



## Thirty-First Meeting of the IMF Committee on Balance of Payments Statistics

Washington, D.C.  
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BOPCOM—18/14  
For Discussion

# Assessing Global Imbalances: Data Challenges





# **Assessing Global Imbalances: Data Challenges**

*Gustavo Adler  
IMF Research Department*

*Thirty-first Meeting of IMF Committee on  
Balance of Payments Statistics  
Washington DC— October 25, 2018*

# **Overview**

**1. The IMF's External Sector Surveillance**

**2. A Sample of External Sector Assessments**

**3. Issues and Data Limitations in External Sector Statistics**

# **1. The IMF's External Sector Surveillance**

# The IMF's mandate in external sector surveillance

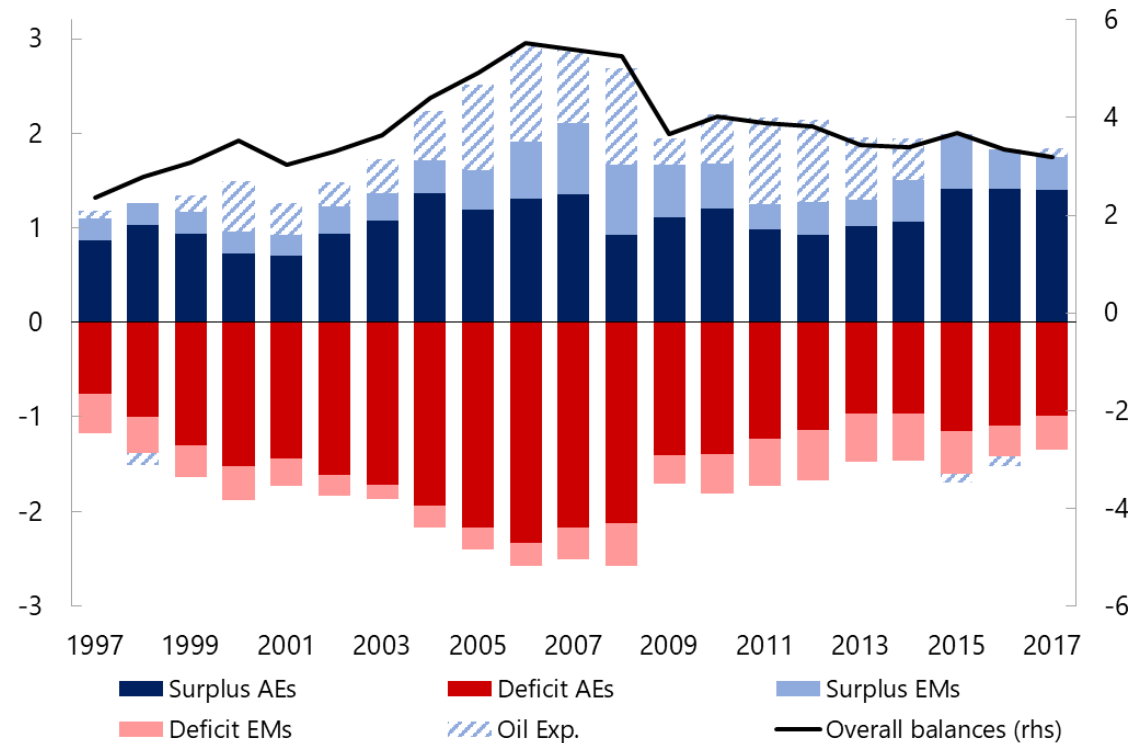
- External positions are a key aspect of macroeconomic diagnostics
  - *Individual viewpoint*
    - **Manifestation of internal imbalances** (DD vs Output ; S vs I)
  - *Multilateral perspective*
    - **Contribution to global demand**
    - **Accumulation/decumulation of external wealth: Built-up of risks** for the global economy.

*Ex.: Global Financial Crisis, Euro Area Crisis*

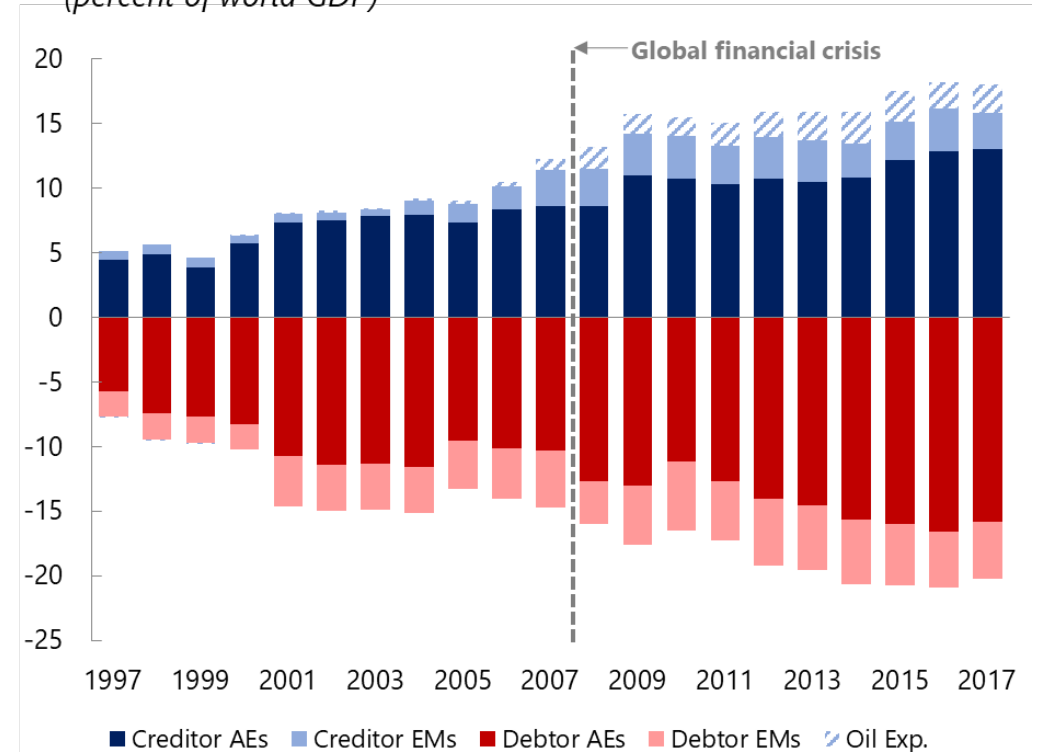
- IMF's Mandate:
  - ***Promote the stability of the international monetary system***  
(a public good)
  - ***Understanding and monitoring external imbalances is key***

# External sector surveillance has become central in the last decade, amid large current account and NIIP imbalances...

**Current Account Balances, 1997-2017 1/**  
(percent of world GDP)



**Net International Investment Position, 1997-2017**  
(percent of world GDP)



Sources: World Economic Outlook, *International Financial Statistics*, and IMF staff calculations.  
1/ Overall balance is the absolute sum of global surpluses and deficits.

# Assessing external positions

- Not all external imbalances are risky, some even necessary.
  - Low income per capita/high growth potential → invest
  - Institutional quality → ability to borrow & invest
  - Ageing populations → save more
  - Terms-of-trade shocks → save/de-save

→ **Challenge is to distinguish *excess* from *healthy* imbalances**



# External Assessments at the IMF: A History

IMF has always analyzed imbalances, in country reports, the WEO, etc.

Model-based assessments started in the mid-1990s.

## ▪ **Consultative Group on Exchange Rates (CGER)**

- Evolved over time – larger samples, more refined methodology

**CGER:** <http://www.imf.org/en/publications/occasional-papers/issues/2016/12/31/exchange-rate-assessments-cger-methodologies-19582>

## ▪ **External Balance Approach (EBA)**

- Since 2012 – builds on CGER; greater attention to the role of policies
- Refinements are made constantly, also this year

**EBA:** <http://www.imf.org/external/np/res/eba/data.htm>

## ▪ **External Sector Report (ESR)**

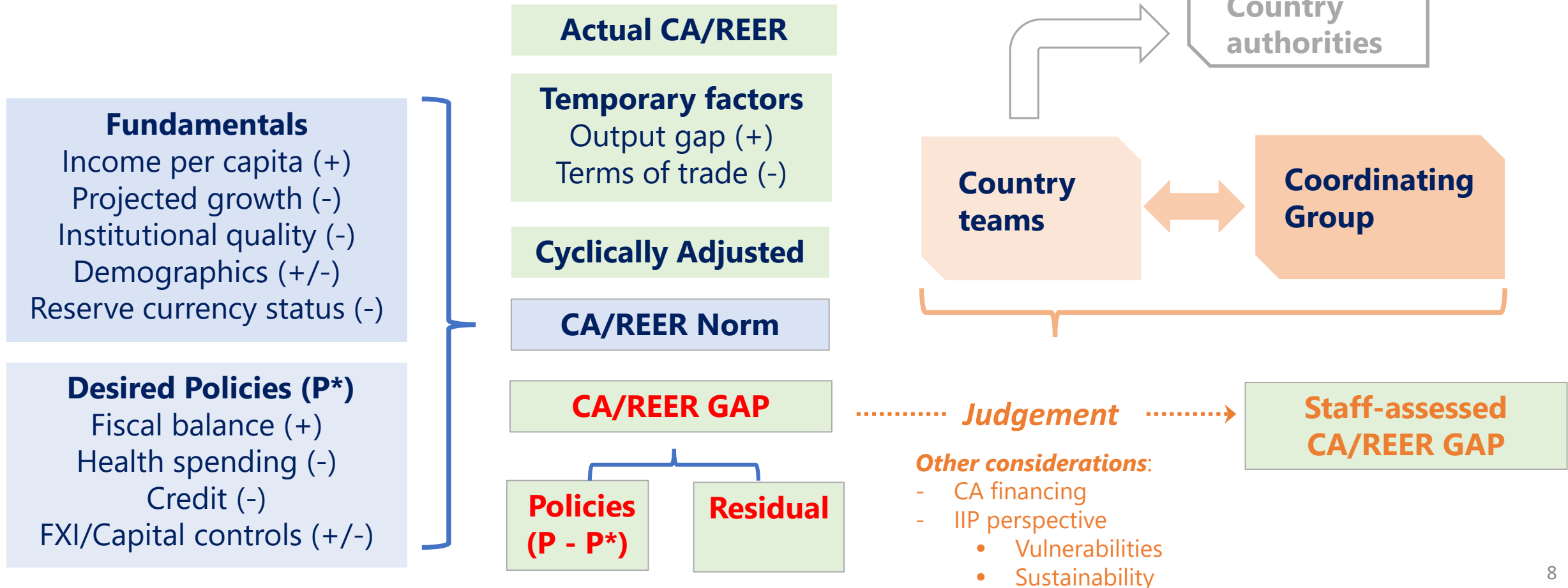
- Assessment of systemic economies, representing over 85 percent of global GDP
- Findings summarized in the annual External Sector Report (ESR).

**ESR:** <http://www.imf.org/en/Publications/SPROLLs/External-Sector-Reports>

# The ESA framework: multilaterally-consistent, combining numerical inputs and judgement

## External Balance Approach (EBA)

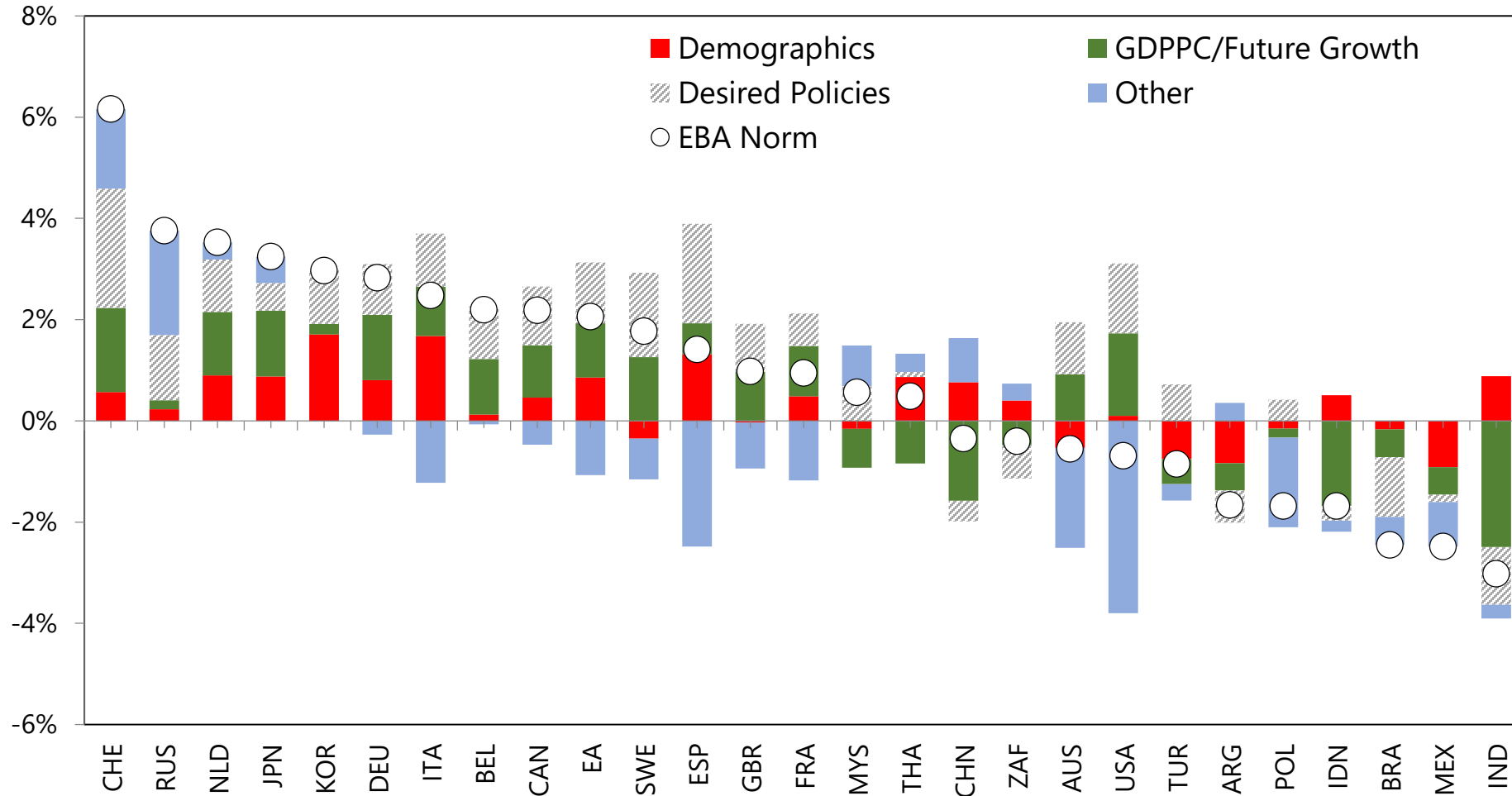
- Focus on identifying source of excess imbalances
- CA flow perspective



## **2. A Sample of External Sector Assessments**

# 2017 EBA Current Account Norms

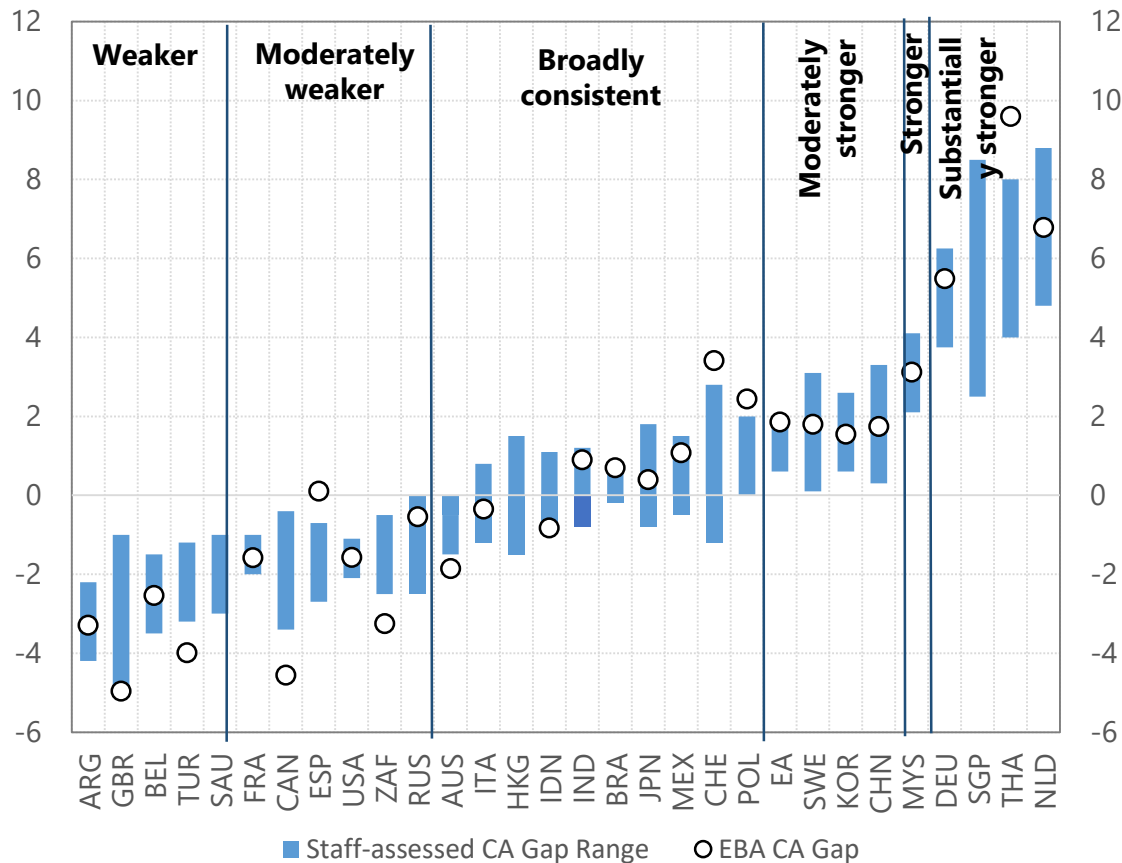
Selected Economies: Breakdown of EBA Norms, 2017  
(percent of GDP)



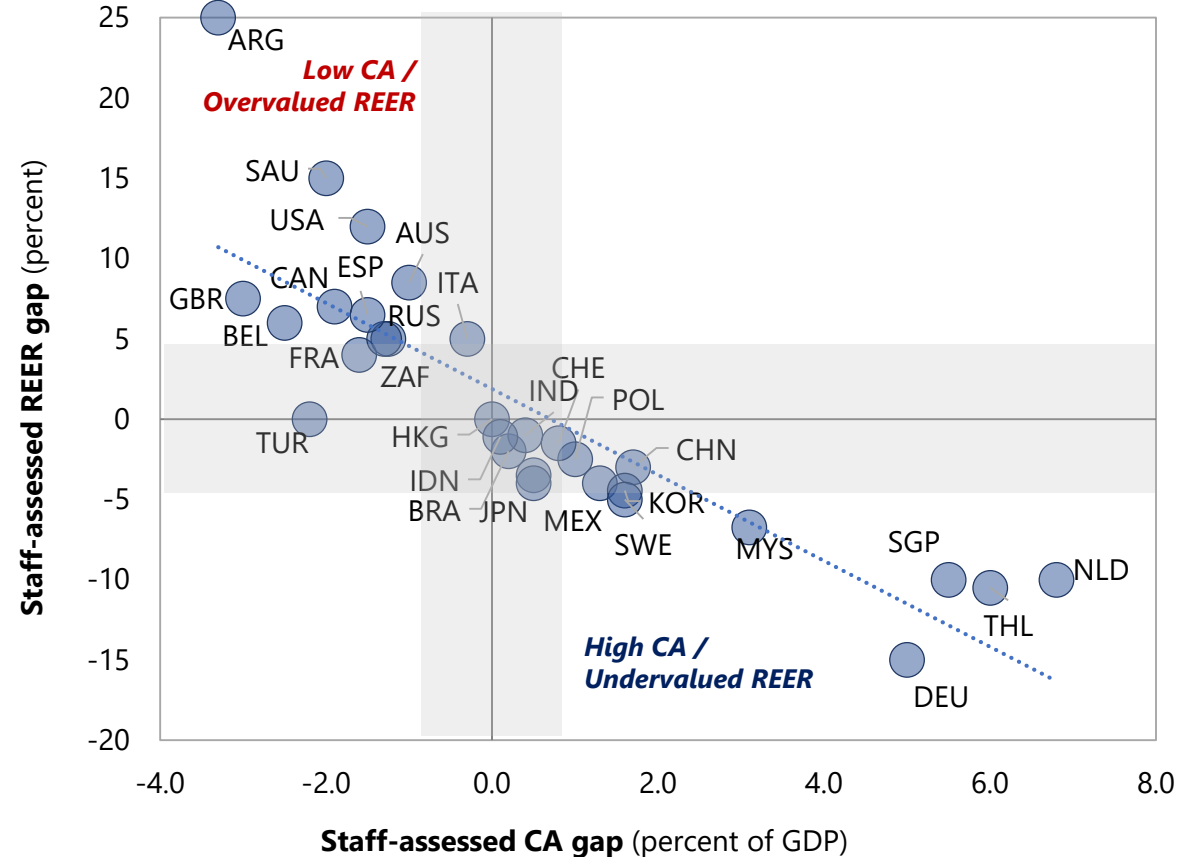
Source: IMF Staff Estimates

# 2017 Current Account and REER Gaps

## 1. Current Account Gaps 1/ (in percent of GDP)



## 2. Current Account vs REER Gaps 1/ (in percent of GDP and percent)



Source: IMF Staff assessments.

1/ Sorted by the mid-point of the staff-assessed gap. Hong Kong, Saudi Arabia and Singapore do not have EBA estimates. For Saudi Arabia, the current account gap reflects a fiscal policy gap.

Source: IMF staff calculations.

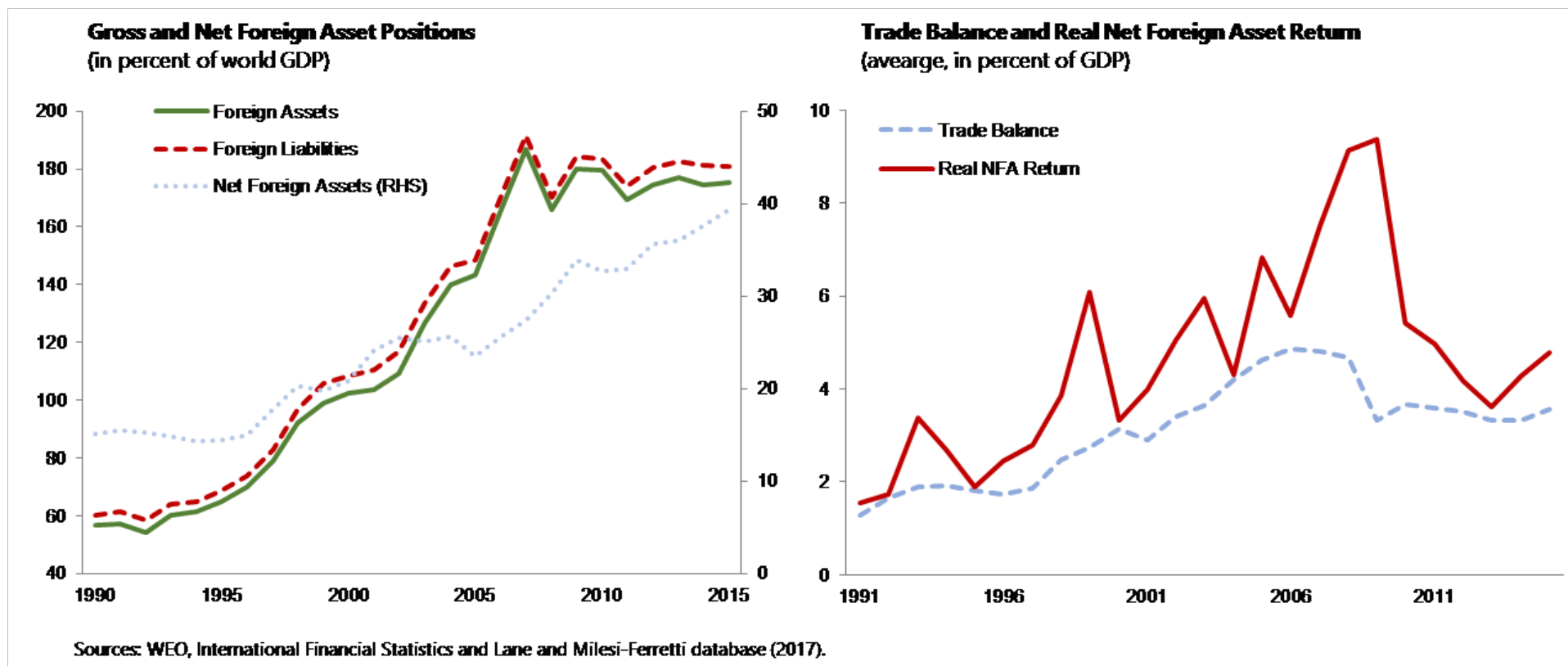
1/ Gray bands depict broadly-in-line ranges for CA and REER gaps. REER gap based on 2017 average REER.

### **3. Issues and data limitations in external sector statistics**

# Key elements of external assessments

- **Accurate measure of current account balance, especially income balance**
  - ✓ Real accumulation of external wealth by domestic residents (ultimate owner)
- **Accurate measure of the IIP and its composition**
  - ✓ Ultimate owner basis, consistent valuations, currency composition

*Financial returns on Foreign Assets and Liabilities increasingly important*



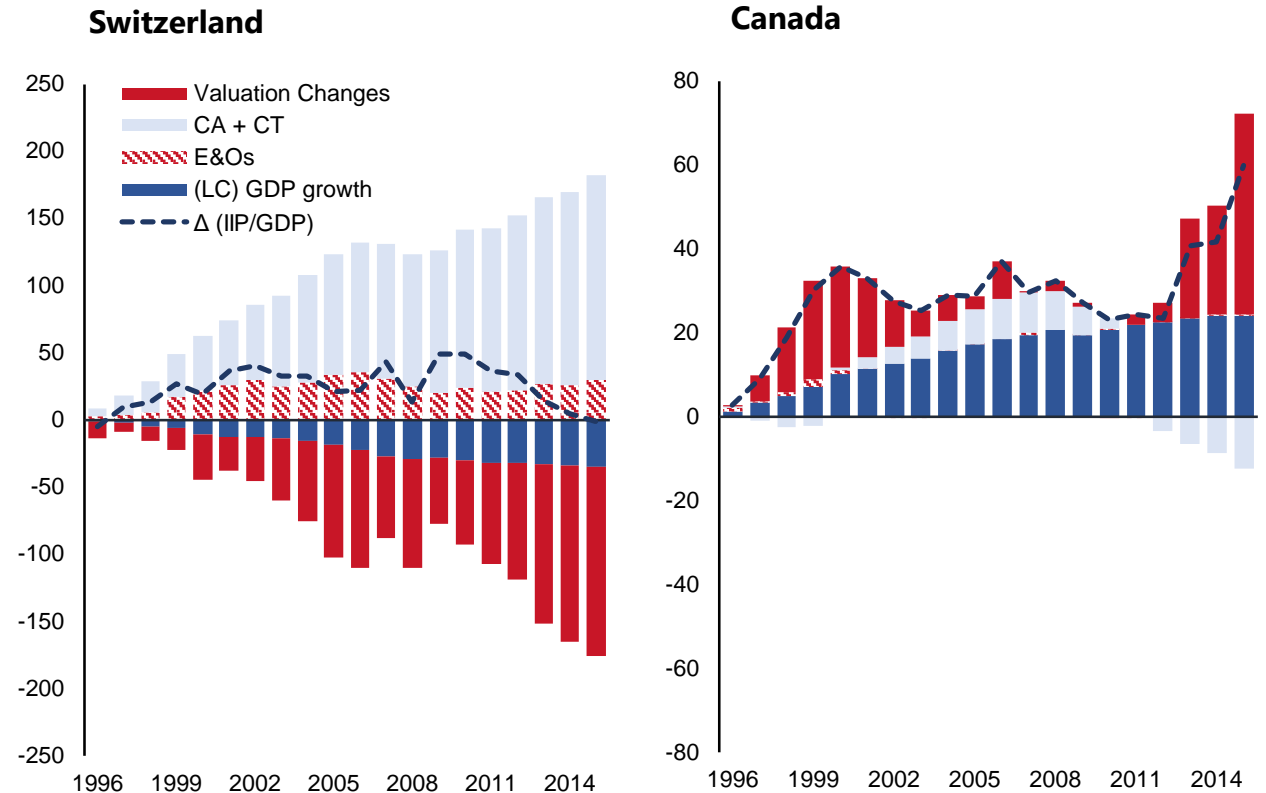
# Issues with current external sector statistics

- **Income balance**

- Treatment of retained earnings on portfolio equity
- Focus on nominal investment income
- Merchanting & profit shifting?

- Income balance definitional issues > systematic IIP valuation changes

**Selected countries. Drivers of NIIP-to-GDP ratio, 1996-2016**  
(percent of GDP)



1/ Based on Lane and Milesi-Ferretti dataset. Valuation changes in local currency, based on financial account data.



# Treatment of retained earnings on portfolio equity

**Retained earnings on portfolio equity** are not recorded in the income balance.

- Income not attributed to ultimate owner.
- Discrepancy with IIP → IIP valuation changes

Magnitude of RE on PE can be gauged from stock positions and financial market data.

- Composition of cross-border portfolio equity investments assumed similar to the national average.
  - Details in 2018 External Sector Report.
- ***Non-trivial magnitudes in some cases***

	Country	Flow	Stock	Hybrid	Avg.
Understated	Hong Kong SAR	2.4	6.3	8.5	5.8
	Singapore		4.6		4.6
	Saudi Arabia	1.2	1.5	1.6	1.4
	Canada	0.7	1.1	1.3	1.0
	Ireland	-6.5	2.4	6.6	0.8
	South Africa	0.7	0.7	0.3	0.6
	Sweden	0.8	0.4	0.2	0.5
	Australia	0.9	0.5	0.1	0.5
Overstated	China		-0.5		-0.5
	Japan	-0.1	-0.7	-1.0	-0.6
	India		-0.6		-0.6
	Thailand	-1.9	-0.7	0.6	-0.7
	Russia	-1.6	-0.9	-0.8	-1.1
	Korea	-0.7	-1.3	-1.4	-1.1
	Switzerland	-0.7	-1.2	-1.5	-1.1

# Focus on nominal investment income

## Statistics record income in nominal terms

Nominal interest payments include the associated (anticipated) erosion of real value of principal resulting from inflation (and related nominal currency movements).

Inflation bias can be estimated from expected inflation rate in each currency and net debt position in such currency ( $NFA^D_{ij}$ ):

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

Currency exposures: available data from country authorities or Benetrix et al (2015)

Country	Forecast	Realized	Avg.
Hong Kong SAR	6.7	5.9	6.3
Singapore	5.5	4.2	4.9
Ireland	3.3	1.9	2.6
Switzerland*	2.4	1.4	1.9
Belgium*	1.5	1.2	1.4
Japan*	0.9	0.7	0.8
Malaysia	0.6	0.7	0.6
China**	0.7	0.5	0.6
Thailand	0.7	0.5	0.6
Poland*	-0.7	-0.3	-0.5
United Kingdom	-0.6	-0.5	-0.5
Italy*	-0.8	-0.4	-0.6
Canada	-0.8	-0.5	-0.6
Brazil*	-0.5	-0.8	-0.7
United States	-1.0	-0.6	-0.8
Australia	-1.1	-0.7	-0.9
Netherlands	-1.1	-0.8	-0.9
Turkey*	-0.9	-1.0	-0.9
Spain*	-1.4	-0.8	-1.1

**Overstated** (red bracket) covers the top 9 rows (positive values).

**Understated** (blue bracket) covers the bottom 9 rows (negative values).

→ **Sizable estimates in some cases.**

# Other income balance issues?

- **(True) Merchanting**

- Empirical regularity: merchanting associated with CA surpluses
  - Beusch, Döbeli, Fischer & Yeşin, 2017, "Merchanting and Current Account Balances," *The World Economy*
- Conceptually: same as other trade
- In practice: is compilation consistent across countries?

- **Profit shifting**

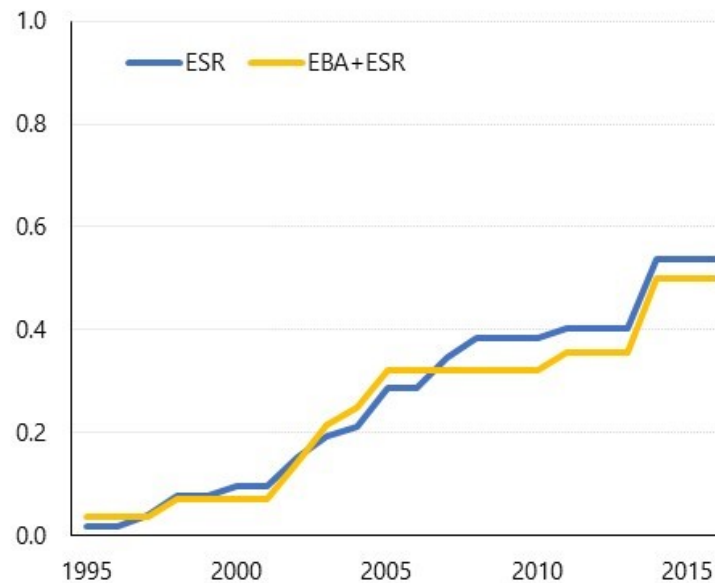
- Conceptually: TB/IB compositional effect
- In practice?

# Issues with IIP statistics

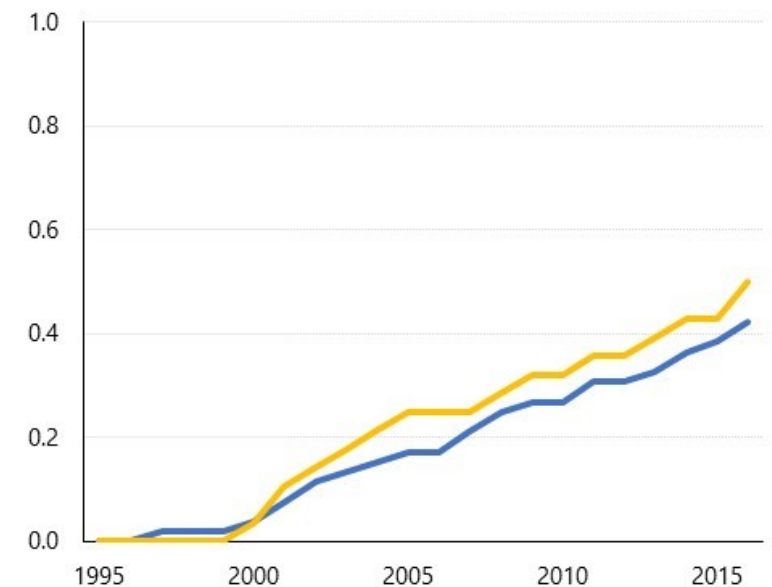
- **Stock/flow reconciliation** (1/2 EBA/ESR sample; short time series)
  - Proper estimates of IIP valuation changes > Study of returns on assets and liabilities
- **Currency exposure data** (40% of EBA/ESR countries; short time series)
  - Study of exchange rate channels and vulnerabilities.
- **FDI Valuation**
  - Material difference for financial centers
  - Consistency across countries
- **Ultimate owner basis**
  - Analysis of bilateral exposure and vulnerability

ESR/EBA countries reporting IIP stock/flow reconciliation and currency composition statistics, 1995-2015 1/

IIP stock/flow reconciliation statistics 2/



IIP currency composition statistics 3/



Sources: Country authorities and IMF staff calculations.

1/ From ad-hoc November 2017 data request to EBA/ESR countries. 2/ Based on reporting of revaluation and other changes separately.

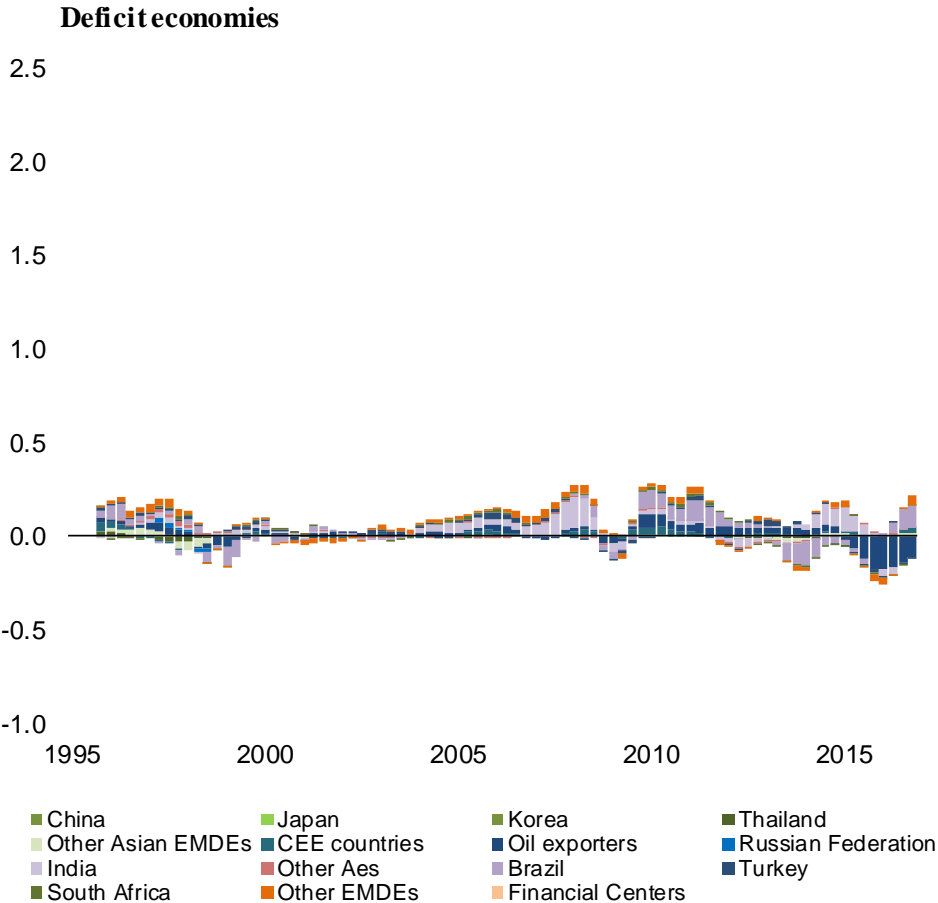
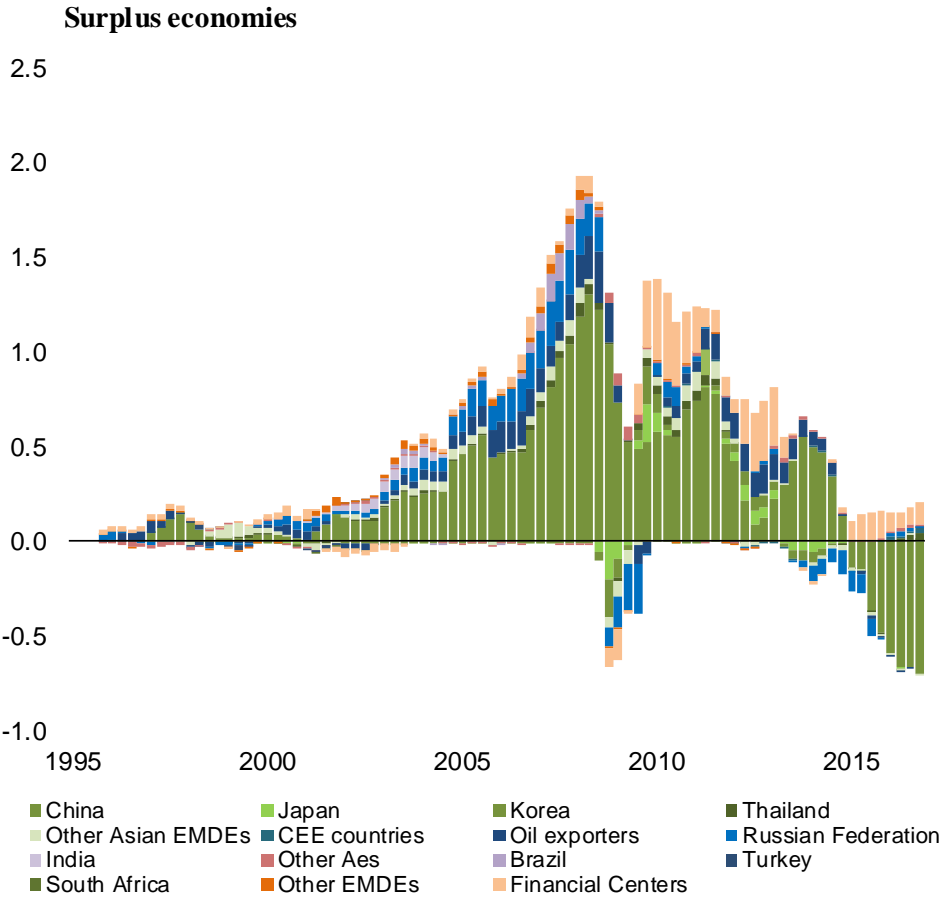
3/ Based on reporting of any level of disaggregation.

# Other data limitations – FX intervention

- Important tool with direct and sizable impact on external positions

## Estimated Foreign Exchange Intervention, 1995-2016

(in percent of World GDP, 4-quarter moving sum)



# Other data limitations – FX intervention

- **Scant publication of FXI data** (1/3 of G20 does not report)
- **Use of proxies**
  - Change in stock of reserves (or central bank's NFA position)
  - BOP reserve flows
- **Issues with proxies**
  - Valuation changes
  - Residency  $\neq$  currency
  - Accumulation of non-reserve foreign currency assets
- **Off balance sheet operations**
  - Template on International Reserves and Foreign Currency Liquidity  $\rightarrow$  data on stocks
- **Challenges of FXI publication (?)**
  - Market impact  $\rightarrow$  lagged reporting
  - Definition:
    - Concept: Portfolio balance literature  $\rightarrow$  FX position
    - Intention?
    - Coverage: CB or Public Sector?

## Key takeaways

- External sector surveillance is a key mandate and important public good of the Fund.
- External sector statistics are critical for proper external sector analysis
- Greater granularity and frequency achieved in recent years
- Progress needed in addressing some data limitations
  - Stock/flow reconciliation
  - IIP currency exposure
  - Consistent IIP valuation
  - Retained earnings on portfolio equity?
  - Treatment of inflation?
  - Foreign exchange rate intervention



**Thanks!**