structural and fiscal reforms are expected to help reduce the trade and fiscal deficits.	
CA Assessment 2017	Actual CA: -0.6 | Cycl. Adj. CA: -0.6 | EBA CA Norm: 0.9 | EBA CA Gap: -1.6 | Staff Adj.: 0.0 | Staff CA Gap: -1.6	
Real exchange rate	**Background**. The ULC-based REER for the whole economy (based on a broad set of trading partners) appreciated by around 3-11 percent since the late 1990s. As a result, France has lost about a third of its export market share in the 2000s, and has not been able to regain it since. These developments suggest that France has lost competitiveness, notwithstanding relatively stable CPI-based REER indices over this period. Both the ULC-based REER and CPI-based REER indicators appreciated by around 0.3-0.9 percent during 2017, and an additional 1.3-2.9 percent through May 2018 (relative to the 2017 average). **Assessment**. The CPI-based index and level REER EBA models do not point to REER overvaluation (the REER gap ranges between -2.2 to 4.1 percent), while The EBA CA gap model points to an overvaluation of around 4-8 percent (given an elasticity of 0.25 percent). Staff's assessment, which is based on estimates of the EBA CA model but also other approaches, is an REER overvaluation in the range of 0 to 8 percent.	
Capital and financial accounts: flows and policy measures	**Background.** The CA deficit has been financed mostly by debt inflows (portfolio and other investment), while outward direct investment was generally higher than inward investment. Financial derivative flows have grown sizably both on the asset and the liability side since 2008. The capital account is open. **Assessment**. France remains exposed to financial market risks owing to the large refinancing needs of the sovereign and banking sector.	
FX intervention and reserves level	**Background**. The euro has the status of a global reserve currency. **Assessment**. Reserves held by the euro area are typically low relative to standard metrics, but the currency is free floating.	

France (concluded)	
Technical Background Notes	

	Germany	Overall Assessment
Foreign asset and liability position and trajectory	**Background**. Germany's positive net international investment position (NIIP) reached 60 percent of GDP at end-2017; about twice the 2012 level. The net rise in foreign assets over this period has however fallen short of the accumulation of current account (CA) surpluses. The NIIP of financial corporations other than MFIs is large and positive (57 percent of GDP), while that of the general government is large and negative (25 percent of GDP), partly reflecting Germany's safe haven status. The NIIP is expected to reach near 85 percent of German GDP and 4 percent of world GDP by 2022, as the projected CA surplus remains sizable through the medium term but is expected to be partly offset by valuation changes. Foreign assets are well diversified by instrument. The stock of Germany's Target2 claims on the Eurosystem has been on an upward trend since 2015 and surpassed €956 billion in May 2018 (28 percent of GDP), after declining between 2012 and 2014. **Assessment**. With the implementation of quantitative easing measures by the ECB, Germany's exposure to the Eurosystem has continued to widen.	**Overall Assessment**: *Germany's external position in 2017 remained substantially stronger than implied by medium-term fundamentals and desirable policy settings.* Staff projects a modest narrowing in the medium run, supported by a gradual realignment of price competitiveness, and continued strong domestic demand. As Germany is part of the euro area, the nominal exchange rate does not flexibly adjust to the country's external position, but stronger wage growth relative to euro area trading partners is expected to contribute to realign price competitiveness within the monetary union. The projected adjustment is, however, partial, and additional policy actions will be necessary to make further progress on external rebalancing. **Potential policy responses**: A more growth-oriented fiscal policy, making use of fiscal space to stimulate potential growth, structural reforms to foster entrepreneurship, as well as pension reforms prolonging working lives would reduce savings, stimulate investment, and reduce external imbalances.
Current account	**Background**. The CA surplus has been widening since 2001. It averaged 7.9 percent of GDP over the last five years, peaking at 8.9 percent of GDP in 2015. In 2017 it was 8 percent of GDP. Net exports fell for the first time in 6 years, reflecting a deterioration in the terms of trade. However, the CA balance with the rest of euro area continued to rise. The bulk of the CA surplus reflects large saving-investment surpluses of non-financial corporations (NFCs) and households, with rising savings of NFCs and fiscal consolidation accounting for the upward trend. **Assessment**. The cyclically adjusted CA balance reached 8.3 percent of GDP in 2017, slightly below the 2016 level and 3¾ -6¼ percentage points stronger than the value implied by fundamentals and desirable policies. Staff assesses the CA norm at 2- 4½ percent of GDP, with a midpoint ½ percent of GDP above the CA norm implied by the new EBA model of 2¾ percent. Such upward adjustment reflects uncertainty over the demographic outlook and the impact of the recent large-scale immigration on national savings. 1/ 2/	

CA Assessment 2017	Actual CA	8.0	Cycl. Adj. CA	8.3	EBA CA Norm	2.8	EBA CA Gap	5.5	Staff Adj.	0.5	Staff CA Gap	5.0

Real exchange rate	**Background**. The yearly average CPI-based and ULC-based real effective exchange rates (REER) appreciated 1½ and ½ percent in 2017, respectively, reflecting the nominal appreciation of the euro against the currencies of key trading partners – most notably the British pound and the yen, but also the US dollar, yuan, and Swiss franc – and the relative pick-up in inflation and labor costs. Estimates through May 2018 show that the REER has appreciated by 1.3 percent relative to the 2017 average. **Assessment**. Staff's assessment for 2017 is of a REER undervaluation of 10–20 percent. The refined EBA REER Level model yields an undervaluation of 19 percent. The undervaluation implied by the CA gap assessment using standard trade elasticities is 15–30 percent. 3/	
Capital and financial accounts: flows and policy measures	**Background**. In 2017, net portfolio flows constituted almost ¾ of the capital and financial accounts balance, with direct investment being the second largest item (1/6 of total). On a regional basis, over ⅔ of the net outflows were toward European countries and 10 percent toward the Americas (mostly the US). 80 percent of net inflows in 2017 originated from the EU, while net investment by emerging countries has picked up considerably, representing about 40 percent of total. Net direct foreign investment inflows and outflows recovered to historical highs, after a drop in 2016, coming/going mostly from/to euro area countries. **Assessment**. Safe haven status and the strength of Germany's current external position limit risks.	
FX intervention and reserves level	**Background.** The euro has the status of global reserve currency. **Assessment.** Reserves held by euro area countries are typically low relative to standard metrics. The currency is freely floating.	

	Germany (concluded)
Technical Background Notes	1/ Demographic factors have a lower contribution to the EBA CA norm than previously estimated (¾ percentage points of GDP, instead of the previously estimated 3 percentage points of GDP), due to demographic projection updates and model refinements. Moreover, for Germany, nearly all of the EBA-estimated gap for 2017 reflects the regression's residual rather than gaps in the policies variables included in the EBA model. 2/ The estimated norm reflects changes in the credit gap estimates to better reflect the German financial cycle. Staff assesses the credit-to-GDP to be currently lower than its long-term equilibrium, and that gradually closing of such gap will help support investment over the medium term. 3/ The EBA REER Index model implies that the REER is close to equilibrium. However, the EBA REER Index model has an unusually poor fit for Germany.

<table>
<tr><th></th><th>Hong Kong SAR</th><th>Overall Assessment</th></tr>
<tr><td>Foreign asset and liability position and trajectory</td><td>Background. The net international investment position (NIIP) reached around 409 percent of GDP as of end-2017, up from 275 percent in 2012. Gross assets (about 1,605 percent of GDP) and liabilities (about 1,196 percent of GDP) are high, reflecting Hong Kong SAR's status as a major international financial center. Valuation changes have been sizable and positive, as the change in NIIP in the past 5 years was over 200 percent of 2017 GDP compared with cumulated financial account balances of only 20 percent of 2017 GDP in the same period. On the other hand, income accrued to the large NIIP has been modest, due to relatively low yields on assets and, even more importantly, substantially higher payments on liabilities.
Assessment. Vulnerabilities are low given the size of NIIP and its favorable composition, with large and stable stock of reserve assets as a share of total assets, and direct investment accounting for a large and rising share of total assets and liabilities (37.6 and 52.6, respectively in 2016).</td><td rowspan="6">Overall Assessment:
The external position in 2017 was broadly consistent with medium-term fundamentals and desirable policy settings.

Developments through March 2018 do not suggest a change in this assessment. The current account surplus has declined relative to its pre-2010 level on account of structural factors, including opening of the mainland capital account and changes in offshore merchandise trade activities. As a result of Hong Kong SAR's Linked Exchange Rate System (LERS), short-term movements in the REER largely reflect US dollar developments. Hong Kong SAR's flexible goods, factor, and asset markets continue to support the LERS. 3/

Potential policy responses:
Macroeconomic policies are broadly appropriate. Maintaining policies that support wage and price flexibility is crucial particularly as the tightening cycle of US monetary policy continues. Robust and proactive financial supervision and regulation, prudent fiscal management, flexible markets, and the Linked Exchange Rate System have worked well, and continuation of these policies will help keep the external position broadly in line with medium-term fundamentals.</td></tr>
<tr><td>Current account</td><td>Background. The current account (CA) surplus increased marginally to 4.3 percent of GDP in 2017 from 4.0 percent in 2016, although it continues to be substantially lower than the pre-global financial crisis average (around 10 percent in 2000-08). From a sectoral perspective, the gradual decline of private saving (from the peak of 34.4 percent of GDP in 2006 to 24.6 percent of GDP in 2017), driven by robust consumption growth, tight labor market, and wealth effects related to strength in the housing market, accounted for most of the drop in the CA surplus. The CA surplus is projected to be 3.1 percent of GDP in 2018.
Assessment. The CA is broadly consistent with medium-term fundamentals and desirable policies. Staff's quantitative assessment finds that the cyclically adjusted CA at 3.3 percent is roughly in the mid-point of the CA norm range of 1.8 to 4.8 percent of GDP. The CA gap range is hence -1½ to 1½ percent of GDP. Given the large valuation effects in the NIIP and the resulting discrepancies between stocks and flows, the CA needs to be adjusted for measurement issues.1/
<table>
<tr><td>CA Assessment 2017</td><td>Actual CA</td><td>4.3</td><td>Cycl. Adj. CA</td><td>3.3</td><td>EBA CA Norm</td><td>--</td><td>EBA CA Gap</td><td>--</td><td>Staff Adj.</td><td>--</td><td>Staff CA Gap</td><td>0.0</td></tr>
</table></td></tr>
<tr><td>Real exchange rate</td><td>Background. The REER was essentially unchanged in 2017 (0.3 percent below the average REER in 2016). REER dynamics are largely determined by the HKD/USD peg and the subdued inflation in Hong Kong SAR. The HKD has depreciated by 4.0 percent in real effective terms through May 2018 compared with the 2017 average and the weak side of the convertibility undertaking was triggered in April and May prompting the HKMA to sell USD in the market.
Assessment. The real exchange rate is broadly consistent with medium-term fundamentals and desirable policies. Based on elasticity estimates for similar economies and factoring in the uncertainties and variability of an offshore trading and financial center, the REER gap is assessed by staff to be between -5 to +5.</td></tr>
<tr><td>Capital and financial accounts: flows and policy measures</td><td>Background. As a financial center, Hong Kong SAR has an open capital account. Non-reserve financial flows moved from sizable net outflows in 2016 back to inflows in 2017. The financial account is typically very volatile both in terms of portfolio and direct investment. These large movements are likely associated with both financial volatility in the mainland, transmitted through growing cross-border financial linkages 2/ as well as shifting expectations of a US policy rate hike and related arbitraging in the FX and rates markets.
Assessment. Large financial resources and proactive financial supervision and regulation limit the risks from potentially volatile capital flows, as do deep and liquid markets. The greater financial exposure to mainland China could pose risks to the banking sector if mainland growth slows sharply and financial stress emerges in some key sectors, such as export-oriented manufacturing or real estate. However, given the high origination and underwriting standards that Hong Kong SAR banks have maintained, the credit risk appears manageable.</td></tr>
<tr><td>FX intervention and reserves level</td><td>Background. Hong Kong SAR has a currency board arrangement. International reserves have been built up as the HKD was often pushed to the strong side of its trading range, particularly following the global financial crisis. The stock of reserves in end-2017 was equivalent to around 120 percent of GDP, unchanged from end-2016 and in line with its level in end-2012, and has since grown 2.1 percent (by March 2018). In April and May of 2018, the HKD hit the lower range of the convertibility undertaking of 7.85 a few times, prompting the HKMA to sell USD in the market under the normal functioning of the LERS. As liquidity is drained from the system, short-term HKD money market interest rates will continue to rise gradually closing the gap with the LIBOR and reducing HKD depreciation pressures.

Assessment. Currently, reserves are adequate for precautionary purposes and should continue to evolve in line with the automatic adjustment inherent in the currency board system. Hong Kong SAR also holds significant fiscal reserves built up through a track record of strong fiscal discipline.</td></tr>
</table>

	Hong Kong SAR (concluded)
Technical Background Notes	1/ Hong Kong SAR is not in the EBA sample as it is an outlier along many dimensions of EBA analysis, thus one possibility—though with obvious drawbacks—is to use EBA estimated coefficients and applying them to Hong Kong SAR. Following that approach, the CA norm is estimated to be about 13.8 percent of GDP. The implied CA gap of -10.6 is almost entirely due to EBA regression residuals, with the policy gap accounting for only -0.2 percentage points. The large residual reflects a combination of factors chiefly related to measurement issues that are relevant for Hong Kong SAR but not captured by EBA. First, an adjustment of 4-6 percentage points is made to EBA's implied contribution of the NIIP position. The NIIP variable in EBA captures average income effects across countries. In fact, Hong Kong SAR's NIIP has been driven by valuation effects (see box on foreign assets and liabilities), and thus it has had a systematically lower income balance relative to its NIIP compared with other economies. Second, the opening of the Precious Metals Depository has resulted in a decline of 4-4½ percentage points in the gold trade balance that does not reflect changes in wealth but rather the increased physical settlement of gold futures contracts. Third, the decline in logistics and trading activities in Hong Kong SAR in response to mainland China's increased onshoring accounts for a decline of 1-1½ percentage points in the CA. While leading to lower income, the loss of activity did not result in lower consumption because it is viewed as temporary and to be replaced with increased provision of high value-added services as HKSAR's own economy rebalances in response to changes in mainland demand. Adjusting for these factors, staff estimates that the CA gap is close to zero. See SIP in the 2016 Article IV staff report for more details. 2/ The financial linkages with the mainland have deepened in recent years with the increase in cross-border bank lending, securities issuance in Hong Kong SAR by mainland entities and the internationalization of the RMB. As of 2017Q4, banking system claims, including those of foreign banks, on mainland nonbank entities amounted to HK$5.5 trillion, or about 207 percent of GDP, up by 15 percentage points from a year earlier. 3/ See SIP in the 2016 Article IV staff report and IMF WP17/09.

	India	Overall Assessment
Foreign asset and liability position and trajectory	**Background**. India's net international investment position (NIIP) has improved slightly since 2014, going from -18.1 percent of GDP at the end of FY2014/15 to -17.3 percent of GDP as of end-2017. Gross foreign assets and liabilities were 24 and 42 percent of GDP, respectively, at end-2017. The modest level of foreign liabilities reflects India's gradual approach to capital account liberalization, which has focused mostly on FDI. The bulk of assets are in the form of official reserves and FDI, while liabilities include mostly FDI and portfolio equity. **Assessment**. With CA deficits of about 2½ percent of GDP projected for the medium term, the NIIP-to-GDP ratio is expected to slightly deteriorate. India's external debt, at about 20 percent of GDP, is moderate, compared with other emerging market economies. 48 percent of the external debt is denominated in US dollars and another 37 percent is dominated in Indian rupees. The debt maturity profile is favorable, as long-term external debt accounts for about 81 percent of the total, and the ratio of short-term external debt to foreign exchange (FX) reserves is low.	**Overall Assessment**: *The external sector position in 2017/18 is broadly consistent with fundamentals and desirable policy settings.* India's low per capita income, favorable growth prospects, demographic trends, and development needs justify running CA deficits. External vulnerabilities remain, although they have been reduced since 2013. India's economic risks stem from more volatile global financial conditions, oil price volatility, and a retreat from cross-border integration. Progress has been made on FDI liberalization, while portfolio flows remain controlled. India's trade barriers remain significant. **Potential policy responses**: An increase in non-debt creating capital flows through FDI will help improve the CA financing mix and contain external vulnerabilities. Gradual liberalization of the portfolio flows should be considered, while monitoring risks of portfolio flows' reversals. Exchange rate flexibility should remain the main shock absorber, with intervention limited to addressing disorderly market conditions. Continued vigilance is needed, given potential external shocks. Going forward, further structural reform efforts to revamp the business climate, ease domestic supply bottlenecks, and facilitate trade and investment liberalization are essential to improve competitiveness and investment prospects, attract FDI, and boost exports.
Current account	**Background**. The current account (CA) deficit is estimated to have increased to about 1.9 percent of GDP in FY2017/18 from 0.7 percent of GDP in the previous year. Reflecting a recovery in commodity (especially oil) prices, imports surged by 19 percent in FY2017/18, following a slight decline in the previous year. Export growth also picked up to 10 percent in FY2017/18, from 5 percent in FY2016/17, in line with the global growth recovery. Over the medium term, the CA deficit is expected to increase to about 2½ percent of GDP, on the back of strengthening domestic demand. **Assessment**. The EBA cyclically adjusted CA deficit stood at 2.1 percent of GDP in FY2017/18. The EBA CA regression estimates a norm of -3.0 percent of GDP for India in FY2017/18, with a standard deviation of 0.5 percent, thus implying an EBA gap of 0.9 percent. As discussed in previous External Sector Reports and Article IV IMF staff reports, in Staff's judgment, a CA deficit of about 2.5 percent of GDP is a more appropriate norm and consistent with the ES approach. Based on India's historical cash flows and restrictions on capital inflows, global financial markets cannot be counted on to reliably finance a CA deficit above 3 percent of GDP. While FDI flows have increased in recent years, they are not sufficient to cover CA deficits for this and outer years. Portfolio flows are highly volatile and susceptible to changes in the global risk appetite as demonstrated in the taper tantrum episode. Thus, based on the staff-assessed CA norm, the CA gap is in the range of -0.6 to +1.4 percent of GDP. Positive policy contributions to the CA gap from a negative credit gap, larger-than-desirable intervention in the FX market, and a relatively closed capital account are offset by a negative unexplained residual, which likely captures underlying competitiveness problems.	
CA Assessment 2017	Actual CA: -1.9 | Cycl. Adj. CA: -2.1 | EBA CA Norm: -3.0 | EBA CA Gap: 0.9 | Staff Adj.: 0.5 | Staff CA Gap: 0.4	
Real exchange rate	**Background**. The average REER in 2017 appreciated by about 4.1 percent over its 2016 average. As of May2018, the REER depreciated 3.6 percent relative to its 2017 average. **Assessment**. The EBA Index REER and Level REER regression approaches estimate a gap of 10.9 and 8.8 percent for the 2017 average REER, respectively. However, these approaches have large estimation errors for India. Based on the CA gap, the REER is assessed to be in line with fundamentals with the range of -7 to +5 percent for FY2017/18.	
Capital and financial accounts: flows and policy measures	**Background**. The sum of FDI, portfolio, and financial derivatives flows on a net basis is estimated at 1.9 percent of GDP in FY2017/18, slowing from 2.3 percent in FY2016/17 despite larger portfolio inflows. Net FDI flows moderated to 1.2 percent of GDP in FY2017/18, from 1.6 percent in FY2016/17. Portfolio inflows into government and corporate securities were strong in 2017, leading to almost fully exhausting ceilings on non-resident investment. That said, in line with global trends, there were some portfolio outflows in 2018. **Assessment**. Given that portfolio debt flows have been volatile and the exchange rate has been sensitive to these flows and changes in global risk aversion, attracting more stable sources of financing is needed to reduce vulnerabilities. Implementation of structural reforms to improve business climate would help to attract FDI.	
FX intervention and reserves level	**Background**. The evolution of the rupee is generally consistent with a floating arrangement. Spot foreign exchange intervention was US$28 billion (1.1 percent of GDP) and net forwards increased by US$28.5 billion in 2017. International reserves reached $424.5 billion at end-March 2018, increasing by about $55 billion since March 2017. Reserves slightly declined to about $412 billion as of end-May 2018. Reserve coverage currently is about 16.3 percent of GDP and about 7.5 months of prospective goods and services imports. **Assessment**. Reserve levels are adequate for precautionary purposes relative to various criteria. International reserves represent about 190 percent of short-term debt and more than 160 percent of the IMF's composite metric. 1/	

	India (concluded)
Technical Background Notes	1/ Reserves stand at about 210 percent of the metric adjusted for capital controls, the construction of which is explained in the IMF policy paper, *Assessing Reserve Adequacy—Specific Proposals*. While the adjusted reserve metric uses a composite index to measure capital account openness that is based on de jure capital control indices, staff analysis indicates that India's capital account is not as closed as suggested by traditional measures. See Annex IV in IMF (2016), *India: Staff Report for the 2016 Article IV Consultation*, IMF Country Report No. 16/75 and Chapter 5 in IMF (2016), *India: Selected Issues*, IMF Country Report No. 16/76.

<table>
<tr><th></th><th>Indonesia</th><th>Overall Assessment</th></tr>
<tr><td>Foreign asset and liability position and trajectory</td><td>Background. At end-2017, Indonesia's net international investment position (NIIP) stood at -33½ percent of GDP, compared with -35¾ percent of GDP at end-2016 (and -40½ percent at end-2012). Gross external assets reached 33¼ percent of GDP (of which, close to 40 percent were reserve assets) and gross external liabilities, 66¾ percent of GDP. Indonesia's gross external debt was moderate at 34¾ percent of GDP at end-2017, of which 19¾ percent was denominated in rupiah and 84½ percent was maturing after one year. About one-third of the government's external debt (18 percent of GDP at end-2017) was denominated in rupiah.
Assessment. The level and composition of the NIIP and gross external debt indicate that Indonesia's external position is sustainable and subject to limited roll-over risk, but nonresident holdings of rupiah denominated government bonds, at 38 percent of the total stock (or 6 percent of GDP) at end-April 2018, combined with shallow domestic financial markets, make Indonesia susceptible to global financial volatility, higher US interest rates, and stronger US dollar. Staff projections for the current account suggest that the NIIP position as a percent of GDP will continue to strengthen over the medium term.</td><td rowspan="5">Overall Assessment:
The external position of Indonesia in 2017 was assessed to be broadly consistent with medium-term fundamentals and desirable policies. Stable commodity prices and external demand developments should help to contain the current account deficit. External financing appears sustainable, although the large share of foreign portfolio holdings makes the economy vulnerable to a sharp tightening of global financial conditions.

Potential policy responses: Continued flexibility of the exchange rate and market-determined bond yields would continue to underpin external stability. The fiscal position should be strengthened by accelerating tax reforms, while keeping the fiscal deficit below the legal limit and allowing for more infrastructure and social spending. While expanding the safety-net could lead to a widening in the CA deficit over the medium term, structural policies will be necessary to bolster global value chain participation and external competitiveness. Emphasis should be given to easing FDI and non-tariff trade restrictions, as well as strengthening labor markets, including through streamlining stringent job protection and improving job placement services, vocational training, and overall education.</td></tr>
<tr><td>Current account</td><td>Background. Indonesia's current account deficit reached 1.7 percent of GDP in 2017, an improvement from the peak of 3.2 percent in 2013, as the economy has adjusted to the low commodity prices. Exports and imports started to pick up in Q4: 2016, as commodity prices bottomed out. Over the medium term, a moderate increase in the current account deficit is expected from a rise in capital goods and raw material imports tied to infrastructure investment and a pickup in domestic demand. A gradual increase in manufacturing exports, stronger demand from trading partners, and more favorable commodity prices should help limit the current account deficit.
Assessment. Staff estimates a CA gap of 0.1 percent for 2017, consistent with an estimated cyclically adjusted CA balance of -1.6 percent of GDP and a norm of -1.7 percent of GDP. 1/ Taking uncertainties around the estimates into account, staff assesses that a norm of -3.2 percent to -0.2 percent of GDP is appropriate.[2/] This suggests a CA gap in the range of -1.4 percent to 1.6 percent of GDP for 2017. Domestic policy gaps, including in social spending and reserve accumulation, as well as policy gaps in partner countries (particularly fiscal) are largely offset by the unexplained residuals of the model, which could reflect structural distortions in the labor market and barriers to FDI and trade.</td></tr>
<tr><td>CA Assessment 2017</td><td>Actual CA | -1.7 | Cycl. Adj. CA | -1.6 | EBA CA Norm | -0.8 | EBA CA Gap | -0.8 | Staff Adj. | -0.9 | Staff CA Gap | 0.1</td></tr>
<tr><td>Real exchange rate</td><td>Background. The REER remained broadly stable between 2013 and 2016. In 2017, the average REER appreciated by 1.2 percent relative to the average of 2016 due to a relatively higher inflation rate than its trading partners, as the average NEER depreciated by 0.7 percent. Estimates through May 2018 show that the REER has depreciated by 4.3 percent relative to the 2017 average.
Assessment. The EBA index and level REER models point to an REER gap of about 2.1 percent to -5.5 percent for 2017, respectively, in line with staff's REER gap assessment in the range of -9.4 percent to 7.2 percent (based on the CA assessment and estimated elasticities).</td></tr>
<tr><td>Capital and financial accounts: flows and policy measures</td><td>Background. In 2017, net capital and financial account inflows (2.9 percent of GDP) were sustained by net FDI inflows (2.0 percent of GDP) and net portfolio inflows (2.0 percent of GDP), partly offset by net other investment inflows of -1.1 percent of GDP. In the first quarter of 2018, net capital and financial account inflows declined to 0.7 percent of GDP, with net portfolio inflows of -0.5 percent of GDP.
Assessment. Net and gross financial flows have been relatively steady since the global financial crisis despite some short periods of volatility. The contained current account deficit and strengthened policy frameworks, including exchange rate flexibility since mid-2013 have also helped reduce capital flow volatility. Continued strong policies focused on strengthening the fiscal position, keeping inflation in check, and easing supply bottlenecks would help sustain capital inflows in the medium term.</td></tr>
<tr><td>FX intervention and reserves level</td><td>Background. Since mid-2013, Indonesia has had a more flexible exchange rate policy framework. Its floating regime has better facilitated adjustments in exchange rates to market conditions. At end-2017, reserves were US$130.2 billion (equal to 13 percent of GDP, about 138 percent of IMF's reserve adequacy metric, and about 8 months of prospective imports of goods and services), compared with US$116.4 billion at end-2016. In addition, contingencies and swap lines amounting to about US$81½ billion are in place. In February–April 2018, international reserves fell by US$7 billion to US$124.9 billion mainly due to FX intervention in response to depreciation pressures on the rupiah.
Assessment. While the composite metric may not adequately account for commodity price volatility, the current level of reserves (US$124.9 billion at end-April) should be sufficient to absorb most shocks, with predetermined drains also manageable. FX intervention should aim primarily at preventing disorderly market conditions, while allowing the exchange rate to adjust to external shocks.</td></tr>
</table>

	Indonesia (concluded)
Technical Background Notes	1/ As Indonesia is among the few outlier countries regarding adult mortality rates, the demographic indicators are adjusted to account for the younger average prime-age and exit age from the workforce. This results in an adjustor of -0.9 percentage point being applied to the model-estimated CA norm (-0.8 percent of GDP). 2/ A range of +/-1.5 percent is added to reflect the fact that the EBA-regression estimates are subject to normal uncertainty (the standard error of the EBA norm is 1.5 percent).

<table>
<tr><th></th><th>Italy</th><th>Overall Assessment</th></tr>
<tr><td>Foreign asset and liability position and trajectory</td><td>Background. Italy's net international investment position (NIIP) reached -7 percent of GDP at end-2017, returning broadly to the level at end-2000 (-6 percent of GDP). Gross assets and liabilities, however, reached 157 and 164 percent of GDP respectively, both 58 percentage points higher than in 2000. TARGET2 liabilities rose from about 15 to 26 percent of GDP between end-2015 and end-2017, in part reflecting residents' net purchases of foreign assets and the creation of liquidity by the Bank of Italy's participation in the ECB's asset purchase program. Debt securities represent about ¾ of gross external liabilities, half of which is owed by the public sector. Modest current account (CA) surpluses forecast should continue to improve gradually the NIIP.
Assessment. Further strengthening of balance sheets would reduce vulnerabilities, related to the high public debt and potential negative feedback loops between the debt stock and debt servicing costs.</td><td rowspan="5">Overall Assessment:
The external position in 2017 was broadly in line with fundamentals and desirable policy settings. Recent developments suggest that this assessment remains valid.

Nonetheless, improving competitiveness would help strengthen growth, consistent with reducing high unemployment and public debt, and safeguard the external balance sheet.

Potential policy responses:
Strong implementation of structural reforms, including to improve the wage bargaining mechanism to better align wages with productivity at the firm level, as well as efforts to strengthen bank balance sheets will be critical to improving competitiveness, boosting potential growth, and reducing vulnerabilities. Progress in fiscal consolidation will also help reduce external vulnerabilities and maintain investor confidence.</td></tr>
<tr><td>Current account</td><td>Background. Italy's CA averaged -1¼ percent of GDP in the decade following euro adoption. Starting in 2013, it moved into balance; by 2017, it registered a surplus of 2.9 percent of GDP (up slightly from 2.7 percent of GDP in 2016). About two-thirds of the improvement since 2013 was driven by Italy's growing trade surplus, supported initially by lower commodity prices and subsequently by a rebound in external demand. The rest was due to a higher income balance following the increase in residents' net purchases of foreign assets and a reduction of external liabilities' payments, related not least to the impact of monetary policy. In terms of saving and investment, declining investment accounted for ⅔ of the improvement in the CA since 2010, while higher public saving contributed most of the rest.
Assessment. The cyclically adjusted CA is estimated at 2.1 percent of GDP in 2017, 0.3 p.p. below the EBA estimated CA norm of 2½ percent of GDP. 1/ Staff assesses a CA gap in the range of -1.3 and +0.7 percent of GDP. Italy's sizable and long-standing structural rigidities, however, hamper its ability to improve competitiveness (also reflected in negative residuals from the EBA CA model). 2/</td></tr>
<tr><td>CA Assessment 2017</td><td>Actual CA | 2.8 | Cycl. Adj. CA | 2.1 | EBA CA Norm | 2.5 | EBA CA Gap | -0.3 | Staff Adj. | 0.0 | Staff CA Gap | -0.3</td></tr>
<tr><td>Real exchange rate</td><td>Background. From 2016 to 2017, the CPI-based real effective exchange rate (REER) appreciated by 0.8 percent while the ULC-based REER was unchanged. From a longer perspective, stagnant productivity and rising labor costs have led to a gradual appreciation of the REER since Italy joined the euro area, both in absolute terms and relative to the euro area average (by about 10 percent using ULC-based indices). As of May 2018, the REER appreciated by a further 0.6 percent relative to the 2017 average.
Assessment. The EBA level and index REER models suggest a modest overvaluation of 5.4 percent and 7.2 percent, respectively. This is generally consistent with, but slightly below, the persistent wage-productivity differentials vis-à-vis key partners, and it corresponds to a CA gap in the lower end of the staff-assessed CA gap range. 3/ Taken together, staff assesses a REER gap of 0–10 percent.</td></tr>
<tr><td>Capital and financial accounts: flows and policy measures</td><td>Background. Portfolio and other-investment inflows typically have financed the CA deficits of the past, despite a modest net FDI outflow, without much difficulty. Italy's financial account posted net outflows of about 3 percent of GDP in 2017, largely reflecting residents' net purchases of foreign assets, even as foreign investment in Italian portfolio securities continued.
Assessment. While supported by monetary accommodation by the ECB, Italy remains vulnerable to market volatility, owing to the large refinancing needs of the sovereign and banking sectors, and the potentially tight credit conditions from the still high stock of NPLs in the banking sector.</td></tr>
<tr><td>FX intervention and reserves level</td><td>Background. The euro has the status of a global reserve currency.
Assessment. Reserves held by the euro area are typically low relative to standard metrics, but the currency is free floating.</td></tr>
</table>

	Italy (concluded)
Technical Background Notes	1/ The CA norm for 2017 (2.5 percent) is lower than in 2016 (4.4 percent), reflecting methodological refinements to the EBA framework, particularly as it pertains to capturing demographic effects and credit cycles. For Italy, the refined model indicates a positive, but smaller, contribution of demographics (1.7 instead of 3.4 percent), and a small positive contribution of policies (including credit) of 0.3 percent (instead of -0.5 percent as in 2016). 2/ IMF Working Paper No. 18/60, "Italy: Quantifying the Benefits of a Comprehensive Package" provides an overview of the structural distortions and the impact on the REER in Italy. 3/ The elasticity of the REER to the CA gap is estimated to be 0.26.

	Japan	Overall Assessment
Foreign asset and liability position and trajectory	**Background**. The net international investment position (NIIP) has remained at about 60 percent of GDP over 2013-2017, with assets reaching 184 percent and liabilities reaching 124 percent of GDP in 2017. In the medium term the NIIP is projected to rise to about 77 percent with current account (CA) surpluses, before gradually stabilizing due to population aging. **Assessment**. Vulnerabilities are limited (equity and direct investment comprise a rising share of liabilities, now at 36 percent of total). Assets are diversified geographically and by risk classes. The NIIP generated net annual investment income of 3.6 percent of GDP in 2017.	**Overall Assessment**: *The 2017 external position was broadly consistent with medium-term fundamentals and desirable policies.* Developments since end-2017 do not change the assessment. A continued accommodative stance by the Bank of Japan is consistent with the objective of reflating the economy, and needs to be accompanied by bold structural reforms and a credible and specific medium-term fiscal consolidation plan to maintain an external position consistent with medium-term fundamentals. **Potential policy responses**: A more forceful and coordinated policy package is needed to raise growth and inflation in a sustainable manner. This includes structural measures to boost wages, increase labor supply, reduce labor market duality, enhance risk capital provision, reduce barriers to entry in some industries, and accelerate agricultural and professional services sector deregulation. Fiscal consolidation should proceed in a gradual manner anchored by a credible medium-term fiscal framework. These 'desirable' policies are expected to support growth, imports and prices, and maintain an external position in line with fundamentals over the medium term.
Current account	**Background**. In line with growing national savings, the CA surplus has risen since 2013, reaching 4 percent of GDP in 2017, driven mainly by an improvement in the trade balance which was largely underpinned by lower energy prices. In 2017, the CA surplus increased by 0.1 percent of GDP relative to 2016, due to an improvement in the income balance, as the fall in the goods balance was offset by a higher services balance. Japan's CA is positive because of high corporate saving in excess of domestic investment opportunities, and a sizable income account owing to its large NFA position. The income balance continues to account for most of the current account surplus (90 percent in 2017). **Assessment**. The CA assessment uses the EBA estimates, but makes an adjustment to the cyclically adjusted CA to reflect a factor not fully captured in the EBA model. In particular, the EBA estimated cyclically adjusted CA of 3.6 percent of GDP is adjusted upward by 0.1 percent to reflect temporary factors (elevated energy imports with the nuclear power plant shutdown).1/ The EBA estimates the 2017 cyclically adjusted CA norm at 3.2 percent of GDP, with a standard error of 1.3 percent of GDP. Staff estimates a CA norm range between 1.9 and 4.5 percent of GDP. The underlying CA gap midpoint in 2017 is therefore assessed to be 0.5 percent of GDP (with a CA gap range between -0.8 and 1.8), broadly consistent with desirable policies and medium-term fundamentals. However, the large unexplained portion of the EBA CA gap suggests that important bottlenecks to investment remain.	

CA Assessment 2017	Actual CA	4.0	Cycl. Adj. CA	3.6	EBA CA Norm	3.2	EBA CA Gap	0.4	Staff Adj.	-0.1	Staff CA Gap	0.5

Real exchange rate	**Background**. After depreciating substantially during 2013-15, the average real effective exchange rate (REER) appreciated substantially during 2016. In 2017, the average REER weakened by about 4.9 percent relative to 2016, reflecting a significant nominal yen depreciation at the end of 2016 related in part to rising global interest rates following the US election. Estimates through May 2018, show that the REER has depreciated by 2.3 percent relative to the 2017 average while it has appreciated by 0.7 percent relative to end-2017. **Assessment**. The EBA REER Index and Level models estimate the 2017 average REER to be 17-18 percent lower than the level consistent with fundamentals and desirable policies, mainly from a large unexplained residual. Because of absent Japan-specific factors in the model, less weight is given to the EBA REER models. Using the staff-assessed CA gap range as reference and a staff-estimated semi-elasticity of 0.14 yields an indicative range for the REER gap as -13 to 6 percent with a midpoint of -4 percent. Taking into consideration that this broad REER gap range is due to the low semi-elasticity, the REER is assessed as broadly in line with medium-term fundamentals and desirable policies.	
Capital and financial accounts: flows and policy measures	**Background**. Portfolio outflows continued during most of 2017—though at a slower pace than in 2016—as institutional investors continued to diversify overseas and FDI outflows continued. Net short yen positions have prevailed since Q2 2017, but after end-March net positions are balanced. **Assessment**. Vulnerabilities are limited (inward investment tends to be equity-based and home bias of Japanese investors remains strong). So far there have been no large spillovers from Yield Curve Control to financial conditions in other economies (interest rates, credit growth). If outflows from Japan accelerate, they could provide an offset to tighter domestic financial conditions in the region due to normalization of policy rates in other advanced economies.	
FX intervention and reserves level	**Background**. Reserves are about 25 percent of GDP, on legacy accumulation. There has been no FX intervention in recent years. **Assessment**. The exchange rate is free floating. Interventions are isolated (last in 2011) to reduce short-term volatility and disorderly exchange rate movements.	

	Japan (concluded)
Technical Background Notes	1/ As in previous years, staff adjusted the EBA estimate of Japan's cyclically adjusted CA to account for the reliance on energy imports after the 2011 earthquake that temporarily reduced the CA. This adjustment takes into account changing energy prices and it also reflects the authorities' latest plans to restore nuclear energy.

<table>
<tr><th></th><th>Korea</th><th>Overall Assessment</th></tr>
<tr><td>Foreign asset and liability position and trajectory</td><td>Background. The net international investment position (NIIP) has been positive since 2014. At end-2017, it stood at 16 percent of GDP, with gross liabilities totaling 79 percent of GDP, of which 27 percent of GDP was gross external debt.
Assessment. The positive NIIP position strengthens external sustainability and should increase further as the current account remains in surplus. Risks from currency mismatches are lower than before the global financial crisis (GFC), as short-term external liabilities of banks, which rose to relatively high levels before the GFC, declined back to below pre-crisis levels. Also, in the non-financial sector the bulk of short-term external debt is held by exporters who typically hedge their currency risk.</td><td rowspan="6">Overall Assessment:
The external position in 2017 was assessed to be moderately stronger than warranted by medium term fundamentals and desirable policy settings. This reflects excessive saving, including for precautionary purposes, as well as relatively weak private investment.

Potential policy responses:
Significantly more expansionary fiscal policy to boost domestic demand in the short and longer run will help to reduce imbalances, given the substantial fiscal space. This will also contribute to a recalibration of the policy mix, thereby gradually reducing reliance on monetary policy. Structural policies should also play an important role by facilitating rebalancing of the economy toward services and boosting domestic demand growth. These include strengthening the social safety net to lessen incentives for precautionary savings and addressing bottlenecks to investment. The exchange rate should remain market determined, with intervention limited to addressing disorderly market conditions.</td></tr>
<tr><td>Current account</td><td>Background. The current account (CA) surplus in 2017 was 5.1 percent of GDP. The surplus declined by 1.9 percentage points in 2017 and now stands below its five-year average. This decline reflected (i) a surge in imports of capital goods, more than compensating for a rise in exports, (ii) a narrowing of the service balance, associated with a decline in shipping services and tourist arrivals from China, (iii) a smaller income balance, and (iv) rising commodity prices. The investment-to-GDP ratio rose, more than offsetting a marginal increase in the savings ratio. The CA surplus is projected to remain large on the back of strong export performance, and in the absence of fiscal easing and well targeted structural measures.
Assessment. The EBA model estimates the 2017 cyclically adjusted CA surplus to be 4.5 percent of GDP, and the CA norm to be in the range 2.0 to 4.0 percent of GDP. This yields a CA gap midpoint of 1.6 percent of GDP with a range of 0.6 to 2.6 percent of GDP. Identified policy gaps from significantly tighter than desired fiscal policy and relatively low social spending are key contributors to the CA gap. The latter acts to increase precautionary savings, and thus the CA, through lack of access to the social safety net.</td></tr>
<tr><td>CA Assessment 2017</td><td>Actual CA 5.1 | Cycl. Adj. CA 4.5 | EBA CA Norm 3.0 | EBA CA Gap 1.6 | Staff Adj. 0.0 | Staff CA Gap 1.6</td></tr>
<tr><td>Real exchange rate</td><td>Background. The REER appreciated by 3.0 percent in 2017, thus continuing a gradual appreciating trend since 2013. As of May 2018, the REER has appreciated 2.0 percent relative to the 2017 average.
Assessment. The REER in 2017 is estimated to have been below the level consistent with fundamentals and desired policies by 7.2 to 1.7 percent. This range is derived by applying to the range for the CA gap above a semi-elasticity of the CA-to-GDP ratio to the REER of 0.36. The REER regression models suggest gaps of -2.1 (EBA Level REER model) and +4.4 (EBA Index REER model).</td></tr>
<tr><td>Capital and financial accounts: flows and policy measures</td><td>Background. Net capital outflows have been relatively stable over the medium term despite significant shifts in composition. In 2017, they decreased to 5.7 percent of GDP from 7.2 percent of GDP in 2016. Non-resident portfolio inflows surged to $17.7 billion as foreigners sharply expanded purchases of debt securities. Equity inflows have also been strong, with the share of foreign ownership in the domestic stock market rising to 33 percent in end-2017.
Assessment. The present configuration of net and gross capital flows appears sustainable over the medium term. Korea has demonstrated the capacity to absorb short term capital-flow volatility in magnitudes occurred over the last few years.</td></tr>
<tr><td>FX intervention and reserves level</td><td>Background. Korea has a floating exchange rate. FX intervention appears to have been two-sided since early 2015, based on staff estimates. Staff estimates that total net intervention in 2017 was limited to around US$10 billion (0.7 percent of GDP); US$5 billion was in forward markets. In 2018, net intervention as of end-April is estimated to have been around US$2 billion. Reserves increased steadily from 2009 through mid-2014, but remained broadly stable through 2016. In 2017, reserves increased by $18 billion including valuation effects. At end-2017, total reserves stood at $389 billion (25.4 percent of GDP).
Assessment. Intervention appears to have been limited to address disorderly market conditions since 2015. Foreign exchange reserves were around 107 percent of the IMF's composite reserve adequacy metric in end-2017, which provides a sufficient buffer against a wide range of possible external shocks.</td></tr>
</table>

Korea (concluded)	
	Technical Background Notes

	Malaysia	Overall Assessment
Foreign asset and liability position and trajectory	**Background**. Malaysia's net international investment position (NIIP), as a percent of GDP, averaged around 1.7 percent of GDP since 2010, with changes in recent years reflecting both capital flows and valuation effects. In 2017, it turned into a net liability position of 2 percent of GDP, driven by lower direct investment assets and higher portfolio liabilities (2016: net assets of about 5¼ percent of GDP). 1/ Official reserves contribute most to net assets, while net portfolio liabilities contribute most to net liabilities. Total external debt was at about 69.4 percent of GDP in 2017, about one-third of which was denominated in local currency and more than one-half was of medium-term maturity, helping to reduce FX and rollover risks. Interbank and intercompany loans account for the bulk of private external debt in foreign currency, while the federal government's external debt is mostly in local currency. 2/ **Assessment**. The NIIP is expected to rise gradually over the medium term, reflecting projected moderate current account (CA) surpluses. Balance sheet strength of banks and domestic institutional investors, maturity and currency composition of external debt, presence of longer-term foreign portfolio investors, exchange rate flexibility, and adequate reserves would provide resilience to Malaysia's potential external vulnerabilities.	**Overall Assessment**: *The external position in 2017 was stronger than the level consistent with fundamentals and medium-term desirable policies*. The current account surplus in 2017, as a ratio to GDP, was higher than a year ago, following recovery in external demand and improvement in the terms of trade. REER developments since end 2017 support the adjustment of the external position. **Potential policy responses**: Over the past few years Malaysia's growth model has become increasingly driven by domestic demand, and its current account surplus has narrowed significantly. Going forward, macroeconomic policy adjustments, continued exchange rate flexibility, and structural policies should address the existing policy gaps. The authorities should continue with medium-term fiscal consolidation. Spending needs should accommodate further improvements in social protection and public healthcare. At the same time, addressing structural bottlenecks (for example, labor market frictions in terms of skills mismatch; low female participation; and weak education quality) and further improving physical infrastructure would help support higher private investment and productivity.
Current account CA Assessment 2017	**Background**. Malaysia's CA surplus has declined by about 7 percentage points of GDP between 2010 and 2017, driven mainly by a decline in national saving, while investment also rose. In 2017, the CA surplus, as a share of GDP, was higher at 3 percent (2016: 2.4 percent) as the goods balance improved on export recovery. The goods balance is in surplus, while the services and income accounts are in deficits. **Assessment**. The refined EBA CA model estimates 2017 CA norm at 0.5 percent of GDP after cyclical and multilateral consistency adjustments. 3/ The 2017 cyclically adjusted CA is estimated at about 3.7 percent of GDP. This leads to an estimated 2017 CA gap of 3.2 percent of GDP (±about 1 percent of GDP). Unidentified residuals explain the entire CA gap, potentially reflecting structural distortions and country-specific factors not included in the model. On identified domestic policy gaps, low public healthcare spending explains a part of the excess surplus. The CA balance is expected to remain in surplus, albeit a lower one, over the medium term, driven by smaller private sector net saving. Actual CA | 3.0 | Cycl. Adj. CA | 3.7 | EBA CA Norm | 0.6 | EBA CA Gap | 3.1 | Staff Adj. | 0.0 | Staff CA Gap | 3.1	
Real exchange rate	**Background**. The annual average real effective exchange rate (REER) depreciated by 1.7 percent in 2017. It was nearly 15 percent lower from its 2013 peak, reflecting impact on the currency from capital outflows and negative terms of trade shocks. Since late 2017, the REER has appreciated. In March 2018, it was up by 5.5 percent from its 2017 average. **Assessment**. The EBA REER models estimate Malaysia's REER to be about 33–36 percent below what is warranted by fundamentals and desirable policies. However, the usual macroeconomic stresses associated with such undervaluation are absent, for example, high core inflation, sustained wage pressure, or significant FX reserve build up. Consistent with the assessed CA gap, staff assesses the REER gap in 2017 was close to -6¾ percent (± about 2 percent). 4/	
Capital and financial accounts: flows and policy measures	**Background**. Since the Global Financial Crisis, Malaysia experienced significant capital flow volatilities, largely driven by portfolio flows in and out of the local-currency debt market. 5/ In 2017, the annual financial account balance was in a small surplus for the first time since 2011. Net capital inflows continued in the first four months of 2018. Since late 2016, the Financial Markets Committee has implemented measures to develop the onshore FX market. 6/ **Assessment**. Exchange rate flexibility and macroeconomic policy adjustments should continue to play the central role in response to capital flow volatility. A more holistic approach toward onshore market development, including phasing out of current capital flow management measures, would have potential benefits.	
FX intervention and reserves level	**Background**. Gross foreign reserves stood at US$102.4 billion in 2017, witnessing the first annual increase after 2012. Malaysia faced significant reserve losses in 2014 and 2015. As of mid-May 2018, gross reserves were at US$109.4 billion. **Assessment**. Under the IMF's composite reserve adequacy metric, which classifies Malaysia's regime as "floating", gross official reserves are currently within the adequacy range (118 percent of the metric as of end-2017). In case of disorderly market conditions reserves could be deployed. In the face of a capital inflow surge, a combination of further reserve accumulation and some exchange rate appreciation would be appropriate.	

	Malaysia (concluded)
Technical Background Notes	1/ The ratios to GDP are based on staff estimates using the bilateral US dollar exchange rate (official statistics are published in national currency). As of end-2017, gross external assets were 132 percent of GDP. 2/ Malaysia's local currency external debt reflects holdings of domestically-issued debt (mainly Malaysian Government Securities-MGS) by nonresident investors (about 12.2 percent of GDP as of end-2017). Short-term FX-denominated debt largely belongs to the banking system and a good portion is matched by short-term foreign currency assets. 3/ The 2017 EBA norm is lower than the 2016 norm, reflecting refinements and data updates to the EBA model. But the changes are within the standard error of estimation. 4/ The REER gap is based on the estimated semi-elasticity of CA to REER at –0.47. The elasticity estimate has been updated from the last assessment. It is based on cross-country estimates of export and import elasticities, obtained from the IMF's Consultative Group on Exchange Rates (CGER), and adjusted for updates to Malaysia's trade openness and share of commodity exports. 5/ Since the Global Financial Crisis, the financial account balance fluctuated between net inflows of 17 percent of GDP in 2011Q2 and net outflows of 11.5 percent of GDP in 2014Q1. 6/ On December 2, 2016, the Financial Markets Committee (FMC) announced a package of measures aimed at facilitating onshore FX risk management and enhancing the depth and liquidity of onshore financial markets. Two of these measures were classified as capital flow management measures under the IMF's Institutional View on capital flows. In addition, the authorities' strengthened enforcement of regulations on resident banks' non-involvement in offshore ringgit transactions was considered as enhanced enforcement of an existing capital flow management measure. In April, September, and November 2017, additional measures were announced to help deepen the onshore financial market and facilitate currency risk management.

	Mexico	Overall Assessment
Foreign asset and liability position and trajectory	**Background**. Mexico's NIIP was -45.7 percent of GDP in 2017 (gross foreign assets and liabilities were 54.8 percent and 100.6 percent of GDP, respectively). Over the past five years, the NIIP has remained relatively stable at around -47 percent of GDP, with negative balance of payments flows largely compensated for by exchange rate- and other valuation effects. While known portfolio assets are small, portfolio liabilities stood at 43.5 percent of GDP in 2017, of which around one fifth were holdings of local-currency government bonds. A predominant share of FX liabilities was denominated in US dollars (80 percent in the case of outstanding federal government securities). 95 percent of debt securities liabilities were long term, mainly FX-denominated (41 percent) and local currency-denominated government bonds (28 percent), with average maturities of 21 and 8 years, respectively. The NIIP-to-GDP ratio is projected to decline only marginally to about -44 percent by 2023. **Assessment.** While the NIIP is sustainable, the large gross foreign portfolio liabilities holdings could be a source of vulnerability in case of global financial volatility. A significant weakening of the peso could complicate policy making through balance sheet exposures.	**Overall Assessment**: *In 2017, Mexico's external sector position was broadly consistent with medium-term fundamentals and desirable policies.* The depreciation of the peso in 2016 and early 2017 contributed to the strengthening of the CA in 2017. Uncertainty about the future trade relations with the United States also contributed to a decline in private investment, while public investment continued to decline driven by a decline in investment by the state oil company (PEMEX). The undervaluation of the REER was partly reversed during the second half of 2017, reflecting a perceived reduction in the risk of severe protectionist actions. Taking into account the temporary effects on the exchange rate, staff assesses the CA and the REER to remain broadly in line with medium-term fundamentals and desirable policies. **Potential policy responses**: Despite the absence of external imbalances at this point, further structural reforms to improve competitiveness and strengthen exports will be essential for boosting growth while maintaining external sustainability also in the medium- and long term. The authorities have committed to reducing the public sector borrowing requirement from 4.6 percent of GDP in 2014 to 2.5 percent in 2018, and met this target with a margin already in 2017. The central bank sets monetary policy to ensure that inflation remains close to the 3-percent target. Staff recommends that the authorities continue to rely on the floating exchange rate as the main shock absorber, and use foreign exchange intervention solely to prevent disorderly market conditions. The IMF Flexible Credit Line provides an added buffer against global tail risks.
Current account CA Assessment 2017	**Background**. In 2017, the current account (CA) deficit continued to narrow to 1.7 percent of GDP (1.4 percent cyclically adjusted), from 2.1 percent in 2016. This was driven by a decline in both public and private investment, the former in particular related to oil and gas investment by the state-owned oil company, PEMEX, and the latter partly because of uncertainties around external trade relations. Despite higher oil prices, the oil balance fell further, reflecting continued low production, although this was more than offset by an exceptionally strong non-oil goods balance. **Assessment**. The EBA model estimates a cyclically adjusted current account norm of -2.5 percent of GDP in 2017. 1/ This implies a CA gap of 1.1 percent of GDP in 2017. Staff estimates a somewhat smaller gap within the range of -0.5 and 1.5 percent of GDP, as the temporary reduction in investment will unwind going forward, supported partly by the improving sentiment and a strengthening of the peso, although uncertainties remain high. 2/ Actual CA | -1.7 | Cycl. Adj. CA | -1.4 | EBA CA Norm | -2.5 | EBA CA Gap | 1.1 | Staff Adj. | 0.6 | Staff CA Gap | 0.5	
Real exchange rate	**Background**. The average REER in 2017 was 2.2 percent stronger than the 2016 average. It appreciated by 15.5 percent relative to its January 2017 low, reflecting a perceived reduced risk of severe protectionist action by key trading partners. The free-floating exchange rate has been a key shock absorber in an unsettled global environment. In 2018, the peso initially strengthened substantially on more optimism about the NAFTA negotiations, but this was fully reversed from mid-April to mid-May as NAFTA uncertainty remained, with the peso reaching its weakest level since early 2017. As of May 2018, the REER had depreciated by 2.4 percent relative to the 2017 average. **Assessment**. The EBA level REER regression estimates an undervaluation of 11.9 percent in 2017. The index approach yields higher undervaluation (23.2 percent). Staff puts less weight on the index approach as it has shown the peso to be persistently undervalued for the last 9 years. The external sustainability approach suggests a 1.5 percent undervaluation and the staff-assessed CA gap implies a REER undervaluation of 3.8 percent (applying an estimated elasticity of 0.13). Considering all estimates and the uncertainties around them, staff assesses Mexico's real effective exchange gap to be in the range of 4 to -12 percent. The peso is thus broadly in line with fundamentals.	
Capital and financial accounts: flows and policy measures	**Background**. During 2010-14, a large share of capital inflows went into purchases of locally-issued government paper and other portfolio investments. In 2015-17 gross portfolio inflows slowed markedly. Net flows from local currency government securities were marginally negative in 2017, due primarily to the elimination of previous arbitrage opportunities favoring holdings of short term peso securities. Going forward, structural reforms are expected to lead to higher FDI, while portfolio inflows are unlikely to return to the previous high growth rates. **Assessment**. The long average maturity of sovereign debt and the high share of local currency financing reduce the exposure of government finances to depreciation risks. The banking sector is well capitalized and liquid and assessed to be resilient to large shocks. Non-financial corporate debt levels are low and foreign exchange risks well covered by natural and financial hedges. Nonetheless, the strong presence of foreign investors leaves Mexico exposed to greater risk of capital flow reversals and risk premium increases. The authorities have refrained from capital flow management measures. Capital flow risks are also mitigated by prudent macroeconomic policies.	
FX intervention and reserves level	**Background**. The central bank remains committed to a free-floating exchange rate, which has been the key shock absorber, while discretionary intervention is used solely to prevent disorderly market conditions. In the past, the central bank built up reserves primarily through purchases of the net foreign currency proceeds of the state oil company, which have declined substantially, and occasionally through auctions. 3/ At end-2017, FX reserves had declined to US$175.5 billion (15.3 percent of GDP) from US$178.0 at end-2016. In February 2017, the Foreign Exchange Commission announced a new FX hedging program, enabling the Bank of Mexico to offer up to US$20 billion of non-deliverable forwards (NDF) settled in pesos with a maturity of up to 12 months. The program adds to the authorities' toolkit to counter disorderly market conditions. Several auctions took place in 2017, with total NDF sales amounting to US$5.5 billion. As of mid-May, no new NDF sales or other discretionary interventions had taken place in 2018. **Assessment**. At 123 percent of the ARA metric and 271 percent of short-term debt (at remaining maturity), the current level of foreign reserves remains adequate. Staff recommends that the authorities continue to maintain reserves at an adequate level over the medium term. The Flexible Credit Line arrangement has been an effective complement to international reserves, providing protection against global tail risks.	

	Mexico (concluded)
Technical Background Notes	1/ The current account norm estimate has a standard error of 1.4 percent. 2/ More specifically, staff-assessed cyclically adjusted CA is somewhat wider than implied by the EBA model (-2.0 instead of -1.4 percent of GDP). 3/ Rules-based intervention mechanisms were in place between December 8, 2014 and February 17, 2016. During this time, pre-announced amounts were automatically offered for auction when the exchange rate depreciated by more than a threshold (1 or 1.5 percent) on a given day. Regular auctions with no minimum price were also used. Since February 17, 2016, the authorities moved to discretionary intervention and used it only once in 2016 and once in 2017 (US$2 billion). Data on intervention amounts are published weekly.

<table>
<tr><th></th><th>The Netherlands</th><th>Overall Assessment</th></tr>
<tr><td>Foreign asset and liability position and trajectory</td><td>Background. The Netherlands' net international investment position (NIIP) increased to 74 percent of GDP at the end of 2017 (with gross assets and liabilities totaling 1251 and 1177 percent of GDP, respectively), rising from almost balanced NIIP at end-2009. The largest component of the NIIP comes from the net FDI stock, which reached 956 billion euro (130 percent of GDP) at the end of 2017. TARGET2 assets on the euro system increased to reach 120 billion euro. Over the medium term, the NIIP is expected to continue growing to about 100 percent of GDP, in line with projected sizable current account (CA) surpluses.
Assessment. The Netherlands' safe haven status and its sizable foreign assets limit risks from its large foreign liabilities.</td><td rowspan="5">Overall Assessment:
The external position in 2017 was substantially stronger than the level consistent with medium-term fundamentals and desirable policy settings.
The Netherlands' status as a trade and financial center and natural gas exporter make an external assessment more uncertain than usual.

Potential policy responses:
The expansionary fiscal policy planned by the new government, progress in repairing household balance sheets, and the strengthening of the banking system could support domestic demand and adequately contribute to reducing excess external imbalances. Higher wage growth, consistent with tighter labor market conditions, would however be needed to help rebalancing within the monetary union. In addition, structural reforms aimed at raising the productivity of small domestic firms and encouraging domestic productive investment, as well as pension reforms to reduce precautionary savings, would also reduce the CA surplus.</td></tr>
<tr><td>Current account</td><td>Background. The CA surplus increased to 10.2 percent of GDP in 2017 (10.3 percent cyclically adjusted), driven by continued strong net exports. The CA has been in surplus since 1981—a reflection of a positive goods and services balance—and until 2000 was mainly driven by household savings. Since 2001 however, non-financial corporate net savings have progressively taken over as the main driver of the surpluses, with large and global corporate savings financing substantial FDI outflows. Households savings have nonetheless also risen since mid-2008 as a result of deleveraging following the sharp declines in housing prices and increases in mandatory contributions to the second-pillar pension funds. The Netherlands' status as a trade and financial center and natural gas exporter likely plays a role to account for the strong structural position.
Assessment. The EBA CA model estimates a CA norm of 3.5 percent of GDP and a CA gap of 6.8 percent of GDP in 2017 1/. As the CA surplus essentially reflects the high corporate savings and liquidity of Netherlands-based multinationals, partly due to some favorable tax treatment for corporate income, as well as more recent but possibly long-lasting increases in household saving rates, the assessment of the EBA estimated current account gap is particularly uncertain. Taking these factors into account, staff assesses the norm in a range of 1.5-5.5 percent of GDP, and a corresponding CA gap of 4.8-8.8 percent of GDP. In the short term, a more expansionary fiscal stance will put some downward pressure on the surplus, while over the medium to long term further declines in the surplus will be supported by progress in private sector deleveraging, declining gas exports, and demographic trends, including divestment by pension funds.</td></tr>
<tr><td>CA Assessment 2017</td><td>
<table>
<tr><td>Actual CA</td><td>10.2</td><td>Cycl. Adj. CA</td><td>10.3</td><td>EBA CA Norm</td><td>3.5</td><td>EBA CA Gap</td><td>6.8</td><td>Staff Adj.</td><td>0.0</td><td>Staff CA Gap</td><td>6.8</td></tr>
</table>
</td></tr>
<tr><td>Real exchange rate</td><td>Background. The real effective exchange rate (REER) has been on an appreciation path since April 2015. The annual average CPI-based and ULC-based REER appreciated 1 percent and 1.7 percent, respectively, in 2017. The REER appreciated by an additional 0.9 percent through May 2018, relative to the 2017 average.
Assessment. The EBA REER models indicate a range of overvaluation of 10.6 percent (index model) to slight undervaluation of 0.7 percent (level model) in 2017, largely attributable to unexplained residuals. The staff-assessed CA gap implies a REER undervaluation of 9.2 percent (elasticity of 0.74). Taking into account all estimates and the uncertainty surrounding the EBA REER results, staff assesses that the REER remained undervalued by around 10 percent within a range of 7–13 percent.</td></tr>
<tr><td>Capital and financial accounts: flows and policy measures</td><td>Background. Net FDI and portfolio outflows dominate the financial account. FDI outflows are driven by the investment of corporate profits abroad. On average, gross FDI outflows largely match corporate profits. 2/
Assessment. The strong external position limits vulnerabilities from capital flows. The financial account is likely to remain in deficit as long as the corporate sector continues to invest substantially abroad.</td></tr>
<tr><td>FX intervention and reserves level</td><td>Background. The euro is a global reserve currency.
Assessment. Reserves held by the euro area are typically low relative to standard metrics, but the currency is free floating.</td></tr>
</table>

	The Netherlands (concluded)
Technical Background Notes	1/ In comparison with last year, the EBA-estimated CA gap in 2017 (unexplained residual plus the contribution of identified policy gaps) widened by 3.2 percent of GDP, reflecting increasing unidentified residuals. The larger gap reflects a higher cyclically adjusted CA surplus (from 8.9 to 10.3 percent of GDP) and a much lower CA norm (from 5.3 to 3.5 percent of GDP) due to the exclusion of the financial center dummy. 2/The larger external balance sheet, presence of large international corporations, and issues related to the measurement of the current account add uncertainty to this assessment. According to the DNB, half of the positions in a ssets and liabilities are attributable to subsidiaries of foreign multinationals.

	Poland	Overall Assessment
Foreign asset and liability position and trajectory	**Background.** The net international investment position (NIIP) stood at negative 65 percent of GDP in 2017, broadly in line with the average level of recent years. Gross liabilities increased to 118 percent of GDP, while gross assets remained at the level of 2016 (52 percent of GDP). FDI (equity and debt) accounted for 45 percent of gross external liabilities in 2017, and is diversified across sectors and source countries. While gross external debt is sizable (72 percent of GDP at end-2017), a quarter of it is liabilities to direct investors. The share of short-term debt (at remaining maturity) is relatively high (28 percent of total gross debt). Currency mismatch stems from the different shares of euro-, USD- and zloty-denominated instruments in gross assets and liabilities, and therefore, movements in bilateral exchange rates of these three currencies affect the NIIP. **Assessment.** While sizable external debt, including short-term debt, presents a vulnerability, rollover risk is mitigated by the large share of debt FDI, which tends to be stable. Sizable reserves also help to mitigate liquidity risk that may arise from rolling over the large amount of short-term debt.	**Overall Assessment**: *The external position in 2017 was broadly in line with medium-term fundamentals and desirable policies.* The cyclically adjusted CA balance in 2017 is expected to decline going forward on accelerated absorption and utilization of EU funds. Reserves are sufficient to guard against external shocks and disorderly market conditions. Developments since end-2017 do not change the overall assessment. **Potential policy responses**: Policies should manage the cyclical upswing to preserve external balance. This will require timely monetary policy responses to prevent nascent overheating pressures from becoming more widespread and migrating to consumer prices. A gradual structural fiscal consolidation is also needed from a cyclical perspective and to lower the structural deficit in order to create space to absorb future costs of adverse demographics and the eventual decline in EU funds.
Current account CA Assessment 2017	**Background.** Sizable CA deficits during 2004-14 have been replaced more recently by close-to-balance/small surplus positions, notwithstanding a significant primary income deficit. The improvement in the CA followed a large depreciation during 2014-16 and lower public investment due to the transition to the 2014-20 EU funds cycle, with favorable terms of trade contributing as well. Poland's CA turned positive in 2017 at 0.3 percent of GDP, as the increase in the services surplus more than offset the decline in the goods surplus. From a saving-investment perspective, the increase in the CA in 2017 was supported by low public investment due to delayed EU funds absorption. **Assessment.** For 2017, the cyclically adjusted current account stood at a surplus of 0.8 percent of GDP, and the EBA CA norm was a deficit of 1.7 percent of GDP. The resulting EBA gap of 2.4 percent of GDP reflects the sum of domestic and external policy gaps of 0.4 percentage points, and an estimation residual of 2.1 percentage points. Delayed absorption and utilization of EU funds account for about 1.4 percentage points of the EBA gap. 1/ Staff assesses that the CA was broadly in line with fundamentals and medium-term policies in 2017, with a CA gap range centered on 1 (± 1) percent of GDP. 2/ 3/
	Actual CA | 0.3 | Cycl. Adj. CA | 0.8 | EBA CA Norm | -1.7 | EBA CA Gap | 2.4 | Staff Adj. | 1.4 | Staff CA Gap | 1.0
Real exchange rate	**Background.** The annual-average real effective exchange rate (REER) depreciated by a cumulative 7¾ percent during 2014-16, largely on nominal depreciation vis-à-vis the US dollar and the Swiss franc, as the zloty tends to move in line with the euro. The depreciation is consistent with NBP policy rate cuts in response to deflationary pressures and domestic policy uncertainties in the run-up to and following the 2015 election. However, the REER appreciated by 3.2 percent on average in 2017 (6.7 percent from end-2016 to end-2017), mainly on account of nominal appreciation. Against the backdrop of general volatility in emerging market economies, between end-2017 and end-May 2018, the zloty weakened by about 6.9 percent against the US dollar, and by 5.9 percent against the euro, with no intervention from the NBP. Estimates through May 2018 show that the REER has appreciated by 6.4 percent relative to the 2017 average. **Assessment.** The EBA REER and CA models suggest an undervaluation of between 0 and 5 percent for 2017. The REER gap implied by the EBA CA model is -5 percent and the REER index model suggests a gap of -2.5 percent. 4/ Overall, staff assesses Poland's REER in 2017 to have been close to the level consistent with fundamentals and desirable policy settings, with a gap in range of -5 to 0 percent.	
Capital and financial accounts: flows and policy measures	**Background.** The capital account is dominated by EU funds inflows for financing investment projects, despite a temporary slowdown in EU funds absorption in 2016-17 due to the transition to the 2014-20 EU funds cycle. In recent years, net financial inflows have decreased and were volatile. **Assessment.** The foreign holdings (around 41.7 percent) of government debt securities indicate potential vulnerabilities, but the ratio continued to decline in 2017 as domestic banks increased their holdings in response to the introduction of the bank asset tax, which exempts government bonds. The diversified foreign investor base is another mitigating factor.	
FX intervention and reserves level	**Background.** Gross international reserves were stable at US$113 billion at end-2017. Net reserves, which exclude the NBP's repo operations (part of its reserve management strategy) from gross reserves, have increased from US$96.1 billion at end-2016 to about US$104.9 billion at end-2017 as the NBP has continued to build an adequate precautionary reserve position. The zloty has floated freely. **Assessment**. Net reserves are now about adequate, standing at 95 percent of the IMF's composite reserve adequacy (ARA) metric in 2017 (gross reserves are about 110 percent of the ARA metric).	

	Poland (concluded)
Technical Background Notes	1/ The cyclically adjusted CA balance is therefore assessed to be -0.7 (instead of model-implied 0.8) percent of GDP. 2/ The 0.4 percentage points contribution of identified policy gaps reflects a combination of a domestic fiscal policy gap of -0.4 percentage points that is more than offset by fiscal gaps in trading partners, resulting in a positive 0.2 percentage points contribution of fiscal policies to the current account gap. The credit gap and health spending together contribute an additional 0.3 percentage points to the total policy gap. Capital controls and reserves contribute negative 0.1 percent of GDP to the total gap. 3/ The EBA estimation standard error for the 2017 CA norm is 0.6 percent of GDP. 4/ The REER level model for Poland suggests an undervaluation of 16.9 percent. However, the model has residuals of 14.6 percent, and may not adequately capture changes in the equilibrium REER that occurred during the sample period.

	Russia	Overall Assessment
Foreign asset and liability position and trajectory	**Background**. The net international investment position (NIIP) at end-2017 was at 18 percent GDP (marginally higher than in 2016 and up from 10 percent in 2013, the last pre-crisis year). Gross assets were at 88 percent of GDP and liabilities—split evenly between equity and debt—constituted 70 percent of GDP, both lower than in 2016 on account of higher dollar GDP and private sector deleveraging. Total external debt was at 34 percent of GDP at end-2017, a 6 percentage point reduction from the year before. 1/ There are no obvious maturity mismatches between the gross asset and liability position. Historically, the NIIP position has not kept pace with the CA surpluses due to unfavorable valuation changes and the treatment of "disguised" capital outflows. 2/ **Assessment**. The projected current account surpluses suggest that Russia will continue to maintain a positive IIP, which lowers risks to external stability. Moreover, official external assets have been increasing rapidly since the introduction of the new fiscal rule. The recent external deleveraging by the private sector reduces risks further.	**Overall Assessment**: *The external position in 2017 was moderately weaker than suggested by fundamentals and desirable policy settings. Since then, worsening geopolitical tensions have weakened the exchange rate, but have not altered the overall assessment. While this has not altered the overall assessment, the correction likely brought the REER closer to fundamentals.* Since 2016, the REER has recovered as oil prices rebounded, economic uncertainty declined, and appetite for Russian government assets recovered. However, the evolving nature of economic sanctions against Russia and their structural implications create exceptional uncertainty when assessing the external position. **Potential policy responses**: Russia's moderately weaker external position and lingering uncertainty suggest the need for greater diversification and prudence. Fiscal policy should operate within the parameters of the new fiscal rule to reduce the impact of oil price volatility on the non-oil sector, while government expenditure should be rebalanced to capital spending, while leaving space for higher health spending. This rebalancing—coupled with a renewed emphasis on structural reforms to invigorate the private sector—would help increase savings on a net basis, and yet create some room for somewhat higher private and public-sector investment over the medium term.
Current account	**Background**. Following a decade of continuously shrinking surpluses, the Current Account (CA) balance temporarily surged on the back of an oil price shock to 5 percent of GDP in 2015, as reduced oil export revenues (approximately 7 percent of GDP) were more than offset by falling absorption. However, demand recovery has reduced the surplus to 1.9 percent of GDP in 2016, before recovering energy prices marginally raised it to 2.3 percent of GDP in 2017 (despite a further deterioration of 0.2 percent of GDP in the non-energy CAB). In the medium-term, the authorities' fiscal consolidation plans should support a gradual increase in the CAB (mostly on account of a rising non-oil balance). **Assessment**. The EBA CA model yields a norm for 2017 of 3.8 percent of GDP, compared with a cyclically adjusted CA surplus of 3.2 of GDP, resulting in a CA gap of –½ percent of GDP. 3/ There are substantial uncertainties about the external assessment when volatile oil prices play a dominant role in the economy. The impact and duration of sanctions are also difficult to quantify but, on balance, staff assesses that they create long-lasting uncertainty, raising the CA norm both through higher precautionary savings and lower investment. Staff assesses the 2017 CA gap at –1¼ percent, with a confidence interval between –2½ and 0 percent. The fiscal gap accounts for most of the CA gap. Thus, in the medium term, fiscal policy should be tightened—while raising infrastructure and health spending—to rebuild buffers and save more of the oil wealth for future generations. The new fiscal rule provides a reasonable mechanism for achieving this goal.	
CA Assessment 2017	Actual CA 2.3 | Cycl. Adj. CA 3.2 | EBA CA Norm 3.8 | EBA CA Gap -0.5 | Staff Adj. 0.7 | Staff CA Gap -1.3	
Real exchange rate	**Background**. Following the dual shocks of oil prices and sanctions, and the floating of the ruble in November 2014, the REER depreciated by over 35 percent between mid-2014 and February 2016. Part of this depreciation represented an overshooting that was corrected in 2017, when the REER appreciated by 16 percent. The REER remained broadly stable since mid-2017 at a level some 15 percent below the pre-crisis level. By May 2018, the REER has depreciated by 5.8 percent relative to the 2017 average, in part due to the imposition of new US sanctions in April. **Assessment**. Both the EBA Level and Index REER models indicate a small undervaluation of around 5 percent. Staff assesses that the 2017 REER was between 0 and 10 percent above its equilibrium level, in line with the staff-assessed CA gap (applying an estimated elasticity of 0.26).	
Capital and financial accounts: flows and policy measures	**Background**. Net private capital outflows continued in 2017, though at a significantly slower pace than in 2014-15, as confidence has returned. Private sector external deleveraging has continued in the face of limited access to international capital markets. Nonetheless, volatile oil prices will continue to weigh on the outlook. Over the medium term, structural outflows are expected to decline but only provided that Russia improves its investment climate. **Assessment**. While Russia is exposed to risks of accelerated capital outflows because of geopolitical uncertainties, the floating exchange rate regime and large international reserves provide substantial buffers to help absorb such shocks.	
FX intervention and reserves level	**Background**. Since the floating of the ruble in November 2014, FX interventions have been limited. International reserves rose to US$457 billion at end-March 2018, up from U$378 billion at end-2016, due to valuation effects and MoF's FX purchases in line with the provisions of the new fiscal rule, which attempts to shield the non-oil economy from oil price volatility. In response to geopolitical volatility in early April, FX purchases were temporarily backloaded. **Assessment**. International reserves at end-2017 were equivalent to 264 percent of the IMF's reserve adequacy metric, considerably above the adequacy range of 100-150 percent. Considering Russia's vulnerability to oil price shocks, an additional commodity buffer of $58 million is appropriate, translating into a ratio of reserves to the buffer-augmented metric to 195 percent, a level still considerably above the adequacy level, but justifiable given the high degree of uncertainty related to sanctions. 4/ Large FX interventions should be limited to episodes of market distress.	

	Russia (concluded)
Technical Background Notes	1/ Russia's foreign assets are mostly in foreign currency (over 93 percent as of end-2017), while liabilities are predominantly in rubles (64 percent). However, about three-quarters of external debt is denominated in foreign currency. The 19 percent increase in the dollar GDP in 2017 (on account of rebounding oil prices and ruble appreciation) explains most of the reduction in assets- and liabilities-to-GDP ratios. 2/ Unfavorable valuation changes arise because the Russian stock market has performed very well in the last 15 years as the oil price soared, boosting the valuation of foreign-owned assets. "Disguised" capital outflows include transactions such as pre-payments on import contracts where the goods are not delivered, repeated large transfers abroad that deviate from standard remittances behavior, or securities transactions at inflated prices. The CBR includes estimates of "disguised" capital outflows in the financial account but not in the foreign asset position of the reported NIIP. Hence, the actual NIIP position could be higher than the reported level, and this treatment of "disguised" outflows may explain part of the discrepancy between accumulated CA surpluses and the reported NIIP position. 3/ The 2017 CA norm for Russia is 2½ percentage points of GDP lower than under the previous methodology. 4/ The commodity buffer is computed in line with Annex III of the Guidance Note on Reserve Adequacy.

	Saudi Arabia	Overall Assessment
Foreign asset and liability position and trajectory	**Background**. Net external assets were 81 percent of GDP at end-2017. 1/ External assets declined by 10 percent of GDP during 2017 and 17 percent of GDP since their 2015 peak largely due to a decline in central bank FX reserves. External liabilities rose by 1.1 percent of GDP in 2017 mainly because of new government borrowing. Projections suggest the NIIP-to-GDP ratio will increase over the medium-term to around 92.6 percent of GDP in 2023 as the current account (CA) remains in surplus. No details are available on the composition of external assets. **Assessment**. The external balance sheet remains very strong. Substantial accumulated assets represent both savings of the exhaustible resource revenues for future generations and protection against vulnerabilities from oil price volatility.	**Overall Assessment**: *The external position in 2017 was weaker than the level consistent with desirable medium-term fiscal policy settings. Planned fiscal adjustment needs to be successfully implemented to further strengthen the CA and increase saving for future generations.* The pegged exchange rate provides Saudi Arabia with a credible policy anchor. In 2017, the REER depreciated, but this trend has reversed in recent months with the strengthening of the US dollar. Given the close link between the fiscal and external balance and the structure of the economy, with exports dominated by oil and oil-related products and limited substitutability between imports and domestically produced goods, external adjustment will be driven primarily by fiscal policy. The external balance sheet remains very strong. Despite the substantial drawdown since 2015, reserves remain very comfortable when judged against standard IMF metrics, although external savings are not sufficient from an intergenerational equity perspective. Under the government's planned fiscal adjustment, reserves will increase over the medium term. **Potential policy responses**: Continued fiscal consolidation is necessary over the short- and medium-term to strengthen the CA and increase saving for future generations. The authorities planned fiscal adjustment is based on further energy price reforms, non-oil revenue measures, and expenditure restraint. The non-exported oil primary fiscal deficit is expected to narrow substantially over the medium-term and reduce the external gap. Fiscal adjustment should be supported by reforms to strengthen the fiscal framework. Structural reforms that help diversify the economy and boost the non-oil tradables sector over the medium-term will also support a stronger external position over time.
Current account	**Background**. The CA deficit moved back into a surplus of 2.7 percent of GDP in 2017 from a deficit of 3.9 percent of GDP in 2016. Imports of goods fell by 7 percent as the economy contracted while exports increased by 20 percent largely due to higher oil prices (import volumes fell by 9 percent while export volumes decreased by 1.5 percent). The terms of trade improved by 22.5 percent in 2017 and is projected to improve by a further 28.8 percent in 2018. The trade balance rose to over 15 percent of GDP. The CA surplus is expected to increase to 9.3 percent of GDP in 2018 as oil revenues increase further and then to narrow over the medium-term as the oil price declines. 2/ **Assessment**. The reliance on oil subjects the CA to wide swings and complicates the application of standard external assessment methodologies. The estimated CA gap varies with the methodology. The estimated CA gap in 2017 varies depending on the methodology: -2.4 percent of GDP using the EBA-lite macro-balance approach, -1.9 percent of GDP using the external sustainability approach, and -1.6 percent using an alternative specification for oil-exporters. 3/ Staff assesses a CA gap in a range of -1 to -3 percent of GDP in 2017. Planned fiscal adjustment needs to be successfully implemented to further strengthen the CA over the medium-term.	
CA Assessment 2017	Actual CA: 2.7 | Cycl. Adj. CA: -- | EBA CA Norm: -- | EBA CA Gap: -- | Staff Adj.: -- | Staff CA Gap: -2.0	
Real exchange rate	**Background**. The Riyal has been pegged to the US dollar at a rate of 3.75 since 1986. The REER in 2017 was on average 15 percent above its 10-year average, but this gap declined to 10 percent by year-end. Estimates through May 2018 show that the REER has depreciated by 2.0 percent relative to the 2017 average. **Assessment**. The REER depreciated with the US dollar in 2017, but this trend has reversed in recent months. Exchange rate movements have a limited impact on competitiveness in the short-run as most exports are oil or oil-related products and there is limited substitutability between imports and domestically-produced products, which in turn have significant imported labor and intermediate input content. Staff estimates an average REER gap in 2017 in the range of 10-20 percent, but at the lower end of this range by end-2017. As fiscal consolidation proceeds, it would be expected that the REER gap would narrow as domestic costs and prices are restrained.	
Capital and financial accounts: flows and policy measures	**Background**. Recorded net financial outflows increased in 2017. Errors and omissions declined to 0.6 percent of GDP in 2017 compared with 10.3 percent of GDP in 2016. FX reserves continued to fall, but at a slower pace. **Assessment**. Analysis of the financial account is complicated by the large errors and omissions in the balance of payments in some years. The strong reserves position limits immediate risks and vulnerabilities.	
FX intervention and reserves level	**Background.** The government is developing a sovereign wealth fund by broadening the mandate of the Public Investment Fund (PIF). Nevertheless, most of the government's foreign assets are still held at the central bank within international reserves. Reserves fell to $489 billion (71 percent of GDP, 28 months of imports, and 470 percent of the IMF's reserve metric) at end-2017, down from $727 billion in 2014. **Assessment**. Reserves play a dual role—savings for both precautionary motives and for future generations. Reserves are more than adequate for precautionary purposes (measured by the IMF's metrics). Nevertheless, continued fiscal adjustment is needed to strengthen the CA and increase savings for future generations.	

	Saudi Arabia (concluded)
Technical Background Notes	1/ The NIIP may be underestimated given the large errors and omissions in the balance of payments over many years and inconsistencies between the BoP and IIP data. 2/At current oil production, a $1 change in the oil price results in a 0.4 percent of GDP first-round change in the CA balance. The oil price is assumed to be $70.7 in 2018, declining to $59.2 in 2023 ($53.2 in 2017). 3/ *EBA models do not include Saudi Arabia*. Staff considered three methodologies, including one that incorporates the special intertemporal considerations that are dominant in economies in which exports of non-renewable resources are a very high share of output and exports. Estimated CA norms for the external sustainability (ES) approach were 5.5 percent of GDP and 2.7 percent of GDP for the constant real per capita annuity and constant real annuity allocation rules, respectively. Using the macro-balance approach, the CA norm is estimated at 4.6 percent of GDP under the EBA-lite approach. An alternative specification estimated on a sample of oil-exporting countries and a narrower set of control variables (see Behar and Fouejieu, 2017) suggests a CA norm of 3.8 percent of GDP.

<table>
<tr><th></th><th>Singapore</th><th>Overall Assessment</th></tr>
<tr><td>Foreign asset and liability position and trajectory</td><td>Background. The net international investment position (NIIP) increased to 248 percent of GDP in 2017, reaching the highest level since 2009 (though still lower than pre-GFC peak of 265 percent of GDP in 2006). The current account (CA) surplus has been a main driver since the GFC, although in 2017 valuation effects also contributed significantly to the increase in the NIIP. CA and growth projections imply that the NIIP will rise over the medium term.
Assessment. The external balance sheet is not a major source of risk. Potential vulnerabilities posed by the large gross non-FDI liabilities (472 percent of GDP in 2017)—predominantly cross-border deposit taking by foreign bank branches—are mitigated by banks' large short-term external assets and authorities' close monitoring of banks' liquidity risk profiles. However, given Singapore's status as a financial center, global financial conditions should be carefully monitored. Singapore has large official reserves and other official liquid assets. 2/</td><td rowspan="5">Overall Assessment:
The external position in 2017 was substantially stronger than what is consistent with fundamentals and desirable policies. The current account balance was similar to the previous year. The assessment for 2017 and the size of the imbalance are subject to a wide range of uncertainty, reflecting Singapore's very open economy and position as a global trading and financial center.

Potential policy responses:
Singapore's economy is undergoing structural transformation in light of a rapidly aging population and challenges posed by transition to a new digital economy. Higher public investment addressing these issues, investments in physical infrastructure, human capital, and public health-care related expenditures would help moderate the current account imbalances over the medium term by lowering net public saving. Structural reforms also aim at improving labor productivity, which supports a trend appreciation of the currency. The gradual normalization of monetary policy recently initiated by MAS will help rebalancing by allowing gradual appreciation of the NEER over time.</td></tr>
<tr><td>Current account

CA Assessment 2017</td><td>Background. The CA surplus of 19 percent of GDP in 2017, similar to in 2016, reflects a strong goods balance that is partly offset by deficits in the services and income account balances. 3/ The oil trade deficit widened in 2017. 4/ Structural factors and policies that boost savings, such as Singapore's status as a financial center, a limited social safety net, high income inequality, and the rapid pace of aging combined with a mandatory defined-contribution pension scheme (whose assets were about 70 percent of GDP in 2015) are the main drivers of Singapore's high saving rate and strong external position. Fiscal policy has been associated with increased social and infrastructure spending in recent years. If this trend continues, it will contribute to a lower CA surplus over the medium term.
Assessment. Singapore is a small, very open economy with a large positive NIIP and high income per capita, but it is aging rapidly. Such non-standard factors make a quantitative assessment of its CA subject to a wide range of uncertainty. Guided by the EBA framework, staff assesses the 2017 CA as substantially higher than the level consistent with fundamentals and desirable policies, by 2.5–8.5 percent of GDP. 5/ The fiscal balance contributed about 2 percent of GDP to the identified policy gap.
<table>
<tr><td>Actual CA</td><td>18.8</td><td>Cycl. Adj. CA</td><td>18.9</td><td>EBA CA Norm</td><td>--</td><td>EBA CA Gap</td><td>--</td><td>Staff Adj.</td><td>--</td><td>Staff CA Gap</td><td>5.5</td></tr>
</table></td></tr>
<tr><td>Real exchange rate</td><td>Background. The real effective exchange rate (REER) depreciated by 1 percent year over year in 2017 due to low inflation in Singapore, while the nominal effective exchange rate (NEER) appreciated by 0.2 percent year over year. This followed depreciation of REER by 3 percent and appreciation of NEER by 0.6 percent, both in cumulative terms, between 2014 and 2016. Estimates through May 2018 show that the REER has depreciated by 1.4 percent relative to the 2017 average.
Assessment. Notwithstanding the nonstandard factors that make a quantitative assessment difficult, staff assesses that the REER is 4-16 percent weaker than warranted by fundamentals and desirable policies. This assessment is subject to a wide range of uncertainty about both the underlying CA assessment and the semi-elasticity of the CA with respect to the REER.</td></tr>
<tr><td>Capital and financial accounts: flows and policy measures</td><td>Background. Singapore has an open capital account. The financial account deficit tends to rise during periods of lower uncertainty in global financial markets. It reflects in part reinvestment abroad of income from the foreign assets of the official sector. Financial flows also encompass sizable net inward FDI and smaller but more volatile net bank-related flows. 6/ In 2017, the deficit on the capital and financial account narrowed substantially to 10 percent of GDP, compared with the large deficits of 15-20 percent in 2014-16. This reflects the decrease in outflows in other investments (driven by inflows to banks) and resumed inflows in financial derivatives. As a trade and financial center in Asia, changes in market sentiment in emerging market and low-income countries in the region can affect Singapore significantly.
Assessment. The financial account is likely to remain in deficit as long as the trade surplus remains large.</td></tr>
<tr><td>FX intervention and reserves level</td><td>Background. With the NEER as the intermediate monetary policy target, intervention is undertaken to achieve inflation and output objectives. Official reserves held by the Monetary Authority of Singapore (MAS) reached US$ 280 billion (86 percent of GDP) in 2017. As a financial center prudential motives call for a large NIIP buffer also in the form of reserves.
Assessment. In addition to FX reserve held by the MAS, Singapore also has access to other official foreign assets managed by Temasek and the GIC. 7/ The current level of official external assets appear adequate, even after considering prudential motives, and there is no clear case for further accumulation for precautionary purposes.</td></tr>
</table>

	Singapore (concluded)
Technical Background Notes	1/ Staff estimates in US dollar terms. Valuation changes have been an important driver of changes in the NIIP, given the large gross assets and liabilities. 2/ Singapore's official reserves held by the Monetary Authority of Singapore (MAS) amounted to about 86 percent of GDP in 2017. 3/ Singapore has a negative income balance despite its large positive NIIP position. This reflects the lower rate of return on its foreign assets relative to the return paid on its foreign liabilities. The lower return on foreign assets may reflect the fact that the composition of Singapore's assets is tilted toward safer assets which yield lower returns. 4/ Singapore is a net oil importer, with a net oil trade deficit of about 2 percent of GDP in 2017. The oil trade deficit would be smaller if one considers the high imported petroleum product content in Singapore's exports of petrochemicals and other oil intensive products and services like water transportation. In addition, Singapore has some sectors that are closely linked to investment in the oil sectors, such as production of oil rigs. The decline in investment in the oil sector is expected to reduce Singapore's exports of these products. 5/ Nonstandard factors make quantitative assessment of Singapore's external position difficult and subject to significant uncertainty. Singapore is not included in the sample used to estimate the EBA models because it is an outlier along several dimensions (e.g., large external asset and lability positions, highly positive NFA position). Estimates based on the EBA CA framework suggest that Singapore's CA surplus is mainly explained by the high level of productivity, fiscal surplus, and its large NFA position. The estimated CA gap is about 5.5 percent of GDP (relative to the cyclically adjusted level of the CA of about 18.9 percent of GDP in 2017 and norm of about 13.4 percent of GDP). Identified policy gaps under the regression models are driven largely by the need for more fiscal spending to strengthen the social safety net. 6/ The latter is the result of considerably large gross inflows and outflows. 7/ The reserves-to-GDP ratio is also larger than in most other financial centers, but this may reflect in part that most other financial centers are in reserve-currency countries or currency unions. External assets managed by the government's investment corporation and wealth fund (GIC and Temasek) amount to at least 70 percent of GDP.

<table>
<tr><th></th><th>South Africa</th><th>Overall Assessment</th></tr>
<tr><td>Foreign asset and liability position and trajectory</td><td>Background. South Africa's economy is highly integrated into international financial markets, with large external assets and liabilities. After valuation effects led to a marked improvement of the net international investment position (NIIP) in 2015 (from –8 percent of GDP at end-2014 to 16 percent of GDP one year later), the NIIP has remained strong, standing at 12 percent of GDP as of end-2017. However, the NIIP is expected to weaken somewhat over the medium term on account of CA deficits. Gross external debt rose to 49.6 percent of GDP at end-2017 from 26 percent of GDP at end-2008 on the back of an increase in long-term debt. Short-term external debt (residual maturity) amounted to 14.2 percent of GDP at end-2017.
Assessment. Large gross external liabilities pose risks. Mitigating factors include the comfortable external asset position and the sizable rand-denominated share of external debt (about half of total external debt).</td><td rowspan="6">Overall Assessment:
The external position of South Africa in 2017 was moderately weaker than implied by fundamentals and desirable policy settings.

In 2017, the current account gap remained broadly unchanged, and South Africa remains highly reliant on non-FDI flows to finance its relatively high current account deficit. Despite several years of REER depreciation until recently, structural rigidities result in a relatively slow pace of CA adjustment. Developments since end-2017 do not change the assessment.

Potential policy responses:
Several measures would help to reduce the external position gap, including improving competitiveness and increasing employment and savings. These measures include fostering entry into key product markets (such as power generation, transportation, and telecommunications); upgrades in infrastructure and education/skills within the fiscal envelope; and greater financial inclusion. Preserving government debt sustainability and accelerating labor and product market reforms are also essential to continue to attract foreign inflows, especially durable inflows such as FDI. Seizing opportunities—such as large FDI inflow transactions—to accumulate reserves would strengthen the country's ability to deal with FX liquidity shocks.</td></tr>
<tr><td>Current account</td><td>Background. The CA deficit narrowed to 2.5 percent of GDP in 2017 from 2.8 percent in 2016, owing to a further improvement in the trade balance as terms-of-trade gains more than outweighed a pick-up in domestic demand. The CA deficit is projected to widen to around 3 percent of GDP in 2018 as the surplus on the trade balance moderates.
Assessment. The CA regression model estimates a CA norm surplus of 0.7 percent of GDP. However, an adjustment to the norm of 1.1 percent of GDP is needed given special demographic factors relative to other countries in the regression sample. 1/ Therefore, staff considers a CA norm of -0.4 percent of GDP. Over time, as policy uncertainty may unwind following the new administration's initial announcements, the CA norm may be further reduced. The cyclically adjusted CA stood at -2.5 percent of GDP in 2017. However, given statistical treatments related to the transfers and income accounts, an additional adjustment of 0.8 percent of GDP is needed. Hence, staff considers a revised cyclically adjusted CA of -1.7 percent of GDP, implying a CA gap of -1.3 percent of GDP. The CA gap is largely explained by structural factors not captured by the model. 1/
CA Assessment 2017
<table>
<tr><td>Actual CA</td><td>-2.5</td><td>Cycl. Adj. CA</td><td>-2.5</td><td>EBA CA Norm</td><td>0.7</td><td>EBA CA Gap</td><td>-3.2</td><td>Staff Adj.</td><td>-1.9</td><td>Staff CA Gap</td><td>-1.3</td></tr>
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</td></tr>
<tr><td>Real exchange rate</td><td>Background. After several years of REER depreciation, the CPI-REER appreciated by 12.4 percent on average in 2017 relative to 2016. Despite renewed depreciation in the second half of 2017, a marked appreciation at the turn of the year more than reversed this weakening. As of May 2018, the REER had appreciated an additional 5.6 percent relative to the 2017 average.
Assessment. The REER is assessed through two REER-based regressions and by computing the implied REER gap from the CA gaps. The CA approaches, on which staff puts greater weight, point to overvaluation of 2–9 percent. The REER approaches point to undervaluation of between 7.4 percent (level approach) and 13.4 percent (index approach), but these results are considered less reliable. 3/ Staff assesses a REER overvaluation of 0–10 percent for 2017, broadly consistent with the CA gap. 4/</td></tr>
<tr><td>Capital and financial accounts: flows and policy measures</td><td>Background. Net FDI flows at -1.7 percent of GDP in 2017 marked the fourth consecutive year with net FDI outflows. Portfolio investment remained strong at 4.7 percent of GDP, becoming the main source of financing of the CA deficit. Gross external financing needs stood at 14 percent of GDP in 2017.
Assessment. High reliance on non-FDI flows and high nonresident holdings of local financial assets pose risks. These are mitigated by a floating exchange rate, the fact that nonresident portfolio holdings are mainly denominated in local currency, and a large domestic institutional investor base.</td></tr>
<tr><td>FX intervention and reserves level</td><td>Background. South Africa has a floating exchange rate regime. Foreign exchange intervention is rare. At end-2017, international reserves were equivalent to 14.5 percent of GDP, down from 16 percent the year before. They cover 5½ months of projected imports, but are below the IMF's composite adequacy metric (64 percent of the metric without considering existing capital flow management measures, and 70 percent of the metric after considering them).
Assessment. As conditions allow, reserve accumulation is desirable to strengthen the external liquidity buffer, subject to maintaining the primacy of the inflation objective.</td></tr>
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	South Africa (concluded)
Technical Background Notes	1/ The staff-assessed CA gap uses results from the EBA CA regression, the External Sustainability (ES) approaches, and staff's judgment. • As South Africa is among the few outlier countries regarding adult mortality rates, the demographic indicators are adjusted to account for the younger average prime-age and exit age from the workforce. This results in an adjustor of -1.1 percent of GDP to the model-estimated CA norm. • Net current transfers related to the Southern African Customs Union (SACU), which are assessed to have a net negative impact on the CA, are not accounted for in the regression model and therefore warrant an adjustment of the cyclically adjusted CA. In addition, large and positive IIP valuation changes relative to other countries in the sample point to the need for adjusting the cyclically adjusted CA gap. The combined adjustment is 0.8 percent of GDP. • The ES approach compares the CA balance expected to prevail in the medium term with the one that would stabilize South Africa's stock of net foreign assets at its emerging market peers' benchmark (-35 percent of GDP). According to the ES approach, stabilizing South Africa's NIIP at the level of emerging market peers would require a CA deficit of 1.4 percent of GDP. Compared with staff's adjusted medium-term projection of a CA deficit of 3.6 percent of GDP, the latter implies a CA gap of -2.3 percent of GDP. 2/ Gauging the appropriate REER for South Africa is challenging as the pre-2000 average REER was at a more appreciated level than the post-2000 average. In this context, REER regression-based models are likely to point to undervaluation, unless they can link the full downward trend of the REER to deteriorating fundamentals. 3/ Applying a long-run elasticity estimate of 0.27 would suggest a REER overvaluation of 2–9 percent. However, considering the uncertainty regarding the estimates as well as the REER-regression results, staff assesses REER overvaluation in the order of 0–10 percent.

	Spain	Overall Assessment
Foreign asset and liability position and trajectory	**Background**. The net international investment position (NIIP) dropped from -35 percent of GDP in 2000 to -94 percent of GDP in 2009, driven mostly by high current account (CA) deficits but also by valuation effects. The NIIP remained elevated at -81 percent of GDP at end-2017, yet has improved by 14 percentage points since 2013, partly due to sustained CA surpluses during the period. Gross liabilities stood at 242 percent of GDP in 2017, with more than 2/3 in the form of external debt. While the private sector has deleveraged since the crisis, NIIP accounted for by the general government and the central bank increased, raising its share from around ¼ in 2010 to ¾ in 2017. Part of that increase is due to TARGET2 liabilities, which had reached 32 percent of GDP by end-2017. 1/ **Assessment**. The large negative NIIP comes with external vulnerabilities, including from large gross financing needs from external debt and potentially adverse valuation effects. Mitigating factors are a favorable maturity structure of outstanding sovereign debt (averaging 7 years) and current ECB measures, such as QE, that lower the cost of debt.	**Overall Assessment**: *The external position in 2017 was moderately weaker than consistent with medium-term fundamentals and desirable policy settings. Recent developments suggest that the external position continues to gradually strengthen.* Staff assesses Spain's current account (CA) norm to be relatively high, in part due to external sustainability risks from a large negative net international investment position (NIIP). In 2017, the CA remained in surplus, helped by robust external demand, low interest rates, and improved competitiveness from wage moderation. Spain recorded its fifth consecutive annual CA surplus, unprecedented in recent Spanish history. Despite the improvement in the CA since the pre-crisis peak deficit in 2007, achieving both a sufficiently strong NIIP and further reductions in unemployment continues to require a moderately lower real effective exchange rate for a sustained period. **Potential policy responses**: The authorities' structural reforms in response to the global financial crisis, in particular the labor market reform, with the resulting wage moderation, and fiscal deficit reductions supported the reduction in imbalances. Reducing the still sizable structural fiscal deficit is a key policy requirement to lower the remaining imbalances. Moving forward with additional structural reforms of the labor market and faster implementation of product market reforms are also required to achieve the necessary additional adjustment. Continued monetary accommodation at the euro area level to lift inflation closer to the ECB's medium-term price stability objective should support external demand and Spain's adjustment efforts.
Current account	**Background**. After a peak CA deficit in 2007 of 9.6 percent of GDP, corrected initially by a sharp contraction in imports, exports and imports have since grown strongly along with the economic recovery leading to CA surpluses in 2013-17. The CA surplus reached 1.9 percent of GDP in 2017. Regained competitiveness from wage moderation and greater internationalization efforts by Spanish firms contributed to strong export growth, and an increase in Spain's share of world goods exports. CA surpluses are projected to continue in the medium term notwithstanding the recent appreciation of the euro and the projected moderately higher oil prices. **Assessment**. The EBA CA model suggests a norm of 1.4 percent of GDP for 2017, which is roughly equal to the cyclically adjusted CA balance (1.5 percent of GDP). However, given external risks from a large and negative NIIP, staff's assessment puts more weight on external sustainability, and is guided by the objective of strengthening the NIIP to above -50 percent over the medium term. This yields a CA norm of about 3 percent of GDP, with a range of 2-4 percent of GDP, and a CA gap of -2.5 to -0.5 percent of GDP. 2/ Another factor supporting a higher CA gap is a high uncertainty about the output gap against the backdrop of past structural reforms and large structural changes of the economy: if the output gap is larger (for example, reflecting a structural level of unemployment closer to international peers), the cyclically adjusted CA would be lower and thus the gap with respect to the desirable level would be larger.	
CA Assessment 2017	Actual CA 1.9 | Cycl. Adj. CA 1.5 | EBA CA Norm 1.4 | EBA CA Gap 0.1 | Staff Adj. 1.6 | Staff CA Gap -1.5	
Real exchange rate	**Background**. In 2017, both the CPI-based and the ULC-based real effective exchange rate (REER) appreciated by 2 percent from their average 2016 levels. The CPI-based REER is still about 8 percent lower than its 2009 peak, partially reversing the 21 percent appreciation from the euro entry in 1999 until 2009. The ULC-based REER shows that the appreciation since euro entry has been substantially reversed, initially because of significant post-crisis labor shedding and, more recently, of wage moderation and enhanced output growth. After reaching its peak in 2008, the ULC-based REER depreciated by 17 percent. As of May 2018, the CPI-based REER and the ULC-based REER appreciated an additional 0.6 to 2.0 percent, relative to their 2017 averages, boosted by euro appreciation. **Assessment**. The two EBA REER models estimate an overvaluation in the range of 5.1 to 5.8 percent for 2017; whereas the CA model implies a close-to-zero overvaluation. 3/ Taking into account also the historical CPI- and ULC-based REER, and the risks from NIIP sustainability, on balance, staff assesses a 2017 REER gap in the range of 3 to 10 percent.	
Capital and financial accounts: flows and policy measures	**Background**. Financing conditions have continued to be favorable, with sovereign bond yields near historical lows. At the same time, the private sector has continued its deleveraging against the rest of the world. TARGET2 liabilities increased during 2015-17 at an annual average pace of 5 percent of GDP, reflecting the creation of liquidity within the framework of the Eurosystem's asset purchase program. In this context of plentiful liquidity, resident agents increased their net investment in foreign assets and net liability flows against the rest of the world (excluding the Bank of Spain) declined. Recent net capital outflows are also explained by a net FDI outflow. **Assessment**. The ECB's actions as well as domestic reforms and fiscal consolidation have greatly helped improve investor sentiment. However, large external financing needs both in the public and private sector leave Spain vulnerable to sudden changes in market sentiment and spillovers from Europe.	
FX intervention and reserves level	**Background**. The euro has the status of a global reserve currency. **Assessment**. Reserves held by the euro area are typically low relative to standard metrics, but the currency is free floating.	

	Spain (concluded)
Technical Background Notes	1/ Based on data available through 2017: Q4. 2/ The EBA model suggests a CA norm of 1.4 percent of GDP, with a standard deviation of 1.3 percent of GDP. This CA norm is 0.4 percentage points of GDP lower than that reported in last year's ESR report, largely reflecting data updates and refinements to the EBA framework. In the case of Spain, a reduction in the contribution of demographic factors to the CA norm was partly offset by a more positive contribution of policy variables, particularly the refined private credit variable That said, the empirically-based EBA norm doe s not fully account for the very negative NIIP, with around 30 percent of gross liabilities in the form of equity. Given external stability considerations, a CA norm in the range of 2-4 percent of GDP is necessary to strengthen the NIIP by about 5 percent of GDP annually over the next 5-10 years. 3/ The semi-elasticity of the CA to the REER is estimated at 0.28.

<table>
<tr><th></th><th>Sweden</th><th>Overall Assessment</th></tr>
<tr><td>Foreign asset and liability position and trajectory</td><td>Background. The Swedish net IIP reached 9.6 percent of GDP in 2017, up 4.6 percentage points in the year. It is expected to rise further in the medium term, reflecting the outlook for continued current account (CA) surpluses. It is worth noting that over the last decade, the average annual increase in the net IIP was about 0.7 percent of GDP, well below the average CA surplus of 5.3 percent of GDP. This gap may partly reflect negative valuation effects, but its persistence since 2000 suggests potential measurement issues. This is consistent with the large errors and omissions, which have averaged -2.9 percent of GDP in the past decade.
Assessment. Gross liabilities were 278 percent of GDP in 2017, with about a third being external debt (91 percent of GDP). Although rollovers of external debt (which include banks' covered bonds) pose some vulnerability, risks are moderated by the banks' liquidity and capital buffers. Sweden's strong FX reserves and low public debt help ensure capacity to manage pressures.</td><td rowspan="6">Overall Assessment:
Sweden's external position in 2017 was moderately stronger than the level consistent with medium-term fundamentals and desirable policies. Subsequent developments do not point to a change in the external position.

Potential policy responses:
Under current and prospective policies, a decline in the current account surplus can be expected in the medium-term. Accommodative monetary policy is supporting domestic demand growth, and some appreciation of the krona is expected when inflation returns to target. A mildly expansionary fiscal policy stance—consistent with converging to the lower medium-term surplus target—will also support demand going forward. Overall investment is solid, but it remains important to implement reforms to sustain the higher level of residential investment. Efforts to facilitate migrant integration into the labor market should continue in order to raise potential output and also reduce household uncertainties around the sustainability of Sweden's strong social model.</td></tr>
<tr><td>Current account

CA Assessment 2017</td><td>Background. The CA balance is estimated to have fallen to 3.2 percent of GDP in 2017, from 4.2 percent in 2016 and well below its average in the past decade (5.3 percent). This decline is in part related to an unusually large decline in net services (of 1.1 percent of GDP), with three-fifths of which coming from financial services and other unspecified services.
Assessment. The cyclically adjusted current account was 3.6 percent of GDP in 2017, 1.8 percentage points above the cyclically adjusted EBA norm of 1.8 percent of GDP. However, the estimated EBA norm for Sweden has been below the actual CA balance for the past two decades, suggesting that factors not captured by the model may also be driving Sweden's savings-investment balances. Overall, staff assesses Sweden's CA gap at 1.6 percent of GDP in 2017, within a range of +/- 1.5 percent of GDP, reflecting uncertainty around both the 2017 CA outturn and the EBA estimated norm.
<table>
<tr><td>Actual CA</td><td>3.3</td><td>Cycl. Adj. CA</td><td>3.6</td><td>EBA CA Norm</td><td>1.8</td><td>EBA CA Gap</td><td>1.8</td><td>Staff Adj.</td><td>0.2</td><td>Staff CA Gap</td><td>1.6</td></tr>
</table></td></tr>
<tr><td>Real exchange rate</td><td>Background. The Swedish krona was mostly unchanged in real effective terms in 2017 relative to its average level in 2016, as monetary policy in Sweden helped keep the yield curve broadly aligned with that of Germany. As of May 2018, the REER has weakened by 5.8 percent relative to the 2017 average.
Assessment. EBA analysis suggest a gap of -10 percent using the REER index and level approaches, respectively, for 2017. In contrast, in 2017 the ULC based REER index is only 3 percent below its 25-year average, well within its +/- 12.5 percent historical fluctuation range. Applying a 0.25 semi-elasticity of CA to REER to the CA gap of 1.6 percent +/- 1.5 percent of GDP gives a valuation range for the krona of 0 to -12 percent. Given uncertainties related to EBA's CA gap estimates for Sweden, staff gives greater weight to estimates from the EBA REER models and the ULC based REER position, and assesses the krona to be undervalued by 0 to 10 percent. This REER gap is expected to be temporary, with the krona likely to appreciate in the medium term as monetary policy eventually normalizes.</td></tr>
<tr><td>Capital and financial accounts: flows and policy measures</td><td>Background. Given their size and funding model, Sweden's large banks remain vulnerable to liquidity risks stemming from global wholesale markets even though banks have improved their structural liquidity measures in recent years.
Assessment. A further decline in banks' short-term funding in favor of longer maturities is desirable over time. Macroprudential policies, including planned increases in capital buffers of domestic banks, raising funding stability standards, and mortgage amortization regulations on the household side, can help contain vulnerabilities and hence potential liquidity risks.</td></tr>
<tr><td>FX intervention and reserves level</td><td>Background. The exchange rate is freely floating—Riksbank statements regarding their potential to intervene have not as yet been implemented. Foreign currency reserves stood at USD 54 billion in December 2017, which is equivalent to 20 percent of the short-term external debt of monetary and financial institutions (primarily banks) and about 11 percent of GDP.
Assessment. In view of the high dependence of Swedish banks on wholesale funding in foreign currency, and the disruptions in such funding that have occurred at times of international financial distress, it would not be appropriate to reduce Sweden's existing reserves. A further tightening of FX liquidity requirements on banks should be evaluated.</td></tr>
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	Sweden (concluded)
Technical Background Notes	

	Switzerland	Overall Assessment
Foreign asset and liability position and trajectory	**Background**. Switzerland is a financial center with a positive net international investment position (NIIP) of 127 percent of GDP and gross foreign asset and liability positions of 714 and 587 percent of GDP, respectively, at end-2017. The NIIP-to-GDP ratio is about unchanged from its peak in 2011 at 133 percent, having subsequently declined steadily—despite CA surpluses averaging about 10 percent of GDP—reflecting mainly persistent negative valuation effects, but recovered by around 35 percentage points from 2015 to 2017 partly on account of valuation gains. 1/ Valuation changes reflect fluctuations in exchange rates and prices of securities and precious metals that interact with mismatches between assets and liabilities in terms of currencies and financial instruments. 2/ **Assessment**. Switzerland's large gross liability position and the volatility of financial flows present some risk, but these are mitigated by its large gross asset position and the fact that most external liabilities are denominated in Swiss francs. Nonetheless, given the large gross positions and compositional mismatch between assets and liabilities, relatively modest changes in exchange rates and asset prices can have a material effect on the NIIP.	**Overall Assessment**: Switzerland's external position was broadly consistent with medium-term fundamentals and desirable policies in 2017, although this assessment is subject to especially-high uncertainty. REER overvaluation following the exit from the floor in 2015 had been unwound by 2017. Were the recent real depreciation to continue, future assessments could be affected. **Potential policy responses**: Macroeconomic policies should be geared toward ensuring balanced contributions to GDP growth from domestic and external demand. This objective requires moving to—and maintaining—a structurally-neutral fiscal stance, which would also ease the burden on monetary policy that faces operational limits during periods of economic weakness or safe-haven appreciation pressures. In addition, monetary policy should continue to accommodate a modest secular trend real appreciation via timely adjustment of the policy interest rate to keep inflation within target. Foreign c urrency intervention should be reserved for addressing large exchange market pressures that would otherwise cause temporary volatility in inflation and output. In addition, reforming the corporate income tax would encourage investment by SMEs, thereby reducing net saving.
Current account	**Background**. Switzerland has run large CA surpluses, averaging about 10 percent of GDP since 2006. The composition of the CA has changed considerably during this period. While in earlier years the largest component was the income balance, in recent years this has been replaced to a large extent by the trade balance. Within the latter, goods (which include merchanting) have been responsible for an increasing share of the surplus, particularly the chemical and pharmaceutical categories. The CA surplus increased to 9.8 percent of GDP in 2017 from 9.4 percent of GDP in 2016. **Assessment**. Based on a cyclically adjusted CA surplus of 9.6 percent of GDP and an EBA CA norm of 6.2 percent of GDP (which partly reflects the demand for saving by the large share of prime-age savers), the total gap including the unexplained residual equaled to 3.4 percentage points of GDP in 2017, of which the policy gap contributed -0.5 percentage points (mainly due to excessive private sector credit). Some Switzerland-specific factors not appropriately treated in the measured underlying CA lower the CA gap: (i) inclusion of retained earnings on portfolio equity investment and (ii) compensation for valuation losses on fixed income securities arising for inflation that is recorded as income. 3/ After accounting for these factors, staff estimates a remaining CA gap of about 0.8 percent of GDP (with a range of ±2 percentage points). 4/
CA Assessment 2017	Actual CA 9.8 | Cycl. Adj. CA 9.6 | EBA CA Norm 6.2 | EBA CA Gap 3.4 | Staff Adj. 2.6 | Staff CA Gap 0.8
Real exchange rate	**Background**. The CPI-based REER appreciated by 25 percent during 2007–17, including two episodes of rapid appreciation in response to safe-haven inflows. The first spike occurred in July 2011, and led the SNB to establish a floor of 1.20 for the CHF/EUR exchange rate in September 2011. After appreciating sharply following the exit from the floor on January 15, 2015, the REER moderated, initially on account of a partial unwinding of the overshooting of the nominal effective exchange rate and, subsequently, on lower inflation in Switzerland than in its trading partners. The average REER for 2017 weakened by 2.2 percent relative to the 2016 average, and as of May 2018, it had weakened a further 5.4 percent (compared with the 2017 average). **Assessment**. The EBA REER index and level models suggest the average REER in 2017 was 15-22 percent overvalued, with policy gaps accounting for a modest amount of the total gap. To a large extent, this finding reflects the "reversion to trend" properties of the empirical model in the context of the prior rapid appreciation episodes. However, due to measurement issues, these results may not fully capture the secular improvement in productivity, especially in knowledge-based sectors. Based on the CA gap, staff assesses the REER gap to have been in the range of -5.3 to +2.3 percent in 2017.
Capital and financial accounts: flows and policy measures	**Background**. In recent years, Switzerland has experienced large inflows in the form of currency and deposits, in part due to its status as a safe haven. Since 2007, these cumulative net inflows amounted to about 75 percent of GDP. To reduce the attractiveness of these inflows, since January 15, 2015, banks' placements at the SNB (above a certain threshold) have been subject to a negative interest rate of 0.75 percent. These inflows stopped during 2017. There are no restrictions on financial flows. **Assessment**. Financial flows are large and volatile, reflecting Switzerland's status as a financial center and a safe haven, with inflows tending to accelerate during periods of heightened global and regional uncertainty.
FX intervention and reserves level	**Background**. Foreign exchange reserves amounted to USD811 billion (120 percent of GDP) at end-2017, up USD 132 billion (including valuation changes) since end-2016, with the bulk of the increase taking place in the first half of 2017. About 75 percent was accumulated during 2009–15, including to defend the previous exchange rate floor. Since exiting the floor, the SNB has intervened periodically, purchasing sizable volumes in response to large appreciation pressures from safe-haven surges, as well as more frequently but in smaller amounts. Purchases ceased in mid-2017. **Assessment.** Reserves are large relative to GDP but more moderate when compared with short-term foreign liabilities. The high level of reserves reflects monetary policy operations aimed at avoiding persistent undershooting of inflation (which averaged -0.3 percent during 2012–17) as a result of inflow surges, given the limited scope for significant further easing via other monetary policy tools. In particular, the supply of domestic assets available for purchase is very limited, and the interest rate on banks' deposits at the SNB is -0.75 percent, which is the lowest in the world. Past interventions also helped to avoid potential exchange rate overvaluation.

	Switzerland (concluded)
Technical Background Notes	1/ Other stock-flow adjustments include changes in statistical sources, such as changes in the number of entities surveyed and items covered, although their quantitative importance is not known. 2/ As a result, an appreciation (depreciation) of the Swiss franc has a negative (positive) effect on the NIIP, while a symmetric percentage increase in share prices in Switzerland and abroad would reduce the NIIP. 3/ The underlying CA is adjusted for: (i) retained earnings on portfolio equity investment that are not recorded in the income balance of the CA under BPM6; and (ii) the recording of nominal interest on fixed income securities under the BPM framework, which compensates for expected valuation losses (due to inflation and/or nominal exchange rate movements), even though this stream compensates for the (anticipated) erosion in the real value of debt assets and liabilities. Adjusting for both of these effects, and taking into account the lagged NFA contribution to the norm, the underlying CA would need to be reduced by about 2¾ percent of GDP. 4/ The CA gap range reflects the uncertainty inherent in the assessment.

	Thailand	Overall Assessment
Foreign asset and liability position and trajectory	**Background**. The net international investment position (NIIP) improved steadily from -48 percent of GDP in 2000 to -2 percent of GDP in 2009. Subsequently, the NIIP declined to -24 percent of GDP in 2014, despite CA surpluses averaging 1.6 percent of GDP, largely due to valuation changes and other stock-flow adjustments. 2/ The NIIP further declined to around -7 percent of GDP in 2017 with steady increase in gross assets, accompanied by a rising CA surplus and subdued FDI, amid steadily rising outward investment by residents. **Assessment**. In 2017, gross assets were 100 percent of GDP (44 percent being reserve assets) and gross liabilities were 107 percent of GDP (dominated by non-debt liabilities). External debt declined from nearly 35 percent of GDP in 2014 to 32.7 percent of GDP (one-fifth being public debt). Short term debt stood at 14 percent of GDP. There are limited risks to external debt sustainability as external debt is projected to remain relatively low over the medium term and net foreign liabilities as a share of GDP are expected to stabilize.	**Overall Assessment**: *The external position in 2017 was substantially stronger than warranted by medium-term fundamentals and desirable policy settings.* Despite a modest decline, the current account remained large, reflecting a cautious response of domestic demand to large, positive income shocks amid political uncertainty, as well as structural challenges. The REER appreciation trend continued in 2017. **Potential policy responses**: External rebalancing requires a concerted policy effort to support domestic demand and a gradual, sustained appreciation of the REER over the medium term. Mutually reinforcing monetary and fiscal stimulus, coupled with structural reforms, should support domestic demand and help lower the current account gap over time. Such a strategy would facilitate the needed REER appreciation through a growth-driven process, boosting real incomes. The boost to public infrastructure within available fiscal space should crowd-in private investment. The authorities should continue addressing structural rigidities by reforming social safety nets, notably the fragmented pension schemes compounded by widespread informality, and reducing barriers to investment, especially in the services sector. The exchange rate should move flexibly as the key shock absorber. Intervention should be limited to avoiding disorderly market conditions. Reserves exceed all adequacy metrics, thus there is no need to build up reserves for precautionary purposes.
Current account CA Assessment 2017	**Background**. Thailand's current account (CA) has been volatile over the last decade, ranging from a deficit of 4 percent of GDP in 2005 to a surplus of 7¼ percent of GDP in 2009. The CA then dropped to a deficit of 1¼ percent of GDP by 2013 and rose back to a record surplus of 11.7 percent of GDP in 2016 (with the 5-year average of 4.4 percent of GDP). The 12.9 percent of GDP turnaround in the CA between 2013-16 can be largely accounted for by a 5.8 percent of GDP decline in net oil imports and a 3 percent of GDP rise in the services balance (mainly tourism). Net oil imports and tourism also account for the bulk (two-thirds) of the increase in the CA in 2016. The CA surplus modestly declined to 10.6 percent of GDP in 2017, reflecting an increase of imports of 1½ percent of GDP. **Assessment**. The EBA CA model estimated a small (0.5 percent of GDP) terms-of-trade (ToT) cyclical adjustment, with a cyclically adjusted 2017 CA of 10.1 percent of GDP and a CA norm of 0.5 percent of GDP. The CA gap of 9.6 percent of GDP consists of an identified policy gap of 1.8 percent of GDP (0.4 percent of GDP from domestic policy gaps), and an unexplained residual of 7.8 percent of GDP. The large unexplained residual partly reflects Thailand-specific features not fully captured by the EBA model. Notwithstanding continued improvement in ToT and the boom in tourism, private domestic demand remained weak, reflecting a cautious response to these positive shocks during the ongoing political transition that weighed on private sector confidence. Considering these factors, staff assesses the CA surplus to be 4 percent to 8 percent of GDP larger than the level consistent with medium-term fundamentals and desirable policies. 3/ The CA gap is expected to narrow over the medium term, as policy stimulus is deployed, political uncertainty dissipates, private confidence recovers, and steps are taken to reform the safety net. Actual CA 10.6 | Cycl. Adj. CA 10.1 | EBA CA Norm 0.5 | EBA CA Gap 9.6 | Staff Adj. 3.6 | Staff CA Gap 6.0	
Real exchange rate	**Background**. The baht has been on a broadly stable real effective exchange rate (REER) appreciation trend since the mid-2000s. Exceptional periods were the Fed's tapering talk in mid-2013 and the domestic monetary policy easing cycle in 2015: Q1, when the baht depreciate d for several quarters. The REER resumed its gradual real appreciation trend in 2016 and continued this trend in 2017. In 2017, the REER appreciated by 3.4 percent relative to 2016 4/, while, as of May 2018, the REER appreciated by an additional 2.5 percent compared with the average of 2017. **Assessment**. Using an elasticity of 0.6, staff assesses the 2017 REER to be 7 percent to 14 percent below levels consistent with medium-term fundamentals and desirable policies. This gap is expected to narrow over the medium term as policy stimulus and structural reforms are deployed, supporting domestic demand and a growth-driven real exchange rate appreciation process. 5/	
Capital and financial accounts: **flows and policy measures**	**Background**. The capital and financial account balance has been negative since 2013. In 2017, the net negative balance amounted to 4 percent of GDP. Outward FDI hit a record high of 4.6 percent of GDP owing to Thai firms' overseas investment. Outward portfolio investment reached 2.6 percent of GDP (two-thirds is equity securities), higher than portfolio inflows of 2.1 percent of GDP (mostly concentrated in the long-term securities issued by the government and corporate sectors). Net other investment outflows were about 1 percent of GDP. The authorities continued with financial account liberalization, encouraging outward investment by residents. **Assessment**. Up to 2013, Thailand enjoyed overall portfolio inflows benefiting from its strong fundamentals. But from 2013, Thailand has faced headwinds, including the Fed's interest rate lift-off, China's slowdown, and political uncertainty. Capital outflows are manageable considering the resilient external sector and the greater flexibility of the baht, partially offsetting the current account surplus.	
FX intervention and reserves level	**Background**. The exchange rate regime is classified as (de jure and de facto) floating. International reserves were 44½ percent of GDP in 2017, standing at over three times short-term debt, 234 percent of the IMF's reserve metric unadjusted for capital controls, and 278 percent of the metric adjusted for capital controls. Staff considers the unadjusted adequacy metric to be more appropriate. (The adjusted metric relies on de jure capital controls, which fail to capture recent liberalization measures and the extent to which controls are binding). **Assessment**. Interventions appear to have been mostly one-sided, as suggested by the sizable and continuous monthly increase in the stock of reserves and FX forward position during 2017 (the only proxies for intervention, as actual intervention data are not published). International reserves (including net forward position) increased by US$41.7 billion (9 percent of GDP) during 2017, and further increased by US$12.1 billion (2½ percent of GDP) in 2018Q1. Reserves are higher than the range of the IMF's adequacy metrics and there is no need to build up reserves for precautionary purposes. The exchange rate should move flexibly, acting as a shock absorber, with intervention limited to avoiding disorderly market conditions.	

	Thailand (concluded)
Technical Background Notes	1/ The assessment is based on the refined EBA model. Preliminary figures from the previous model indicate a similar assessment. 2/ These persistent negative valuation effects during 2010-14 have been driven mainly by capital inflows contributing to the growth of asset prices and baht appreciation. 3/ The EBA model has a very large (and rising since 2013) unexplained residual for Thailand, likely driven by imperfect measurement of the large, positive ToT shock, the boom in tourism, and political uncertainty. Staff adjustments improve the measurement of these Thailand-specific cyclical and transitory factors through (i) updated weights in the EBA terms of trade index, with an adjustment of 1-1.5 percent of GDP; (ii) an estimate of the cyclical component in the recent boom in tourism, with an adjustment of 0.5-1.0 percent of GDP; and (iii) an estimate of the transitory impact of the ongoing political transition not captured by the institutional quality variables included in the EBA model, with an adjustment of 0-3 percent of GDP. Moreover, the public health expenditure variable does not fully reflect the largely underdeveloped social safety nets, including low minimum pensions accruing to the large informal sector, which contribute to the current high levels of precautionary savings. 4/ The REER appreciated more than 6 percent since 2005. 5/ The EBA index REER gap in 2017 is estimated at 6.4 percent; the EBA level REER gap is estimated at -2.1 percent.

<table>
<tr><th></th><th>Turkey</th><th>Overall Assessment</th></tr>
<tr><td>Foreign asset and liability position and trajectory</td><td>Background. Turkey's net international investment position (NIIP) deteriorated significantly from -42 percent of GDP in 2016 to -53 percent of GDP at end-2017, a weak position relative to peers, reflecting a wider CA deficit and increased valuation of equity liabilities driven by rising equity prices more than offsetting the impact of Lira depreciation. 1/ Total foreign liabilities amount to 80 percent of GDP, dominated by debt, which, at 53 percent of GDP, remains sustainable over the medium term. Improvements seen in debt maturities over 2015-16 have been slightly reversed due to the lower subsequent quality of inflows and risks remain significant, given that short-term debt and non-resident holding of domestic portfolio debt amount to around 25 percent of GDP. Debt service of the private sector is vulnerable to hikes in global rates with 40 percent of long-term debt being on adjustable interest rate terms. In addition, a large portion (37 percent) of private domestic debt is denominated in FX. Non-debt external liabilities are low relative to peers at 27 percent of GDP, with FDI equity capital liabilities comprising 20 percent of GDP and the remainder being mostly in equity securities.
Assessment. The large negative NIIP and the composition of foreign liabilities expose Turkey to liquidity shocks, sudden shifts in investor sentiment, and increases in global interest rates. Turkey's NIIP is projected to deteriorate further by about 5 percentage points of GDP by 2023 due to sustained CA deficits. The FX component of domestic debt also comprises a balance sheet risk for corporates with the potential to worsen bank asset quality with negative feedback on growth and financial stability.</td><td rowspan="5">Overall Assessment:
In 2017, Turkey's external position was weaker than the level consistent with medium-term fundamentals and desirable policies, although the sharp REER depreciation since 2016 is expected to support the CA adjustment toward its norm over the medium term.
Large financing needs and a high share of short-term and portfolio inflows make Turkey vulnerable to capital flow reversals.

Potential policy responses:
Tighter macroeconomic policies are necessary to reduce the large current account deficit, while also allowing reserves to be rebuilt, raising the NIIP, and shifting the composition of liabilities away from short-term debt.

Specifically, tighter fiscal, and quasi-fiscal, and monetary policies will help rein in domestic demand and imports, while macroprudential policies could help to slow credit growth, improve the quality of external financing, and lower risks from FX exposure in the economy.

Monetary policy should aim at re-anchoring inflation expectations and building the credibility of the inflation target. The CBRT should increase reserve coverage, while limiting FX sales to periods of excessive lira volatility. The combination of these macro policies and reforms to strengthen competitiveness and encourage private saving would help to sustain external rebalancing.</td></tr>
<tr><td>Current account</td><td>Background. The CA deficit narrowed sharply between 2011 and 2016 (from 8.9 to 3.8 percent of GDP), principally driven by the decline in oil prices. It widened again in 2017 to 5.6 percent, however, due to expansionary policies as well as greater gold imports, offsetting the impact of growth in exports and recovery in tourism receipts. 2/ The stimulus-backed recovery in domestic demand has led to the output gap turning positive in 2017 with clear signs of overheating emerging.
Assessment. EBA model estimates suggest that the cyclically adjusted CA balance in 2017 was 4.0 percent of GDP lower than the level implied by medium-term fundamentals and desirable policies. After adjusting the CA balance for the temporary surge in gold imports (0.7 percent of GDP), and the EBA estimated CA norm downward for NIIP-related considerations, staff assesses the CA gap to be in the -1.2 to -3.2 percent of GDP range. 3/
CA Assessment 2017 — Actual CA: -5.6 | Cycl. Adj. CA: -4.8 | EBA CA Norm: -0.9 | EBA CA Gap: -4.0 | Staff Adj.: -1.8 | Staff CA Gap: -2.2</td></tr>
<tr><td>Real exchange rate</td><td>Background. The Turkish REER has been on a depreciating trend since 2013. In 2017, the average REER depreciated by 10 percent from the year before, standing 25 percent below its peak. By May 2018, the lira had fallen an additional 13 percent in real terms relative to the 2017 average.
Assessment. The EBA REER Index and level approaches suggest the REER was undervalued in 2017 in the range of 5-6 percent. The EBA CA approach points to a REER overvaluation of around 14.5 percent, while the ES approach suggests an REER broadly in line with fundamentals. Staff assesses the 2017 REER to have moved to the broadly in line range (+/-10 percent), which will support a narrowing of the CA deficit going forward. This assessment is also supported by other measures of competitiveness, including rising export shares and declining unit labor cost measures of the REER.</td></tr>
<tr><td>Capital and financial accounts: flows and policy measures</td><td>Background. The quality of financing weakened in 2017 with a decline in net FDI (to below 1 percent of GDP) and higher portfolio inflows into government and bank debt securities stimulated by carry trades. Turkish spreads have narrowed, but remain elevated relative to other large emerging market economies. Rollover rates on non-financial corporate external loans declined earlier in the year as firms made more use of domestic credit supported by state guarantees, but have recovered since then. Turkey has not made use of capital controls on either inflows or outflows.
Assessment. Following earlier improvements in the financing structure of the current account over 2015-16 with the start of credit deleveraging, the quality of financing has again deteriorated in 2017 as credit growth resumed, with increased reliance on volatile capital flows for external financing. Gross external financing needs are over 25 percent of GDP making Turkey vulnerable to adverse shifts in global investor sentiment.</td></tr>
<tr><td>FX intervention and reserves level</td><td>Background. The de facto and de jure exchange rate is floating. The CBRT stopped selling foreign exchange to commercial banks in 2016 though it continues to provide direct sales of FX to energy-importing SOEs. Reserves have been impacted by several measures to support FX liquidity, including 1-week FX deposit auctions, changes to the Reserve Option Mechanism aimed at releasing FX liquidity used for lira reserve requirements, and accepting below-market rate lira payments for US dollar–denominated export rediscount credit repayments. These measures have contributed to limiting the net inflow of FX into gross reserves, which have remained low at around $108 billion USD at end-2017 (82 percent of the ARA metric) while net international reserves declined to $31 billion USD. 4/
Assessment. Given the low reserve coverage of external financing requirements (less than half) and low net international reserves, further reserve accumulation is needed.</td></tr>
</table>

	Turkey (concluded)
Technical Background Notes	1/ Despite persistent CA deficits, the NIIP has fluctuated with no clear upward trend over 2009–16, due to a mix of positive valuation effects and large net BOP errors and omissions. 2/ Staff estimates the additional cyclical contribution to the CA deficit due to gold imports in 2017 at 0.7 percent of GDP (the demeaned gold trade deficit over 1998-2017 was 0.4 percent of GDP, compared with 1.1 percent of GDP in 2017). 3/ Staff assesses Turkey's CA norm about 1 percent of GDP lower than the estimated EBA CA norm. The staff-assessed norm of -1.9 percent of GDP is consistent with a gradual improvement in the NIIP to levels comparable to peers and a reduction in vulnerabilities. 4/ Net international reserves net out from gross international reserves the CBRT's FX liabilities to banks. The latter includes the Reserve Option Mechanism (ROM), which allows banks to meet reserve requirements on lira liabilities with foreign exchange and gold. The ROM balances are held at blocked accounts at CBRT for 14 days, and may be fully substituted with lira liquidity after this maintenance period. Domestic banks may also use FX deposits at the CBRT as collateral for lira liquidity facilities, including swaps with maturities of up to 1 month.

	United Kingdom	Overall Assessment
Foreign asset and liability position and trajectory	**Background.** The net international investment position (NIIP) declined from -4.4 percent of GDP in 2016 to -12.8 percent of GDP in 2017. Over the past five years, the NIIP has strengthened by 16 percentage points, reflecting a negative CA contribution (-24pp) more than offset by valuation and growth effects (35 percentage points and 5 percentage points, respectively). 1/ Staff projects the NIIP to weaken over the medium term, although the importance of and uncertainty around valuation effects cast significant doubt around these estimates. **Assessment**. The sustainability of the NIIP is not a concern. UK's external assets have a higher foreign-currency component than its external liabilities, so the NIIP improves with sterling depreciation. However, fluctuations in the underlying gross positions are a potential source of vulnerability (both gross assets and liabilities amount to over 500 percent of GDP).	**Overall Assessment**: *The external position in 2017 was weaker than implied by medium-term fundamentals and desirable policy settings.* Although improving, the current account deficit remained high in 2017, reflecting low public and private savings. Over the medium term, the deficit is set to narrow helped by the past sterling depreciation and ongoing fiscal consolidation. The uncertainty around this assessment is significant, reflecting both possible measurement issues in external sector statistics as well as uncertainty about the future trade arrangement with the EU and its possible effect on growth and trade flows. **Potential policy responses**: The current fiscal consolidation plan implemented within a medium-term framework will appropriately continue to support the external rebalancing. Further structural reforms focused on broadening the skill base and investing in public infrastructure should boost productivity, improving the competitiveness of the economy. Maintaining financial stability through macroprudential policies should also support private-sector saving. These efforts are particularly important in light of expectations that access to the EU market will become more restrictive.
Current account	**Background.** The CA balance improved to -4.1 percent of GDP in 2017 (from -5.8 percent in 2016), remaining significantly below its average historical values. The wider CA deficits since the global financial crisis reflect mostly weaker income balance, due in part to lower earnings on the UK's foreign direct investment abroad (especially in the euro area). By contrast, the trade balance has been stable at around -2 percent of GDP through 2016, and increased to -1.4 percent in 2017, supported by strong growth in trading partners and a weaker sterling. The CA improvement in 2017 was also driven by an improvement in net income flows (0.9 percent of GDP), helped by the positive valuation effect from sterling depreciation which increase the sterling value of income inflows denominated in foreign currency. From a savings-investment perspective, the CA dynamics during 2017 reflect an improvement in gross national savings, but the CA deficit reflects a still elevated general government deficit (2.2 percent of GDP in 2017) and low private sector savings. **Assessment.** The EBA CA model estimates a CA gap of -5 percent of GDP for 2017 (a cyclically adjusted CA balance of -4 percent of GDP compared with a CA norm of 1 percent of GDP). However, the cyclically adjusted CA could be understated due to measurement biases, as suggested by the observed persistent, positive, and large valuation effects that have kept the NIIP broadly stable since the 1980s. 2/ Looking ahead, the recovery of global growth relative to UK growth should translate into higher net income inflows over time. Uncertainty around the CA gap estimation is high, as evident from the results under different methodologies, possibly reflecting such large measurement issues. Overall, staff assesses the 2017 cyclically adjusted CA balance to be 1 to 5 percent of GDP weaker than the CA norm, with a mid-point of 3 percent of GDP. This range takes into account the uncertainty in the assessment due to the Brexit negotiation process, possible measurement issues, the REER assessment below, and the External Sustainability (ES) approach. 3/ 4/	
CA Assessment 2017	Actual CA -4.1 | Cycl. Adj. CA -4.0 | EBA CA Norm 1.0 | EBA CA Gap -5.0 | Staff Adj. -2.0 | Staff CA Gap -3.0	
Real exchange rate	**Background.** Sterling depreciated by 10 percent in 2016 in real effective terms relative to its average level in 2015 and by an additional five percent from 2016 to 2017. The depreciation may reflect in part an unwinding of past overvaluation, and in part market expectations of more restrictive access to the EU market in the future. As of May 2018 the REER had appreciated by 1.9 percent relative to its 2017 average. **Assessment.** EBA REER level and index approaches suggest a gap of -9.3 and -10.0 percent, respectively, for 2017. In comparison to previous years, the REER assessment is subject to a greater margin of uncertainty due to uncertainty about the UK's new trading relationship with the EU and its effects on the equilibrium level of the REER. Overall, staff assesses the REER to be between 0 and 15 percent above the level consistent with fundamental and desirable policy settings. This range is broadly anchored on the CA assessment. The weaker sterling and strong trading partner growth are expected to support further CA deficit narrowing in the near term.	
Capital and financial accounts: **flows and policy measures**	**Background.** Given the UK's role as an international financial center, portfolio investment and other investment are the key components of the financial account. **Assessment.** Large fluctuations in capital flows are inherent to financial transactions in countries with a large financial sector. This volatility is a potential source of vulnerability, although it is mitigated by sound financial regulation and supervision and a strong financial sector. An additional risk is that FDI and portfolio investment inflows may decelerate driven by concerns about the UK's future trade relations with the EU.	
FX intervention and reserves level	**Background**. The pound has the status of a global reserve currency. **Assessment**. Reserves held by the UK are typically low relative to standard metrics, and the currency is free floating.	

	United Kingdom (concluded)
Technical Background Notes	Note: The Office for National Statistics introduced in 2017 methodological changes, revising the historical series of the CA and the NIIP. Revisions to the CA are negative in most years and relate mainly to the primary income balance. 1/ The official NIIP data might understate the true position—estimates of FDI stocks at market values imply a much higher NIIP. Bank of England estimates suggest that the NIIP based on market values could be close to 80 percent of GDP in mid-2017 (November 2017 Inflation Report). Market value estimates of FDI assets assume their valuations move in line with those of equity market indices in the UK and abroad. These estimates are uncertain, as actual FDI market values could evolve differently from equity markets. 2/ Staff's estimates of valuation effects have been persistently positive even during periods without significant exchange rate depreciation (i.e. 2000 to 2007, and 2009 to 2015), pointing to potential measurement issues. 3/ The ES approach provides a complementary perspective when the regression approaches yield unsatisfactory empirical fits, as in the case of the UK. This approach suggests a CA gap of about -3 percent of GDP relative to the CA level that would stabilize NFA to GDP at its 2016 level. 4/ Should Brexit lead to a significant increase in trade barriers, the equilibrium exchange rate could be weaker than suggested here.

	United States	Overall Assessment
Foreign asset and liability position and trajectory	**Background**. The net international investment position (NIIP) increased from -44.7 percent of GDP in 2016 to -40.5 percent of GDP in 2017 (but still somewhat below the average of -37.3 percent of GDP for the period 2012-16), mostly due to valuation changes linked to the depreciation of the US dollar by end-2017. Under staff's baseline scenario, the NIIP is projected to decline by about 8 percent of GDP over the next five years, due to a path of increasing current account deficits. **Assessment**. Financial stability risks could surface in the form of an unexpected decline in foreign demand for US fixed income securities, which are the major component of the country's external liabilities. This risk has risen with the deterioration in the US medium-term fiscal outlook, but remains moderate given the dominant status of the US dollar as a reserve currency. Most US foreign assets are denominated in foreign currency and around 65 percent are in the form of FDI and portfolio equity claims, the value of which tends to decline when global growth and stock markets are weak, and when the US dollar appreciates.	**Overall Assessment**: *The US external position was moderately weaker than implied by medium-term fundamentals and desirable policies in 2017.* The strengthening of the economy and the fiscal stimulus are expected to increase the CA deficit in the coming years, moving it further from the level justified by medium term fundamentals and desirable policies. Actual and prospective changes in trade, taxation, and immigration policies add substantial uncertainty to the assessment. **Potential policy responses**: Fiscal consolidation, to achieve a general government primary surplus of about 1¼ percent of GDP (a federal government primary surplus of about 1½ percent of GDP) will be necessary to put the debt-GDP ratio on a downward path and address the CA gap. Structural policies to strengthen export competitiveness and further reduce the CA gap include, within the tighter budgetary envelope, upgrading investment in transportation infrastructure, enhancing schooling and training of workers, supporting the working poor, and policies to increase growth in the labor force (including skill-based immigration reform). Trade and investment disagreements should be resolved without resorting to the imposition of tariff and non-tariff barriers.
Current account	**Background**. The US CA deficit was unchanged between 2016 and 2017 at 2.4 percent of GDP, compared with a deficit of 2.1 percent of GDP in 2013. The deterioration was led by the non-oil balance, which reached a deficit of 2.0 percent of GDP in 2017 compared with a deficit of 0.6 percent of GDP in 2013. For 2017, two opposing forces have been at play in 2017: a depreciating dollar and stronger private investment growth. The CA deficit is expected to increase over the medium-term due to a stronger US economy and the planned fiscal expansion, including the 2017 tax cuts. **Assessment**. The EBA model estimates a cyclically adjusted CA of -2.3 percent of GDP, and a cyclically adjusted CA norm of -0.7 percent of GDP. The cyclically adjusted CA gap is -1.5 percent of GDP for 2017, reflecting policy gaps (-0.6 percent of GDP) and an unidentified residual (about -1.0 percent of GDP). The External Sustainability Approach estimates a CA gap of -2.2 percent of GDP. On balance, staff assesses the 2017 cyclically adjusted CA to be 1.0 to 2.0 percent of GDP lower than the level implied by medium-term fundamentals and desirable policies.	

CA Assessment 2017

Actual CA	-2.4	Cycl. Adj. CA	-2.3	EBA CA Norm	-0.7	EBA CA Gap	-1.6	Staff Adj.	-0.1	Staff CA Gap	-1.5

Real exchange rate	**Background**. The real effective exchange rate (REER) appreciated by about 18 percent between 2012 and 2016 but it depreciated by about 0.6 percent in 2017. As of May 2018, the REER had depreciated by a further 2.0 percent relative to the 2017 average. **Assessment**. Indirect estimates of the REER (based on the EBA current account assessment) imply that the exchange rate was overvalued by 12 percent in 2017 (applying an estimated elasticity of 0.12). The EBA REER index model suggests an overvaluation of 8.1 percent, the EBA REER level model suggests an overvaluation of 14.4 percent, and the External Sustainability Approach estimates a REER overvaluation of 12.5 percent. Considering all the estimates and their uncertainties, staff assesses the 2017 average REER to be moderately overvalued, in the 8-16 percent range, compared with the level implied by medium-term fundamentals and desirable policies. The recent currency depreciation has reduced this gap.	
Capital and financial accounts: flows and policy measures	**Background**. Net financial inflows were about 1.8 percent of GDP in 2017, compared with 2.0 percent of GDP in 2016. Net portfolio investments and other investments increased by 0.2 and 0.8 percent of GDP, respectively, year over year, in 2017 but were partially offset by weaker net direct investments. **Assessment**. The United States has an open capital account. Vulnerabilities are limited by the dollar's status as a reserve currency with foreign demand for US Treasury securities supported by the stronger outlook for the US economy compared with key trading partners, the status of the dollar as a reserve currency, and, possibly, by safe-haven flows.	
FX intervention and reserves level	**Assessment**. The dollar has the status of a global reserve currency. Reserves held by the United States are typically low relative to standard metrics. The currency is free floating.	

United States (concluded)	
Technical Background Notes	

INTERNATIONAL MONETARY FUND

June 28, 2018

2018 EXTERNAL SECTOR REPORT—REFINEMENTS TO THE EXTERNAL BALANCE ASSESSMENT METHODOLOGY—TECHNICAL SUPPLEMENT

Prepared by the Research Department (RES), in close consultation with the External Sector Coordinating Group and under the guidance of Maurice Obstfeld and Jonathan Ostry. The RES team included Gustavo Adler, Emine Boz, Kyun Chang, Luis Cubeddu, Mai Dao, Daniel Garcia-Macia, Deepali Gautam, Swarnali Ahmed Hannan, Callum Jones, Signe Krogstrup, Nan Li, Carolina Osorio-Buitron, Pau Rabanal, Jair Rodriguez, Zijiao Wang, and Hongrui Zhang.

EXECUTIVE SUMMARY

As is done periodically, the External Balance Assessment (EBA) methodology was refined this year to reflect insights gained since the last (2015) round of changes. The 2018 refinements aimed at providing a stronger, conceptually grounded modelling of the main drivers of current account balances, incorporating advances in the literature and extensive feedback from country authorities. Refinements focused on improving the modeling of certain fundamentals—demographics, the measurement of external positions, and institutional quality—and macroeconomic policies—foreign exchange intervention and credit excesses—in the EBA current account model. Complementary tools were also developed to evaluate the role structural policies could play in explaining excess current account imbalances. The refinements not only placed the model on a stronger conceptual footing, but also improved its overall statistical fit. In this round, the real exchange rate models incorporated the same refinements as the current account model for consistency and comparability, and were estimated with updated data. The EBA model refinements are part of a continuous effort to maintain and improve key tools for rigorous external sector assessments, which will also continue to rely on informed and analytically based country-specific judgment.

I. INTRODUCTION

1. **IMF tools to assess external positions in a multilaterally-consistent fashion have evolved over time.** Initial assessments, based on the Consultative Group on Exchange Rate Issues (CGER) framework, focused on the exchange rates of key advanced economies, although these evolved to include a broader range of measures of a country's external position and wider country coverage. The existing External Balance Assessment (EBA) framework was launched in 2012, with current account and real exchange rate (REER) models that are used as numerical inputs into the external sector assessment conducted by IMF staff. The key innovation of the EBA framework consisted of expanding the set of policy variables, and defining the concept of current account "norms" as current account levels that correspond to policies at their desired levels. The EBA models also helped highlight the role of policy distortions, and introduced an internal collaborative exercise to arrive at multilaterally consistent staff assessments.

2. **Refinements built on insights gained from the use of the EBA framework.** The first refinements to the 2012 EBA methodology were introduced in 2015. These entailed mainly: (1) extending the sample estimation period by three years, (2) seeking to capture the nonlinear effects of demographics, and (3) introducing a new model to understand persistent differences in the *level* of the REER across countries. The experience gained since the 2015 EBA refinements pointed to the need for revisiting the demographic specification, as well as reassessing the modeling of certain fundamentals and policies. In consultation with country teams, country authorities, and experts, extensive work was undertaken to explore these issues, leading to the refinements discussed in this Technical Supplement, presented to the IMF Executive Board on April 9, 2018.[1]

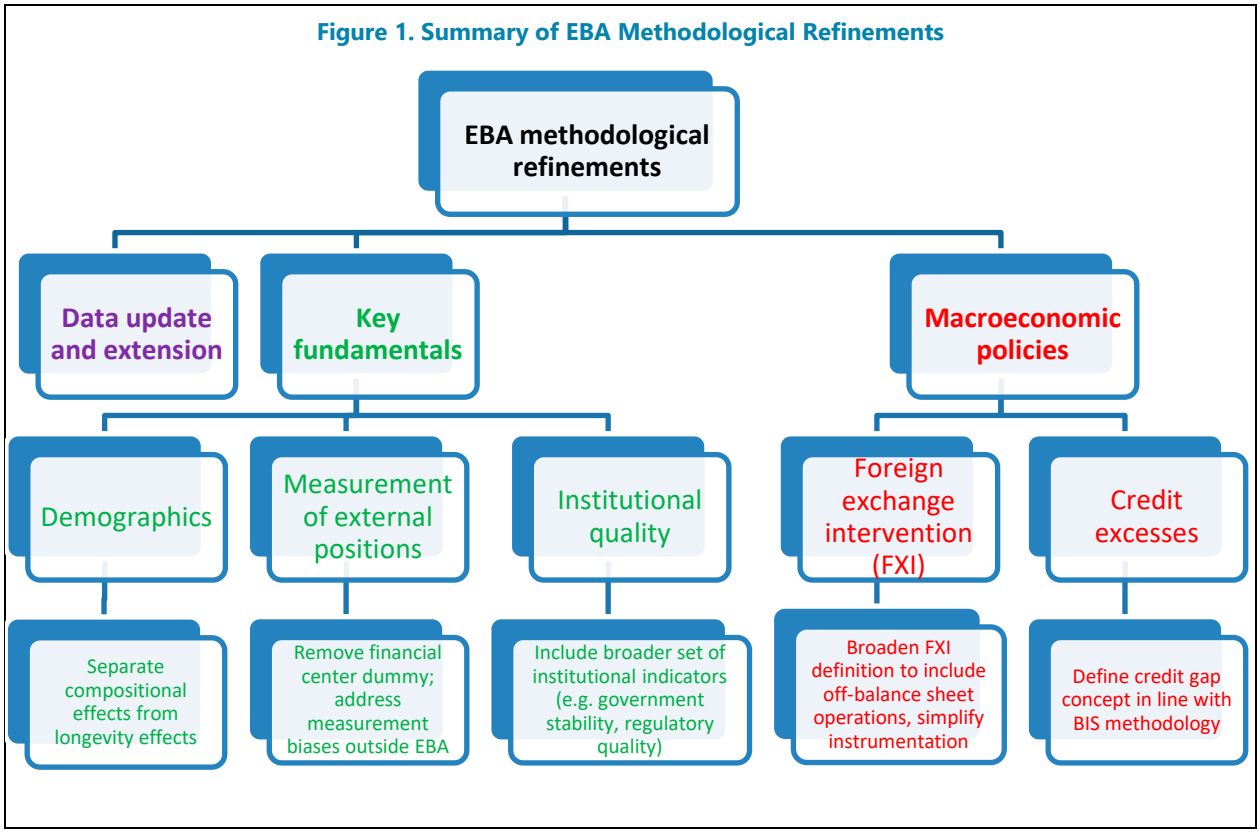
3. **The 2018 methodological refinements focused on providing stronger, conceptually grounded, modeling of the main drivers of current account balances.** While maintaining the structure and logic of the previous EBA framework (as described in detail in IMF 2013), the 2018 refinements focused on improving how the model captured the role of certain fundamentals—demographics, the measurement of external positions, and institutional quality—and macroeconomic policies—foreign exchange intervention and credit excesses. Complementary tools were also developed to shed light on the potential role of structural on excess external imbalances. The refinements focused on the EBA current account model, although similar revisions were adopted by the REER level and index models wherever possible (see paragraph 6). This Technical Supplement to the Overview Paper offers a summary of the refinements and will, subsequently, be complemented by a comprehensive Working Paper.

4. **Overall, the 2018 refinement of EBA methodology can be grouped into four areas (Figure 1):**

[1] There have been numerous interactions with Executive Directors, as well as with authorities and other experts during outreach efforts in Argentina, Belgium (European Commission), China, Germany, Japan, Korea, Spain, Switzerland, Thailand, and the United Kingdom.

(1) *Data update and extension:* As in previous rounds, refinements entailed re-estimating the model with an extended estimation sample (three additional years, to 2016) and revised historical data. These implied some non-trivial changes to the results, including as a result of migration of external statistics data to the IMF's *Balance of Payments Manual,* 6th edition (BPM6) and new demographic estimates and projections (2017 Revision of World Population Prospect). In addition, careful work was undertaken to ensure the consistency in the sources and coverage of the policy variables, especially public health spending and private credit.

Figure 1. Summary of EBA Methodological Refinements



(2) *Modeling of fundamentals:* Refinements in this area focused on improving the modeling of demographics, better accounting for biases in the measurement of the current account, and better measuring the role of institutional and political risk in saving and investment decisions.

- *Demographics:* Changes to the specification addressed concerns related to sharp changes in the demographic contribution to norms in some countries as well as to differences in their contribution across countries with similar demographic characteristics. The new demographic specification disentangles static (or age-compositional) effects from dynamic (or longevity) effects. The set of variables that measure the static effect of the model was expanded to include the current share of prime savers (ages 45–64) as a proportion of the total working-age population (ages 30–64). The dynamic effect is now captured directly by the life expectancy of the current prime-age saver cohort, as well as the interaction of longevity with future old-age dependency to capture the extent to which current savers expect to rely on future workers for their old-age support.

- *Measurement of external balances:* Growing global integration and activities of multinational corporations in recent years have raised questions about the appropriateness of existing measures of external balances, as the attribution of income across countries has become more ambiguous, particularly regarding financial returns on gross foreign assets and liabilities. The previous EBA specifications controlled for these biases by including a financial center dummy, but only for a few ad-hoc cases, and assumed a constant and equal bias for such economies. The refined model excludes this financial center dummy. Instead, measurement issues related to the statistical treatment of financial returns (especially retained earnings on portfolio equity and inflation) are addressed more comprehensively and granularly outside the EBA model through adjustments based on IMF staff estimates of these specific forms of biases, but only when sizable. Given data limitations and estimation uncertainties, the adoption of such outside-the-model adjustors is subject to a careful review process, including to ensure overall multilateral consistency.

- *Institutional and political risk:* Earlier versions of the EBA model used a subset of institutional and political risk indicators from the widely used International Country Risk Guide (ICRG) surveys. IMF staff reassessed the appropriateness of the ICRG as a third-party indicator and whether the subset of indicators (socio-economic conditions, investment profile, corruption, religious tensions, and democratic accountability) properly captured a country's underlying institutional and political risk. After careful conceptual and empirical analysis, the indicator was broadened to include other institutional features, such as government stability, law and order, and bureaucratic quality, that are considered influential in saving and investment decisions. The institutional risk proxy continues to be based on the ICRG survey, which not only has the needed time series coverage, but also yields generally similar results to alternative surveys.

(3) *The role of macroeconomic policies:* Refinements related to policy variables focused on better capturing the impact on current account dynamics of *foreign exchange intervention* (FXI) and the financial cycle.

- *Foreign exchange intervention:* The refined model broadens the definition of FXI to encompass off-balance sheet operations (that is, derivatives contracts), which are increasingly being used by countries to complement their spot market interventions. In addition, the instrumentation of FXI has been simplified to mitigate possible overfitting and to capture a small number of variables linked mainly to precautionary motives for reserve accumulation. Where FXI data are not made public, IMF staff estimates are used.

- *Financial cycle (credit excesses):* To better capture the role of the financial cycle in current account dynamics, the refinement adopts a new detrending methodology consistent with that developed by the Bank for International Settlements (BIS). The new specification allows for a more straightforward interpretation of the degree of credit excesses, since it considers the role of financial deepening and other low-frequency movements in credit.

(4) *The role of structural policies:* While in theory a country's structural policies should have an important effect on its external position, data limitations prevent their inclusion directly into the EBA

model. Given these constraints, and using publicly available third-party data on structural indicators for a subset of country-years, IMF staff developed tools outside the model to inform the extent to which residuals (that is, the unexplained portion of the current account gap) are associated with distortions in the product market and labor markets. These complementary tools are meant to *provide general guidance* to country desks on the potential role of structural policies in a more systematic and multilaterally consistent fashion. Country-specific insights will remain of essence to properly tailor the structural policy advice.

5. **Apart from improving the model's conceptual basis, the updated and refined EBA current account model is associated with improvements in goodness-of-fit indicators.** Most model coefficients, especially those associated with the refinements, turned out to be statistically significant and with the sign predicted by the conceptual framework. Moreover, the distribution of estimated current account norms is now more closely aligned across countries with similar income and demographic characteristics.

6. **The REER index and level models were also updated, incorporating the refinements of the current account model where applicable.** In 2015, a new REER level model was introduced to explain differences in the level of relative prices across countries. For this round, efforts focused on refinements to the current account model. The general features of the REER models were left broadly unchanged, although for comparability and consistency, changes in modeling of certain fundamentals and policies were also included where applicable. The fit of the updated REER models was generally unchanged, and estimated coefficients were broadly in line with those coming from the current account models.

7. **While EBA model estimates provide a key quantitative input, external sector assessments will continue to rely on informed and analytically based country-specific judgment.** The EBA models provide numerical inputs to IMF country teams to arrive at external sector assessments. In general, since the current account is a less volatile variable than the REER, it is often preferable to base the overall assessment on the EBA current account model, especially when the current account and REER models provide conflicting signals. Moreover, these assessments cannot be based solely on models, given their inevitable limitations when applied across a broad range of countries. Judgment will also be needed, and the overall framework allows for this critical component, provided it is well grounded and transparently explained**.**

8. **This round of methodological refinements represents a step forward in delivering a more reliable assessment tool, but this is not the last step.** Lessons will continue to be drawn from model implementation, as well as from discussions with country authorities and academic research.

II. DATA UPDATE AND EXTENSION

9. **As in previous rounds, refinements entailed extending the estimation sample by three years to 2016.** Historical data were also updated, resulting in some non-trivial changes, partly because of the migration of external statistics data to BPM6 and new demographic estimates and projections (2017 Revision of World Population Prospect). In addition, work was undertaken to ensure the consistency in the sources and coverage of the policy variables, especially public health spending and private credit. On

the latter, a more consistent measure of private credit across countries, based on BIS data (available for all but 10 of the 49 EBA countries), was adopted which corrects for breaks in the series and covers both banks and nonbank financial institutions (see Annex I).[2]

III. STRENGTHENING THE MODELING OF KEY FUNDAMENTALS

A. Demographics

10. **Background and motivation:** Drawing from the standard life cycle model, the 2015 EBA model specification captured the nonlinear effects of demographics on the current account with four variables: population growth, old-age dependency ratio (OADR), and two interactions of the old-age dependency ratio with aging speed (which is defined as the expected 20-year-ahead *change* in the OADR). However, the specification, while empirically significant, turned out to be associated with large increases in current account norms for some countries over a short period, contradicting the presumed slow-moving evolution of demographics and its contribution to aggregate savings. The specification also implied difficult-to-reconcile differences in the demographic contribution of countries with similar demographic characteristics. A key shortcoming came from the interpretation of the aging speed variable, which confounded very different forces in one indicator, including changes in longevity, cumulative fertility changes, and variations in cohort sizes.

11. **Refinement objectives:** The new demographic specification seeks to better disentangle the different relationships between demographics and savings. The refinements were guided by a multicountry overlapping generations model embedding the relevant demographic forces and are informed by the latest academic research on the relationship between demographics and savings and international capital flows.[3] Structural models of the demographic transition commonly focus on two key drivers of recent demographic trends: (1) age composition (the static effect), driven mostly by declining fertility rates, and (2) increasing old-age survival risk (the dynamic effect), the key driver of household savings in quantitative models.[4] However, the literature suggests a variety of indicators to proxy for these effects. The age composition has been often been measured by the OADR, although some papers have proposed a polynomial approximation to represent the entire age structure (Higgins, 1998). Meanwhile, old-age survival risk has been measured directly by estimating age-specific life expectancy (Lisack, Sajedi, and Thwaites et al. 2017), although some have also used the speed of aging as a proxy (Lane and Milesi-Ferretti, 2011; European Commission, 2017).

[2] In addition, new benchmark estimates for public health spending are based on updated and revised data. These benchmarks which are used for setting desirable levels, do not affect the estimation of the model.

[3] For example, see Brooks (2003); Domeij and Floden (2006); Backus, Cooley, and Henriksen et al (2014); Eugeni (2015); and Bárány, Coeurdacier, and Guibaud (2016). Further details will be included in a forthcoming IMF Working Paper (Dao and Jones).

[4] See Auerbach and Kotlikoff (1987); Eggertsson, Mehrotra, and Robbins (2017); and Lisack, Sajedi, and Thwaites (2017).

Table 1. Comparison of Demographics Specifications

	2015 EBA	Refined 2018 EBA
Static Effects	• Old age dependency (OAD) ratio (ages 65+/30-64) • Population growth	• OAD (ages 65+/30-64) • Population growth • Current share of prime savers (ages 45-64) as a proportion of the total working-age population (ages 30-64)
Dynamic Effects	• Interaction of relative aging speed (20-year ahead change in OAD) with current OAD • Interaction of relative current OAD with aging speed.	• Life expectancy of a current prime-aged saver • Interaction of life expectancy with future old-age dependency.

12. **The new demographic specification:** Guided by these studies, direct measures for static and dynamic effects were used. Table 1 shows how the demographic variables compare between the earlier (2015) and new specifications.

- The **static effect**, captured in the earlier specification by the contemporaneous old-age dependency ratio (ages 65+/30–64) and population growth, has been expanded to include the current share of prime savers (ages 45–64) as a proportion of the total working-age population (ages 30–64). The idea is to capture the relative differences in the demographic transition across countries that go beyond the old-age dependency, while also recognizing that the 45–64 age cohort typically has the highest saving rates. The latter is a direct result of the life cycle model and the hump-shaped earnings and savings profiles—so that a higher share of prime-age savers should imply a higher aggregate saving rate (see theoretical underpinnings in, for example, Lisack, Sajedi, and Thwaites 2017; and Jones 2018 and empirical support in, for example, Lane and Milesi-Ferretti, 2001).

- The **dynamic effect** is now captured by the life expectancy of a current prime-aged saver, such that countries with longer longevity and retirement spans save more, as predicted by the standard lifecycle hypothesis. An interaction between life expectancy and future old-age dependency is also included to capture the notion that workers save more when they expect to live longer, but also when they expect to be able to rely to a lesser extent on future generations for support.[5] While the future age composition captures, to some extent, the sustainability of public pension systems, understanding the role of pension systems remains an area for future work, as data limitations and

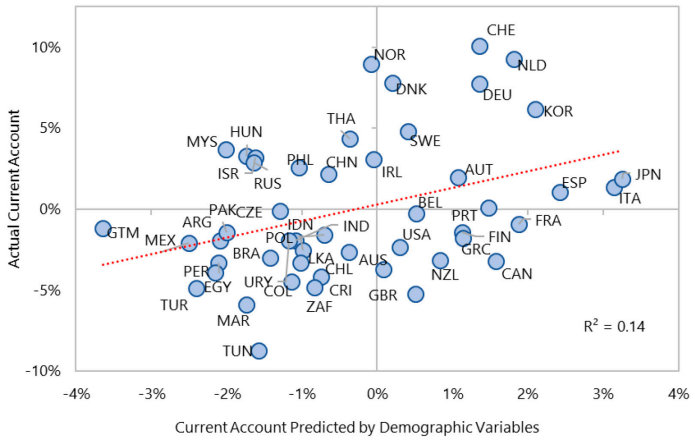
[5] For a few EBA countries that are clear outliers in terms of low life expectancy and high adult mortality, consideration is being given to shifting down by 5 years the age-cohorts defining the working age population, prime-aged savers and old age dependency when computing the demographic contribution to their current account norms.

(continued)

conceptual complexities currently constrain a more explicit modelling of these aspects of the EBA framework.[6]

13. **Results and implications:** The refined demographic specification shows statistically significant coefficients, with expected signs, for variables that capture both static and dynamic effects.[7] In particular, the life expectancy term and its interaction capture the non-linearities observed in the reduced-form relationship between life expectancy and the current account balance (negative slope for low life expectancy emerging market and developing economies, turning positive for advanced economies facing unfavorable old-age support ratios). In addition, the combined impact of the demographic variables is economically significant, and can explain about 15 percent of the cross-country variation in current accounts over the past five years (Figure 2).[8] Furthermore, across the sample, the new demographic specification explains a larger fraction of the unexplained component of the current account, after accounting for the non-demographic regressors in the EBA model.[9] Importantly, the refinements lead to a more stable and intuitive interpretation of the demographic contribution to the current account norm across countries—relatively younger countries with larger shares of prime age savers, and countries with longer retirement life spans, have correspondingly larger increases in the demographic contributions to their norms, consistent with theory.

Figure 2. EBA Countries: Actual versus Predicted Current Account,2012-16 Average (*Percent of GDP*)



Source: IMF staff estimates.

Notes: The horizontal axis denotes the current account level predicted by the regression model with the new demographic specification (and an intercept). Values on both axis are averaged over the 2012-16 period for each country.

[6] Work on this area would build on the forthcoming IMF Staff Discussion Note "The Future of Saving: The Role of Pension System Design in an Aging World."

[7] See Section V and Table 4. Among the demographic variables, only the old-age dependency ratio is not significant, but with the correct sign, as was also the case for the 2013 and 2015 EBA current account models.

[8] This magnitude is consistent with the literature, in which demographic forces generated by calibrated structural models explain between 13 and 27 percent of current account variation across major advanced economies, depending on the time period considered (see Domeij and Floden, 2006; see also Brooks, 2003; Backus, Cooley, and Henriksen, 2014).

[9] This involved comparing under the 2015 and the 2018 EBA models, the R^2 from a regression of the mean residual of the EBA model without demographics on the mean residual predicted by the demographic variables. The R^2 rises from 0.05 under the previous model to 0.13 under the new model, indicating that across the sample, the new demographic specification explains more of the residual variation in the current account.

(continued)

B. Measurement of External Positions

14. **Background and motivation:** Increasing financial and trade integration and the growing role of multinational corporations have blurred the boundaries between residents and non-residents, and the corresponding attribution of income across countries. This can cause mismeasurement of external positions that vary by country and over time. [10] The relevant economic concept of external positions for countries' external assessments is their residents saving minus domestic spending on capital formation, or the saving-investment imbalance. The fraction that residents save that is not spent on capital formation must be lent to, and spent by, nonresidents. By the same token, domestic spending on capital formation that exceeds saving must be borrowed from abroad. Measured in real terms and on an ultimate-owner basis, this concept of the saving-investment imbalance gives an indication of countries' real contributions to world demand and accumulation of external wealth, and is therefore also an indicator of potential sustainability problems.

15. **Sources of mismeasurement (or definitional differences):** International statistical standards (BPM6), however, record the *accrued nominal income arising from a transaction.*[11] This means that returns on cross-border financial investments that do not give rise to a transaction or are not based on a contractual agreement, are not recorded in the income balance, even if they are considered part of the income generated on an investment. Such returns are instead reflected in valuation changes in foreign assets and liabilities.[12] These definitional differences can entail different attributions of income across countries. Two forms of definitional differences are particularly prominent:

- **Retained earnings on equity investments:** The income from equity investments is not always attributed to the ultimate owner.[13] The nominal return on equity consists of total nominal earnings plus any increase in the equity price beyond these earnings.[14] The former is considered income and the latter valuation changes. The statistical treatment of earnings, however, is different between direct and portfolio investment and not always attributed to the ultimate owner. For portfolio equity, the portion of the return that is paid out as dividends is recorded as income in the current account income balance while retained earnings are not. Instead, they are reflected in international investment position (IIP) valuation changes. Conversely, in the case of foreign direct investment, under the BPM6 definition, retained earnings are considered part of a formal agreement for

[10] An illustrative example is the impact of the recent large transfer of intangible and internationally-mobile capital assets by a multinational company on Ireland's key economic statistics. Their recording in national accounts and balance of payments statistics has led to an inflated picture of Ireland's true economic performance. See Ireland's 2017 IMF Staff Report (IMF Country Report 17/171).

[11] Obstfeld (1986) notes that measured income balances and hence current accounts do not include investment returns related to valuation, thus making the current account in certain circumstances less fit as a measure of saving-investment imbalances.

[12] The focus on *accrued* income also means that changes in the market value of assets that are not linked to contemporaneously generated income are not recorded as income of the asset owner.

[13] See also Mancini and Stoffels (2012) and Lane (2015 and 2017).

[14] These additional equity price increases, in turn, consist of nominal inflation, and other real equity price changes.

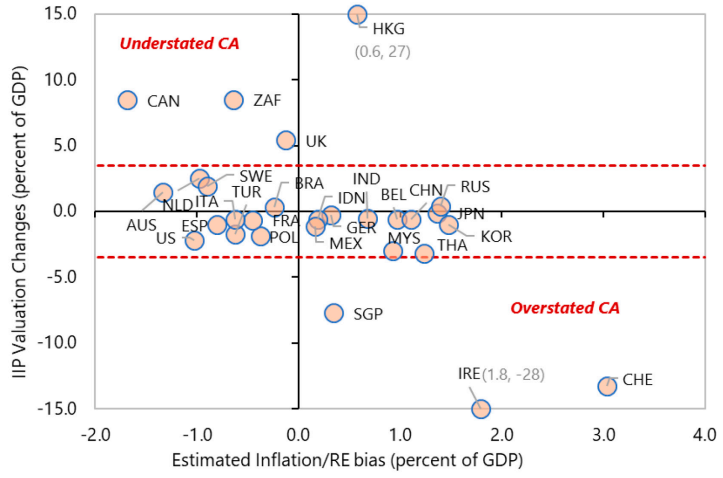
(continued)

remuneration on the investment, and hence are recorded as income. From an economic perspective, however, retained earnings can be considered income in both cases.

- **Inflation component in interest income:** Investment income is recorded in nominal terms. While this is consistent with the treatment of other forms of income in the balance of payments, it entails a departure from the economic notion of real income (and real accumulation of external wealth in this case). This issue is well recognized in national accounting, and has received recent attention also in the context of the recording of income on international assets, as discussed by Fletcher (forthcoming) as well as Mian and Saure (2018).[15] Specifically, the nominal return on debt assets reflects the real interest rate and inflation according to the Fisher equation. Higher nominal interest payments due to inflation are recorded as a positive income stream for the creditor, and as a negative income stream for the debtor. However, the associated (anticipated) erosion in the real value of debt caused by inflation (and the related nominal foreign currency depreciation) is not recorded as income and instead leads to IIP valuation changes.

16. **Earlier limitations in the treatment of measurement issues:** Earlier versions of the EBA did not address measurement issues consistently across countries. A financial center dummy was used to capture persistent measurement biases for a few economies, which were more susceptible to these measurement biases than other countries due to their large gross foreign investment positions (Figure 3). In addition, in the process of conducting external assessments, country teams have proposed country-specific adjustors for measurement issues. The underlying assumption in the financial center dummy—that biases have a similar direction (sign) and magnitude over time, and that they are present for only a few economies—was too restrictive. The sign and size of measurement biases vary with many factors, including with net equity and debt positions, inflation differentials, differences in dividend policies, and so on, which are not uniform across time and countries. Some of these cross-country differences were addressed in the 2015 *External Sector Report* framework by applying adjustors for measurement outside the EBA model, although there was scope to enhance the consistency in their estimation and application across countries.

Figure 3. ESR Economies: Estimates of IIP Valuation Changes and Measurement Biases, 2012-16 Average *(Percent of GDP)*



Sources: Lane and Milesi-Ferretti 2017 data set; IMF, *World Economic Outlook*; and IMF staff estimates.

[15] The inflation bias of interest income on debt is well recognized in national accounting. See, for example, Jump (1980), Vanoli (1999) and Hill and Hill (2003). Similarly, the inflation content in the current account income balance was also previously studied by Freedman (1979).

Technical Supplement Box 1. Methodology for Estimating Measurement Biases

This box describes the methodologies for estimating biases in the measurement of retained earnings on portfolio equity and income from fixed income instruments.

Estimating the bias from excluding retained earnings. Retained earnings on portfolio equity are not recorded in the income balance. These components of income can be proxied or estimated from stock positions and financial market data. The methodology used assumes that the portfolio breakdown of stocks included in cross-border portfolio equity investments is similar to the national average reflected in national stock market data. Three different approaches are considered, given data limitations and uncertainties about some key assumptions:

- **A flow approach** relies on recorded income streams on foreign portfolio equity positions to reflect distributed dividends. Using stock market data on dividend yields and price earnings ratios by country allows for computation of an estimate of total earnings and, in turn, retained earnings as a residual. Specifically, the dividend-yield and price-earnings (PE) ratios are applied to the recorded investment income on portfolio equity assets (iA^{PEQ}) and liabilities (iL^{PEQ}) to obtain an estimate of the unrecorded retained earnings in country j:

$$RE_j = re_W * iA_j^{PEQ} - re_j * iL_j^{PEQ}$$

  in which $re_j = 1/(dividend\_yield_j \times PE\_ratio_j) - 1$ and re_W is the world average *re* weighted by the bilateral asset portfolio equity exposures of country j vis-à-vis each other country.

- **A stock approach** relies on gross portfolio investment positions and stock market data on PE ratios to provide an estimate of total earnings. Multiplying outstanding foreign portfolio equity positions by stock market data on the dividend yield gives an estimate of distributed dividends. The difference between these two estimates provides an estimate of retained earnings. Specifically, the dividend yield and the PE ratio are applied to portfolio equity asset (A^{PEQ}) and liability (L^{PEQ}) stock positions according to:

$$RE'_j = rep_W * A_j^{PEQ} - rep_j * L_j^{PEQ}$$

  in which $rep_j = (1/PE\_ratio_j) - dividend\_yield_j$, and rep_W is defined in the same way as re_W above.

- **A hybrid approach** relies on international portfolio equity income flows to capture distributed dividends, while international portfolio stock positions and financial market data on PE ratios provide estimates of total earnings. The difference between these two measures reflects retained earnings. Specifically, average PE ratio data are applied to portfolio equity asset and liability positions, and investment income is netted out:

$$RE_j'' = (A_j^{PEQ}/PE\_ratio_W) - (L_j^{PEQ}/PE\_ratio_j) - (iA_j^{PEQ} - iL_j^{PEQ})$$

  The advantage of this approach is that it takes maximum advantage of observed data on external income and stock positions, thereby minimizing the reliance on stock market data. The drawback is that the estimates of earnings and distributed dividends rely on different sources, and may hence be less consistent.

Key results (See Figure 1.TS.1). Estimates on retained earnings bias are, on average, small for most economies, although they range from an underestimation of the "economic concept" income of 6 percent of GDP to an overestimation of income of 1 percent of GDP. The three approaches generally point in the same direction, with only a few exceptions (for the latter, particular caution in the application of adjustments will be necessary).

Estimating inflation bias. Income is recorded in nominal terms, departing from the relevant economic notion of real income. The nominal return on debt assets (i^D) reflects the real interest rate (r) and inflation (π) according to the Fisher equation, $i^D = r + \pi$. Higher nominal interest payments due to inflation are recorded as a positive income stream for the creditor, and as a negative income stream for the debtor. However, the associated (anticipated) erosion in the real value of debt associated with inflation (and the related nominal foreign currency depreciation) is not recorded as income and leads instead to IIP valuation changes. The inflation bias can be estimated using data on inflation rates and currency composition of international debt positions.[1] Country *j*'s bias can be computed as the expected inflation rate associated with each currency *i* (π_i) times country *j*'s net debt position in each currency *i* (NFA^D_{ij}):

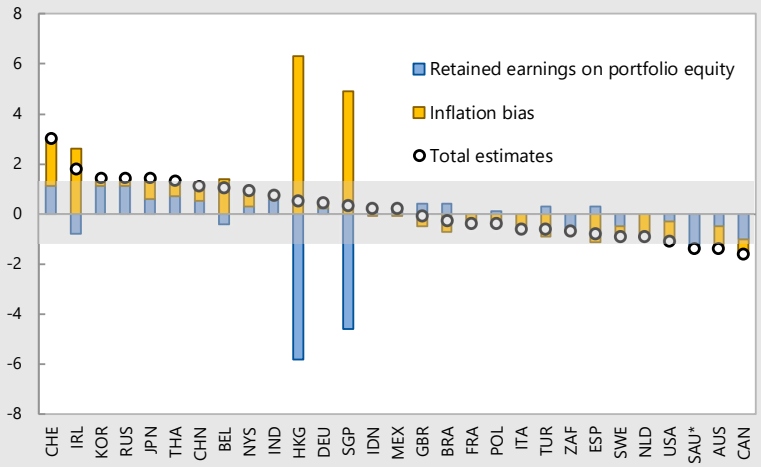
$$\pi\text{-income}_j = \Sigma_i \, \pi_i \times NFA^D_{ij}$$

Data on currency weights in international debt positions from alternative sources are used to divide net international debt positions by currency. When available, data from country authorities are used, otherwise estimates provided by Benetrix and Lane (2015) are used.[2] Expected inflation is approximated by either *realized* inflation or the five-year ahead *consensus forecast* inflation. Since both measures are subject to error, an average of the estimates based on these two inflation measures is used.[3]

Technical Supplement Box 1. Methodology for Estimating Measurement Biases (concluded)

Results (See Figure 1.TS.1). Estimates for the inflation bias are generally small, and range from about 6 percent of GDP (indicating that standard statistics overestimate the economic concept of the income balance—balancing out the underestimation due to retained earnings) to about –1 percent (indicating an underestimation of the income balance). For most economies, the estimates based on the two different inflation measures point in the same direction and with little discrepancy.

Figure 1.TS.1. Estimates of Retained Earnings on Portfolio and Inflation Bias, 2012-16 Average [1/]



Sources: IMF Staff Calculation.
1/ Countries sorted by the sum of estimates of retained earnings on portfolio equity and inflation

[1] Debt positions include reserves and money-market mutual fund positions. The latter are added ex-post as they are recorded as equity positions in balance of payments data. However, disaggregated money-market data are available for a limited number of economies, with a visible difference only for Ireland.

[2] The weights provided in Benetrix and Lane (2015) have been updated only until 2012. For country estimates relying on these, constant currency weights since 2012 are assumed.

[3] Consistently with the estimates for retained earnings, the inflation distortion is presented in five-year moving averages. There is less year-to-year noise in the estimates for inflation income, however.

17. **A new approach to deal with measurement issues**: The refinements entailed removing the financial center dummy from the EBA current account model, and including outside adjustors for measurement issues, when empirical estimates consistently point to sizable biases. To implement this refinement, IMF staff will produce consistent and comparable country-specific estimates of (1) specific biases due to retained earnings and inflation distortions, and (2) general biases related the systematic and persistent differences between a country's financial account and changes in its IIP. The biases related to retained earnings on portfolio equity would be estimated from stock positions and financial market data, while those related to inflation biases would be estimated using data on inflation rates and currency composition of international debt positions (see Technical Supplement Box 1 for more details). Given uncertainties related to data limitations and the need to rely on simplifying assumptions, measurement adjustments will initially only be considered only for countries where IIP valuation issues are large and persistent and granular estimates of inflation and retained earnings biases point in the same direction.

18. **Results and implications:** IMF staff estimates, based on data over the past five years, suggest that adjustments for measurement would be applicable only to a few economies—where current account

balances may be *overstated* (Ireland, Singapore, Switzerland), or *understated* (Canada, Hong Kong SAR, South Africa, United Kingdom). The precise size of the adjustment would be determined on a case by case basis, taking into account that the net foreign asset (NFA) coefficient in the EBA model already partially captures these measurement biases.

C. Institutional and Political Risk

19. **Background and motivation:** In line with the vast literature that supports the notion that the quality of institutions influences the ability of countries to finance current account deficits (see Chinn and Ito 2007; Gruber and Kamin 2007; Legg, Prasad, and Robinson 2007; Cheung, Furceri, and Rusticelli 2013; and Alfaro, Kalemli-Ozcan, and Volosovych 2008), the EBA model includes a proxy for institutional quality or risk. However, questions were raised over the appropriateness of the *International Country Risk* Guide (ICRG) survey as a third-party indicator, as well as whether the indicator used in the model was sufficiently broad to capture all relevant aspects of institutions and political risks.[16] Earlier versions of the model excluded indicators, such as government stability, law and order, and bureaucratic quality, that were generally considered important in linking institutional quality to saving and investment decisions, on grounds that each of them independently was not statistically significant (IMF 2013).

20. **Refinement objectives:** The refinements examined the adequacy of the institutional proxy on several dimensions**.** First, the appropriateness of the ICRG as a third-party indicator was assessed, and compared against the widely-used Worldwide Governance Indicators (WGI), compiled by staff from the World Bank, the Natural Resource Governance Institute, and the Brookings Institution, based on more than 30 surveys of companies, citizens and experts**.** Second, a fresh conceptual and empirical look was taken at the set of indicators generally considered important in linking institutional quality to saving and investment decisions.

21. **Summary of refinements:** IMF staff opted to keep the ICRG based institutional risk indicator, and to expand the set of sub-indicators to include other variables known to affect the current account.

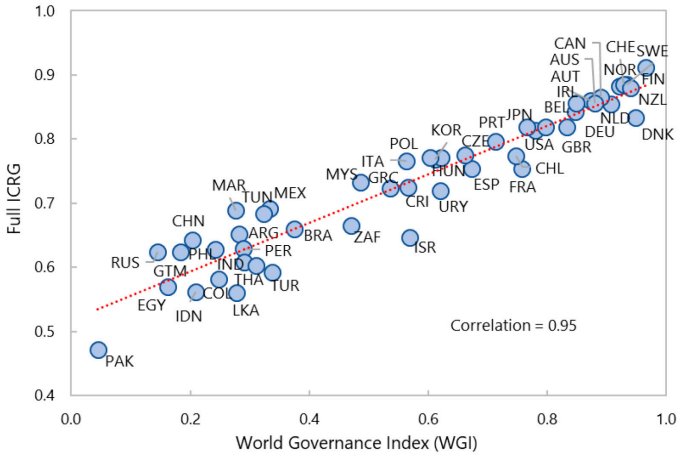
- **Appropriateness of the third-party indicator:** Like the ICRG, the annual WGI indicator includes multiple dimensions of governance—voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption (Table 2). Not surprisingly, both indicators showed very similar cross-country institutional quality rankings, which are highly correlated with income per capita (Figure 4). IMF staff explored the option of basing the institutional quality index on WGI data, although given that reliable cross-country data are only available only starting in 2002, alternative ways were considered of merging both indicators.[17]

[16] The IMF has recently documented a range of third-party indicators that are typically available to provide perspectives on governance in any given country (IMF 2017b). In line with the principles for best practice, an important caveat to this exercise is that governance concepts are difficult to measure using any kind of data. Perception-based indicators like the ICRG can change from year to year without fully reflecting changes in the fundamentals of a country.

[17] These included using WGI from 2002 and pre-2002 ICRG; and using WGI from 2002 and basing pre-2002 WGI on the ICRG/WGI relationship during 2002–16.

IMF staff also studied the option of combining the WGI and ICRG indicators, which delivered statistically significant coefficients and results that were robust to different alternatives for merging the indicators. Since combining the ICRG and WGI measures leads to similar results, IMF staff opted to keep the ICRG-based indicator and to use the WGI for robustness of estimates.

Figure 4. EBA Countries: Comparing Institutional Indices, Full ICRG versus WGI, 2002-16 Average



Sources: IMF staff estimates, PRSG, World Bank. (0: Lowest; 1: Highest)

- **A broader view on institutional risk:** Factors such as government stability, law and order, and bureaucratic quality, which were excluded from the earlier EBA models, are conceptually important components of a country's overall institutional environment, and are typically used by others in the literature. For example, Gruber and Kamin (2007) find that regulatory quality and rule of law were important determinants of US current account dynamics. Moreover, further empirical investigation found that after updating and extending the EBA sample series to 2016, some of the previously-excluded sub-indices (for example government stability, military in politics) were individually statistically significant, with most other indices having the expected sign. The analysis led IMF staff to base the index on the full set of sub-indices.

Table 2. EBA Comparing Institutional Subindicators, ICRG versus WGI

ICRG	WGI
· Democratic accountability	· Voice and accountability
· Corruption	· Political stability
· Socioeconomic conditions	· Government effectiveness
· Investment profile	· Regulatory quality
· Religious tensions	· Rule of law
· Government stability	· Control of corruption
· Internal conflict	
· External conflict	
· Military in politics	
· Law and order	
· Ethnic tensions	
· Bureaucratic quality	

Source: Third-Party Indicators Digest, 2017.
Note: Indicators in red refer to those excluded in the previous EBA specification.

22. **Results and implications:** The refined institutional proxy did not affect the fit of the model—yielding the same level of statistically significant root mean squared errors (see Section V and Table 4). However, the new indicator affected some current account norms. In particular, norms are lower in emerging market and developing economies where government stability and law and order are relatively strong (see discussion in Section V).

IV. IMPROVING THE MODELING OF POLICIES

A. Foreign Exchange Intervention

23. **Background and motivation:** If capital is imperfectly mobile, foreign exchange interventions (FXI) should affect nominal and real exchange rates and therefore the current account. To capture this, the EBA model includes as a regressor the FXI/GDP ratio, interacted with a measure of capital controls. In the previous versions of EBA, depending on data availability, FXI was measured as the change in the stock of reserves in US dollars, or the net reserves flow from the balance of payments statistics, while the degree of capital mobility is based on the Quinn's index of capital controls (ranging from full mobility at 0, to no mobility at 1). However, a growing number of countries are complementing their spot market FXI operations with the use of derivatives contracts, which have been found to have comparable effects to on-balance-sheet operations (see IMF 2014; and Nedeljkovic and Saborowski 2017). Moreover, recent research has found that FXI has, in general, a larger effect on the REER and the current account than that estimated by the EBA model, suggesting that the instrumentation of FXI may have been associated with a downward bias in the estimated effect (see also IMF 2013).[18]

24. **The FXI refinements:** Revisions were made to the definition and the instrumentation of FXI:

(1) **A broader definition of FXI** was adopted, encompassing comparable operations in derivative markets. Derivatives include aggregate short and long positions in forwards and futures in foreign currencies vis-à-vis the domestic currency (including the forward leg of currency swaps), and financial instruments denominated in foreign currency but settled by other means (for example, in domestic currency), as reported in the *International Reserves and Foreign Currency Liquidity Template*. This broader measure of FXI builds on the notion that on- and off-balance sheet interventions have similar effects on exchange rates and current accounts.[19] The on-balance sheet component can be proxied by balance of payments reserves flows (changes in stocks are used only when flow data are not available, which is uncommon).[20]

(2) **A simpler instrumentation**, with a more limited number of variables (three), is now used to facilitate interpretation, avoid possible over-fitting in the first stage of the regression, and deliver more stable second-stage regression coefficients. These instruments include: (a) a measure of *global accumulation of reserves*, capturing what is known in the reserve accumulation literature as the "keeping-up with-the-Joneses" effect, or the desire of countries to maintain FX liquidity (for precautionary motives)

[18] For related empirical studies, see Adler, Lisack, and Mano (2015); Blanchard, Adler, and de Carvalho Filho (2015); Bayoumi, Gagnon, and Saborowski (2015); and Gagnon (2012, 2013).

[19] Derivatives and spot market interventions may not have comparable effects when there are meaningful risks of non-convertibility (in the case of instruments settled in local currency), or tightening of capital controls; or when derivatives are of very short maturity.

[20] While this measure still includes interest income on reserves, this component is typically small and stable over time. More importantly, the latter are largely uncorrelated with the country's exchange rate and current account, and as such should not lead to biases in the estimated coefficient.

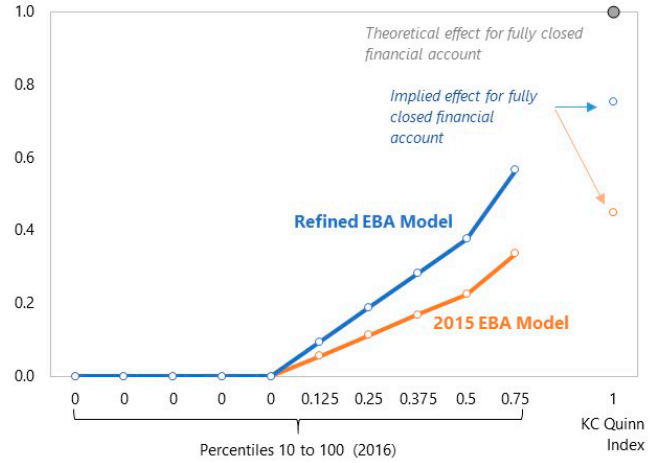
(continued)

at par with peer emerging market countries (excluding own reserve accumulation for each country),[21] (b) a measure *of reserve adequacy linked to M2*, which is defined as (M2-reserves)/GDP relative to the average emerging market group; and (c) an emerging market and developing economy dummy, in line with Bayoumi, Gagon and Saborowski (2015), to capture the tendency of emerging markets and developing economies to accumulate reserves as part of their export-led growth strategies.

25. **Results and implications:** The estimated effect of FXI under the refined model is larger than in previous EBA estimations, and more in line with theoretical predictions and other recent empirical studies (Figure 5 and Section V, Table 4). The regression coefficient suggests that a 1 percent of GDP FXI leads to a 0.19 percent of GDP increase in the current account for a country in the 75th percentile of the EBA distribution of the Quinn index of capital controls (compared to 0.11 under the earlier specification) and 0.38 for a country at the 90th percentile (compared to 0.22).

26. **Defining desired policy levels for FXI:** For consistency with the broader definition of FXI flows, off-balance-sheet positions should be taken into account when assessing the adequacy of FX stocks and thus the desirability of FXI operations from a precautionary point of view. Over the medium term, countries would be expected to hold a level of reserves (plus the comparable off-balance-sheet FX position) that is deemed adequate from a precautionary viewpoint, thus requiring no additional accumulation (beyond small amounts to sustain such adequate level of FX liquidity). That is, the desirable FXI over the medium-term should be zero ($P^* = 0$). In exceptional circumstances, if countries are not expected to reach adequate reserves over the medium-term, a non-zero desirable level could be set, provided it is accompanied by a clear justification.[22] Deviations from the medium-term desirable level (that is, $P - P^*$) would not necessarily be interpreted as a distortion. In fact, FXI policy gaps may be appropriate if they are an adequate response to current conditions (for example, to cope with large capital inflows under the conditions set forth in the IMF's Institutional View on Managing Capital Flows) or the necessary temporary, build-up of reserves to reach an adequate level of reserves over the medium-term.

Figure 5. EBA Countries: Marginal Effect of FXI on the Current Account by Capital Account Openness *(Percent of GDP)*



Source: IMF staff estimates and calculations.

[21] See, for example, Cheung and Qian (2009) and Cheung and Sengupta (2011).

[22] This formulation aligns more closely with those of other policy variables. For capital controls, in most cases, the benchmark level that is suggested as desirable for the medium term is either the contemporaneous cross-country average level of the controls index, or a country's actual level, whichever is the smaller, as indicated in IMF (2013b).

(continued)

B. Private Credit

27. **Background and motivation:** To capture the role of financial excesses, previous versions of the model included the private sector credit-to-GDP ratio (relative to its historical average) as an explanatory variable. This follows a large body of research that shows that the current account deteriorates and the REER appreciates in countries that experience credit booms, with the opposite occurring during credit busts.[23] However, this financial indicator had several shortcomings. For one, there is substantial variation in the coverage of financial intermediation institutions across countries and the indicator lacked a systematic treatment of breaks that are common in credit series.[24] In addition, the *demeaned* credit series did not adequately isolate the financial cycle nor recognize the existence of low-frequency drivers, including financial deepening. As a result, large and permanent deviations of credit from their historical average were estimated in countries experiencing trend changes in the credit-to-GDP ratio. Such deviations are not necessarily related to financial excesses.

28. **Data and methodological refinements:** Refinements focused on improving both the coverage and consistency of credit data, as well as the modeling of financial excesses.

- **Data upgrades:** Refinements involved constructing a comprehensive and consistent measure of credit to the private sector. For most countries in the EBA sample, the BIS is now the main data source, given efforts made over the years to address breaks in the credit series and compile a comprehensive and consistent measure of credit across countries (BIS, 2013).[25] To capture only the "resident" component of credit from banks and nonbank intermediaries to the nonfinancial private sector, the *cross-border banking flows to the domestic non-bank sector* (which come from the BIS "Locational Banking Statistics") are subtracted from the BIS aggregate credit measure. This is necessary since credit provided by nonresidents is also recorded in the financial account.[26]

- **A new proxy for financial excesses:** A new credit gap measure is used, consistent with advances in the literature and the new methodology developed by the BIS (Drehmann, Borio, and Tsatsaronis, 2011). Specifically, a one-sided Hodrick-Prescott (HP) filter is applied to the credit-to-GDP ratio with a large penalty parameter that takes into account the fact that financial cycles have longer duration

[23] See Dell'Ariccia and others (2012); Mendoza and Terrones (2012); and Landerretche, Gourinchas, and Valdés (2001).

[24] More specifically, the World Bank's *World Development Indicators* (WDI) use credit to the private sector from the IMF's *International Financial Statistics* (IFS). In some cases, the WDI obtain this series from the Financial Survey, which includes depository corporations and nonbank financial institutions, while in other cases the data source is the Banking Survey, which excludes nonbank financial institutions. The WDI also does not systematically correct for breaks in the series for euro area countries in the years around the adoption of the euro.

[25] The WDI private credit series is used in the 10 (out of the 49) EBA countries without BIS data (Costa Rica, Egypt, Guatemala, Morocco, Pakistan, Peru, Philippines, Sri Lanka, Tunisia, Uruguay). Meanwhile, for the few countries for which BIS data does not cover the full sample period (Brazil, Colombia, Hungary, Israel, Poland, and Russia), the BIS series is extended by splicing the data backwards using the WDI series (see Annex I).

[26] In the case of Ireland, the BIS series for bank credit to the private nonfinancial sector is used instead, because using the BIS total credit series minus cross-border banking flows produced non-intuitive results given Ireland's recent boom-and-bust cycle.

(continued)

than real business cycles.[27] Meanwhile, applying a one-sided filter avoids revisions to the estimated gaps from the use of real-time data. IMF staff credit gaps estimates are generally consistent with those published by the BIS, with small differences reflecting data and methodological differences (that is, the BIS credit measure includes cross-border banking flows, and the HP-filter is applied to quarterly rather than annual data, see Table 3). Technical Supplement Box 2 provides an example of the implications of applying the new methodology for identifying credit excesses.

29. **Implications for the current account model:** Results imply that a 10 percent of GDP increase in credit relative to its trend would be associated with a 1 percent of GDP deterioration in the current account (see Section V, Table 4). This estimated effect is highly significant and symmetric along the financial cycle. Moreover, given improvements in the modeling of financial excesses, the relationship between the fiscal balance and the current account is somewhat weaker under the new specification, since the effect is now party captured by the credit gap variable.[28] This result is consistent with the new literature suggesting that the financial cycle accentuates the procyclicality of fiscal policy.[29] Robustness was also evaluated, which involved replacing the new credit gap measure with the current and lagged credit-to-GDP changes. The fit of the alternative specification turned out to be very similar to the revised credit gap specification, although it would be unclear conceptually how to go about defining the desired credit growth level.

30. **Defining desired credit gap levels:** Under the new credit gap specification, deviations from the estimated trend will be deemed as unwarranted, as the starting point will be to set the desired credit gap level to zero. This means that in the refined model, and unlike in the 2015 model, credit does not generally have an impact on the current account norms. However, adjustments can be considered if the credit gap estimate does not provide an accurate picture of financial imbalances. This might be warranted in countries that are experiencing financial deepening (where the gap measure may be overstating financial imbalances by understating the long-term trend).[30] Adjustments can also be considered in countries experiencing a credit bust (where the credit-to-GDP ratio is either not expected to return to pre-crisis levels or will recover only over a protracted period).[31]

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[27] The BIS suggests a penalty parameter (that is, "lambda") of 400,000 for quarterly data. Ravn and Uhlig (2002) suggest dividing the quarterly value by 4^4 to obtain its annual frequency counterpart. This results in a penalty parameter of 1600 for annual data, which is higher than the value of 100 typically assumed with the HP-filter in real business cycle analysis. In a few countries with data limitations (China, Czech Republic and Russia), a two-sided HP filter was applied to estimate the credit gap in the initial years of the sample.

[28] The coefficient of the fiscal balance fell from 0.47 to 0.33, bringing it closer to the value estimated in the original 2013 EBA model (see Section V and Table 4).

[29] See Borio, Lombardi and Zampolli (2016) and Benetrix and Lane (2015). The intuition is that during periods of buoyant credit and/or high asset prices government revenues rise (beyond the business cycle) and the fiscal balance improves. The opposite holds true during credit busts.

[30] This would require justifying why the pace of financial deepening is healthy, rather than on an unsustainable trajectory. Since distinguishing between "good" and "bad" credit booms in real time is difficult, erring on the safe side would generally be recommended.

[31] In certain situations, such as in the aftermath of a prolonged period of excessive credit growth, the BIS credit gap could be biased downwards (see ECB 2017 for a discussion), and adjustments to the estimated credit gap would be

(continued)

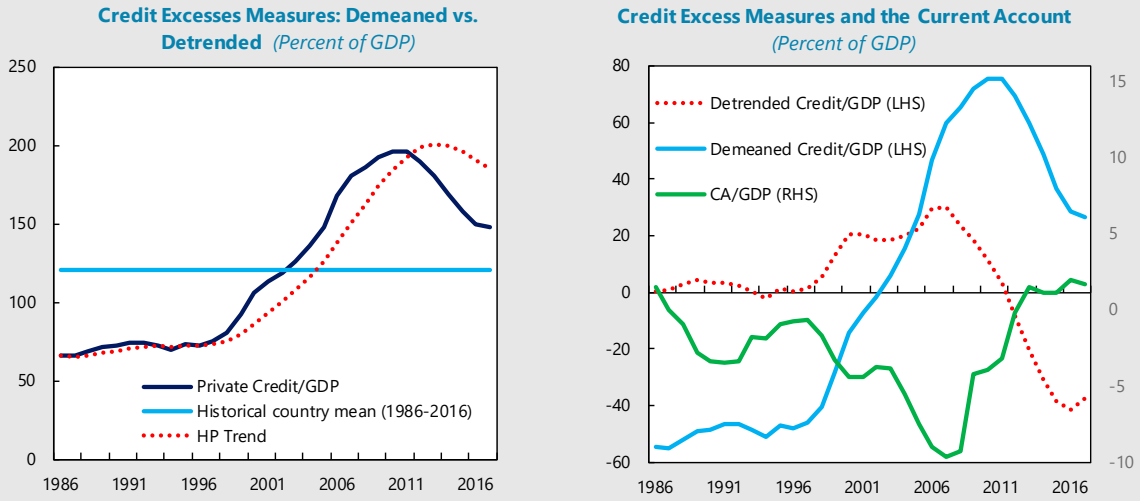
Technical Supplement Box 2. Measuring the Effect of the Credit Cycle on the Current Account

Using a country example, this box examines the implications of the refinements in the modeling of financial excesses, comparing them with the previous specification.

Measurement of credit gaps: How financial excesses are measured could lead to different conclusions on their role in driving external balances. Take for example an actual country that has undergone both a period of financial deepening and a full boom-and-bust cycle. Applying the previous EBA credit gap concept, which involved demeaning the data with the historical average, would suggest that the country had large negative gaps in the first half of the sample and large positive gaps towards the end of the sample, even after a large credit bust. In contrast, applying the new filtering methodology, which allows for both the removal of the low-frequency movements (related to structural changes in credit markets or other factors) and the identification of the financial cycle component, would suggest small credit gaps in the early part of the sample, the emergence of a positive gap during the boom and negative gaps following the post-global-financial-crisis bust.

Relationship with the current account: The relationship between demeaned credit and the current account is weak (with a correlation of –0.26 over the entire series), as the turning points of both series are not always aligned. In particular, while the current account deficit started narrowing in 2007, the demeaned credit shows a declining pattern only after 2011. Meanwhile, the new detrended measure displays a striking negative correlation (-0.85), and can capture the turning points in the current account over different cycles. While other countries in the EBA sample have different credit cycles and their relationship with the current account varies, a general pattern can be found: while the correlation between the current account and the demeaned credit series is –0.01, it decreases to –0.30 with the new credit gap measure. These findings suggest that the new credit gap measure is able to better capture the well-known negative effects that credit excesses have on a country's current account balances.

Figure 1.TS.2. Sample Country: Comparing Implications of Credit Excess Specifications



Sources: BIS, World Economic Outlook and IMF Staff calculations.

justifiable. In addition, large and negative credit gaps are highly persistent. The experience prior to the global financial crisis suggests that large negative credit gaps (in excess of 30 percent of GDP at the trough of the cycle) close only by half in 5 years and do not fully close even after 10 years. Where negative credit gaps exceed 20 percent of GDP, consideration could also be given to setting the "desired" detrended credit level such that half of the gap is closed in the medium term.

V. EBA CURRENT ACCOUNT MODEL: CONSOLIDATED RESULTS

31. **The methodological refinements offer a more theoretically-grounded specification, while improving the overall fit (Table 4)**.

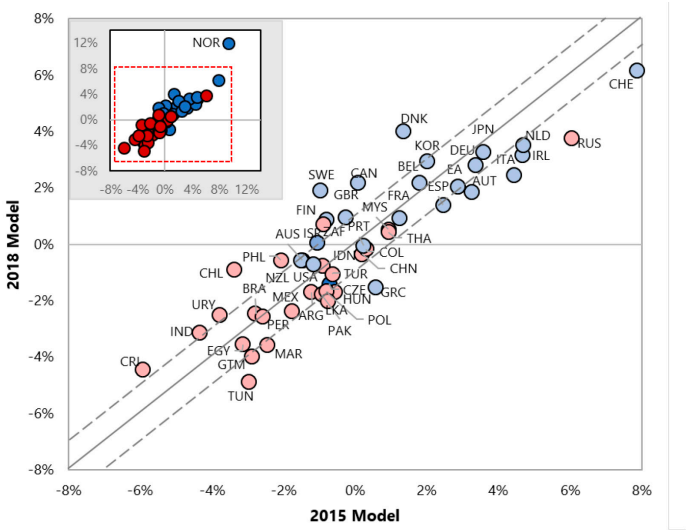
- **Model fit:** The goodness of fit improves with respect to the 2015 model with updated data, with the *R*-squared rising by about 10 percent (from 0.49 to 0.55). The root mean squared error declined by 6 percent (from 3.3 to 3.1 percent). This improvement is sizeable, especially since the exclusion of the financial center dummy in the refined model in itself worsened the model's fit.

- **Parameter estimates:** The coefficients of the regressors of the new model largely coincide with economic priors and are statistically significant in most cases. The refined demographic specification shows statistically significant coefficients, with expected signs, for variables that capture both static and dynamic effects. As discussed earlier, changes in size of the coefficients are also generally consistent with findings in the literature.: (1) the smaller fiscal coefficient is consistent with the growing literature suggesting that financial cycles accentuate the procyclicality of fiscal policy and the sample of advanced economies; (2) the larger coefficient for FXI is more in line with that of recent studies suggesting that the intervention can have meaningful medium-term effects on imbalances; and (3) the higher coefficient on the NFA variables, resulting from the exclusion of the financial center dummy variable, is consistent with the view that this stock position is partly capturing biases in the measurement of the current account.[32] Finally, global uncertainty variables (proxied by the Chicago Board Options Volatility Index (VIX) are no longer significant following the extension of the sample period.

[32] As discussed in IMF (2006, 2013) this coefficient captures a confluence of factors, including underlying solvency constraints as well as the effect of the NFA position on the income balance. Disentangling such factors remains a methodological challenge and an area for future work.

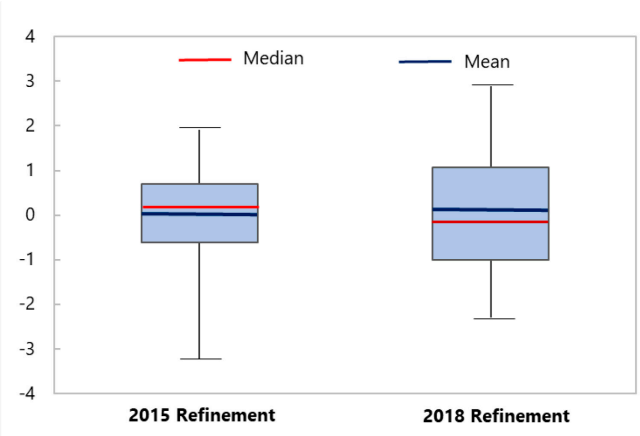
32. **The refined model resulted in generally small changes in EBA estimated current account norms, with some exceptions** (Tables 5–8 provide a breakdown of the contributions to country-specific norms under the previous and refined specification). The distribution of current account norms does not vary significantly relative to the previous specification, with richer economies that are also more advanced in their demographic transition continuing to post higher current account norms (Figure 6). The refinements, however, led to a distribution of norms that is now more closely aligned across countries with similar income and demographic characteristics (for example, Denmark, Finland and Sweden, which had low or negative norms under the previous specification, now show much higher and positive norms that are comparable to their advanced economy peers). Changes in current account norms, however, were large in a few cases, reflecting a series of factors, including: (1) the new approach for considering measurement biases, in which exclusion of the financial center dummy led to lower "estimated" norms for the Netherlands and Switzerland; (2) refinements to the demographics specification, where disentangling static and dynamic effects led to downward revisions in the contribution of demographics in some cases (Germany, Italy, Spain), and upward revisions in others (China, Denmark, Finland, Sweden); (3) changes in the modeling of credit, which led to higher norms in some cases (Denmark, Sweden, the Netherlands); and (4) broadening the set of institutional indicators (that is, to include the role of political stability), which led to an upward reassessment of some countries' (China, Thailand) ability to borrow externally to meet investment needs. The overall size and distribution of revisions to the norms were similar to the refinements adopted in the past (where only the demographic specification was altered),

Figure 6. Comparison of EBA Estimated Current Account Norms for 2017, Previous versus New Model *(Percent of GDP)*



Source: IMF staff estimates.
Note: Blue dots refer to advanced economies; red and pink dots refer to emerging market and developing economies.

Figure 7. Distribution of Current Account Norm Changes, 2015 versus 2018 Refinements [1/]



Source: IMF staff estimates.
1/ Box limits denote 25th and 75th percentiles.

although the dispersion this round was naturally somewhat higher (Figure 7).[33] That said, changes in numerical inputs, do not necessarily translate into changes in *staff-assessed* current account norms. In fact, and as discussed earlier, some of the refinements are necessarily associated with outside-the-model adjustments, for either measurement biases (Switzerland) or special demographic features (South Africa and Indonesia).

VI. COMPLEMENTARY TOOLS: THE ROLE OF STRUCTURAL POLICIES

33. **Background and motivation:** Publicly available data sources on structural policies currently lack the proper time or cross-country coverage to assess their implications directly in the EBA model. In light of these constraints, available data for a subset of countries and years were used to examine the relationship between the estimated unexplained residuals from the EBA current account model, which are large in some cases, and structural features in product and labor markets. The results help shed light on the potential effects structural policies could have on the current account in a multilaterally-consistent manner, which are qualitatively in line with estimates in the literature. That said, IMF staff assessments and policy recommendations in the structural area should continue to be informed by and tailored according to country-specific insights and analysis.

34. **Conceptual framework:** There are several channels through which product and labor market policies affect the current account (Obstfeld and Rogoff, 2006; Cacciatore and others 2016a, 2016b). The relationship between structural policies and the current account is complex, operating through at least three channels:

- *Productivity channel*. Changes in structural policies increase investment opportunities, resource availability, and productivity levels.[34] These reforms improve the current account if consumption rises less than income, and if the productivity gains are concentrated in the tradables sector. [35]
- *Price-competitiveness channel*. Reforms that reduce rigidities in labor and goods markets affect the current account through its effects on price-competitiveness. On the one hand, increased labor market flexibility can lower labor costs and boost competitiveness by allowing firms to adjust labor inputs more easily, and by reducing the bargaining power of the employed. On the other hand, more product market flexibility, reduces the price-setting power of firms, but it may have an inflationary

[33] The GDP-weighted average change in norms was similar to that of the 2015 refinements.

[34] Reforms to product and labor market regulations often lead to temporary increases in productivity growth and permanent gains in productivity levels. See Obstfeld and Rogoff (1996) and Aguiar and Gopinath (2007) for a discussion of the effects on the current account of temporary and permanent changes in productivity growth rates.

[35] Obstfeld and Rogoff (2006) show how higher productivity growth can reduce global imbalances. However, their results depend on which country (deficit or surplus) and sector (tradable or non-tradable sector) benefits from the productivity improvement. Fournier and Koske (2010) show that productivity-enhancing reforms in the tradable sector unambiguously lead to a weakening of the current account, while structural reforms that boost productivity in the nontradables sector may or may not improve the current account, depending on consumers' preferences.

general equilibrium effect—stemming from an increase in investment and labor demand by new entrant firms— which may hurt competitiveness.

- *Uncertainty channel*. Structural reforms affect precautionary savings and the current account through their effects on the degree of uncertainty faced by households and firms. For households, the relationship is ambiguous and depends on the implemented reform. For example, reduced employment protection increases the probability of dismissal—which raises households' precautionary saving—but it also reduces the expected length of unemployment spells—which decreases households' precautionary saving. For firms, reforms that reduce uncertainty would lower saving and raise investment (see Ghosh and Ostry, 1997).

35. **Empirical approach:** Available Organisation for Economic Co-operation and Development (OECD) and World Economic Forum (WEF) structural indicators for a subset of country-years were used to examine their relationship with the estimated unexplained residual from the EBA current account model.[36] The analysis identifies the extent to which unexplained current account gaps are associated with deviations of product or labor market regulations from best-practices or the frontier. The normative assessment is focused on identifying policies that help reduce both domestic structural gaps and excess current account imbalances, assuming that structural distortions in the rest of the world, on average, remain unchanged. Specifically, a country's distance to a particular structural benchmark is estimated relative to the world's average distance to the same benchmark.

36. **Summary of findings:** The results suggest that removing some types of business entry barriers can reduce the current account balance, while addressing certain labor market rigidities would do the opposite (Table 9). The baseline analysis uses OECD data for which empirical findings are more robust and for which there is a better conceptual understanding of their effects. The variables selected include (1) barriers to entrepreneurship in the form of *licenses and permits system regulations* (LPS) for product market regulations; and (2) the strictness of *employment protection laws* (EPLs) related to severance pay regulations and regulations on temporary labor contracts. In line with the related empirical literature, the results indicate that reducing burdens in LPS can lower the current account as investment by new firms rises and their additional demand for labor puts upward pressure on wages, reducing competitiveness. Meanwhile, addressing certain labor market rigidities by easing EPLs can improve the current account as labor costs decline, boosting competitiveness.[37] Since OECD variables are available for only 24 economies, the analysis for the remaining EBA countries relies on WEF indicators of de-facto product and labor market rigidities, which are available for all EBA countries but only for the past 10 years.

[36] OECD indicators are survey-based measures of hard data on product and labor market regulations. Additional information can be found at http://www.oecd.org/eco/growth/indicatorsofproductmarketregulationhomepage.htm http://www.oecd.org/els/emp/oecdindicatorsofemploymentprotection.htm. The WEF product market indicator relies on the World Bank Doing Business survey on the number of procedures required to start a business. Further details about the methodology employed and the assumptions made to compute this indicator, are available at http://www.doingbusiness.org/methodologysurveys/ The WEF labor market indicator is a survey-based measure, of firms' opinions about the degree of cooperation in labor employer relations. Additional information can be found here http://reports.weforum.org/global-competitiveness-index-2017-2018/downloads/

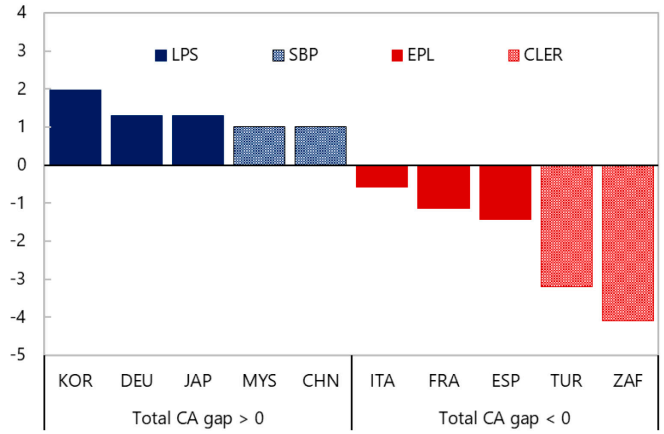
[37] These results confirm those of the existing empirical literature. See Jaumotte and Sodsriwiboon (2010); Cheung, Furceri, and Rusticelli (2013); IMF (2017); Culiuc and Kyobe (2017); and Kerdrain, Koske, and Wanner (2010).

(continued)

Comparable results hold for WEF indicators, signaling that the current account balance falls with a reduction in procedures to start a business (SBP), yet improves with better *cooperation in labor-employer relations*. Better cooperation in labor-employer relations is correlated with policies that increase labor market flexibility, including reductions to the strictness of EPLs, but also increased public spending on active labor market policies.[38]

37. **Operational implications:** These empirical findings are being used as a complementary tool by country teams to shed further light on the unexplained residuals and in the process help guide policy discussions. With a focus on policies that could help achieve the dual goal of reducing domestic structural distortions as well as current account imbalances, product market regulations were found to help explain the positive residuals in key economies—such as Germany, Japan and Korea— while distortions in labor markets explain negative residuals — including in France, Italy, and South Africa (see Figure 8). These complementary tools serve as guidance, by using the results from indicators that are available for an important subsample of EBA countries and years in a multilaterally-consistent manner. IMF staff assessments and related policy recommendation should rely on country-specific insights to properly tailor the structural advice. These tools are available to all country teams, and will continue to be refined as experience is gathered and data availability constraints are eased.

Figure 8. Structural Policy Gaps and Excess Current Account Imbalances *(Percent of GDP)*



Sources: OECD, WEF, WEO, IMF staff estimates.
Note: Bars denote contributions of various structural policies to excess imbalances. LPS: licenses and permits system regulation; SBP: procedures to start a business; EPL: employment protection laws; CLER: cooperation in labor-employer relations.

VII. REER MODELS

38. **The REER-Index and REER-Level models were also refined, incorporating most aspects of the new EBA current account model while keeping the overall frameworks unchanged.** For this round, efforts focused on refinements to the current account model. The general features of the REER models were left broadly unchanged, although for comparability and consistency, changes in modeling of demographics, institutions, FXI and credit excesses were also included where applicable. The fit of the updated REER models was generally unchanged, and estimated coefficients were broadly in line with those coming from the current account models. The REER-Index model, which includes country fixed effects, assumes that each country's real exchange rates is on average in equilibrium over the sample period. Since the REER-Index model does not shed light on the long- run differences in real exchange

[38] The cooperation in labor-employer relations result finds some support in empirical studies which have found that civic attitudes determine the design and functioning of labor market institutions (see Blanchard, Jaumotte, and Loungani 2014; Algan and Cahuc 2009; and Aghion, Algan, and Cahuc 2011).

rates across countries, the REER-Level model was introduced in 2015, exploiting cross-country information on Purchasing Power Parity (PPP) exchange rate levels. Although IMF staff provides estimates for REER gaps for both models, greater weight is increasingly given to the REER-Level model estimates, including because it exhibits a much better fit for external assessments, which parallel the current account model. A summary of the refinements and their overall implications follows:

- **The REER-Level model** refinements resulted in a similar fit to the previous version, although they also led to changes in some coefficients of policy variables (Table 10). The new measure of FX intervention resulted in a much larger coefficient which is more in line with those of other studies (i.e. a 1 percent of GDP increase in FXI would weaken the REER by about 3½ percent). Meanwhile, in the case of credit, the new detrended measure, while having the right sign (a positive credit gap appreciates the exchange rate) it is no longer statistically significant. Consistent with findings in the literature (Rose, Supaat, and Braude, 2009), only the static demographic effects, captured by population growth and the old-age dependency ratio and population growth, were included in the specification.[39]
- **The REER-Index model** refinements also resulted in a similar fit to the previous version (Table 11). Both the new FXI measure and the new credit gap measure were significant and with an estimated coefficient as predicted by theory. As in the case of the new REER-Level and current account models, reserve accumulation has a stronger effect than previously estimated. Meanwhile, the estimated effect of credit excesses on the exchange rate is significant yet relatively small (that is, a 10 percent increase in credit above its long-term trend appreciates the exchange rate by about 1 percent). The impact of demographic variables on the exchange rate was generally weak, especially those capturing the dynamic effects that led to their exclusion.

VIII. CONCLUSION

39. **Methodological refinements to the EBA models represent a step forward in delivering a more reliable assessment tool, yet lessons will continue to be drawn.** The overarching goal of these refinements was to improve the conceptual framework by drawing from lessons learned during its past implementation, as well as by incorporating the feedback received from various stakeholders and the latest advances in the academic literature. This search for "better" models should be viewed as a continuous and evolving process of incorporating new lessons into the conceptual framework. IMF staff will continue to seek feedback from IMF country teams and country authorities, follow recent developments in the literature, and conduct future revisions to the EBA models when these prove to be superior to the current framework.

[39] The share of prime-age savers and variables measuring the dynamic effect were not included because they were either not significant or did not have the expected sign.

Table 3. Credit-to-GDP Gap Estimates

Country Name	Staff (HP Filter, lambda=1600)		BIS	
	2016	2017	2016	2017
Spain	-41.4%	-37.7%	-50.0%	-49.3%
United Kingdom	-18.2%	-15.4%	-21.5%	-19.0%
Italy	-10.7%	-11.8%	-16.6%	-16.7%
Sweden	-8.7%	-9.0%	-11.3%	-12.3%
Australia	-2.5%	-7.8%	-1.0%	-6.6%
Netherlands	-8.5%	-6.9%	-19.8%	-22.3%
India	-5.8%	-6.3%	-7.7%	-8.8%
Brazil	-3.9%	-6.1%	-3.0%	-6.1%
South Africa	-3.9%	-4.2%	-2.6%	-2.5%
United States	-4.5%	-4.0%	-8.4%	-7.4%
Russia	-1.3%	-3.9%	-1.7%	-3.5%
Korea	0.6%	-1.3%	0.2%	-0.5%
Poland	3.9%	-0.7%	-0.6%	-4.0%
Germany	-0.1%	2.0%	-4.7%	-3.0%
Belgium	5.8%	2.3%	2.0%	-2.9%
Indonesia	4.7%	2.7%	9.3%	7.6%
Mexico	5.0%	3.2%	9.5%	6.4%
Malaysia	7.6%	3.5%	9.7%	6.2%
Canada	11.0%	5.2%	13.7%	9.4%
Turkey	8.9%	5.4%	9.8%	7.8%
France	5.9%	5.5%	4.6%	5.2%
Japan	2.5%	5.5%	5.8%	6.8%
Thailand	8.8%	6.1%	11.4%	8.7%
Switzerland	11.0%	9.0%	6.4%	6.3%
China	23.9%	14.0%	24.6%	18.9%

Sources: Bank for International Settlements; and IMF staff estimates..

Table 4. EBA Current Account Regression Results: 2013, 2015, and Refined 2018 Model

Variables	2013 Model	2015 Model (Current)		Refined Model (1986-2016)
	1986-2010	1986-2013	1986-2016	
L. NFA/Y	0.016**	0.015**	0.014**	0.023***
L. NFA/Y*(dummy if NFA/Y < -60%)	-0.012	-0.009	0.005	-0.006
L.Output per worker, relative to top 3 economies	0.007	0.033	0.025	0.023
L.Relative output per worker*K openness	0.065***	0.046**	0.046**	0.041*
GDP growth, forecast in 5 years #	-0.471***	-0.425***	-0.272***	-0.302***
L.Public Health Spending/GDP #	-0.551***	-0.503***	-0.310**	-0.399***
L.demeaned VIX*K openness	0.068***	0.040**	0.022	0.02
L.demeaned VIX*K openness*share in world reserves	-0.136*	-0.093	-0.008	0.002
Own currency's share in world reserves	-0.045***	-0.041***	-0.038***	-0.030***
Output Gap #	-0.400***	-0.385***	-0.392***	-0.356***
Commodity ToTgap*Trade Openness	0.230***	0.197***	0.139***	0.161***
Demeaned Private Credit/GDP #	-0.026***	-0.021***	-0.038***	
Detrended Private Credit/GDP #				-0.104***
Change in Reserves to GDP* K controls, instrumented #	0.346**	0.449**	0.261	
Change in Reserves to GDP* K controls, instrumented #(New)				0.754***
Population Growth #	-0.629	-0.565	-0.689*	-0.692*
Old-age Dependency Ratio #	-0.030	-0.057	-0.079	-0.069
rel. Dependency Ratio*Aging Speed		0.130***	0.101***	
rel. Aging Speed * Dependency Ratio		0.088**	0.107***	
Aging Speed (proj. change in old age dependency ratio) #	0.156***			
Prime Savers Share #				0.138**
Life Expectancy at Prime Age #				-0.005***
Life Expectancy at Prime Age # * Future OADR				0.013***
Institutional/Political Environment (ICGR-12) #				-0.047**
Institutional/Political Environment (ICRG-5) #	-0.109***	-0.109***	-0.104***	
Financial Center Dummy	0.033***	0.027***	0.028***	
Oil and Natural Gas Trade Balance * resource temporarines	0.615***	0.410***	0.398***	0.310***
Cyclically adjusted Fiscal Balance, instrumented #	0.324***	0.470***	0.543***	0.329***
Constant	-0.014***	-0.014***	-0.014***	-0.009***
Observations	1080	1,197	1,340	1,367
Number of countries	49	49	49	49
R-squared IV	0.520	0.544	0.511	0.524
R-squared Fit	---	---	*0.494*	*0.550*
Root MSE	0.033	0.032	0.033	0.031

* significant at 10%; ** significant at 5%; *** significant at 1% "L." denotes one year lag.
Variables denoted with # are constructed relative to a (GDP-weighted) country sample average, in each year.

Table 5. EBA Countries, 2015 Model: Summary of EBA Current Account Norms and Contributions for 2017 1/

Country	Constant+MLC	NFA	Demographics	Institutions	GDPPC/Future Growth	Country factors (Oil, FC, RC)	Policy Variables	Cyclically Adjusted EBA Norm
Argentina	-0.1%	0.1%	-1.6%	1.5%	-0.8%	-0.1%	-0.3%	-1.2%
Australia	-0.1%	-0.8%	-1.1%	-1.7%	1.3%	0.0%	0.9%	-1.5%
Austria	-0.1%	0.0%	1.6%	-0.8%	1.7%	-0.9%	1.8%	3.3%
Belgium	-0.1%	0.7%	0.2%	-0.5%	1.6%	-0.9%	0.8%	1.8%
Brazil	-0.1%	-0.5%	-0.6%	0.8%	-0.8%	-0.1%	-1.5%	-2.8%
Canada	-0.1%	0.2%	0.2%	-1.9%	1.5%	0.1%	0.1%	0.1%
Chile	-0.1%	-0.2%	-0.4%	-0.9%	-0.5%	-0.1%	-1.1%	-3.4%
China	-0.1%	0.3%	-0.1%	2.8%	-2.2%	-0.1%	-0.4%	0.2%
Colombia	-0.1%	-0.7%	-0.6%	1.5%	-1.4%	2.5%	-0.9%	0.3%
Costa Rica	-0.1%	-0.7%	-0.7%	0.6%	-1.2%	-0.1%	-3.7%	-5.9%
Czech Republic	-0.1%	-0.4%	-0.3%	0.0%	0.3%	-0.1%	-0.2%	-0.7%
Denmark	-0.1%	0.7%	-0.9%	-1.2%	1.7%	-0.1%	1.2%	1.3%
Egypt	-0.1%	-0.6%	-1.0%	3.8%	-2.4%	-0.1%	-2.8%	-3.1%
Finland	-0.1%	0.1%	-0.8%	-1.8%	1.6%	-0.9%	1.1%	-0.8%
France	-0.1%	-0.3%	0.4%	0.0%	1.4%	-0.9%	0.7%	1.2%
Germany	-0.1%	0.7%	2.0%	-1.5%	1.8%	-0.9%	1.3%	3.4%
Greece	-0.1%	-1.4%	1.8%	0.9%	0.5%	-0.9%	-0.3%	0.6%
Guatemala	-0.1%	-0.3%	-1.1%	1.3%	-1.7%	-0.1%	-0.9%	-2.9%
Hungary	-0.1%	-0.9%	-0.6%	0.1%	0.0%	-0.1%	1.0%	-0.6%
India	-0.1%	-0.4%	-0.6%	1.7%	-3.7%	-0.1%	-1.2%	-4.3%
Indonesia	-0.1%	-0.5%	-0.5%	2.5%	-2.4%	0.0%	0.2%	-0.9%
Ireland	-0.1%	-1.6%	-0.2%	-0.9%	2.6%	-0.9%	5.8%	4.7%
Israel	-0.1%	0.5%	-1.9%	0.3%	0.4%	-0.1%	-0.2%	-1.0%
Italy	-0.1%	-0.2%	3.8%	0.2%	1.4%	-0.9%	0.3%	4.4%
Japan	-0.1%	0.9%	1.4%	-1.1%	1.9%	-0.3%	0.9%	3.6%
Korea	-0.1%	0.3%	1.4%	-0.7%	0.3%	-0.1%	1.0%	2.0%
Malaysia	-0.1%	0.1%	-0.8%	1.0%	-1.1%	1.1%	0.8%	0.9%
Mexico	-0.1%	-0.7%	-0.9%	1.0%	-0.8%	-0.1%	-0.3%	-1.8%
Morocco	-0.1%	-0.9%	-0.9%	1.2%	-2.1%	-0.1%	0.5%	-2.4%
Netherlands	-0.1%	0.9%	1.4%	-0.8%	1.8%	2.1%	-0.6%	4.7%
New Zealand	-0.1%	-0.9%	-0.2%	-2.2%	0.6%	-0.1%	1.3%	-1.5%
Norway	-0.1%	3.0%	-1.0%	-2.0%	3.0%	6.9%	-0.6%	9.3%
Pakistan	-0.1%	-0.5%	-0.9%	3.0%	-2.5%	-0.1%	0.1%	-0.9%
Peru	-0.1%	-0.6%	-0.9%	0.9%	-1.6%	-0.1%	-0.3%	-2.6%
Philippines	-0.1%	-0.2%	-0.7%	1.8%	-3.1%	-0.1%	0.3%	-2.1%
Poland	-0.1%	-0.9%	0.3%	0.0%	-0.2%	-0.1%	0.2%	-0.8%
Portugal	-0.1%	-1.2%	2.1%	0.0%	0.6%	-0.9%	-0.2%	0.2%
Russia	-0.1%	0.2%	-0.2%	2.3%	0.3%	1.6%	2.0%	6.1%
South Africa	-0.1%	0.1%	-0.5%	1.3%	-0.7%	-0.1%	-0.9%	-0.9%
Spain	-0.1%	-1.0%	2.6%	0.2%	0.9%	-0.9%	0.8%	2.5%
Sri Lanka	-0.1%	-0.8%	-0.2%	3.0%	-2.0%	-0.1%	-0.5%	-0.8%
Sweden	-0.1%	0.1%	-1.7%	-2.1%	1.8%	-0.1%	1.0%	-1.0%
Switzerland	-0.1%	1.6%	0.7%	-1.5%	2.4%	2.6%	2.2%	7.9%
Thailand	-0.1%	-0.1%	0.3%	2.7%	-1.3%	-0.1%	-0.5%	0.9%
Tunisia	-0.1%	-1.3%	-0.8%	2.2%	-1.7%	-0.1%	-1.2%	-3.0%
Turkey	-0.1%	-0.7%	-1.1%	2.2%	-0.7%	-0.1%	-0.2%	-0.6%
United Kingdom	-0.1%	-0.1%	-0.4%	-1.6%	1.4%	-0.3%	0.8%	-0.3%
United States	-0.1%	-0.7%	-0.5%	-1.5%	2.3%	-2.9%	2.1%	-1.2%
Uruguay	-0.1%	-0.5%	-1.7%	-0.2%	-0.6%	-0.1%	-0.6%	-3.8%

Sources: IMF Staff Assessments and IMF International Financial Statistics (IFS).
1/ MLC refers to Multilateral Consistency Adjustment, FC to Financial Center, RC to Reserve Currency. Assumes 2015 Model coefficients with updated demographics data (2017 UN vintage).

Table 6. EBA Countries, 2015 Model: Contribution of Policy Variables to EBA Current Account Norms for 2017 1/

Country	Policy Variables			Fiscal			Health			Credit			FXI*Capital control			K-Controls
	Total	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total
Argentina	-0.3%	-4.4%	-4.1%	-0.5%	-0.9%	-0.5%	0.4%	-2.8%	-3.2%	0.6%	0.0%	-0.5%	0.1%	0.1%	0.0%	-0.8%
Australia	0.9%	-3.2%	-4.1%	0.5%	0.0%	-0.5%	-0.3%	-3.4%	-3.2%	-0.6%	-1.2%	-0.5%	0.0%	0.0%	0.0%	1.4%
Austria	1.8%	-2.4%	-4.1%	0.2%	-0.2%	-0.5%	-0.1%	-3.3%	-3.2%	0.4%	-0.2%	-0.5%	0.0%	0.0%	0.0%	1.3%
Belgium	0.8%	-3.3%	-4.1%	0.5%	0.0%	-0.5%	-1.0%	-4.1%	-3.2%	0.0%	-0.6%	-0.5%	0.0%	0.0%	0.0%	1.4%
Brazil	-1.5%	-5.6%	-4.1%	-1.0%	-1.4%	-0.5%	0.8%	-2.4%	-3.2%	0.0%	-0.6%	-0.5%	0.0%	0.0%	0.0%	-1.3%
Canada	0.1%	-4.1%	-4.1%	-0.1%	-0.6%	-0.5%	-0.7%	-3.8%	-3.2%	-0.4%	-0.9%	-0.5%	0.0%	0.0%	0.0%	1.2%
Chile	-1.1%	-5.3%	-4.1%	0.0%	-0.5%	-0.5%	0.4%	-2.8%	-3.2%	-0.7%	-1.2%	-0.5%	0.0%	0.0%	0.0%	-0.8%
China	-0.4%	-4.5%	-4.1%	-0.1%	-0.6%	-0.5%	1.2%	-1.9%	-3.2%	-0.1%	-0.7%	-0.5%	0.0%	0.0%	0.0%	-1.3%
Colombia	-0.9%	-5.1%	-4.1%	0.1%	-0.4%	-0.5%	0.5%	-2.7%	-3.2%	0.0%	-0.6%	-0.5%	0.0%	0.0%	0.0%	-1.4%
Costa Rica	-3.7%	-7.8%	-4.1%	-2.4%	-2.9%	-0.5%	0.4%	-2.8%	-3.2%	-0.2%	-0.7%	-0.5%	0.0%	0.0%	0.0%	-1.5%
Czech Republic	-0.2%	-4.4%	-4.1%	0.0%	-0.5%	-0.5%	-0.7%	-3.9%	-3.2%	0.4%	-0.2%	-0.5%	0.0%	0.0%	0.0%	0.1%
Denmark	1.2%	-3.0%	-4.1%	0.5%	0.0%	-0.5%	-0.8%	-4.0%	-3.2%	-0.1%	-0.6%	-0.5%	0.0%	0.0%	0.0%	1.6%
Egypt	-2.8%	-7.0%	-4.1%	-3.6%	-4.0%	-0.5%	1.6%	-1.5%	-3.2%	0.8%	0.3%	-0.5%	0.0%	0.0%	0.0%	-1.7%
Finland	1.1%	-3.1%	-4.1%	0.3%	-0.1%	-0.5%	-0.5%	-3.6%	-3.2%	0.0%	-0.5%	-0.5%	0.0%	0.0%	0.0%	1.2%
France	0.7%	-3.4%	-4.1%	0.5%	0.0%	-0.5%	-1.3%	-4.5%	-3.2%	0.3%	-0.2%	-0.5%	0.0%	0.0%	0.0%	1.3%
Germany	1.3%	-2.9%	-4.1%	0.2%	-0.2%	-0.5%	-1.2%	-4.4%	-3.2%	0.6%	0.1%	-0.5%	0.0%	0.0%	0.0%	1.6%
Greece	-0.3%	-4.4%	-4.1%	0.3%	-0.2%	-0.5%	0.5%	-2.6%	-3.2%	-0.8%	-1.3%	-0.5%	0.0%	0.0%	0.0%	-0.3%
Guatemala	-0.9%	-5.1%	-4.1%	-0.5%	-0.9%	-0.5%	1.4%	-1.8%	-3.2%	0.3%	-0.3%	-0.5%	0.0%	0.0%	0.0%	-2.1%
Hungary	1.0%	-3.1%	-4.1%	0.5%	0.0%	-0.5%	0.5%	-2.7%	-3.2%	0.5%	0.0%	-0.5%	0.0%	0.0%	0.0%	-0.4%
India	-1.2%	-5.3%	-4.1%	-1.9%	-2.4%	-0.5%	2.4%	-0.8%	-3.2%	0.2%	-0.3%	-0.5%	0.0%	0.0%	0.0%	-1.9%
Indonesia	0.2%	-4.0%	-4.1%	-0.7%	-1.2%	-0.5%	1.9%	-1.2%	-3.2%	0.5%	-0.1%	-0.5%	0.0%	0.0%	0.0%	-1.5%
Ireland	5.8%	1.7%	-4.1%	0.1%	-0.4%	-0.5%	0.8%	-2.4%	-3.2%	1.4%	0.9%	-0.5%	0.0%	0.0%	0.0%	3.6%
Israel	-0.2%	-4.4%	-4.1%	-1.0%	-1.4%	-0.5%	-0.1%	-3.3%	-3.2%	0.3%	-0.3%	-0.5%	0.0%	0.0%	0.0%	0.6%
Italy	0.3%	-3.9%	-4.1%	0.5%	0.0%	-0.5%	-0.4%	-3.6%	-3.2%	-0.4%	-1.0%	-0.5%	0.0%	0.0%	0.0%	0.7%
Japan	0.9%	-3.2%	-4.1%	0.5%	0.0%	-0.5%	-1.1%	-4.2%	-3.2%	0.3%	-0.2%	-0.5%	0.0%	0.0%	0.0%	1.2%
Korea	1.0%	-3.2%	-4.1%	0.5%	0.0%	-0.5%	0.5%	-2.7%	-3.2%	-0.1%	-0.7%	-0.5%	0.0%	0.0%	0.0%	0.2%
Malaysia	0.8%	-3.3%	-4.1%	-0.5%	-0.9%	-0.5%	1.2%	-1.9%	-3.2%	0.4%	-0.2%	-0.5%	0.2%	0.2%	0.0%	-0.4%
Mexico	-0.3%	-4.5%	-4.1%	-0.7%	-1.2%	-0.5%	1.1%	-2.0%	-3.2%	0.3%	-0.3%	-0.5%	0.0%	0.0%	0.0%	-1.0%
Morocco	0.5%	-3.6%	-4.1%	0.0%	-0.5%	-0.5%	2.3%	-0.9%	-3.2%	-0.2%	-0.7%	-0.5%	0.2%	0.2%	0.0%	-1.8%
Netherlands	-0.6%	-4.8%	-4.1%	0.2%	-0.2%	-0.5%	-1.6%	-4.8%	-3.2%	-1.2%	-1.7%	-0.5%	0.0%	0.0%	0.0%	1.9%
New Zealand	1.3%	-2.9%	-4.1%	1.1%	0.7%	-0.5%	0.1%	-3.0%	-3.2%	-0.6%	-1.1%	-0.5%	0.0%	0.0%	0.0%	0.6%
Norway	-0.6%	-4.7%	-4.1%	-2.7%	-3.1%	-0.5%	-1.0%	-4.1%	-3.2%	-0.4%	-0.9%	-0.5%	0.0%	0.0%	0.0%	3.5%
Pakistan	0.1%	-4.1%	-4.1%	-1.0%	-1.4%	-0.5%	2.2%	-1.0%	-3.2%	0.7%	0.1%	-0.5%	0.2%	0.2%	0.0%	-2.0%
Peru	-0.3%	-4.5%	-4.1%	0.0%	-0.5%	-0.5%	1.2%	-1.9%	-3.2%	0.1%	-0.4%	-0.5%	0.0%	0.0%	0.0%	-1.7%
Philippines	0.3%	-3.9%	-4.1%	0.0%	-0.5%	-0.5%	2.1%	-1.0%	-3.2%	0.3%	-0.3%	-0.5%	0.0%	0.0%	0.0%	-2.1%
Poland	0.2%	-4.0%	-4.1%	0.0%	-0.5%	-0.5%	0.5%	-2.6%	-3.2%	-0.1%	-0.7%	-0.5%	0.2%	0.2%	0.0%	-0.4%
Portugal	-0.2%	-4.4%	-4.1%	0.5%	0.0%	-0.5%	-0.2%	-3.4%	-3.2%	-0.3%	-0.8%	-0.5%	0.0%	0.0%	0.0%	-0.1%
Russia	2.0%	-2.1%	-4.1%	1.6%	1.2%	-0.5%	0.5%	-2.7%	-3.2%	0.4%	-0.2%	-0.5%	0.0%	0.0%	0.0%	-0.5%
South Africa	-0.9%	-5.0%	-4.1%	-0.5%	-1.0%	-0.5%	1.1%	-2.0%	-3.2%	-0.2%	-0.7%	-0.5%	0.1%	0.1%	0.0%	-1.4%
Spain	0.8%	-3.4%	-4.1%	0.5%	0.0%	-0.5%	-0.4%	-3.5%	-3.2%	0.2%	-0.4%	-0.5%	0.0%	0.0%	0.0%	0.5%
Sri Lanka	-0.5%	-4.7%	-4.1%	-1.2%	-1.6%	-0.5%	1.6%	-1.5%	-3.2%	0.4%	-0.2%	-0.5%	0.1%	0.1%	0.0%	-1.5%
Sweden	1.0%	-3.1%	-4.1%	0.9%	0.5%	-0.5%	-0.8%	-4.0%	-3.2%	-1.0%	-1.5%	-0.5%	0.0%	0.0%	0.0%	1.9%
Switzerland	2.2%	-2.0%	-4.1%	0.5%	0.0%	-0.5%	-0.6%	-3.8%	-3.2%	-0.1%	-0.7%	-0.5%	0.0%	0.0%	0.0%	2.5%
Thailand	-0.5%	-4.6%	-4.1%	-0.4%	-0.9%	-0.5%	1.5%	-1.7%	-3.2%	-0.3%	-0.9%	-0.5%	0.0%	0.0%	0.0%	-1.2%
Tunisia	-1.2%	-5.3%	-4.1%	-1.1%	-1.6%	-0.5%	1.1%	-2.1%	-3.2%	0.3%	-0.2%	-0.5%	0.1%	0.1%	0.0%	-1.6%
Turkey	-0.2%	-4.3%	-4.1%	-0.8%	-1.2%	-0.5%	1.3%	-1.8%	-3.2%	-0.4%	-0.9%	-0.5%	0.1%	0.1%	0.0%	-0.5%
United Kingdom	0.8%	-3.3%	-4.1%	0.5%	0.0%	-0.5%	-0.8%	-4.0%	-3.2%	0.1%	-0.5%	-0.5%	0.0%	0.0%	0.0%	1.1%
United States	2.1%	-2.0%	-4.1%	0.1%	-0.4%	-0.5%	-0.5%	-3.7%	-3.2%	-0.1%	-0.6%	-0.5%	0.0%	0.0%	0.0%	2.7%
Uruguay	-0.6%	-4.7%	-4.1%	-0.7%	-1.2%	-0.5%	0.5%	-2.7%	-3.2%	0.5%	0.0%	-0.5%	0.0%	0.0%	0.0%	-0.9%

Sources: IMF Staff Assessments and IMF International Financial Statistics (IFS).
1/Assumes 2015 Model coefficients with updated demographics data (2017 UN vintage).

Table 7. EBA Countries, Refined 2018 Model: Summary of EBA Current Account Norms and Contributions for 2017 1/

Country	Constant+MLC	NFA	Demographics	Institutions	GDPPC/Future Growth	Country factors (Oil, FC, RC)	Policy Variables	Cyclically Adjusted EBA Norm
Argentina	-0.2%	0.2%	-0.8%	0.4%	-0.5%	-0.1%	-0.6%	-1.7%
Australia	-0.2%	-1.3%	-0.5%	-0.5%	0.9%	0.0%	1.0%	-0.6%
Austria	-0.2%	0.1%	0.9%	-0.4%	1.2%	-0.7%	1.1%	1.9%
Belgium	-0.2%	1.0%	0.1%	-0.2%	1.1%	-0.7%	1.0%	2.2%
Brazil	-0.2%	-0.8%	-0.2%	0.5%	-0.5%	-0.1%	-1.2%	-2.4%
Canada	-0.2%	0.2%	0.5%	-0.6%	1.0%	0.1%	1.2%	2.2%
Chile	-0.2%	-0.4%	0.1%	-0.1%	-0.4%	-0.1%	0.1%	-0.9%
China	-0.2%	0.4%	0.8%	0.8%	-1.6%	-0.1%	-0.4%	-0.3%
Colombia	-0.2%	-1.0%	0.1%	0.6%	-1.0%	1.9%	-0.6%	-0.2%
Costa Rica	-0.2%	-0.6%	-0.3%	0.1%	-0.9%	-0.1%	-1.9%	-3.9%
Czech Republic	-0.2%	-0.6%	-0.6%	-0.1%	0.2%	-0.1%	0.0%	-1.5%
Denmark	-0.2%	1.2%	0.0%	-0.2%	1.2%	-0.1%	2.2%	4.1%
Egypt	-0.2%	-0.9%	0.3%	1.1%	-1.7%	-0.1%	-2.1%	-3.6%
Finland	-0.2%	0.0%	-0.1%	-0.6%	1.1%	-0.7%	1.2%	0.8%
France	-0.2%	-0.4%	0.5%	0.1%	1.0%	-0.7%	0.6%	0.9%
Germany	-0.2%	1.1%	0.8%	-0.5%	1.3%	-0.7%	1.0%	2.8%
Greece	-0.2%	-2.6%	0.6%	0.2%	0.3%	-0.7%	0.8%	-1.6%
Guatemala	-0.2%	-0.5%	-1.7%	0.6%	-1.2%	-0.1%	-0.8%	-4.0%
Hungary	-0.2%	-1.3%	-0.3%	-0.1%	0.0%	-0.1%	0.4%	-1.6%
India	-0.2%	-0.6%	0.9%	0.6%	-2.5%	-0.1%	-1.1%	-3.0%
Indonesia	-0.2%	-0.8%	1.4%	0.8%	-1.7%	0.0%	-0.3%	-0.8%
Ireland	-0.2%	-3.2%	-0.3%	-0.5%	1.8%	-0.7%	6.2%	3.2%
Israel	-0.2%	0.8%	-1.5%	0.3%	0.3%	-0.1%	0.5%	0.1%
Italy	-0.2%	-0.3%	1.7%	0.0%	1.0%	-0.7%	1.0%	2.5%
Japan	-0.2%	1.4%	0.9%	-0.4%	1.3%	-0.2%	0.5%	3.2%
Korea	-0.2%	0.4%	1.7%	-0.2%	0.2%	-0.1%	1.1%	3.0%
Malaysia	-0.2%	0.1%	-0.2%	0.1%	-0.8%	0.8%	0.7%	0.6%
Mexico	-0.2%	-1.1%	-0.9%	0.5%	-0.5%	-0.1%	-0.1%	-2.5%
Morocco	-0.2%	-1.5%	-0.2%	0.4%	-1.5%	-0.1%	-0.5%	-3.6%
Netherlands	-0.2%	1.4%	0.9%	-0.5%	1.3%	-0.4%	1.0%	3.5%
New Zealand	-0.2%	-1.4%	0.3%	-0.7%	0.4%	-0.1%	1.0%	-0.6%
Norway	-0.2%	4.6%	-0.2%	-0.7%	2.1%	5.2%	1.2%	12.0%
Pakistan	-0.2%	-0.8%	0.3%	1.1%	-1.8%	-0.1%	-0.1%	-1.4%
Peru	-0.2%	-0.9%	-0.6%	0.5%	-1.2%	0.0%	-0.2%	-2.6%
Philippines	-0.2%	-0.3%	1.2%	0.6%	-2.2%	-0.1%	0.4%	-0.6%
Poland	-0.2%	-1.3%	-0.2%	-0.2%	-0.2%	-0.1%	0.4%	-1.7%
Portugal	-0.2%	-2.2%	0.8%	-0.1%	0.4%	-0.7%	1.9%	-0.1%
Russia	-0.2%	0.3%	0.2%	0.8%	0.2%	1.2%	1.3%	3.8%
South Africa	-0.2%	0.1%	1.5%	0.5%	-0.5%	-0.1%	-0.7%	0.7%
Spain	-0.2%	-1.7%	1.3%	0.1%	0.6%	-0.7%	2.0%	1.4%
Sri Lanka	-0.2%	-1.3%	0.3%	0.8%	-1.4%	-0.1%	0.0%	-2.0%
Sweden	-0.2%	0.1%	-0.4%	-0.6%	1.3%	-0.1%	1.7%	1.8%
Switzerland	-0.2%	2.5%	0.6%	-0.7%	1.7%	-0.1%	2.4%	6.2%
Thailand	-0.2%	-0.2%	0.9%	0.8%	-0.8%	-0.1%	0.1%	0.5%
Tunisia	-0.2%	-2.4%	0.0%	0.5%	-1.2%	-0.1%	-1.5%	-4.9%
Turkey	-0.2%	-1.0%	-0.8%	1.0%	-0.5%	-0.1%	0.7%	-0.9%
United Kingdom	-0.2%	-0.1%	0.0%	-0.4%	1.0%	-0.2%	0.9%	1.0%
United States	-0.2%	-1.1%	0.1%	-0.4%	1.6%	-2.1%	1.4%	-0.7%
Uruguay	-0.2%	-0.7%	-0.4%	0.1%	-0.5%	-0.1%	-0.7%	-2.5%

Sources: IMF Staff Assessments and IMF International Financial Statistics (IFS).
1/ MLC refers to Multilateral Consistency Adjustment, FC to Financial Center, RC to Reserve Currency. Estimated using new 2018 refined specification and new data through 2016.

Table 8. EBA Countries, Refined 2018 Model: Contribution of Policy Variables to EBA Current Account Norms for 2017 1/

Country	Policy Variables			Fiscal			Health			Credit			FXI*Capital control			K-Controls
	Total	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total
Argentina	-0.6%	-3.7%	-3.0%	0.0%	-0.4%	-0.4%	0.1%	-2.6%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.7%
Australia	1.0%	-2.0%	-3.0%	-0.1%	-0.5%	-0.4%	-0.1%	-2.8%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	1.3%
Austria	1.1%	-1.9%	-3.0%	0.3%	-0.2%	-0.4%	-0.3%	-2.9%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	1.2%
Belgium	1.0%	-2.0%	-3.0%	0.4%	0.0%	-0.4%	-0.5%	-3.2%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	1.2%
Brazil	-1.2%	-4.2%	-3.0%	-1.1%	-1.6%	-0.4%	1.1%	-1.5%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-1.1%
Canada	1.2%	-1.8%	-3.0%	0.2%	-0.2%	-0.4%	-0.1%	-2.8%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	1.2%
Chile	0.1%	-2.9%	-3.0%	0.1%	-0.3%	-0.4%	0.7%	-2.0%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.6%
China	-0.4%	-3.4%	-3.0%	-0.1%	-0.5%	-0.4%	0.9%	-1.8%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-1.1%
Colombia	-0.6%	-3.7%	-3.0%	-0.5%	-0.9%	-0.4%	1.1%	-1.6%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-1.2%
Costa Rica	-1.9%	-5.0%	-3.0%	-0.7%	-1.1%	-0.4%	0.0%	-2.6%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-1.2%
Czech Republic	0.0%	-3.0%	-3.0%	0.2%	-0.2%	-0.4%	-0.4%	-3.1%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.2%
Denmark	2.2%	-0.9%	-3.0%	0.4%	0.0%	-0.4%	-0.5%	-3.2%	-2.7%	0.7%	0.8%	0.1%	0.0%	0.0%	0.0%	1.5%
Egypt	-2.1%	-5.1%	-3.0%	-2.3%	-2.7%	-0.4%	1.7%	-0.9%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-1.4%
Finland	1.2%	-1.8%	-3.0%	0.3%	-0.2%	-0.4%	-0.1%	-2.8%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	1.1%
France	0.6%	-2.4%	-3.0%	0.4%	0.0%	-0.4%	-0.8%	-3.5%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	1.1%
Germany	1.0%	-2.0%	-3.0%	0.3%	-0.2%	-0.4%	-1.1%	-3.8%	-2.7%	0.5%	0.5%	0.1%	0.0%	0.0%	0.0%	1.4%
Greece	0.8%	-2.2%	-3.0%	0.4%	0.0%	-0.4%	0.7%	-2.0%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.3%
Guatemala	-0.8%	-3.8%	-3.0%	-0.2%	-0.7%	-0.4%	1.3%	-1.4%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-1.8%
Hungary	0.4%	-2.7%	-3.0%	0.4%	0.0%	-0.4%	0.3%	-2.4%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.3%
India	-1.1%	-4.2%	-3.0%	-1.5%	-1.9%	-0.4%	2.0%	-0.6%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-1.6%
Indonesia	-0.3%	-3.3%	-3.0%	-0.4%	-0.8%	-0.4%	1.5%	-1.2%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-1.3%
Ireland	6.2%	3.2%	-3.0%	0.2%	-0.2%	-0.4%	0.6%	-2.1%	-2.7%	2.3%	2.3%	0.1%	0.0%	0.0%	0.0%	3.2%
Israel	0.5%	-2.5%	-3.0%	-0.6%	-1.0%	-0.4%	0.5%	-2.2%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.6%
Italy	1.0%	-2.0%	-3.0%	0.6%	0.2%	-0.4%	-0.1%	-2.7%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.6%
Japan	0.5%	-2.5%	-3.0%	0.5%	0.0%	-0.4%	-1.0%	-3.6%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	1.1%
Korea	1.1%	-2.0%	-3.0%	0.4%	0.0%	-0.4%	0.5%	-2.2%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.2%
Malaysia	0.7%	-2.3%	-3.0%	0.1%	-0.4%	-0.4%	1.0%	-1.6%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.3%
Mexico	-0.1%	-3.2%	-3.0%	-0.4%	-0.8%	-0.4%	1.1%	-1.6%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.8%
Morocco	-0.5%	-3.5%	-3.0%	-0.8%	-1.2%	-0.4%	1.9%	-0.8%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-1.5%
Netherlands	1.0%	-2.0%	-3.0%	0.3%	-0.2%	-0.4%	-0.9%	-3.5%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	1.7%
New Zealand	1.0%	-2.0%	-3.0%	0.1%	-0.3%	-0.4%	0.4%	-2.3%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.6%
Norway	1.2%	-1.8%	-3.0%	-1.2%	-1.6%	-0.4%	-0.6%	-3.3%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	3.2%
Pakistan	-0.1%	-3.1%	-3.0%	-0.6%	-1.0%	-0.4%	1.9%	-0.8%	-2.7%	-0.1%	0.0%	0.1%	0.4%	0.4%	0.0%	-1.7%
Peru	-0.2%	-3.2%	-3.0%	0.1%	-0.3%	-0.4%	1.2%	-1.5%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-1.4%
Philippines	0.4%	-2.6%	-3.0%	0.3%	-0.1%	-0.4%	2.0%	-0.7%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-1.8%
Poland	0.4%	-2.6%	-3.0%	0.1%	-0.3%	-0.4%	0.7%	-2.0%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.3%
Portugal	1.9%	-1.1%	-3.0%	0.4%	0.0%	-0.4%	-0.1%	-2.8%	-2.7%	1.7%	1.8%	0.1%	0.0%	0.0%	0.0%	-0.1%
Russia	1.3%	-1.7%	-3.0%	1.2%	0.8%	-0.4%	0.5%	-2.2%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.4%
South Africa	-0.7%	-3.7%	-3.0%	-0.4%	-0.8%	-0.4%	1.0%	-1.7%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-1.2%
Spain	2.0%	-1.0%	-3.0%	0.4%	0.0%	-0.4%	0.1%	-2.5%	-2.7%	1.0%	1.0%	0.1%	0.0%	0.0%	0.0%	0.4%
Sri Lanka	0.0%	-3.1%	-3.0%	-0.2%	-0.7%	-0.4%	1.5%	-1.2%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-1.2%
Sweden	1.7%	-1.3%	-3.0%	0.5%	0.1%	-0.4%	-0.5%	-3.2%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	1.7%
Switzerland	2.4%	-0.7%	-3.0%	0.4%	0.0%	-0.4%	-0.3%	-3.0%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	2.3%
Thailand	0.1%	-2.9%	-3.0%	-0.1%	-0.5%	-0.4%	1.3%	-1.4%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-1.0%
Tunisia	-1.5%	-4.5%	-3.0%	-1.2%	-1.6%	-0.4%	1.1%	-1.6%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-1.3%
Turkey	0.7%	-2.3%	-3.0%	-0.2%	-0.7%	-0.4%	1.2%	-1.4%	-2.7%	-0.1%	0.0%	0.1%	0.2%	0.2%	0.0%	-0.4%
United Kingdom	0.9%	-2.1%	-3.0%	0.4%	0.0%	-0.4%	-0.5%	-3.1%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	1.1%
United States	1.4%	-1.6%	-3.0%	-0.1%	-0.5%	-0.4%	-0.6%	-3.3%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	2.1%
Uruguay	-0.7%	-3.7%	-3.0%	-0.4%	-0.8%	-0.4%	0.4%	-2.2%	-2.7%	-0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.7%

Sources: IMF Staff Assessments and IMF International Financial Statistics (IFS).
1/ Estimated using new 2018 refined specification and new data through 2016.

Table 9. Effect of Product and Labor Market Policies on EBA Current Account Model Residuals

Dependent variable: EBA-CA residual		
	OECD	WEF
	(1)	(2)
PMRs: LPS (+ = more burdens)	0.0049**	
LMRs: EPL (+ = stricter regulations)	-0.0048**	
Effective retirement age, male	-0.0015	
PMRs: SBP (+ = more procedures)		0.0242**
LMRs: CLER (+ = more cooperation)		0.0508***
Constant	0.0011	0.0874***
Observations	374	533
R-squared	0.026	0.053
Number of countries	24	49
rho	0.735	0.472

* significant at 10%; ** significant at 5%; *** significant at 1%

Sources: Organisation for Economic Co-operation and Development; World Economic Forum; and IMF staff estimates.

Table 10. EBA REER Levels Regression Results: 2015 and 2018 Model

Variables	2015 Model	2018 Model
Lag of NFA/GDP	0.11***	0.06***
Expected GDP growth of medium-term(5 years out), WEO project (rel to TRD PRT)	1.76*	1.96**
Lag of health expenditure to GDP (rel to TRD PRT)	1.74**	4.20***
Lag of VIX * capital account openness	-0.32**	-0.15
Lag of VIX * capital account openness *share of own currency in global reserve	1.01*	0.83
Lag of Trade Openness (avg. of exports and imports to GDP) (rel to TRD PRT)	-0.31***	-0.34***
Share of the country's currency held as FX reserve by central banks worldwide	-0.33***	-0.36***
Log Commodity ToT (43) levels in 2011 vs trading partner	0.06***	0.06***
Private credit/GDP (rel to TRD PRT), Demeaned	0.12***	
Private credit/GDP (rel to TRD PRT), Detrended		0.03
Change in reserves to GDP * cap controls (rel to TRD PRT)	-2.10*	
Change in reserves to GDP * cap controls (rel to TRD PRT) (New)		-3.56*
Population Growth (rel to TRD PRT)	6.02***	2.57
Dependency Ratio (rel to TRD PRT)	0.91***	0.36*
Aging Speed (rel to TRD PRT)	0.63**	
Political Risk Rating (rel to TRD PRT) (ICRG-5)	0.42***	
Political Risk Rating (rel to TRD PRT) (ICRG-12)		0.65***
Real interest rate differential demeaned interacted with K openness (rel to TRD	0.89**	0.59*
Lag Demeaned PPPGDP/Top3(PPP)]	0.16***	0.17***
Lag Capital stock per employed person at current PPPs (2005US$) (rel to TRD PRT)	0.09***	0.11***
Lag Ratio Traded/Non Traded relative to trd part (in logs)	0.22***	0.18***
Share of administered prices in CPI	-2.54***	-2.81***
VAT Revenue, % of GDP (rel to TRD PRT)	1.20**	0.66
Constant	0.19***	0.19***
Observations	876	990
R-squared	0.91	0.90
RMSE	0.140	0.146
Number of Countries	39	39

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 11. EBA REER Index Regression Results: 2015 and 2018 Model

Variables	2015 Model	2018 Model
Lagged NFA		-0.10***
Lag of Demeaned GDPpw/Top3GDPpw (PPP)]* capital openness	-0.49***	
Expected GDP growth of medium-term(5 years out), WEO project (rel to TRD PRT)	1.86***	1.74***
Lagged Public health expenditure to GDP (rel to TRD PRT)	1.23	2.40***
Lag of VIX * capital account openness	-0.26***	-0.17***
Lag of VIX * capital account openness *share of own currency in global reserve	0.84**	0.48*
Share of the country's currency held as FX reserve by central banks worldwide	0.04	-0.06
Output Gap (rel to TRD PRT)		0.43***
Log commodity Terms Of Trade	0.09*	0.17***
Lag of Trade Openness (avg. of exports and imports to GDP) (rel to TRD PRT)	-0.30***	-0.20***
Private credit/GDP (demeaned) (rel to TRD PRT)	0.13***	
Private credit/GDP gap (HP Detrended) (rel to TRD PRT)		0.09***
Change in reserves to GDP * cap controls (rel to TRD PRT)	-1.73***	
Change in reserves to GDP * capital controls (rel to TRD PRT) (New)		-2.34**
Population Growth (rel to TRD PRT)	0.86	1.38
Old age dependency ratio (rel to TRD PRT)		-0.35*
Real interest rate differential interacted with K openness (rel to TRD PRT)	0.66***	0.70***
Lag Demeaned PPPGDP/Top3(PPP)	0.70***	0.20***
Lagged Home bias (rel to TRD PRT)	0.37***	0.19***
Share of administered prices	-2.12***	-1.72***
Dummy south africa apartheid (pre-1994)	0.31***	
Country Fixed Effect Not Shown		
Constant	4.33***	4.48***
Observations	882	1,004
R-squared	0.61	0.58
RMSE	0.083	0.085
Number of countries	40	40

* significant at 10%; ** significant at 5%; *** significant at 1%

Annex I. Data Sources

Variable	Sources
1. Net Foreign Assets	External Wealth of Nations Dataset: Lane and Milesi-Ferretti (2001) (EWN)
2. Output Per Worker	World Economic Outlook
3. Capital Openness	Quinn Database
4. Oil and Natural Gas Trade Balance, Resource Temporariness	WEO; World Bank, World Integrated Trade Solution (WITS); BP Statistical Review
5. GDP growth, Forecast in 5 Years	WEO
6. Public Health Spending/GDP	Organisation for Economic Co-operation and Development (OECD); World Bank, World Development Indicators (WDI); United Nations Economic Commission for Latin America and the Caribbean (CEPAL); IMF, Financial Affairs Department (FAD); Asian Development Bank (ADB)
7. Chicago Board Options Exchange Volatility Index (VIX)	Haver Analytics
8. Own Currency's Share in World Reserves	IMF, Currency Composition of Official Foreign Exchange Reserves (COFER)
9. Output Gap	WEO
10. Commodity Terms of Trade and Trade Openness	WEO
11. Detrended Private Credit/GDP	Bank for International Settlements (BIS) (credit statistics); WDI
12. Cyclically adjusted Fiscal Balance	WEO
13. (ΔReserves)/GDP* K controls	WEO; EWN; Data Template on International Reserves and Foreign Currency Liquidity
14. ICGR-12	International Country Risk Guide (ICRG)
15. Prime Savers Share	UN World Population Prospects
16. Life Expectancy at Prime Age	UN World Population Prospects
17. Life Expectancy at Prime Age	UN World Population Prospects
18. Population Growth	UN World Population Prospects
19. Old-age Dependency Ratio	UN World Population Prospects

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The Acting Chair's Summing Up
2018 External Sector Report
Executive Board Meeting 18/66
July 16, 2018

Executive Directors broadly agreed with the findings of the External Sector Report and its policy recommendations. They noted that global current account surpluses and deficits have remained broadly unchanged in recent years. At the same time, the concentration of excess imbalances in advanced economies has increased, on both the surplus and deficit sides, amid a widening of creditor and debtor positions. Directors noted with concern the projected continuation of this trend under baseline policies.

Directors cautioned that, absent effective automatic adjustment mechanisms and conducive policies, large and sustained external excess imbalances could pose risks to global stability and growth. They noted that the lack of progress in rebalancing could increase the likelihood of rising trade tensions, with negative implications for global trade, growth, and financial markets. Meanwhile, expansionary fiscal policy in key deficit economies operating above potential could lead to a faster-than-expected tightening of global financing conditions, and prove disruptive for emerging market and developing economies, especially the more vulnerable ones. Directors also emphasized that a further widening of debtor positions in key economies could result in a sharp adjustment over the medium term.

Directors broadly agreed that, with limited policy space and normalizing cyclical conditions, policies will need to be carefully calibrated to achieve domestic objectives while contributing to external rebalancing. In countries with weaker-than-warranted external positions, actions to strengthen public and private sector balance sheets should take priority, while monetary normalization proceeds gradually. In economies with stronger-than-warranted external positions and fiscal space, a more expansionary and growth-friendly fiscal policy would help support demand and productivity, thereby promoting globally-balanced growth. Directors highlighted the role of flexible exchange rates in facilitating external adjustment. They concurred that, where price adjustment is constrained by currency regimes, the focus should be on reforms to facilitate greater internal relative price adjustment, as well as improved risk-sharing mechanisms.

Directors agreed that well-tailored, growth-enhancing structural policies will need to play a more prominent role in tackling global imbalances. In general, excess surplus countries should prioritize reforms that promote domestic investment and competition, while excess deficit countries should prioritize reforms that strengthen external competitiveness and labor productivity.

Directors welcomed the analysis on the link between trade policies and external imbalances. They broadly shared the assessment that trade barriers undermine domestic and global growth, likely without a meaningful impact on current account balances. Directors called on all countries to work together to resist protectionism, revive liberalization efforts, and strengthen the open multilateral

trading system—particularly to promote trade in services, where gains from trade are substantial but barriers remain high.

Directors welcomed staff's efforts to refine the External Balance Assessment (EBA) methodology, and better reflect the role of fundamentals and policies in explaining current account dynamics. While recognizing the progress in strengthening the conceptual underpinning of the models, they noted remaining limitations and inherent uncertainties, with some also pointing to changes in current account norms following refinements. Accordingly, Directors stressed the need to avoid mechanistic use of model-based estimates and to exercise caution when interpreting model residuals, which remain large in some cases.

Specifically, Directors highlighted the importance of using country-specific judgment and results from all EBA models and new complementary tools to arrive at final assessments. However, they also underscored that this judgment needs to be analytically grounded, transparently presented, and evenhanded. Noting estimation uncertainties, Directors appreciated the presentation of external assessments in ranges, and suggested that a similar approach be consistently taken for all countries. They encouraged further efforts to improve the methodology on an ongoing basis, and offered many suggestions that merit consideration in future refinements.

Directors stressed the unique role of the Fund in providing multilaterally consistent assessments of external positions and contributing to the debate on global imbalances. The quality and timeliness of data provision by its members is important in this regard. Directors welcomed the efforts to broaden the reach of the External Sector Report, while recognizing that continued work remains necessary to incorporate new insights. They also called for greater efforts to better integrate external sector assessments and policy advice into other flagship reports and bilateral surveillance.