Reforming the International Monetary System
A Stock-Flow-Consistent Approach

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Outline

• Problems with the current international monetary system: global imbalances

• Proposal for reforming the I.M.S.
  – Currency areas
  – Different role for SDRs
  – New International Institutions (Clearing Union)

• A stock-flow consistent model of four countries and an international monetary institution

• Reforming the Euro?
Main focus

Research started in 2009
Paper first presented in Berlin, 2010 (with no model)
Finally published (hopefully!) in JPKE, 2015

Focus was on the debate on global imbalances
Similar issues came out in the Eurozone
Basis for our SFC model

- Godley-Lavoie (2005-6)
- Godley-Lavoie (2007)
- Lavoie – Zhao (2010)
- Mazier - Tiou-Tagba Aliti (2012)
Figure 1. Current account balances

% of US GDP

U.S.  China  OPEC countries  Germany  Russia  Japan  Euro countries

Source: IMF

Reforming the IMS - 5/19
Gennaro Zezza – UNICLaM & Levy Economics Institute
### US securities abroad

Major foreign holders of U.S. Treasury securities (% of U.S. GDP)

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2006</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>0.59</td>
<td>2.86</td>
<td>7.14</td>
</tr>
<tr>
<td>Japan</td>
<td>3.09</td>
<td>4.50</td>
<td>7.07</td>
</tr>
<tr>
<td>Belgium</td>
<td>0.29</td>
<td>0.10</td>
<td>1.93</td>
</tr>
<tr>
<td>Carib Bkgs Centers</td>
<td>0.36</td>
<td>0.52</td>
<td>1.91</td>
</tr>
<tr>
<td>Oil exporters</td>
<td>0.46</td>
<td>0.80</td>
<td>1.64</td>
</tr>
<tr>
<td>Brazil</td>
<td>-</td>
<td>0.38</td>
<td>1.47</td>
</tr>
<tr>
<td>Switzerland</td>
<td>0.16</td>
<td>0.25</td>
<td>1.09</td>
</tr>
<tr>
<td>U.K.</td>
<td>0.49</td>
<td>0.67</td>
<td>1.09</td>
</tr>
<tr>
<td>Total</td>
<td>9.87</td>
<td>15.18</td>
<td>35.33</td>
</tr>
</tbody>
</table>
The model

› Four similar blocks
  › U.S. – issues the reserve currency
  › Eurozone – floating against the US$
  › China – pegs to the US$
  › RoW – pegs to the US$

Reason for the fourth block: introduces a degree of freedom
Assumptions #1

› Four similar blocks
  › U.S. – issues the reserve currency
  › Eurozone – floating against the US$
  › China – pegs to the US$
  › RoW – pegs to the US$

Reason for the fourth block: introduces a degree of freedom
The SAM for a typical region

<table>
<thead>
<tr>
<th>Prod.</th>
<th>Hous.</th>
<th>Firms</th>
<th>Banks</th>
<th>C. B.</th>
<th>Gov.</th>
<th>RoW</th>
<th>C. A.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Production</td>
<td></td>
<td>+C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+GDP</td>
</tr>
<tr>
<td>2. Households</td>
<td></td>
<td></td>
<td>+divB+rB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+YH</td>
</tr>
<tr>
<td>3. Firms</td>
<td></td>
<td>+P</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+YF</td>
</tr>
<tr>
<td>4. Banks</td>
<td></td>
<td></td>
<td>+rL</td>
<td></td>
<td>+rB</td>
<td></td>
<td>+rBF</td>
<td>+YB</td>
</tr>
<tr>
<td>5. Central Bank</td>
<td></td>
<td></td>
<td></td>
<td>+rA</td>
<td>+rB</td>
<td></td>
<td>+rBF</td>
<td>+YCB</td>
</tr>
<tr>
<td>6. Government</td>
<td></td>
<td>+TH</td>
<td>+TP</td>
<td>+TPB</td>
<td>+PCB</td>
<td></td>
<td></td>
<td>+YG</td>
</tr>
<tr>
<td>7. Foreign</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+rB</td>
<td></td>
<td></td>
<td>+YW</td>
</tr>
<tr>
<td>8. Capital account</td>
<td>+SH</td>
<td>+SF</td>
<td>+SB</td>
<td>0</td>
<td>+SG</td>
<td></td>
<td>-CA</td>
<td>+S</td>
</tr>
<tr>
<td>Total</td>
<td>+GDP</td>
<td>+YH</td>
<td>+YF</td>
<td>+YB</td>
<td>+YCB</td>
<td>+YG</td>
<td>+YW</td>
<td>+I</td>
</tr>
</tbody>
</table>
Flow of funds for a typical region

<table>
<thead>
<tr>
<th></th>
<th>Hous.</th>
<th>Firms</th>
<th>Banks</th>
<th>C. B.</th>
<th>Gov.</th>
<th>RoW</th>
<th>IMF</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real assets</td>
<td></td>
<td>+ΔK</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+ΔK</td>
</tr>
<tr>
<td>Cash</td>
<td></td>
<td>+ΔHh</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>C.B. advances</td>
<td></td>
<td></td>
<td>-ΔA</td>
<td>+ΔA</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Bank deposits</td>
<td>+ΔM</td>
<td></td>
<td>-ΔM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Bank loans</td>
<td></td>
<td>-ΔL</td>
<td>+ΔL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Domestic g. bills</td>
<td></td>
<td>+ΔBb</td>
<td>+ΔBcb</td>
<td>-ΔB</td>
<td>+ΔBf</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Foreign g. bills</td>
<td></td>
<td>+ΔBF</td>
<td>+ΔBFcb</td>
<td></td>
<td>-ΔBF</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>SDR</td>
<td></td>
<td></td>
<td></td>
<td>+ΔSDR</td>
<td></td>
<td></td>
<td></td>
<td>-ΔSDR 0</td>
</tr>
<tr>
<td>Total</td>
<td>+SH</td>
<td>+SF</td>
<td>+SB</td>
<td>0</td>
<td>+SG</td>
<td>-CA</td>
<td>-ΔSDR</td>
<td>+ΔK</td>
</tr>
</tbody>
</table>
Assumptions #2

Assumptions on the determinants of the components of demand are rather conventional in the PK-SFC approach
- Households spend out of disposable income and wealth
- Investment is determined by the profit rate, the cost of servicing the debt and an accelerator term
- Government expenditure grows at a constant rate, and any deficit is financed by issuing bills
Assumptions #3

- Bilateral imports depend on GDP and the exchange rate (prices are fixed)
- Banks distribute all of their profits
- The CB distributes its seignorage revenue to the government
Assumptions #4

• Household keep their wealth in cash or bank deposits
• Banks provide loans to firms on demand, and purchase domestic or foreign bills – which are imperfect substitutes – according to their rates of return
• The demand for loans arise from the discrepancy between desired investment and retained earnings
The U.S.$ closure

The first closure should represent the existing IMS, where the US$ has the role of medium of exchange, unit of account, and store of value. We thus assume that regions which peg to the US$ (China and the RoW) will demand reserves, in the form of US$ Treasury bills. For the Eurozone, the exchange rate to the US$ is determined by clearing the market for US$ bills in Europe, while the ECB changes its Euro bills holdings to offset changes in its balance sheet.
The U.S.$ closure #2

Regions which peg to the US$ will acquire/sell US$ bills to match their CA
The Fed will clear the market for US$ bills

Under this closure, a restrictive policy in the U.S. will have a global recessionary effect (but for the EZ, which will see the € devaluing against the $)
The ICU-Bancor proposal

An International Clearing Union is set up for managing international payments, denominated in Bancor, a new unit of account.

The exchange rate of each country against the Bancor is fixed, but it is automatically adjusted if the CA of the country exceeds a given threshold.
Symmetric adjustment

Both creditor and debtor countries would pay an interest to the ICU on their Bancor balances.

The system would encourage countries with a trade surplus to transfer liquidity to countries with a trade deficit, say through direct investment.

In the current state of the model we don’t allow for capital mobility, other than FDI.
Implications

Model simulation confirms that - in the US$ closure – trade imbalances tend to arise, and a restrictive policy adopted to reduce a CA deficit has a global recessionary effect, while in the Bancor closure imbalances are limited, and adjustment has smaller global costs.
A Euro-Bancor?

The EZ has adopted rules which force countries running a CA deficit to go through austerity, with a recessionary feedback at the EZ level.

A possibility proposed by Fantacci and others is to use Target2 balances to have creditor share part of the cost of the readjustment.

Another possibility worth exploring is to reintroduce national currencies, while keeping the euro as the unit of account for EZ trade. The problem is that the € will still be used as a store of value.