Macropru is not something new

- It has been part and parcel of the operation of monetary policy in EM
- Used for financial repression (remember McKinnon)
  - Directed lending to the government
  - Directed lending by government policy
  - Caps on interest rates
  - Controls on entry (and exit)
  - Anti-competitive practices notably by state-owned financial institutions
  - Under remunerated compulsory savings accounts
  - Subsidized interest rates for designated sector and/or projects
  - Capital account restrictions
  - In general, a tight and troubling association between government and banks

We used to think of this structure as producing bad outcomes

- Inefficient allocation of K & lower productivity of K
- Increases in the K/L ratio + K deepening w/distorted factor markets
- Predisposition for rent-seeking and corruption
Challenge: separate this legacy
From new ways of implementing macropru

  Background work: Brazil, Indonesia, India, Mexico and Turkey
  Assess FSAPs

• Did well post- GFC impact
  – In part because had built new resilience
  – In part because of "old macropru"
    • public banks lent when private banks were not willing to
    • the state issued guarantees to major borrowers
    • the central bank slashed reserve requirements
    • subsidized smaller banks by granting them regulatory concessions
    • etc.

• FSAPs: little to say about these practices & their possible effects
  – Not surprisingly, follow-up FSAPs were late in detecting when the counter-cyclical
    measures outlasted their purpose
  – ► credit booms (especially with low global rates and "search for yield" in G3
  – ► another cycle of regulation... macropru
Brazil accepted wholeheartedly the new emphasis on macropru
Financial Stability Reports since 2002
Post-2008: changed rhetoric of "controls" and "concessions" to "macropru"

What happened?

• The "Lehman Moment" comes near the apex of a credit & growth boom
  – Sharp contraction in Q1/2009 ► Massive (overwhelming) response
  – Q4/2009 GDP @ 5.3%yoy; 2010 GDP @ near 6%yoy

• 2010 elections (and disregarding the China stimulus)
  – BNDES Jan/09-Dec/10 real dbmts: up 42%pa on average
  – The same was done with lending through Banco do Brasil
  – Caixa Econômica Federal bought two failing banks
  – Central bank reduced RR of large banks
    • Counterpart: Acquisition of credits from smaller banks (app. 4% 2009 GDP)
    – Funding for smaller (troubled) banks: new deposit guarantee mechanism

• Plus: Usual measures
  – FX interventions (Swap program grew to $160bn = largest in non-China EM)
  – Emergency provisions of liquidity
Credit & Activity
Credit stock deflated by CPI/IPCA
Index: 2000=100

Credit stock of private and public banks
Deflated by CPI/IPCA
YoY % change

Credit Stock (deflated by IPCA)  Activity (IBRE/FGV)

Public credit stock  Private credit stock  Total credit stock
By late 2010 the credit cycle was excessive

- Active sterilization to curb the appreciation of the BRL + K-inflows (fueled by the carry trade) ► ineffective monetary policy
- New round of macropru measures
  - Increase RR on term deposits from 15 to 20%
  - Increase RR on demand and term deposits from 8 to 12%
  - Increase the tax on financial operations (IOF) from 1.5 to 3.0%
  - Increased the IOF on nonresident portfolio investments from 2 to 4% (and ultimately to 6%)
  - New 60% RR on banks’ short position in the forex spot market
  - Additional measures to limit banks’ exposure in forex derivative markets
  - Increase capital requirements for consumer loan through a change in risk weights
    - For vehicle financing: increase weight from 75 to 150%
    - Equivalent to an increase in capital requirement from 8 to 16.5%
  - Increase the loan to value ratio (LTV) on vehicle loans—maximum LTV was set to 80% for loans between 24-36 months
Policy rate & credit growth
New loans to households & SELIC rate

Interest rate subsidy
Rate charged by commercial banks for new loans to corporates & BNDES base lending rate

New Loans of Households
SELIC (RHS)

Interest rates for corporate borrowers - %pa
Subsidy in BNDES operations

TJLP
Corporate rate (new credit)
By 2012, the economy was faltering

- Central Bank cut interest rates 525bp to 7.25% lowest on record
- Even while inflation & expectations above target and the exchange rate remained over-appreciated

New round of macropru measures

- Reduced RR on demand deposits from 12 to 0% in 2 steps
- Reduced RR on time deposits from 12 to 11%
- Abolished the special provisions for the car industry

Post “Taper tantrum” (summer of 2013) = strong currency depreciation

- IOF on forex operation was abolished
- IOF on cash withdrawals in foreign countries was increased from 0.38 to 6.38%
- Ministry of Finance introduced measures to boost aggregate demand
  - Tax-abatements favoring certain sectors, notably the auto sector
  - New program of subsidized credit for home purchases using resources from directed credits and federal transfers to Caixa Econômica Federal
  - Ramped-up transfers to BNDES (about 2% of GDP) while disguising these transfers through accounting tricks
  - Increased protectionism on supplier requirements for public investments, especially to Petrobras
  - Strong "moral suasion" to banks to lend to public enterprises while controlling their prices and increasing their losses
Cordella, Tito, Pablo Federico, Carlos Vegh and Guillermo Vuletin: "Reserve Requirements in the Brave New Macroprudential World."

**Table 2b: Policy mix matrix (2005-2011)**

<table>
<thead>
<tr>
<th>Reserve requirement policy</th>
<th>Central bank interest rate policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro-cyclical (1)</td>
<td>Pro-cyclical (1)</td>
</tr>
<tr>
<td></td>
<td>Jamaica</td>
</tr>
<tr>
<td></td>
<td>Trinidad and Tobago</td>
</tr>
<tr>
<td>A-cyclical (2)</td>
<td>Costa Rica</td>
</tr>
<tr>
<td></td>
<td>Ecuador (dollarization),</td>
</tr>
<tr>
<td></td>
<td>Hungary, Macedonia, Mexico,</td>
</tr>
<tr>
<td></td>
<td>Nicaragua, Panama,</td>
</tr>
<tr>
<td></td>
<td>Philippines, Serbia, Thailand,</td>
</tr>
<tr>
<td></td>
<td>Uruguay, Australia, Canada,</td>
</tr>
<tr>
<td></td>
<td>Chile, Czech Rep., Denmark, El</td>
</tr>
<tr>
<td></td>
<td>Salvador, Euro-17, Guatemala,</td>
</tr>
<tr>
<td></td>
<td>Honduras, Israel, Japan, New</td>
</tr>
<tr>
<td></td>
<td>Zealand, Norway, Singapore,</td>
</tr>
<tr>
<td></td>
<td>Sweden, Switzerland, United</td>
</tr>
<tr>
<td></td>
<td>Kingdom, United States</td>
</tr>
<tr>
<td>Counter-cyclical (3)</td>
<td>Argentina, Belarus, Brazil,</td>
</tr>
<tr>
<td></td>
<td>China, Croatia, Lithuania,</td>
</tr>
<tr>
<td></td>
<td>Romania, Turkey</td>
</tr>
<tr>
<td></td>
<td>Colombia, India, Latvia,</td>
</tr>
<tr>
<td></td>
<td>Malaysia, Peru, Poland,</td>
</tr>
<tr>
<td></td>
<td>Venezuela</td>
</tr>
</tbody>
</table>

Substitutes

Complements
Economic and credit cycles
Coincident except: Jun/09-Aug/10

Output gap (Economic Cycle) & Policy rate
Countercyclical: 2004-2014
Procyclical: 2015-?
CONCLUSION

Outcome: A recession and a deep crisis not seen since the IXXth century

• The main issue was faulty diagnosis:
  – Problem was NOT insufficient domestic demand
  – Disincentives to invest leading to increasingly binding supply constraints
  – Failure to recognize that past policy had once and for all effects
  – By 2012 these effects were over and gone (the "manna" from China)

• And the wrong use of policy
  – Exchange rate and public prices to control inflation
  – Protectionism to increase supply
  – Public banks to increase credit
    • Substituting for private credit
    • Disregarding drop in the demand
    • Hence, subsidizing financial speculation at the expense of the fisc
  – Currency intervention to face the drop in terms-of-trade
  – Hyper-activism in monetary and macropru policy
    • Destabilized expectations and accentuated cyclical trends