What do we know about the global financial safety net?

A new database.

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* The views expressed do not necessarily reflect those of the ECB or the European System of Central Banks
Agenda

1. Why we do we need data on the Global Financial Safety Net?
2. What is covered in the data set?
3. How can the data be used?
4. Concluding remarks
5. Appendix
# Agenda

1. **Why do we need data on the Global Financial Safety Net?**

2. What is covered in the data set?

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Why do we need data on the GFSN?

**Significant volatility in capital flows, particularly to and from EMES.**

**Net portfolio flows to EMEs (USD bn)**

![Graph showing net portfolio flows to EMEs from 2010 to 2017.]

**EME Financial Stress Index**

![Graph showing the EME Financial Stress Index from 2006 to 2016.]

Notes: Monthly data up to 04/2017.
Sources: IIF

What do we know about the global financial safety net?

Notes: Latest observations 02/12/2016. The indicator combines: (1) portfolio flows, (2) exchange rate against US dollar; (3) domestic bond market spreads. 12-week moving average. Country sample: Brazil, China, India, Indonesia, Mexico, South Africa, South Korea, Thailand and Turkey.
Sources: Haver and ECB calculations.
The GFSN is a set of institutions/mechanisms that provide financial support to countries hit by a crisis.

<table>
<thead>
<tr>
<th>GFSN element</th>
<th>Conditionality</th>
<th>Availability and key factors determining access</th>
</tr>
</thead>
<tbody>
<tr>
<td>FX Reserves</td>
<td>No</td>
<td>Past reserve accumulation, exchange rate regime</td>
</tr>
<tr>
<td>Central bank swap lines</td>
<td>Yes</td>
<td>Economic and political links with the reserve currency issuer with which the country has a bilateral swap line.</td>
</tr>
<tr>
<td>IMF financing</td>
<td>For most instruments</td>
<td>IMF forward commitment capacity, IMF quota, political factors (e.g. alliance with the US)</td>
</tr>
<tr>
<td>RFA financing</td>
<td>For many RFAs</td>
<td>RFA forward commitment capacity; sometimes limited to a multiple of paid-in capital</td>
</tr>
</tbody>
</table>
Why do we need data on the GFSN?

Research has focused largely on these elements in isolation


2) **Swap line use, role as LOLR:** Capie and Wood (1989), Goldberg et al. (2010), Truman (2013), Papadia (2013), Bordo et al. (2014)


4) **RFAs:** McKay et al. (2011), Ocampo and Titelman (2009), Sussangkarn (2011), Miyoshi et al. (2013), Eichengreen (2012)


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### Existing GFSN data – harmonised

<table>
<thead>
<tr>
<th>Existing data</th>
<th>Added value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FX reserves ✓</strong></td>
<td>WB World Development Indicators (WDI)</td>
</tr>
<tr>
<td></td>
<td>IMF International Financial Statistics (IFS)</td>
</tr>
<tr>
<td><strong>Swap lines ✓</strong></td>
<td>Central bank websites</td>
</tr>
<tr>
<td><strong>RFA lending ✓</strong></td>
<td>RFA websites</td>
</tr>
<tr>
<td><strong>IMF lending ✓</strong></td>
<td>IMF Monitoring of Fund Arrangements (MONA)</td>
</tr>
<tr>
<td></td>
<td>IMF International Financial Statistics</td>
</tr>
<tr>
<td></td>
<td>WB World Development Indicators</td>
</tr>
<tr>
<td><strong>MDB loans ✓</strong></td>
<td>MDB websites</td>
</tr>
<tr>
<td><strong>Hedging instruments</strong></td>
<td>/</td>
</tr>
</tbody>
</table>

**Harmonized Database**

- **Country level**
- **Large sample (198 countries)**
- **Annual frequency (1960-2014)**
- **Stata & Excel**


**Plus:** crises data, private capital flow episodes, macro data
What is covered in the data set?

## Measures of actual and potential GFSN access

<table>
<thead>
<tr>
<th>Type</th>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual GFSN use based on past GFSN access</td>
<td>GFSN_CARD, GFSN_COUNT</td>
<td>Reserve use, drawn amount from Fed swap line, drawn amount from IMF programme, disbursed RFA loan</td>
</tr>
<tr>
<td>Potential GFSN access</td>
<td>GFSN_POT _COUNT, GFSN_POT _CARD</td>
<td>Total reserves or reserves buffer, total swap line limit, maximum cumulative access to IMF facility (weighted with political alignment with US), maximum of RFA forward commitment capacity and potential financing needs</td>
</tr>
</tbody>
</table>
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How much GFSN support is (made) available?

Source: GFSN data base. Own calculations.

Notes: The chart shows the IMF Forward Commitment Capacity (i.e. available funds) relative to sample (total) GDP and swap line limits from the Federal Reserve normalized to country GDP and then summed up. Unlimited swap lines from the Federal Reserve are not included.
How much GFSN support is used?

Total IMF drawings and drawings from the European RFAs

Source: GFSN data base. Own calculations.
Notes: The chart shows drawings from EU BOP facility, EFSF, EFSM and ESM, of which ESM drawings are largest. IMF drawings are summed up over the whole sample. Drawings are normalized to country GDP and then summed up.
How can the data be used?

Which layer of the GFSN will be used and when?

Argentina

Banking crisis
Currency crisis

Ecuador

Banking crisis start 1998, currency crisis start 1999

Source: GFSN data base. Own calculations.

Notes: Reserve use defined as negative reserve flow whose absolute value is larger than the country-specific standard deviation; otherwise zero. Crises based on Laeven and Valencia (2012).
How can the data be used?

Does GFSN use trigger or attenuate capital outflows?

Argentina

Thailand

Source: GFSN data base. Own calculations.
Notes: GFSN_CARD adds disbursed IMF loans, disbursed RFA loans, drawn Fed swap lines and use of reserves defined as negative flow of reserves larger than country-specific standard deviation, measured as % of GDP.
How do GFSN access and crisis outcomes compare between countries?

Source: GFSN data base. Own calculations.
Does GFSN use affect the duration of a sudden stop?

Below-average cap. account restrictions

Above-average cap. account restrictions

Source: GFSN data base. Own calculations.

Notes: Change of reserves defined as negative reserves flow larger than country-specific standard deviation, measured as % of GDP. Sudden stop defined as in Forbes and Warnock (2012), applied to measure of private capital flows provided in the data base. Capital account restrictions as measured by Fernández et al. (2015). Below average restrictions defined as overall restrictions index below sample median.

What do we know about the global financial safety net?
Is potential GFSN access correlated with a country’s risk rating?

Correlation between the country composite risk rating and potential GFSN access

Source: PRS Group and GFSN data base. Own calculations.

Notes: The chart shows a measure of potential access which adds the stock of reserves, maximum cumulative access under a standard IMF facility and the maximum of a country’s financing needs and an RFA’s forward commitment capacity.
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Concluding remarks

- Global insurance against (financial) crises becomes more important.
- There is no clear single international lender of last resort.
- To answer the question which institution would be in the best position to provide lending for a particular crisis, we need to understand the interaction between the different layers of the GFSN.
- Our data base provides comprehensive data on both GFSN coverage and key macro variables.
- Correlation analysis suggests a relation between sudden stops and use of the GFSN (also confirmed by a local projections exercise).
- Follow-up work: Taming the global financial cycle. What role for global safety nets?
Concluding remarks

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Concluding remarks

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