



July 27, 2015

2015 EXTERNAL SECTOR REPORT

IMF staff regularly produces papers covering multilateral issues and cross-country analyses. The following document has been released and is included in this package:

- The **2015 External Sector Report** prepared by IMF staff and completed on June 26, 2015 for the Executive Board's consideration on July 13, 2015.

Informal Session to Engage:

The Executive Board met in an informal session, and no decisions were taken at this meeting. The views expressed in this paper are those of the IMF staff and do not necessarily represent the views of the IMF's Executive Board.

The document listed below will be separately released.

- 2015 External Sector Report—Individual Economy Assessments.

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International Monetary Fund
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June 26, 2015

2015 EXTERNAL SECTOR REPORT

KEY POINTS

- After narrowing modestly in 2013, the global scale of current account imbalances, and of *excess* imbalances, held steady in 2014. Over the last several years, while the country composition of imbalances has rotated somewhat, overall there has been little progress on reducing excess imbalances. Excess deficits narrowed in some cases, but widened in others; progress on reducing excess surpluses has stalled.
- An unfinished policy agenda to reduce excess imbalances remains. Efforts by both surplus and deficit economies would be mutually reinforcing and support growth.
- Several significant recent developments will affect external positions in 2015: sharply lower oil prices, cyclical divergence and different monetary policies among the major economies, and related currency movements. Those developments do not overturn the previous pattern of excess imbalances and associated policy agenda, but they will have significant effects and raise new issues.
- The pattern of projected near-term changes in current accounts is dominated by the impact effects of the oil price drop, though these will be partly offset by related currency movements and by eventual expenditure responses. Recent changes in real effective exchange rates, near 10 percent in some cases, also will affect current accounts in 2015, along with other influences.
- The pattern of recent movements of major currencies, together with recent monetary policies, appear beneficial for the global economy as a whole at this juncture, including by easing global financial conditions. At the same time, recent exchange rate movements and their drivers bring costs and risks.
- The currency shifts associated with economic and monetary policy divergence among the major economies are reflections of an incomplete recovery and the need for broader policy action to support demand and growth. Implementation of the full policy agenda—including demand-supporting policies beyond monetary policies— would likely affect exchange rates but more importantly would improve prospects for sustained global growth and financial stability.
- As discussed in other recent Fund reports, the global financial environment will be complicated by the diverse risks associated with especially accommodative monetary policies, and by the process of exit from those policies, with the potential to disrupt markets. Emerging markets and those with excess current account deficits may be most vulnerable. Policies there should aim at steady external adjustment but also to strengthen frameworks; policymakers should be prepared to respond flexibly to changing financial conditions using a range of tools.

The IMF’s Fourth External Sector Report (ESR) presents a multilaterally consistent assessment of the largest economies’ external sector positions and policies. This report, along with the companion Individual Economy Assessments paper, integrates analysis from the Fund’s bilateral and multilateral surveillance to provide a consistent assessment of exchange rates, current accounts, reserves, capital flows, and external balance sheets. Together with the [Spillover Report](#) and Article IV consultations (with their heightened focus on spillovers), this Report is part of a continuous effort to ensure the Fund is in a good position to address the possible effects of spillovers from members’ policies on global stability and monitor the stability of members’ external sectors in a comprehensive manner.

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The report draws on assessments and other inputs from the staff teams working on the 29 economies covered by the report. It draws also on specific inputs from Mitali Das, Mai Dao, Rui Mano, Mauricio Vargas, Chuan Li, Nakul Kapoor, and Jair Rodriguez (RES); and from Nathan Porter (SPR). The report was formatted by Jane Haizel (RES).

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Glossary

AE	Advanced Economies
CA	Current Account
EA	Euro Area
EBA	External Balance Assessment
ECB	European Central Bank
EM	Emerging Markets
EMBI	Emerging Market Bond Index
ES	External Sustainability
ESR	External Sector Report
FCL	Flexible Credit Line
FDI	Foreign Direct Investment
FX	Foreign Exchange
GCC	Gulf Cooperation Council
GDS	Global Data Source
GDP	Gross Domestic Product
GFSR	Global Financial Stability Report
IMF	International Monetary Fund
INS	Information Notice System
NIIP	Net International Investment Position
REER	Real Effective Exchange Rates
VIX	Chicago Board Options Exchange Market Volatility Index
WEO	World Economic Outlook

INTRODUCTION

1. This fourth annual External Sector Report (ESR) presents updated staff assessments of the external positions of 29 economies. The report comprises two papers. Full, multi-dimensional assessments of external positions are detailed in the Individual Economy Assessments paper. This Overview paper synthesizes part of their content, emphasizing cross-country patterns, globally relevant issues and policy issues that need consideration beyond the country level.

- The next section provides context, briefly recalling the evolution of the global pattern of current account balances and the main findings of the previous ESR.
- The subsequent section presents updated quantitative assessments of current account and real exchange rate outcomes for calendar 2014 and of reserve adequacy at end-2014.
- The penultimate section addresses key recent developments, including large movements of commodity prices and exchange rates of major currencies, and their potential significance for external positions in 2015 and beyond.
- The final section concludes, with emphasis on policy implications and risks.

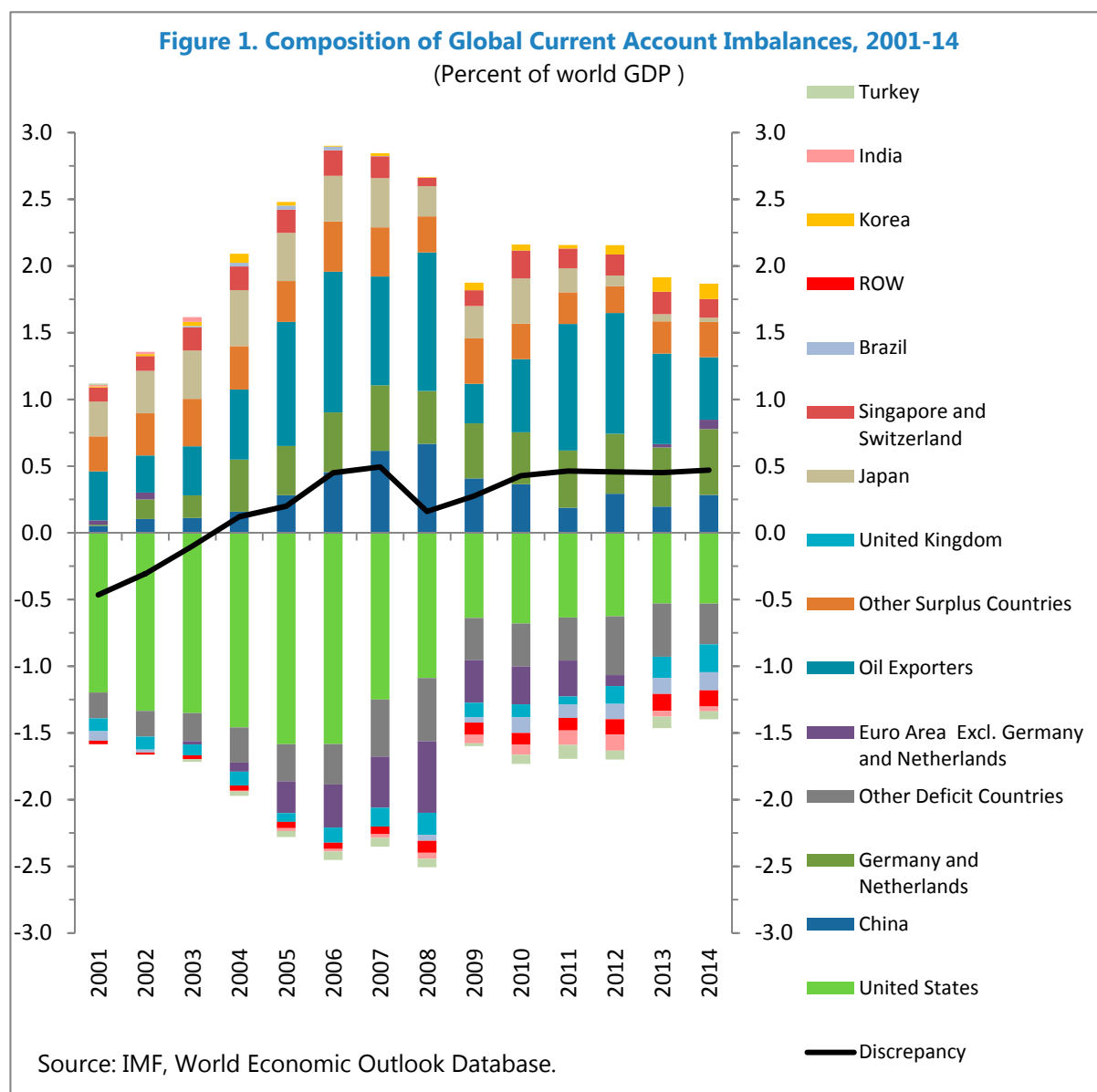
BACKGROUND: EVOLUTION OF IMBALANCES AND FINDINGS OF PREVIOUS REPORT

2. Many of the essential conclusions of the previous ESR remained relevant in 2014, and appear to remain relevant as of mid-2015. As briefly reviewed below, the global scale and composition of current account surpluses and deficits has changed substantially from the period before the global financial crisis—but in the last several years changes have been relatively small. While none of the largest four economies have been assessed to have large excesses recently, excesses do remain for many economies.

3. To put recent developments in perspective, it is useful to briefly recall how the global pattern of current accounts has evolved over time (Figure 1).

- Looking back to 2006-08, when the global sum of (absolute) imbalances peaked at more than 5 percent of world GDP, the composition was then dominated by just a few economies: the deficit of the U.S. and the surpluses of China and oil exporting economies. Also relatively important at that time were the surpluses of some euro area economies, particularly Germany and the Netherlands; these happened to be broadly matched by the combined deficit of all other euro area members.
- By 2010-11, the global sum of imbalances had come down by about a third from its peak. Especially notable were the contributions of the large reductions of the U.S. and China imbalances, both of which had been widely considered assessed as excessive 3-4 years earlier.

By 2010-11, the imbalances of both these very large economies had contracted by more than one half from their 2006-08 levels. As a result the global composition of imbalances became much less concentrated.¹



- In the years after 2010, the global sum of imbalances has been broadly stable, though with a modest narrowing in 2013—but the composition of imbalances has changed further. The surplus of Japan nearly disappeared, and the combined current accounts of euro area countries excluding Germany and the Netherlands switched from deficit to a small surplus, while the U.S. deficit narrowed somewhat further. On the other hand, the surplus of Korea widened, as did the

¹ See the [Fall 2014 WEO](#) for a discussion of the process of adjustment relative to the pre-global crisis period.

deficits of the U.K. and of some EM economies (though India's deficit narrowed sharply after 2012, as did Poland's). The surplus of oil exporters narrowed in 2013, and further in 2014.

4. Such current account imbalances may be appropriate or inappropriate; their evaluation requires a multilaterally consistent standard. In recent years, IMF staff have focused more sharply on current accounts and their *normative* assessment, as well as corresponding exchange rate assessments, as reflected in the 2012-14 External Sector Reports (Box 1).

5. The previous ESR found that in aggregate, actual current account (CA) imbalances for 2013 exceeded the sum of their staff-assessed norms. For the very largest economies—the U.S., euro area, China and Japan—excesses were not great in terms of the countries' own GDP, but the size of those economies still made their excesses globally significant. Among other economies, the excesses in some cases were found to be quite large relative to those economies' size. In the last few years progress in reducing excess imbalances had been mainly among some economies on the deficit side, but this had been offset by widening of some others' excessive deficits; meanwhile, progress on reducing excessive surpluses seemed to have stalled. The present ESR finds that this pattern holds for 2014 as well.

6. Since the time of the last ESR, significant developments have occurred in terms of commodity prices, economic and monetary policy divergence, and exchange rates—the effects of which will be apparent in 2015. The bulk of these movements occurred either in the last part of 2014 or in early 2015, so that their impact on 2014 year outcomes was limited relative to the likely impact in 2015. Accordingly, the next section summarizes the comprehensive assessments of calendar 2014 outcomes, and a later section focuses on latest developments and their potential implications for external positions.

Box 1. Key ESR Concepts

Current account imbalances refer to any current account balance different from zero; i.e., surpluses or deficits, and may be appropriate or inappropriate.

Current account gaps, or **excess imbalances**, are the difference between actual imbalances and those assessed by staff to be consistent with fundamentals and desirable policies (or "**norms**"). They reflect distortions and other factors. Eventual elimination of such gaps is desirable, though a gradual adjustment may be best.

Multilateral consistency of the assessment exercise means that too-high current accounts of some economies are necessarily matched by the too-low current accounts of others.

REER gaps correspond to underlying CA gaps; adjustment of an excess imbalance would involve a change in expenditure (domestic demand) as well as a change in REER. REER gaps are not related to expected future exchange rates. REER gaps may occur in any economy, including those with floating exchange rates.

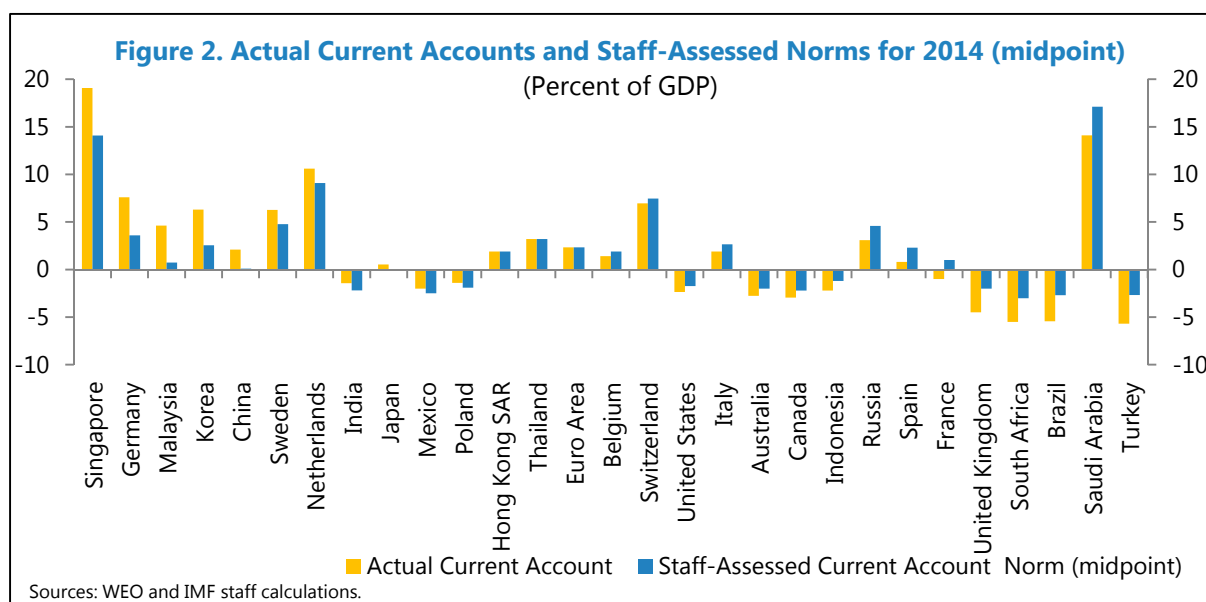
External sector position covers the overall assessment from the external indicators used in this Report, namely current account balances (and the counterpart capital and financial account balance), international investment positions and exchange rates.

External Balance Assessment (EBA) methodology Quantitative methods developed by IMF staff to inform, but not solely determine, assessments. Annex 1 briefly summarizes EBA methods, and several recent enhancements.

ASSESSMENTS OF 2014 CURRENT ACCOUNTS AND REAL EXCHANGE RATES

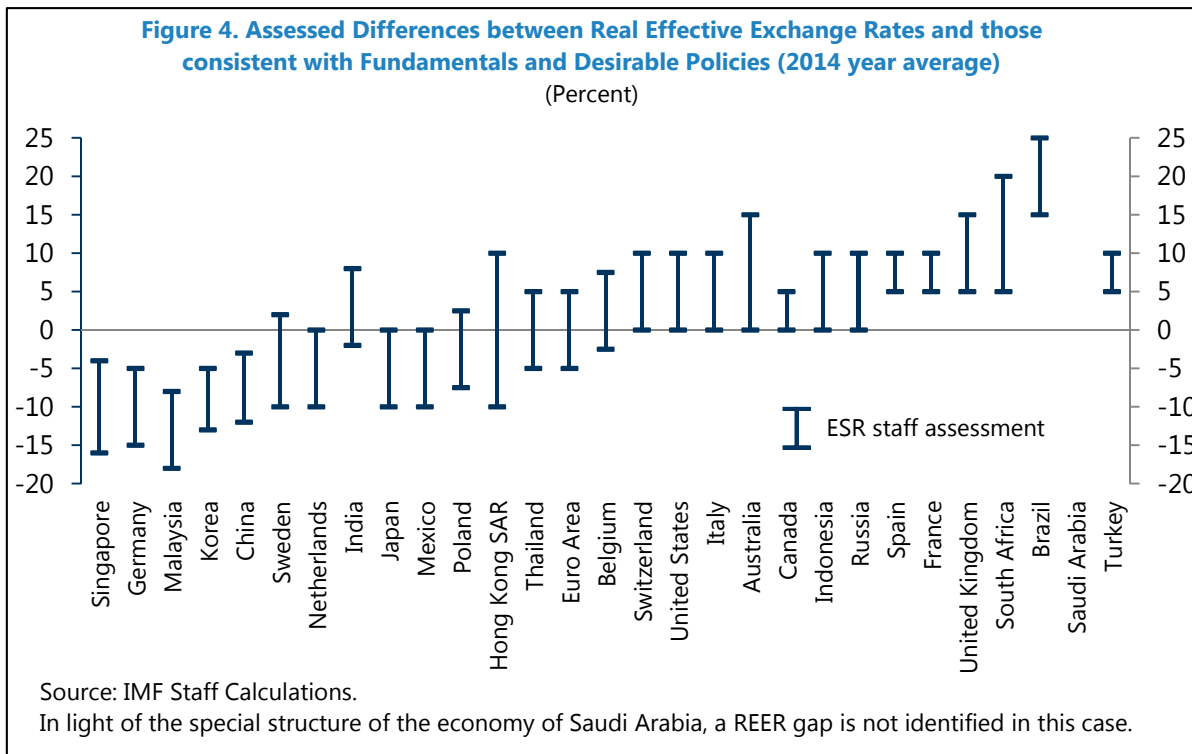
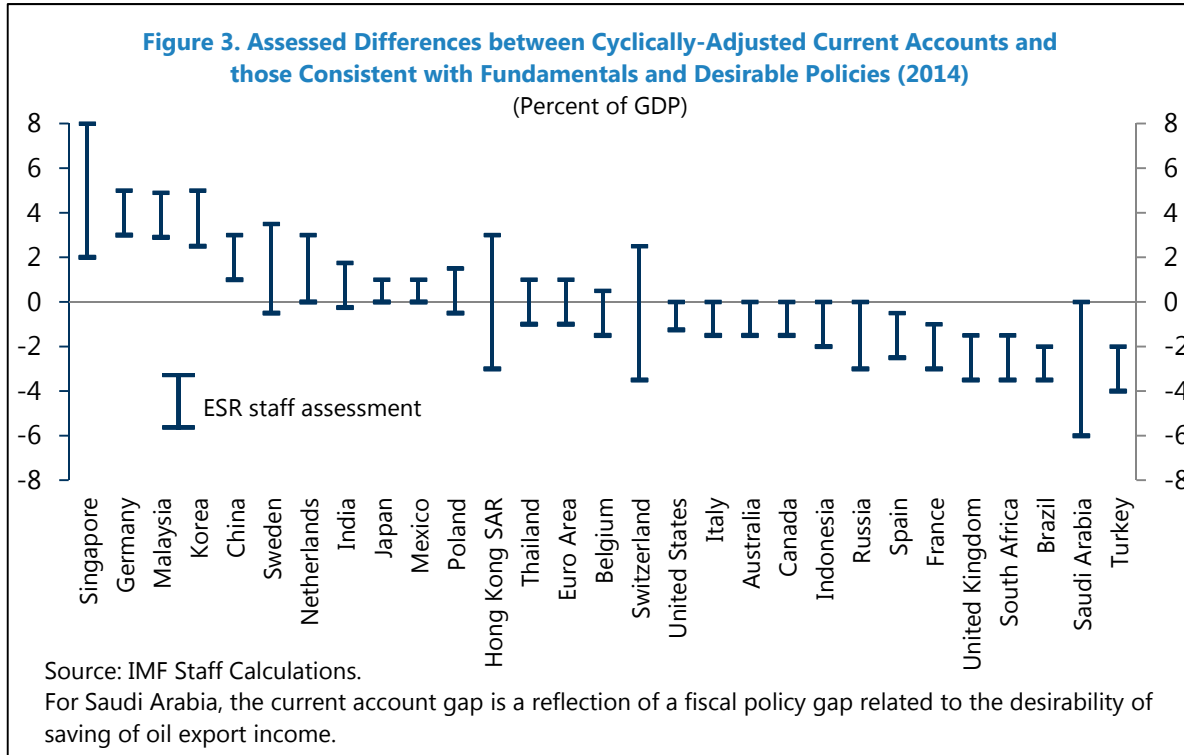
7. As noted, the companion paper offers comprehensive, multi-dimensional staff assessments of the external positions of individual economies; this section summarizes part of those assessments. The focus here is on the quantitative assessments of current accounts, real effective exchange rates (REERs) and reserves adequacy.

8. Looking across the economies in 2014, there is a broad correspondence between actual current account imbalances and the staff-assessed norms, at least in terms of direction. Thus an important part of the international pattern of current account imbalances appears justified (Figure 2).



9. That said, imbalances often differ from staff-assessed norms. Such gaps most often take the form of surpluses or deficits being judged to be wider than desirable, but in some cases are deemed to be too narrow. Figure 3 shows such current account gaps, and corresponding REER gaps, for each of the ESR economies.² Reflecting the uncertainties inherent in such assessments, the gaps are presented as ranges. (The widths of these gap ranges vary, reflecting the relative degree of uncertainty across countries; see Annex 1.)

² Economies in both panels are ordered according to the size of CA gap midpoint as percent of each country's own GDP. The size of the REER gaps corresponds to the CA gap but also is influenced by the responsiveness of the CA/GDP ratio to the REER. Correspondence between CA and REER is complicated by the generally slow-moving nature of CA and the short-term volatility of REERs, and by lags in the impact of REER on CA (see Box 5).



10. For 2014, the broad cross-country pattern of CA and REER gaps is similar to the 2013 pattern, though some economies' positions changed to some degree.³ Among the larger shifts, the negative current account gap of the U.K. widened, as did the positive gap for Malaysia. REER gaps widened in 2014 for Brazil as well as for Malaysia and the U.K. On the other hand, REER gaps narrowed for Turkey and Russia, amid depreciations and shifts in norms.

11. Among the four largest economies—the U.S., China, the euro area and Japan—shifts in assessments were negligible relative to margins of uncertainty. The current account gap for China remained moderate, centered on +2 percent of GDP. The midpoint of the US current gap remained a small negative. The midpoint of the gap for Japan moved upward to a small positive.

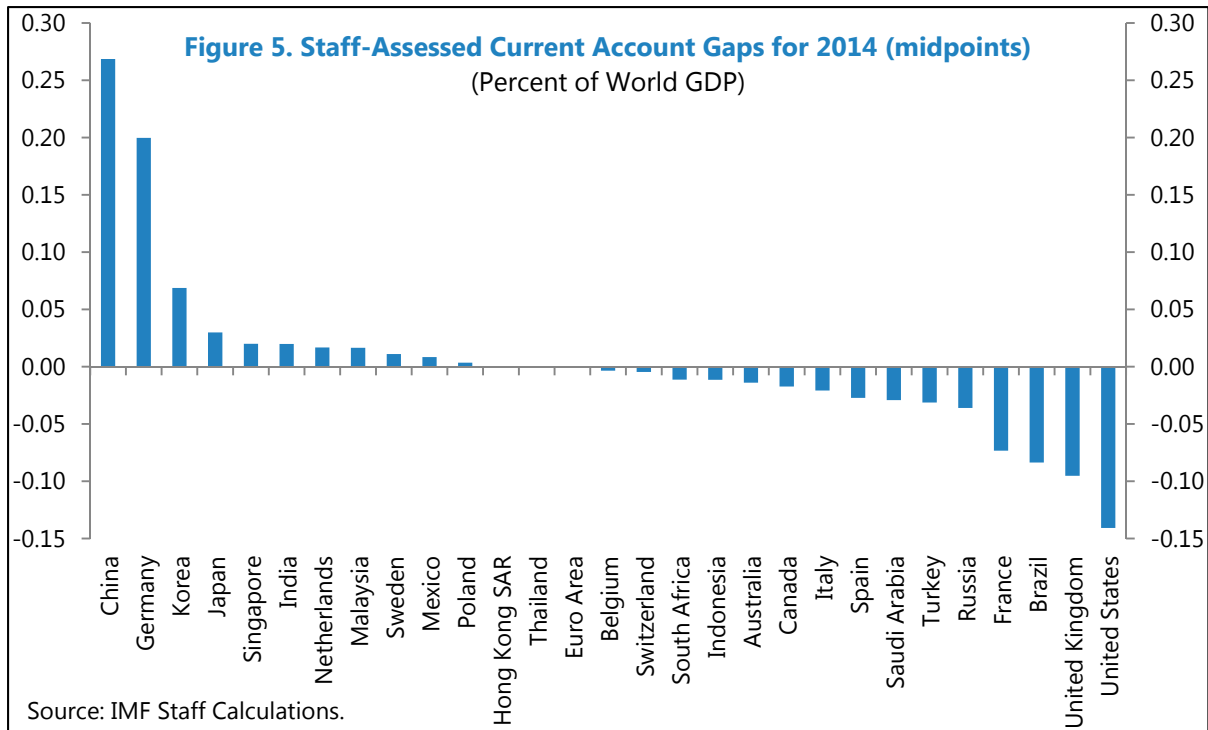
12. Within the euro area, the assessments of individual members continue to differ in direction. This includes a substantial positive current account gap for Germany and a positive gap for the Netherlands as well. On the other side, current accounts for France, Italy, and Spain are still assessed to be weaker than desirable, even after notable increases of recent years.⁴

13. For a systemic perspective, Figure 5 shows the distribution and relative importance of the current account gaps of the 29 economies, scaled on a comparable basis.

- The absolute sums of the gaps of economies with positive current account gaps, and of those with negative gaps, are balanced, each about 0.6 percent of world GDP. This value is essentially unchanged from the previous ESR's analysis of 2013 imbalances.
- A small number of the 29 economies account for the bulk of the assessed gaps. Contributions to the excess surplus side are concentrated in just a few economies, especially China (mostly reflecting the large size of its economy) and Germany, followed by Korea. Contributions on the excess deficit side are more diffuse; the largest such contribution is that of the U.S. (reflecting the size of its economy, despite the gap being small as a share of U.S. GDP), followed by those of the U.K., Brazil and France.

³ For assessments of 2013, see Figures 10–11 of the [ESR](#) published in July 2014. Note that some of those earlier assessments, including for Belgium and Brazil, drew on data for 2013 that subsequently has been revised.

⁴ The focus here is on cyclically-adjusted current accounts. Cyclical adjustments use the EBA-estimated negative association between current accounts and output gaps, with a value consistent with a presumption that changes in output gaps are driven primarily by fluctuations in domestic rather than external demand.



14. The sources of the assessed current account gaps are diverse; see the companion paper for country-specific discussions. These sources include the influence of policies—for some of which the EBA model (Annex 1) provides estimates—as well as other policies or distortions not captured in the EBA model.

- For many economies, the fiscal balance is judged to be below a level that would be recommended for the future. Such a negative fiscal policy gap⁵ has a downward effect on an economy's own current account, but at the same time its current account will also be pushed upward by the negative fiscal gaps of others. For an economy with a fiscal policy gap of minus 2 percent of GDP, these domestic and foreign fiscal gap contributions to its current account would offset each other. For an economy with no fiscal gap of its own, the net contribution of fiscal gaps would be upward, by almost 1 percent of GDP, coming entirely from other economies' policies.
- In some economies, social safety nets are judged to be insufficient, likely pushing upward the private saving rate and the current account. The presence of extensive capital controls in some cases may act on the whole to raise current accounts, as may official purchases of foreign currency. (In that regard, the deceleration of such purchases in 2014 is notable—including in the

⁵ Fiscal gaps refer to differences between underlying fiscal balances and staff-assessed appropriate objectives for medium- and longer-term fiscal positions. A negative fiscal gap reflects an evaluation that fiscal policy should be tightened (not necessarily immediately).

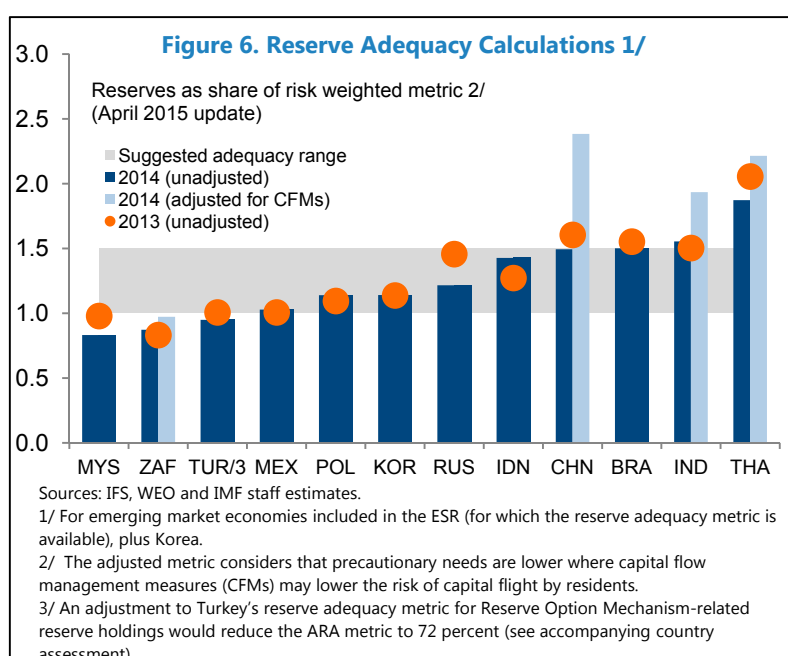
systemically important case of China, where net purchases of foreign exchange decelerated and turned to sales recently).

- More generally, any condition that is judged to distort a country's own rate of saving or investment will contribute to a current account gap. (It will also contribute to such gaps in other economies, though generally to a lesser degree, relative to the size of those economies).

15. Staff assessments of overall external positions take account also of national (external) balance sheets, and of the adequacy of international reserves. For Spain, for example, external sustainability considerations and the need to bolster the still-relatively weak net international investment position (Figure A6) are important in determining the current account gap. The individual economy assessments are also informed, where relevant, by the structure and size of an economy's gross foreign assets and liabilities.

16. Reserve adequacy calculations for end-2014 are broadly similar to those for end-2013 (Figure 6). A few EMs, including some commodity exporters (Malaysia, Russia, Saudi Arabia), did see a decline in reserves in 2014, in part due to weakness in capital flows (Box 2) and in exports arising from lower oil and gas prices in latter 2014. Nevertheless, for most EMs reserves remained adequate. In China, while reserves were above the level required from

a precautionary perspective in 2013, they declined in 2014 to fall just within the range suggested by the Fund's metric for assessing reserve adequacy (ARA).^{6 7} A strengthening of reserves buffers, as financial conditions permit, is warranted in some cases (Malaysia, South Africa, Turkey). The FCL arrangement in Poland remains an effective complement to international reserves, but some additional reserve accumulation is desirable to bolster insurance against external risks.

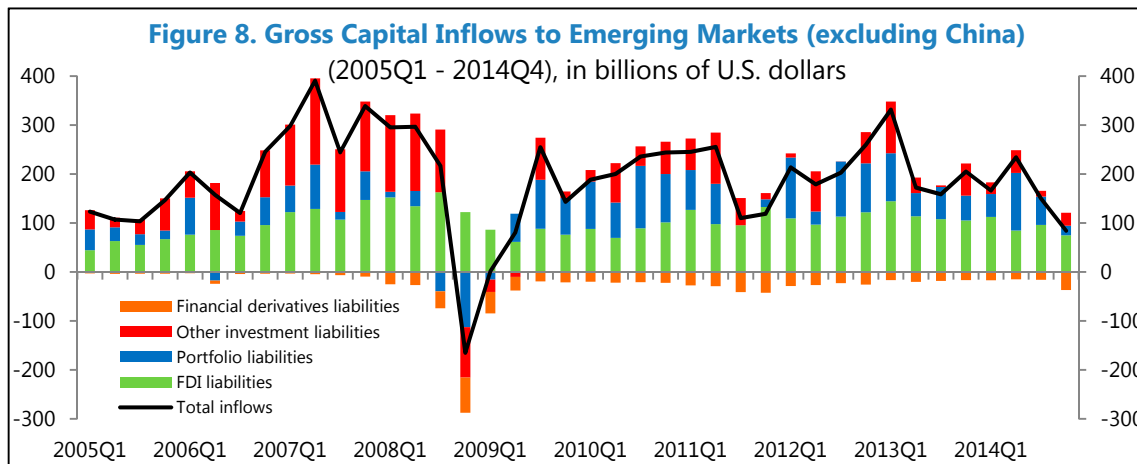
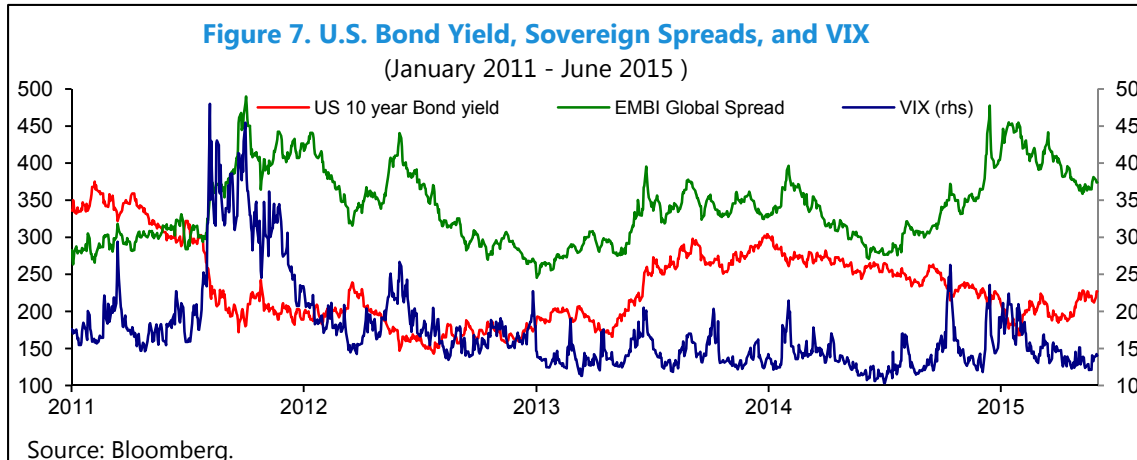


⁶ China's reserves at end-2014 were 149 percent of the unadjusted metric and 238 percent of the metric adjusted for capital flow management measures (CFMs). Under either metric, the staff assessment is that further accumulation is unnecessary from a reserves adequacy perspective.

⁷ IMF (2013) "Assessing Reserve Adequacy—Further Considerations" noted that for countries with long-standing and effective capital flow management measures, an adjusted metric with a lower weight on the risk of resident flight (proxied by broad money) may be appropriate. Based on the extent of such measures as indicated by three widely used measures of capital controls, the ESR countries where this adjusted metric could be considered are China, India, Thailand, and South Africa. See the respective country assessment pages of the accompanying paper.

Box 2. Global Financial Conditions, Capital Flows and Reserve Accumulation

While global financial conditions remained accommodative overall, financing terms evolved and diverged over the course of 2014 (Figure 7). The U.S. T-10 yield, after rising steeply in 2013, declined gradually throughout 2014. However, risk spreads turned upward after mid-2014, not only for EMs but more broadly (e.g., for U.S. high yield corporate bonds). Among EMs, sovereign spreads widened most for those affected by the drop in commodity export prices and by geopolitical tensions (especially in late 2014, amid some rise in risk aversion). A broad-based slowdown of EM growth and the strengthening U.S. recovery affected investors' relative asset demands. External financing conditions nevertheless remained easy for most EMs, from a historical perspective.



In that context, capital flows to EMs slowed after mid-2014, though not uniformly. For China, flows declined throughout the year. Among other EMs (Figure 8), about a third of the drop in the second half of the year reflected the collapse of flows to Russia. Country differentiation was evident, with India for example experiencing stable gross inflows, in part due to a strengthening policy framework.

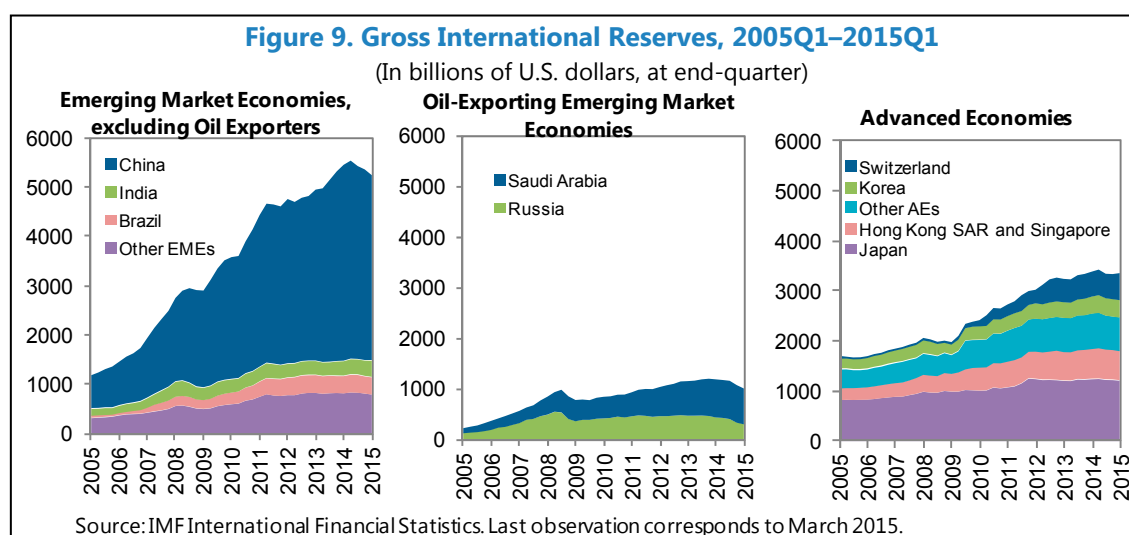
The pattern and scale of capital flows is being shaped also by sharply lower oil prices. For the many economies that are net importers of oil and that also run current account deficits, lower import prices mean at least temporarily higher current accounts and lower demand for gross external financing. The main counterpart are the reduced current account surpluses and foreign asset accumulation of a relatively small number of large oil exporters (Boxes 3 and 4). At the same time, for economies with high oil import dependence, the oil price decline may boost growth prospects and balance sheets, which may

Box 2. Global Financial Conditions, Capital Flows and Reserve Accumulation (concluded)

increase their attractiveness to foreign investors. (For example, India, Indonesia, and Malaysia took the opportunity of lower oil prices to pare fuel subsidies and build fiscal space).¹

Of the many ESR economies experiencing depreciation against the U.S. dollar after mid-2014, available data suggest that most chose not to use FX intervention on a large scale to dampen such depreciation. Currency depreciation was allowed to play an important shock-absorbing role in a number of commodity exporters (those with flexible exchange rates) and in others facing country-specific stresses. Another aspect was that many experiencing depreciation against the dollar were appreciating against the currencies of other large trading partners (the euro area and Japan). At the same time, for those EMs with large exposure to dollar-denominated debt, depreciation against the dollar generated balance sheet losses. Despite such strains, for most, the terms of external financing did not deteriorate notably—in contrast to 2013, when both the US bond yield and risk spreads rose abruptly—and most EM currency depreciations were not unusually large by recent standards (see next section).

Reflecting the slowdown in capital inflows to EMs and smaller surpluses of the largest oil exporters, reserve accumulation generally has slowed and in some cases has reversed (Figure 9).



The decline in the value (in U.S. dollar terms) of reserves holdings reflects both valuation changes (in particular, euro and yen depreciation vis-à-vis the U.S. dollar) and lower accumulation. Notable among these is the decline in reserves in China—which includes estimated foreign exchange sales in early 2015—that reversed a steady annual accumulation over a decade. The pattern of slowing reserve accumulation is broad based and includes declines in international reserves holdings by some oil exporters (e.g. Russia, Saudi Arabia), reflecting reduced oil export revenue as well as the riyal's peg to the U.S. dollar and the managed float of the ruble in place till late 2014, and to a lesser extent Malaysia.² As an exception to the general pattern, in Switzerland, strong capital inflows and appreciation pressure starting in late 2014 led to rising reserve holdings in the context of an exchange rate floor with respect to the euro established in 2011. The central bank removed that floor in mid-January 2015, with limited intervention after end-January.

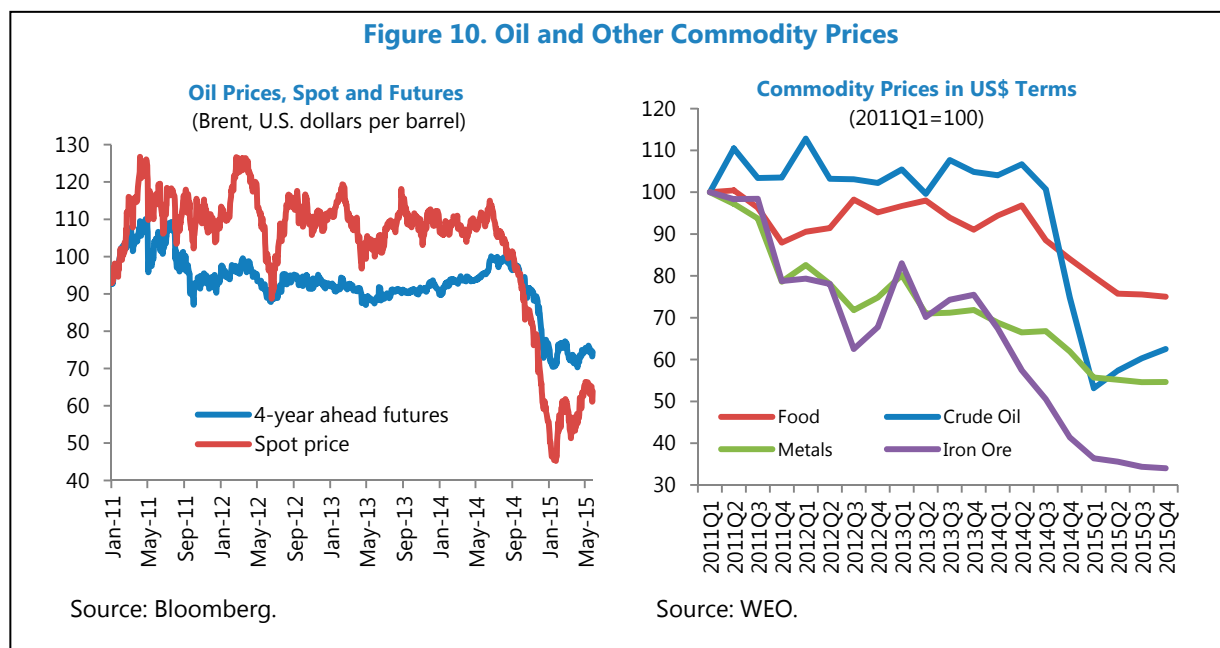
¹ Gross capital flows to EMs are only a fraction of total gross capital flows worldwide. Mirroring the decline in global current account balances, total gross flows in recent years are only a fraction of their size before the global financial crisis.

² In November 2014, Russia moved to a floating exchange rate regime and since has limited intervention.

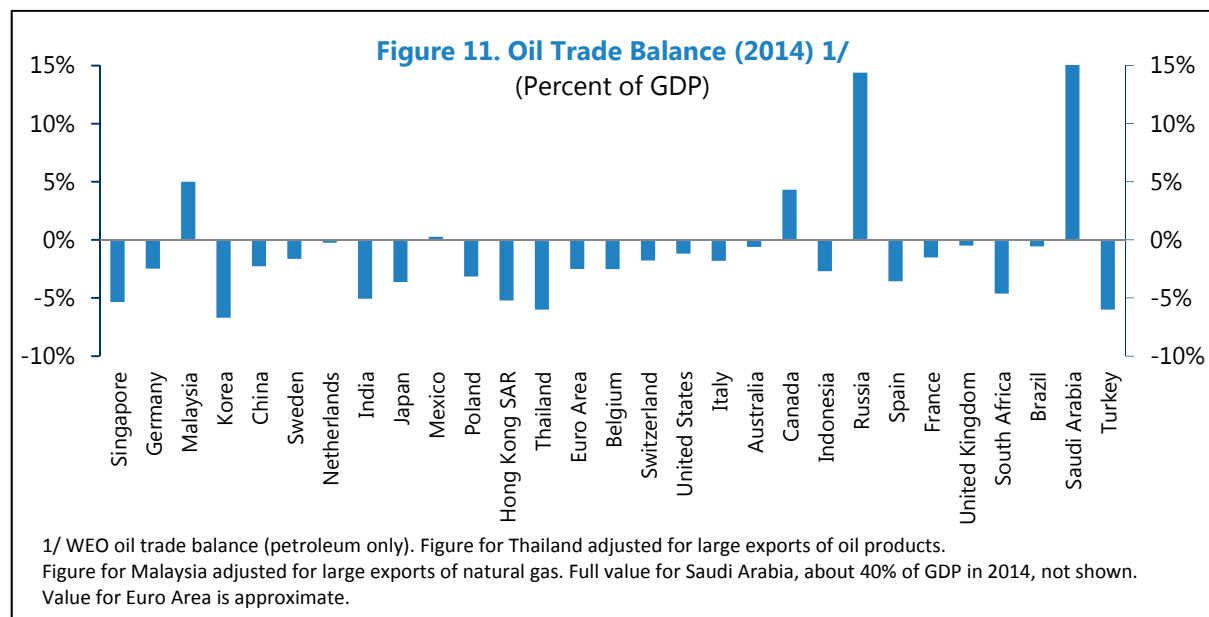
KEY DEVELOPMENTS SINCE 2014 AND IMPLICATIONS FOR EXTERNAL POSITIONS

17. The annual ESRs focus on assessing outcomes of the most recent calendar year—as in the analysis of 2014 just discussed—but this section looks at potential impacts of more recent developments. Those impacts remain to be seen, and are subject to much uncertainty; complete assessments of 2015 external positions are not yet possible. This section takes preliminary stock of select recent developments, analyzing their origins and potential impact. (Some of these began in 2014 but were too late to affect 2014 current account outcomes in most cases.)

A. Lower Prices of Oil and other Commodities



18. The late 2014 plunge in the price of oil, as well as declines in some other commodity prices, will have differential impacts, affecting the global pattern of current accounts. After several years of relative stability, the price of oil declined steeply in latter 2014; WEO projections are that the 2015 average price, in U.S. dollars, will be about 40 percent below its 2014 average (Figure 10). The prices of natural gas and other fuels also have dropped. Exports of oil and natural gas are important to a number of ESR economies, notably Saudi Arabia and Russia, and to a lesser degree Canada and Malaysia. However, most ESR economies are net importers of oil and natural gas and will receive an income windfall from the oil price drop, though in degrees that vary importantly. Figure 11 illustrates the differential exposure of ESR economies' current account balances to changes in oil prices (note that this variation in oil exposure bears no relation to the current gaps identified for 2014). The declines in prices of some other commodities are also relevant to some degree for other ESR economies, particularly the large drop in iron ore prices for Australia and Brazil. But the dominant price development for most is oil, reflecting the size of the price drop and the large scale of oil trade.



19. The implications of the commodity price drop for current accounts are clearest, and likely to be largest, in the short run (Box 3). The direct, static valuation effect on the oil trade balance exceeds 1 percent of GDP for many ESR economies, and in some cases is far larger. In practice, impacts on current accounts will generally be smaller than this initial valuation effect, and are likely to decline over time. One reason simply is that the oil price is projected to recover about half of its decline, albeit gradually over the next several years (Spring 2015 WEO). More immediately, exchange rate responses to the terms of trade shock (see below) will tend to dampen the effect on the current account. Also, the oil-related income gains (or losses) will tend to spur increases (or declines) in expenditure that will partly offset the initial impact on the current account. The size and speed of this offsetting effect may depend on expectations of the duration of the oil price drop, and on whether policies allow passthrough of the price drop to consumers in the private sector. Where consumers receive the windfall and perceive it to be permanent, they may be expected to treat it as any other source of income. Where the public sector instead receives the income gain (loss) from the oil price drop, the impact on the current account will depend on the public sector's decision to offset or not its own income gain (loss).⁸

⁸ See [Staff Discussion Note, "Global Implications of Lower Oil Prices."](#)

Box 3. Oil Trade Balances and Current Accounts

Oil is an important part of international trade: in recent years, the global sum of countries' oil trade balance surpluses and (absolute) oil trade deficits has been similar in size to the global sum of current account imbalances.

In broad terms, the roughly 40 percent estimated drop of the price of oil from 2014 to 2015 will mean a transfer of income from oil exporters to oil importers worth about 1 percent of world GDP. The associated income loss for oil exporters will be highly concentrated in a small number of economies, as just five countries account for more than half of all oil exports (and 10 account for 75 percent). Within this group, many have had high saving rates and run large current account surpluses, accumulating sizable buffers.

Among economies that are net importers of oil, the intensity of such imports varies—but there is little correspondence between the size of their oil trade deficits and their current accounts. Economies which import more oil tend to have stronger non-oil current accounts.

This cross-sectional stylized fact suggests that the long-run effects of oil price changes on current accounts may be small or absent: eventually, the level of domestic demand may adjust to offset the direct impact of the oil import price on the current account, with adjustment of the real exchange rate also playing a role. Before such adjustment fully materializes, however, a large oil price shift would be expected to have a sizable, though diminishing, impact on the current account.

B. Economic and Monetary Policy Divergence and Exchange Rates

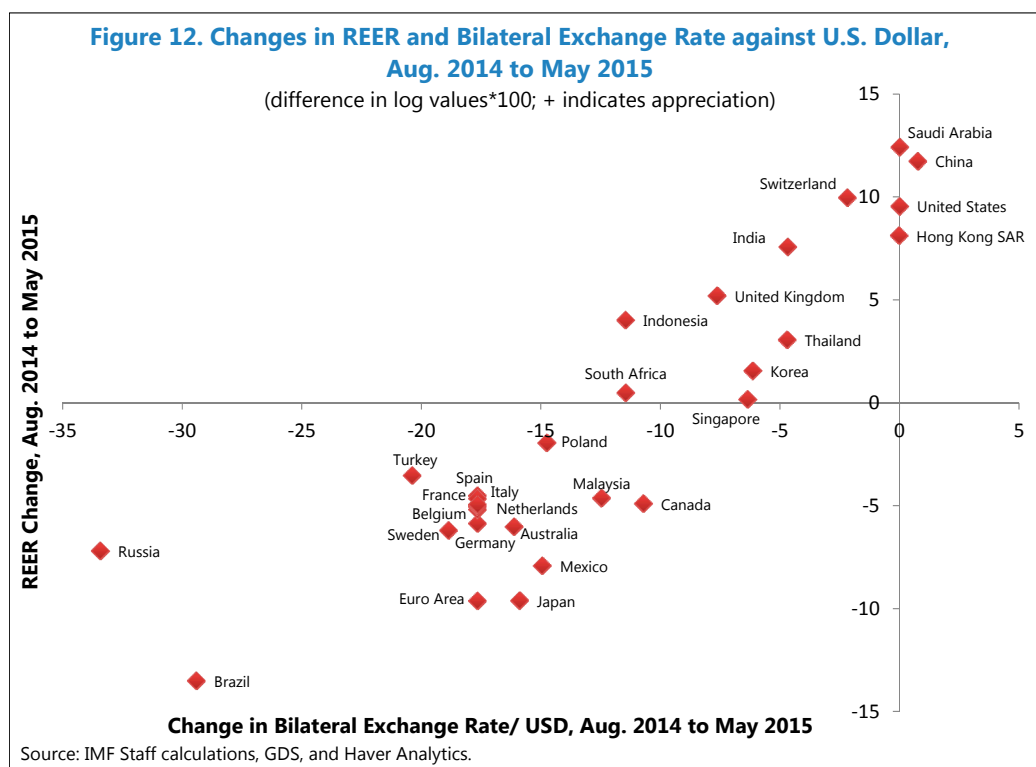
20. Other recent developments with significance for REERs and current accounts are the divergence of growth and inflation among the major economies, as well as divergence in their monetary policies and monetary policy outlooks. For some time already, it had been expected that the cyclical recoveries of the U.S. and U.K. economies were proceeding faster than for the euro area and Japan. In the latter part of 2014, however, new growth and inflation data, and shifting expectations, indicated a widening divergence.⁹ This was followed by significant monetary policy easing action in Japan in late 2014 and in the euro area in January 2015. Outside of the major economies, monetary policy easing steps (which in many cases had not been expected several months earlier) became widespread in the first few months of 2015, among emerging markets and smaller advanced economies alike.

21. The widespread monetary easing announcements, many of which prompted currency depreciations, led some to talk of a “competitive easing” pattern—but such a characterization would be misplaced. Monetary policymakers seem to have been responding to recently diminished inflation and growth prospects for their own economies. Those outlooks were shaped in part by the unexpected plunge in the price of oil, and in some cases by reduced growth prospects of key trading partners.

⁹ In 2014 the estimated output gap narrowed for the U.S. and U.K., but widened for Japan and was flat for euro area.

22. More broadly, the period between August 2014 and early March 2015 was one of large bilateral exchange rate movements, most notably among the largest economies and some oil exporters. The U.S. dollar appreciated against nearly all currencies with flexible exchange rates, but the pattern of depreciation against the dollar was far from uniform, indicating that causes were not solely in the U.S. Among the weakest currencies in this period were the euro and its nearest trading partners (e.g., Poland, Sweden), the yen, and those of oil and gas exporters with flexible exchange rates (e.g., Russia, also Colombia and Norway). At the other end of the spectrum, depreciations against the dollar were small for a number of Asian economies with flexible exchange rates and that rely heavily on imported oil (e.g., India, Korea, and Thailand).

- Looking within this period, the timing of currency movements suggests their likely triggers. Only initially was the story one of a fairly uniform appreciation of the U.S. dollar. In late October, announcement of QQE in Japan was followed by substantial yen depreciation in just a few weeks. Following an OPEC meeting in late November, expectations of medium-term oil prices dropped abruptly and the currencies of oil and gas exporters depreciated sharply in the following weeks. In early 2015, ECB announcement and subsequent implementation of QE was associated with substantial euro depreciation; currencies of those most integrated with the euro area moved along with the euro.
- Since mid-March, currency movements generally have been less pronounced and without clear trends, although the dollar weakened and the euro strengthened somewhat. The largest movement has been a strong recovery of the ruble.



23. Recent currency movements are unusual in some respects, though not unprecedented.

What most distinguishes the recent episode is the size and abruptness of shifts in bilateral exchange rates among the major economies. Seen in simple historical perspective, the current REER levels of the U.S., Japan, and the euro area are not unprecedented (Figure A7). For China, recent REER appreciation is notable and abrupt, as for the U.S., but comes on top of a much larger appreciation since 2005. Among EMs, the REER movements since mid-2014 in general have not been remarkable relative to those seen in the last several years (Figure A8). (The exception is Russia, though much of its very large REER depreciation has been reversed.) The recent episode contrasts with the 2013 “taper” episode, when EMs generally depreciated against all reserve currencies, rather than depreciating against the dollar but appreciating against others.

24. A cross-country analysis shows that REER movements during this period were strongly related to countries’ exposure to prices of commodities (particularly oil and natural gas) and to revisions in their economic outlook.¹⁰ In that light, the pattern of recent currency movements—at least in terms of direction—is a response that would be expected, among countries with flexible exchange rates, in light of significant conjunctural developments.

C. Implications for External Positions

25. Implications of these interconnected developments for external positions need to be considered from several angles.

- First, where sustained gains in commodity terms of trade are paired with real appreciations that arise from those gains, the current account balance is likely to rise at first, before a full adjustment to the new level of real income and relative prices is completed – but there may be no implication for the current account in the end (Box 3). The picture is complicated by wide uncertainty over how much of the oil price drop in particular will be sustained, and for how long.
- Second, where exchange rate movements ultimately arise from domestic demand-driven cyclical divergences among economies, actual current accounts will fluctuate over the cycle, in response to both weakness (strength) in domestic demand and to the currency depreciation (appreciation). In principle, cyclical divergences being temporary, underlying current accounts would not change over the course of the business cycle. But in the interim exchange rates would diverge from medium-term fundamentals-implied values, and aggregate demand and growth would be shifted from more- to less-cyclically advanced economies. In this situation, the underlying issue is not the external position but of resolution of the factor driving the initial divergence of economic cycles as well as the

¹⁰ See [Spring 2015 World Economic Outlook](#).

exchange rate and current account fluctuations: deficiency of domestic demand in cyclically-weaker economies.¹¹

- Third, where the external position was previously assessed as too weak or too strong, there is the question of whether a recent REER movement (apart from movement that would arise from any terms of trade shift or cyclical divergence) in “the right direction,” would mean correction of the underlying external position. The matter is not so simple, as a lasting correction requires an adjustment of expenditure as well as of relative prices. This means also addressing drivers of current accounts that in some cases are longstanding, as in the factors behind too-low saving (e.g., Brazil) or too-high saving (e.g., China). In the absence of adjustment of domestic demand, REER shifts may move economies away from full employment. A further consideration is that the initial REER shift may not be sustained.¹²

D. Baseline Outlook for the Near Term

26. The net impact of recent developments on current accounts is far from certain, but staff projections highlight the role of the oil price drop.¹³ Looking across the projections for ESR economies in 2015 (Figure 13):

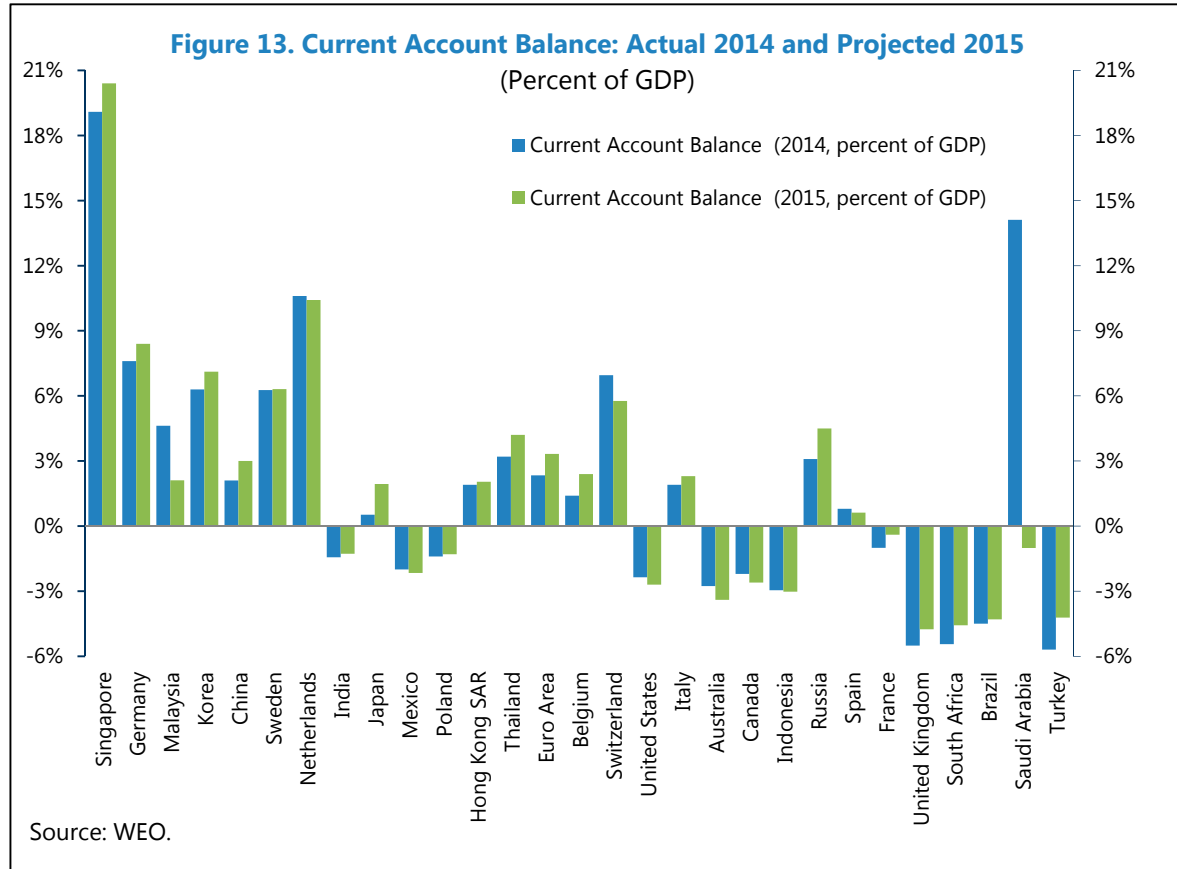
- The cross-country pattern of current account in 2015 is projected to be broadly similar to 2014. With the exception of Saudi Arabia, changes in 2015 are not large relative to the existing wide range of variation. This holds also for 2016 projections (not shown).
- For most economies, the current account is projected to rise in 2015. In most such cases, the increase comes mainly or entirely from a rise in these countries’ oil trade balance, driven by reduced oil import bills. (The notable exception is Russia, where the current account surplus is expected to rise significantly, despite a sizable decline in oil export revenue).
- Current accounts are expected to decline for a number of commodity exporters, including Australia, Malaysia, and Saudi Arabia, and to a lesser extent Canada.
- A lower current account is also projected for Switzerland, and to a lesser extent for the U.S., notwithstanding the narrowing of their oil trade deficits.¹⁴ This decline reflects effects of REER appreciation, as well as domestic demand growth in the U.S. case.

¹¹ In the current context, the *relative* cyclical divergence between the U.S. on one side and the euro area and Japan on the other does not reflect excess demand in the U.S., so the resolution does not include contraction of U.S. demand.

¹² For example, if an REER appreciation (depreciation) affects net exports and induces a negative (positive) output gap, the condition of slack (excess) aggregate demand in turn may lead to eventual real depreciation (appreciation).

¹³ The projections shown were made either for the [Spring 2015 WEO](#) round or are more recent. The projections assume a constant REER for the remainder of 2015. In most cases, actual REERs were broadly unchanged from the time of the Spring WEO and May 2015.

- Overall, projected current account shifts in 2015 are correlated with changes in oil trade balances, but have no general correspondence with the current account gaps identified for 2014. Closure of those gaps will require adjustment, addressing the often longstanding drivers of those gaps.



27. For the largest economies, projected 2015 current accounts reflect an interplay of the oil price drop, sizable REER changes and domestic demand developments:

- For the euro area and Japan, the projected current account rises by slightly more than the narrowing of the oil trade deficit. The upward effect of REER depreciation is mostly offset by the downward effect of domestic demand growth.
- For China, the projected current account rises roughly in line with the oil trade balance. The non-oil current account is essentially flat, as the effect of REER appreciation is offset by ongoing productivity gains and slower growth of domestic demand.

¹⁴ The U.S. oil deficit is modest relative to GDP, so the oil price drop means a relatively small gain for the U.S.

- The projected U.S. current account falls slightly, as a (relatively) small rise in the oil trade balance is more than offset by effects of domestic demand growth and REER appreciation

Box 4. Current Accounts of the Largest Oil Exporters

Just five economies account for more than half of all oil exports: Saudi Arabia, Kuwait, Qatar and UAE (all GCC members) and Russia. Moreover, these economies have run sizable current account surpluses, and the current account surpluses of these five in recent years have accounted for about 90 percent of the combined surplus of all the world's net exporters of oil (Figure 1).

In that light, even though these economies together are not a large part of global GDP, their behavior at a time of a very large oil price shock is relevant for the global pattern of current accounts and capital flows, as well as for the global macroeconomic picture.

Among these five countries, there is a sharp contrast between Russia and the GCC in terms of structural characteristics, exchange rates and exchange rate policies, fiscal policy and size of buffers, and the adjustment of non-oil current account.

- The GCC economies, with fixed exchange rate regimes, have run very large current account surpluses and accumulated sizable buffers. Structural characteristics of their more oil-dominated economies mean that external adjustment is largely a matter of fiscal policy and that adjustment of domestic demand does not need to be accompanied by sizable REER adjustment. For these economies, including Saudi Arabia, expenditure adjustment in the near term is projected to be much less than the loss of oil revenue, and their current account surpluses have fallen sharply.
- Russia also has run current account surpluses, though much smaller as a share of its GDP, and somewhat below the staff-assessed norm level in recent years. In the context of a flexible exchange rate and while experiencing the impact of sanctions and reduced supply of external financing, Russia already has undergone a very large adjustment on the non-oil current account. Despite the loss of oil revenue, Russia's current account is projected to rise in 2015.

28. Overall, recent shifts of commodity terms of trade and REERs are large enough to be of macroeconomic significance to many individual economies, but their implications for current accounts and underlying external positions are complex and uncertain. For the oil-dominated economies, the oil price shock, if sustained, is a watershed. In those economies it is primarily the public sector that experiences the income loss, and the response of the public sector will largely determine whether the external position weakens on a lasting basis. In general, it has been appropriate for these economies to run large external surpluses, in light of resource exhaustibility and intergenerational considerations (and as a precaution against oil price drops); a sustained lower price of oil calls for a downward adjustment of their expenditure, though this may proceed gradually for those with sufficient buffers.¹⁵ For other economies, the evolution of current accounts will be more complex, depending on the size and speed of the private sector's response to the income windfall from lower oil, and fiscal policy reactions to the oil shock. Real exchange rate

¹⁵ An adjustment to fully restore the previous level of the current account surplus is not necessarily indicated. If an oil exporter is following an optimal saving rule, a lower price of oil and thus a lower value of its oil wealth would call for lower consumption, but not enough to fully restore the previous current account surplus.

movements will not translate in a simple manner to current account movements, which will depend also on the driver of any recent REER change and a range of micro and macro factors (Box 5). More broadly, the evolution of current accounts will depend on policies going forward.

Box 5. When Are Large REER Shifts Followed by Large Current Account Movements?

Many considerations are relevant when predicting current accounts in the aftermath of sizable exchange rate moves. These include structural, country- or even industry-specific characteristics, but also the context—other factors are unlikely to be constant—and taking a macroeconomic perspective.

A partial approach to predicting the current account would apply to the REER change an elasticity value, while ignoring the other impacts on the current account of the shock that led to the REER change. Such an elasticity value needs to take account of pricing behavior (whether and how much exchange rate changes are passed through to prices), and of lags in the responses of demand and supply to prices. Complications are that such responses may depend on perceptions of the persistence of any recent REER change, and might be nonlinear (e.g., responses might begin only after a “zone of inaction” has been breached). More simply, the trade balances of countries with higher trade openness, i.e., with larger ratios of exports and imports to GDP, are expected to be more responsive to exchange rate movements, simply because their trade base is larger. Such bases vary greatly; e.g., the U.S. is relatively low, while Malaysia is very high. A complication is that a high level of (gross) exports may reflect that exports have a high import content, with the domestic value-added part of exports being much smaller than gross exports, likely reducing the net impact of exchange rate movements. More generally, the prevalence of global value added chains complicates gauging how exchange rate movements will affect trade.

In addition to such micro-level considerations, a prediction of the current account needs to also take account of context at the macro level. What is driving the change in the REER, and will it also affect the current account? More broadly, what other developments may be happening at the same time that will affect the current account?

Especially important is how such related or contemporaneous developments are affecting domestic demand. In the data, short-term movements of the current account tend to be tightly linked to domestic demand fluctuations, with the REER having less predictive power. This reflects the direct link from domestic demand to imports, compared to the more indirect, and possibly lagged, effect of REER changes on trade. Considering the case of REER *appreciation*:

1. **If an REER appreciation is associated with strong growth of domestic demand,** then the combined implications for the current account can be large, while the implications for aggregate demand and GDP growth may be small. Such a pairing can arise because strong domestic demand growth may be the cause of REER appreciation. And in some circumstances, REER appreciation or its drivers can act to stimulate domestic demand: appreciation may bring a terms of trade gain, boosting real income and demand; capital inflows may loosen financial conditions, stimulating demand.
2. **If REER appreciation occurs at a time when domestic demand growth is weak,** then the predicted movement of the current account will be smaller – but the negative implication for aggregate demand and growth will be larger. In that case, the story is not complete without also considering possible countercyclical policy responses to slackening activity and their implications for the current account.

Concurrent changes in the terms of trade and productivity also need to be taken into account. If an REER appreciation happens in a context of rising productivity or improving commodity terms of trade—which may be the cause of change in REER in the first place—then predictions for the current account, and growth, will be higher than otherwise.

The bottom line is that a REER shift will not by itself translate simply into a clear prediction of current account movement: much more needs consideration.

IMPLICATIONS FOR POLICIES AND RISKS

29. As the pattern of external positions continues to be shaped by drivers that have been in place for some time, the policy agenda identified previously remains relevant. While the implications of recent changes in commodity prices and exchange rates remain to be seen, it is clear that they alone will not overturn the broad pattern of excess imbalances assessed for 2014.

30. Needed policy actions vary by country, but the contours of a global policy agenda for addressing excess external imbalances are familiar. In the broadest terms, actions to reduce such gaps in deficit economies include fiscal consolidation, steps to boost private saving and moderate excesses in private demand, and structural reforms to facilitate the process of adjustment. Policies that would support stronger domestic demand are needed in surplus economies. Such necessary adjustments of demand will need to be accompanied by changes in REERs if deficit economies are not to fall into recession nor surplus economies to overheat. As most of the economies analyzed have adequate international reserves, policies should continue to avoid sustained, one-sided reserve accumulation. More broadly, policies should facilitate rather than delay the real exchange rate adjustment that should accompany the demand adjustment needed to close external gaps.

31. Among those ESR economies with current accounts assessed to be below norms, gradual fiscal consolidation is often part of the agenda, as are other policies to raise saving or curb possible excesses in private demand.

- For some economies with too-low private saving rates, including Brazil, South Africa and Turkey among others, reforms to address distortions that depress saving would be useful.
- Important progress has been made on needed fiscal consolidation in some countries in recent years. Even so, consolidation over the coming years is still desirable for some, such as Brazil, the U.K., and some of the larger euro area member economies, particularly France and Spain. The appropriate timing and pace of consolidation will depend on growth and cyclical considerations. Fiscal consolidation, and demand adjustment more broadly, should be complemented by adjustment of relative prices.

32. For euro area economies, which lack the possibility of nominal exchange rate adjustment with respect to trading partners inside the euro area, relative price adjustment should be facilitated by product and labor market reforms, as part of a broader policy agenda. Such reforms also would boost productivity and growth. The recent easing of euro area monetary policy, while seeking to raise euro area inflation overall, should facilitate relative price adjustment among euro area members. Policy measures to strengthen bank balance sheets, and greater use of space under the fiscal rules to support structural reforms and public investment, are important also.

33. The current account deficit of the U.S., while no longer assessed to be excessive in relation to the size of the U.S. economy, remains an important element of the international landscape. The assessed current account gap for 2014 ranges from $-1\frac{1}{4}$ percent of GDP to zero, suggesting that some modest further narrowing of the deficit could be desirable. Considerable fiscal

consolidation has been one factor in the narrowing of the current account gap in recent years, and some further consolidation—over the medium term—would be appropriate also from a fiscal sustainability perspective. In the near-term, to the extent that the recent appreciation of the U.S. REER puts downward pressure on the outlook for U.S. growth and inflation, monetary policy decisions will naturally need to take this into account.

34. For the ESR economies with current accounts assessed to above norms, a range of policies would be appropriate:

- Within the euro area, increased public investment would be beneficial for Germany, boosting growth in addition to affecting the current account.
- While the excess surplus imbalances of China and emerging Asia have declined importantly over the years, their remaining gaps point to a range of policy needs—as does the surplus gap of Korea. In general there is room to strengthen social safety nets (weaker safety nets tend to distort saving rates upward) and to implement financial reforms. The latter includes appropriately-paced liberalization of capital account restrictions in China and other emerging Asia.
- In China, while high investment since the global financial crisis has brought down the current account surplus, private saving remains too high and there is a need to rebalance domestic demand toward consumption. Following the recent sizable appreciation, the real exchange rate appears no longer undervalued. The implications of this appreciation for the external position remain to be seen; for now, the non-oil current account surplus has not declined, and the gaps in domestic policies that underlie a high saving rate remain. Sustained external rebalancing will require continuing to address those gaps, including by implementing the authorities' reform agenda. Achieving a flexible, market-based exchange rate will be a key complement to such policies.

35. Steady policy action by economies on both sides of excess imbalances would be mutually supportive for external adjustment, and for global demand management and growth. Since current accounts are linked across countries, and sustained current account adjustment requires adjustment of domestic demand, such adjustment by any one economy has spillover implications for growth as well as external balances. If the needed demand adjustments were made by economies with excess deficits, without the needed upward demand adjustments by those with excess surpluses, the result would be contractionary for the global economy. Such an outcome would be particularly undesirable now, as world output is still below its potential level; overall, the global economy needs demand-creating policies.

36. The pattern of recent exchange rate movements, rather than being related to previously identified gaps, appears driven mostly by significant developments in commodity prices and divergences across economies and needs to be evaluated in that context. The direction of the pattern is expected and appears as a conjunctural response that is beneficial for the overall global economy at this time. These currency movements will help adjustment to the large oil

price shock. In addition, the weakening of the euro and yen relative to the U.S. dollar will help lower the risk of deflation and support recovery in the euro area and Japan, which has positive spillovers for other economies, including by easing global financial conditions at a time of overall global economic weakness.¹⁶ At the same time, the net effect on activity in the relatively strong U.S. economy is likely to be negative in the short term, via demand diversion, even though this effect may be mitigated by U.S. monetary policy.

37. While the recent monetary easing in the euro area and Japan appears broadly appropriate to the circumstances, it is only one part of a recovery agenda for those economies. The restoration of satisfactory growth there ultimately will require stronger growth of domestic demand, and a range of other policy measures are needed to create demand and to raise productivity and growth. In the meantime, the REERs of Japan and the euro area are moderately weaker—and the REER of the U.S. moderately stronger—than levels that would be implied by medium-term fundamentals. That is expected in the current circumstances, but is also a symptom of an inadequate economic recovery and a reminder that a broader policy effort needs to be implemented to support recovery and ensure stability.

38. Even if the sizable movements among major currencies, and the related monetary policy divergences, are on the whole conjuncturally beneficial, they are not without downsides and risks. Beyond the external positions and trade-weighted exchange rates that are the focus of this report, large movements in nominal bilateral rates can pose costs and risks. These include costs of possible sectoral dislocation, and balance sheet risks, e.g., for those economies and sectors that may be heavily indebted in U.S. dollar debt. The [2015 Spillover Report](#) concludes that such balance sheet risks, while generally much reduced from the past, remain relevant going forward, for some economies and sectors more than others.

39. Aside from impacts on external positions, shifting and diverging monetary policies inevitably complicate the global financial environment; there is a need to watch various financial risks and spillovers. One concern is that QE operations and persistently low interest rates can encourage excessive risk-taking behavior, including through possibly excessively large capital flows to EMs. In the other direction, complications of exit from especially accommodative monetary policy have the potential to disrupt markets, especially in EMs.¹⁷ Policymakers, including in EM countries, should be prepared to respond flexibly to disruptions, drawing on a range of tools as appropriate to circumstances.

40. Economies with the largest current account deficits may be most vulnerable to such disruptions, possibly with adverse consequences for other economies. The risk of disorderly external adjustment in some deficit economies, noted in the previous ESR, remains—especially if

¹⁶ See [Spring 2015 World Economic Outlook](#).

¹⁷ See [April 2015 Global Financial Stability Report](#).

tightening of external financing conditions in general were joined by policy deterioration at the country level or if other adverse shocks materialize. Country-level risks would have spillovers and could possibly have systemic implications; e.g., if a group of EMs or others with excess current account deficits were affected by negative developments at the same time. Addressing an excess deficit by removing its underlying drivers and adjusting gradually is certainly preferable to a potential disorderly compression of such a deficit triggered by a sudden tightening of external financing supply.

41. Going forward, the pattern of imbalances and excess imbalances will depend on whether policies move in the recommended directions—and on new financial market and other private sector developments that remain to be seen. The Spring 2015 WEO sets out a baseline projection in which aggregate imbalances at the global level do not change greatly in the coming years, in the absence of further shocks; that baseline assumes a partial recovery of oil prices over the medium term and is based on constant real exchange rates. It is of course unlikely that all real exchange rates will be broadly constant going forward, but also very difficult to predict with accuracy how they will move.¹⁸

42. When significant shifts in exchange rates do occur in the future, they will need to be evaluated in the context of their drivers and other concurrent developments. It is to be expected, and will often be appropriate, that exchange rates and current accounts will fluctuate in response to new developments. But some such movements may reflect distortions or excesses. At times, their driver(s) may be unclear, or they may be closely interconnected and mutually reinforcing (e.g., a syndrome in which domestic demand, asset prices, credit, and capital inflows are all expanding strongly, while the real exchange rate appreciates and the current account moves into sizable deficit). External developments therefore will warrant ongoing scrutiny, with a view to avoiding suboptimal scenarios in general, and especially to avoiding mounting vulnerabilities that carry the risk of painful endings. Therefore, at the same time that the policy agenda calls for steady effort to address the sources of existing excess imbalances, policymakers will need also to be alert to new developments that may add on to existing excess imbalances or create new ones.

¹⁸ Part of the well-known difficulty of predicting nominal exchange rate movements comes from the forward-looking nature of asset markets. Currency movements will tend to reflect responses to new developments that were not previously anticipated, and thus not already reflected in the exchange rate. See [Engel and West \(2005\)](#).

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Annex I. Use of the External Balance Assessment Methodology in the ESR Assessments

The staff assessments presented in this report draw, along with other inputs, on estimates using the External Balance Assessment (EBA) methodology.¹ This methodology was used in the previous two ESR exercises, but now includes an additional tool and some refinements (see below).

EBA analyzes current accounts and exchange rates based on fundamental economic characteristics as well as policies—and potential policy distortions. The methodology draws on panel regressions to derive values of current accounts and exchange rates that would be consistent with an economy’s fundamental characteristics, such as demographic factors and the level of economic development. EBA also includes policies—fiscal, monetary, public health expenditure (which influences household saving), capital controls and foreign exchange intervention. For each of these policies, assessments of desirable policy settings offer a view on policy gaps and their contributions. EBA also includes a separate exercise that focuses narrowly on the distinct question of the external sustainability of NIIP positions and current account balances. This exercise is used to inform the assessments only in cases where NIIP stabilization is a dominant concern.

The output of the EBA analysis is a set of estimated “Total Gaps” for current accounts and real exchange rates. These are the sum of the estimated contributions of the various “policy gaps”—which in turn consist of separately-estimated contributions of domestic policy gaps and foreign (i.e., spillover) policy gaps—and a regression residual. Figure A2 shows the EBA-estimated policy gap contributions to 2014 current accounts.

The current account and exchange rate gaps shown in the ESR are staff assessments and reflect not only the EBA estimates but other information and judgment. EBA estimates provide a multilaterally-consistent set of starting points for assessments, but are not adopted mechanically. Especially in cases where the regression residual is large, a judgment needs to be made on whether it reflects only distortions not captured by the regression model or instead reflects fundamentals missed by the model. Moreover, the separate EBA models of current accounts and exchange rates may not be equally reliable in a given case, and alternative estimates need not be given equal weight in arriving at assessments. In many cases, the current account regression-based approach is considered more reliable than real exchange rate regression approaches (this is in part due to the properties of current accounts themselves, aside from the EBA model’s design).

A particular weakness of the latter approach is that real exchange rate measures used for analysis have been *indices*, which do not contain information on how prices vary across countries. A consequence of using such data is that an estimate of an exchange rate norm today is

¹ The EBA methodology is described in detail in [IMF Working Paper WP/13/272](#).

strongly influenced by the exchange rate's past average—which may depend on the sample period chosen, and moreover includes the influence of distortions that were sustained over time.

To avoid those pitfalls, EBA now includes an additional real exchange rate regression tool which uses so-called “level” exchange rates rather than indices. Use of this model involves tradeoffs, however, as it is susceptible to other pitfalls not found in the traditional REER index-based approach. The new tool therefore supplements rather than replaces the existing index-based tool in EBA, and staff assessments need to judge which is more reliable in a particular context. As before, staff assessments of current account gaps in some cases may lead to the most reliable indication of a real exchange rate gap (though this requires an estimate of the sensitivity of trade to the exchange rate, and such an estimate itself will be uncertain).

This year, the EBA treatment of demographic factors in the current account model has been refined and the sample estimation periods have been extended. Theory suggests that the effects of demographics on current accounts are likely to be complex, interrelated and non-linear, and inherently difficult to capture well in a panel regression tool such as EBA. Still, some improvement in the regression modeling is possible by allowing for interaction among some demographics variables. In addition, the EBA models have been re-estimated using data through 2013 (previously through 2010 only).

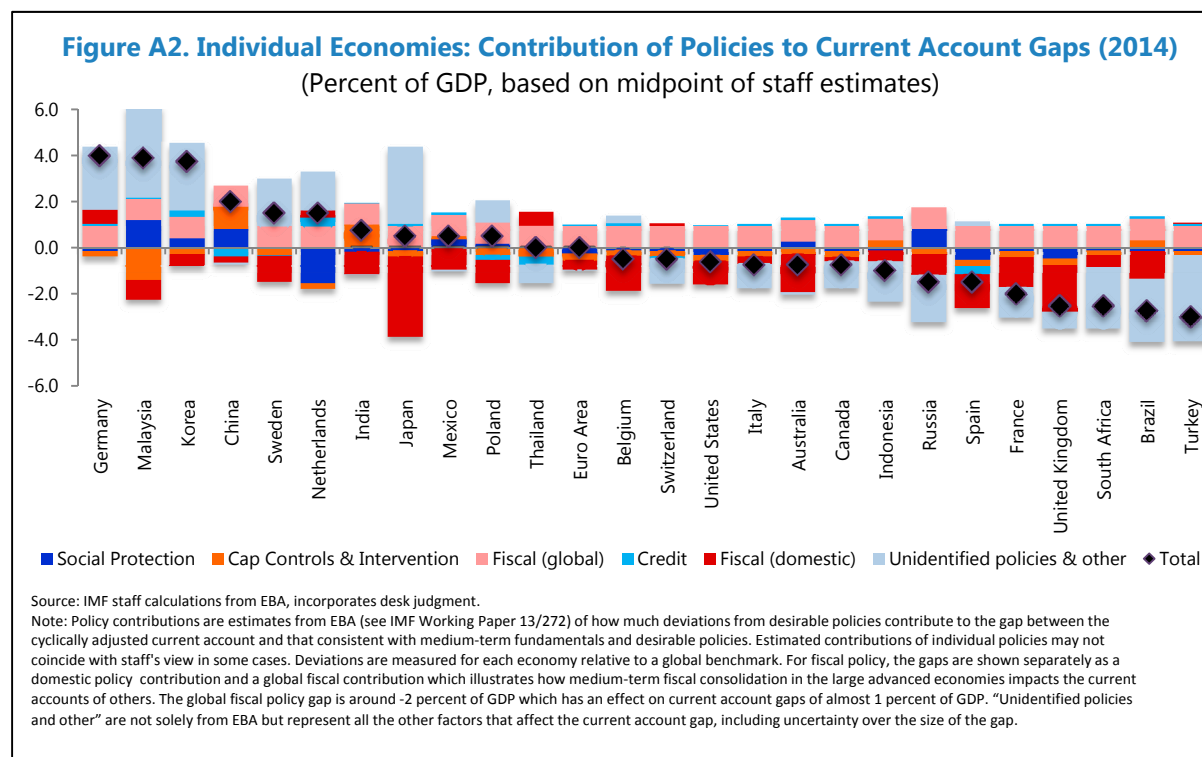
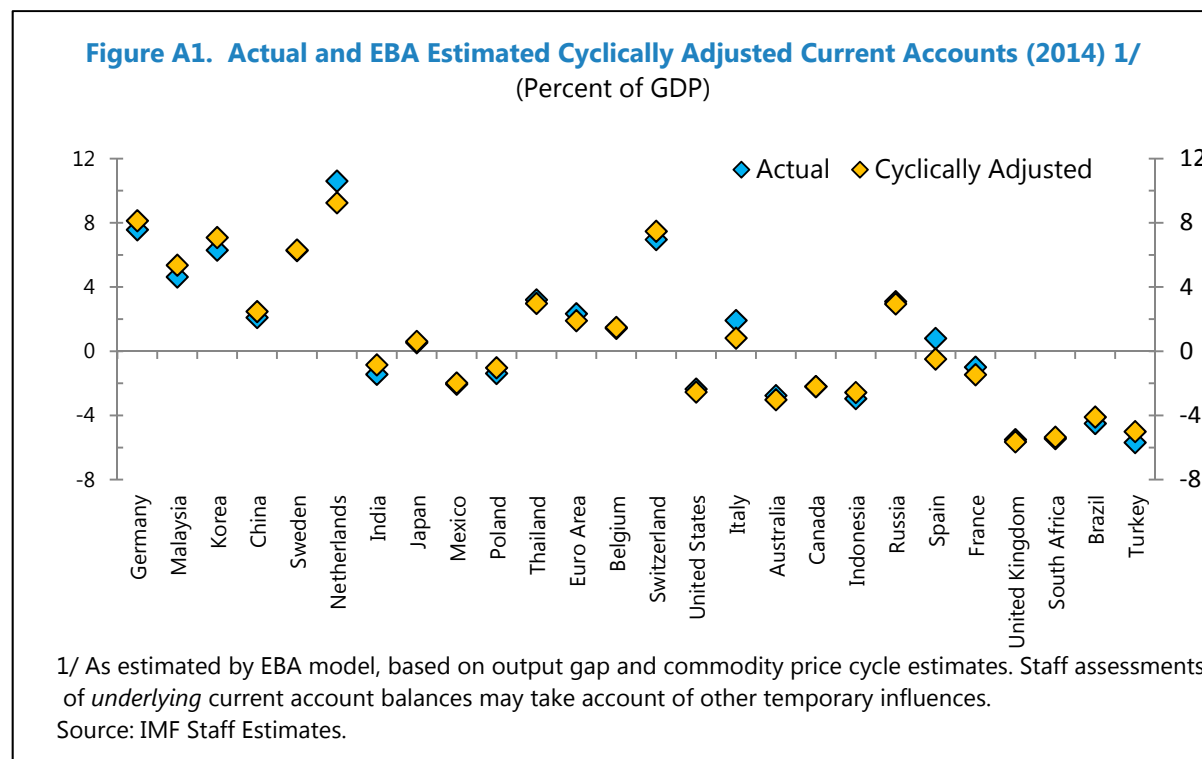
The treatment of capital controls is another area of recent staff exploration of potential refinements to EBA regression models. Accurately summarizing the extent and impact of diverse and often wide-ranging controls in a summary measure is a tall order, and the available de jure indices and de facto indicators are widely recognized to be imperfect. While these indicators do differ, an investigation found that choice of index used in the EBA model generally has little effect on the overall pattern of EBA current account gap estimates. An effort to use detailed information on particular types of controls to construct a new, empirically-based summary index found that the variation in countries' use of different types of measures did not provide sufficient information to build such an index.

Recognizing the uncertainty inherent in the EBA econometrics and in the interpretation of the policy gaps and regression residual, and in external assessments more broadly, the ESR reports current account and exchange rate gaps as ranges. Uncertainty is especially high in financial center economies with relatively large balance sheets and extensive presence of multinational firms. Uncertainty also tends to be larger where the EBA regression has a larger unexplained residual requiring interpretation.

An essential feature of the EBA methodology is its multilateral consistency; this is preserved in the process of arriving at the set of staff-assessed gaps in the ESR. That is, current account gaps “add up” in the sense that assessments of too-strong balances are matched by those of too-weak balances.

While the staff-assessed gaps reported by the ESR will often differ from one or more EBA estimates for a given economy, overall there remains a cross-country correlation between the assessments and the estimates from EBA (Figures A3 and A4). This correlation is especially strong for the assessment of current accounts.

Annex Figures



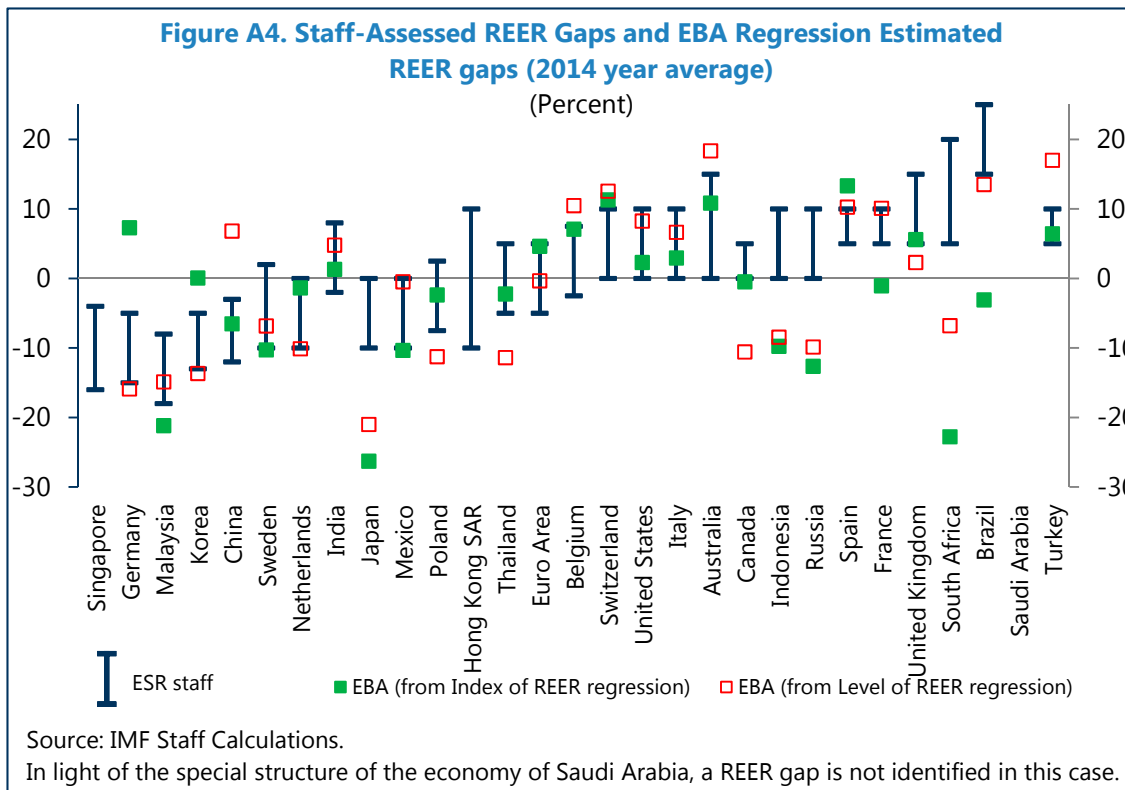
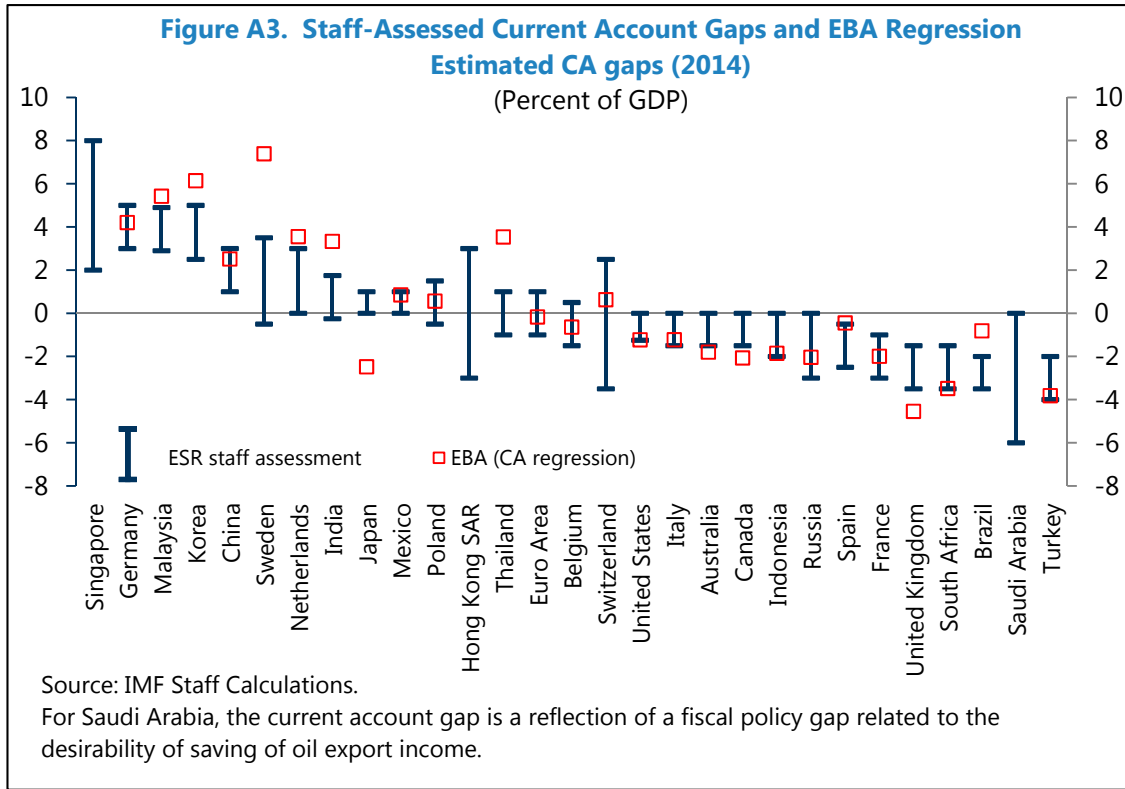
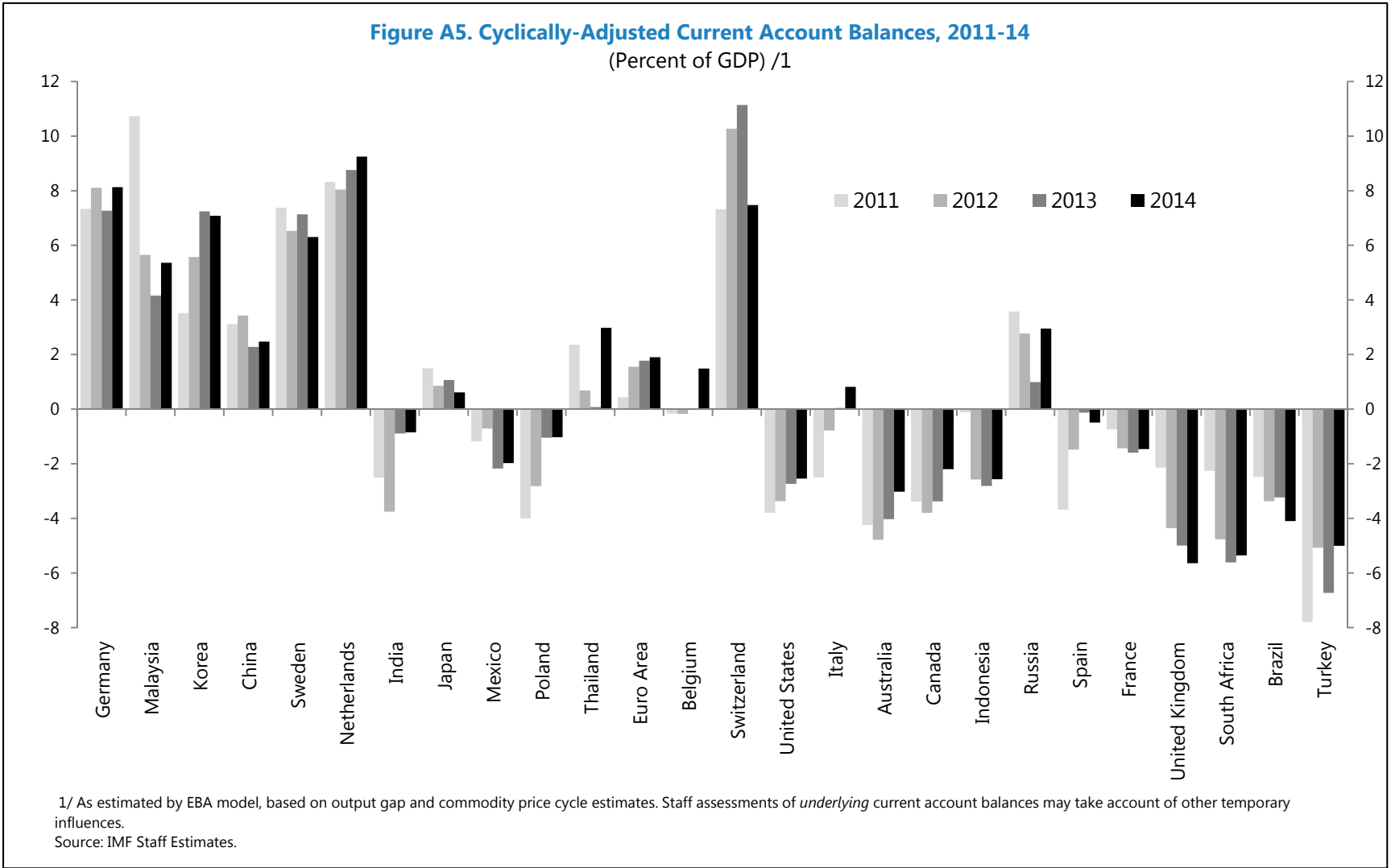


Figure A5. Cyclically-Adjusted Current Account Balances, 2011-14
(Percent of GDP) /1



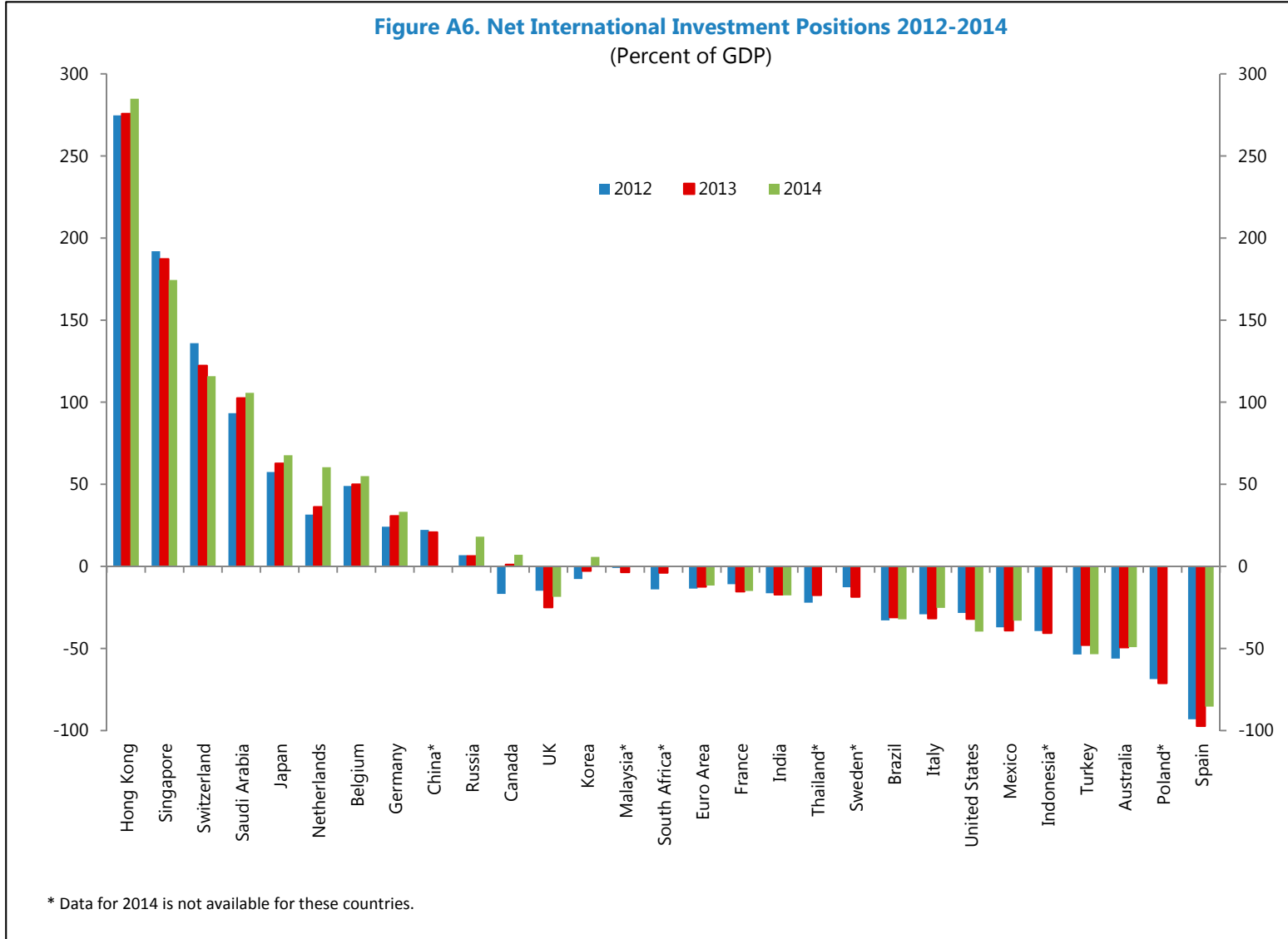
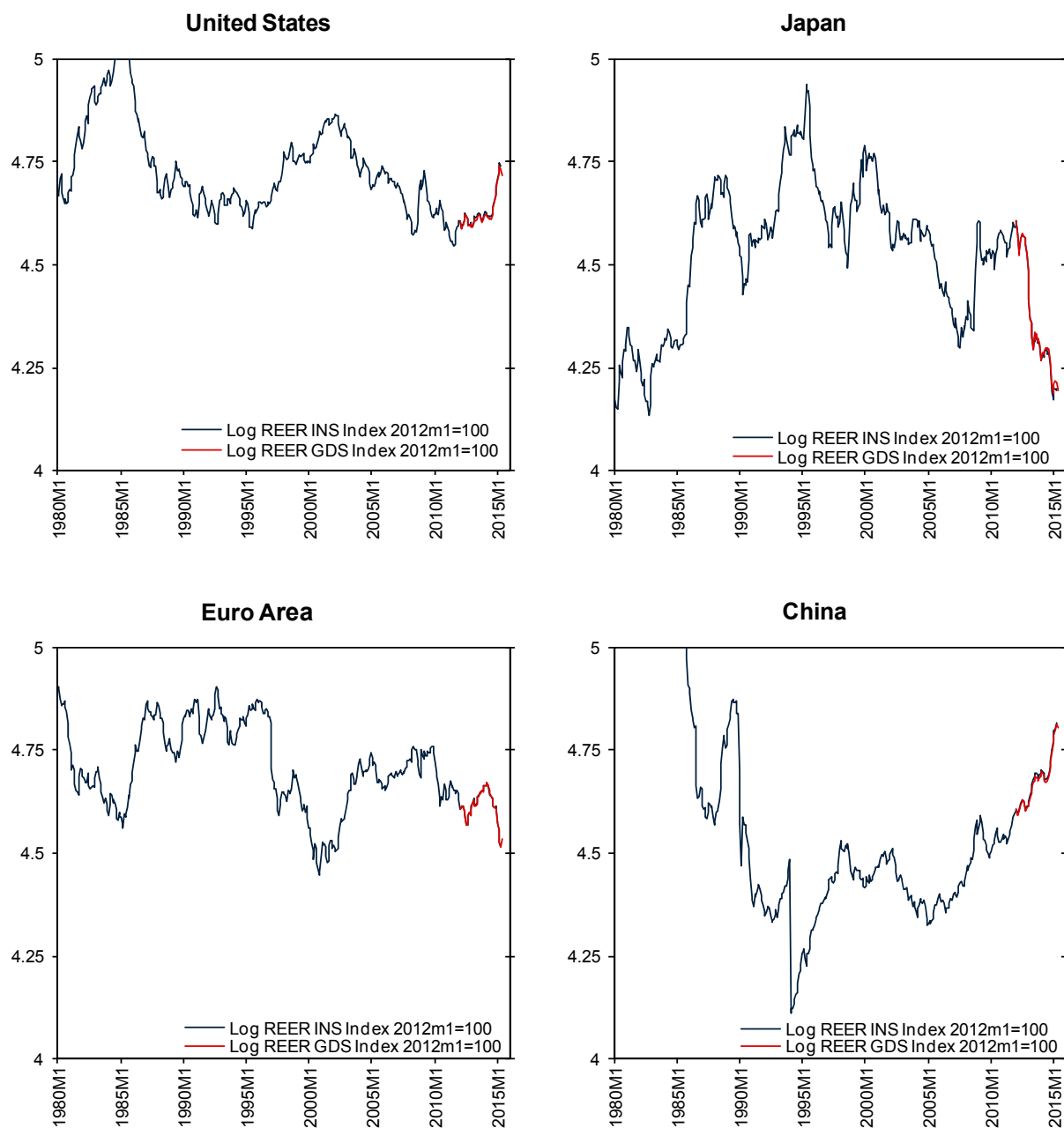


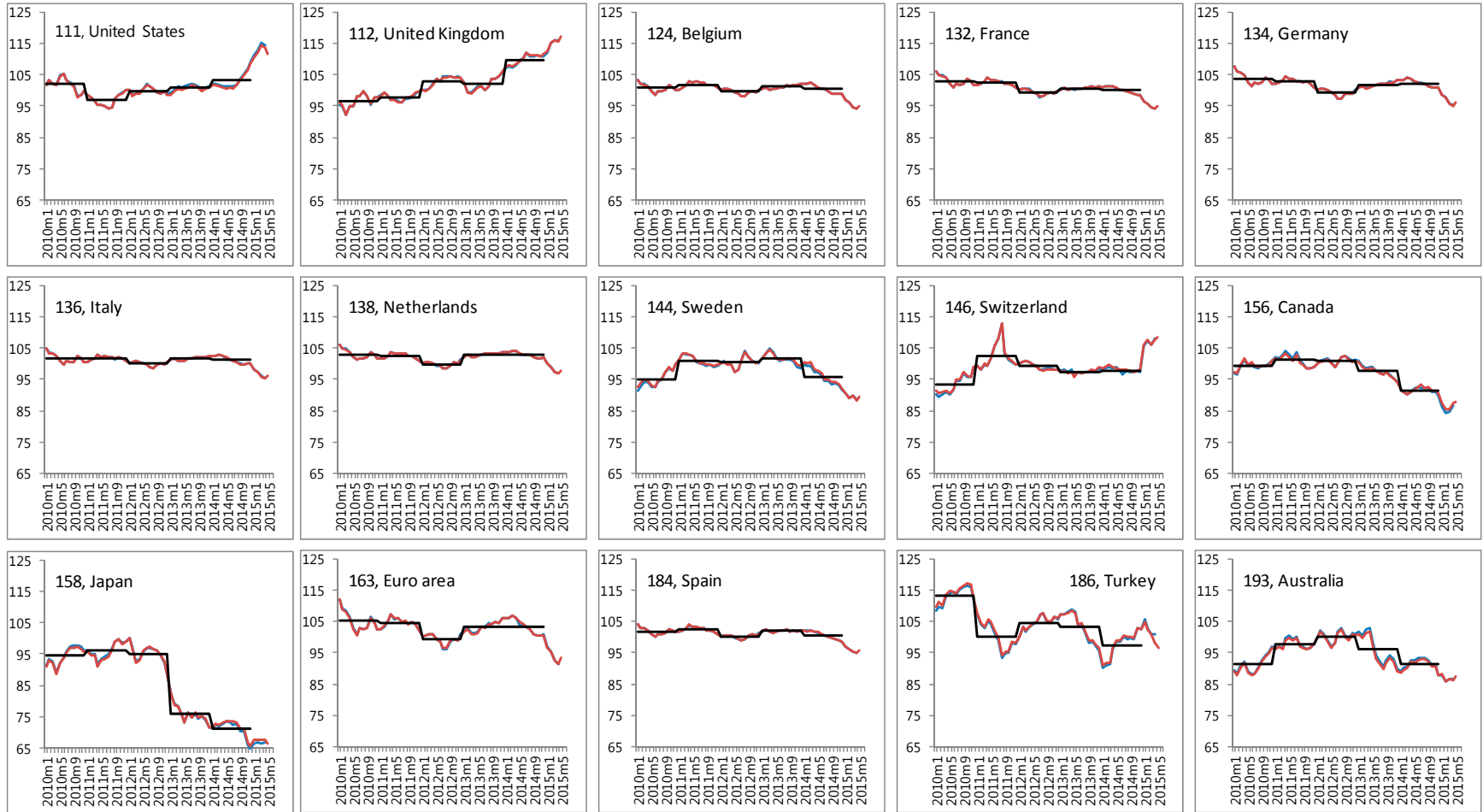
Figure A7. REER of Largest Economies, January 1980 – May 2015

(log of REER index, Jan 2012=100, identical scaling across countries)



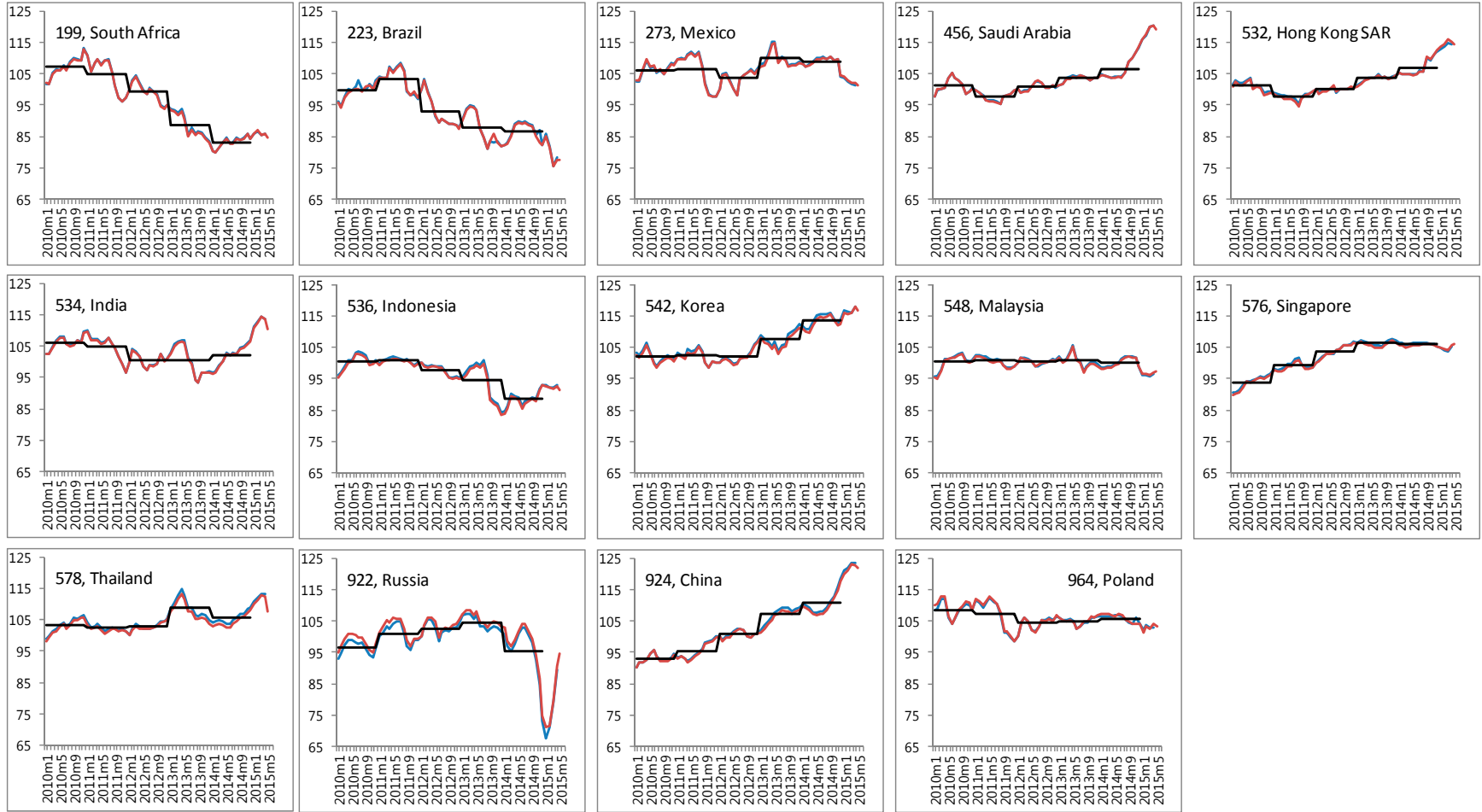
Sources: INS and GDS.

Figure A8. Actual REER: Monthly and Yearly Average, January 2010 – May 2015



Sources: INS and GDS.

Figure A8. Actual REER: Monthly and Yearly Average, January 2010 – May 2015 (concluded)



Sources: INS and GDS.

