The Interaction of Monetary and Macroprudential Policies in an Interconnected World

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Disclaimer! The views presented here are those of the author and do NOT necessarily reflect the views of the IMF or IMF policy.
Structure: Two Parts

1. Domestically: Interactions between monetary and macroprudential policies
   - New paradigm for macroeconomic and financial stability
   - Interactions, implications for policy and institutional design

2. Global dimensions: monetary, macroprudential and capital flows management policies
   - Monetary policy, global financial cycles and spillovers, given policy coordination failures
   - Macroprudential policies and capital flow management tools
Domestic Dimensions
“Old” Framework of Macroeconomic and Prudential Policies

How we saw the world before the financial crisis

Macro

Macroeconomic Policies
(monetary/fiscal/external)

Price Stability
Economic Activity

Prudential

Microprudential Policy

Idiosyncratic Risk
Paradigm delivered broadly stable output and low inflation.
But dangerous imbalances built up despite

- The crisis made evident that to ensure macroeconomic stability, policy needs financial stability as a goal.
- But a new goal requires new tools: macroprudential policies.
“New” Framework of Macroeconomic and Micro- and Macroprudential Policies

How we see the world now
Questions on Interactions

• What is “best” conduct of monetary, macroprudential policies (MPP) in the presence of interactions?
  – Caveat: knowledge to date on macroprudential policies is not at the same level as monetary policy

• Start with a benchmark of how both policies would be conducted optimally

• Departures from ideal world give three questions:
  1. If MPP work imperfectly, what are the implications for monetary policy?
  2. If monetary policy is constrained, what is the role for MPP?
  3. If there are institutional and political economy constraints, how can both policies be adjusted?
Conceptual Framework

• With only nominal rigidities as a distortion, stabilizing inflation = maximizing welfare
• With financial distortions, financial stability becomes an additional intermediate policy goal
• But financial stability is fuzzy concept because financial distortions can vary over time, by country
• Preserving financial stability requires mitigating the aggregate consequences of financial distortions (i.e., excessive leverage, liquidity risk, currency mismatches, etc.)
Monetary policy is not best suited to maintaining financial stability

- Monetary policy lacks the sectoral features that often accompany financial distortions
- Mitigating effects of financial distortions or pricking asset price bubble can require large changes in policy rate, becomes costly for the *entire* economy
  - E.g., Panel VAR suggests 100 basis points increase reduces house price appreciation by 1 pp. but also to a decline of 0.3 pp. in GDP growth
- Hard for open economies when capital flows respond to rate (e.g., if capital flows limited or managed)
- Price stability should thus remain primary objective
MPP are relatively less well suited to managing aggregate demand

- The use of MPP for managing aggregate demand may create additional distortions
  - There can be economic costs as MPP impose constraints on behavior beyond where financial distortions originate
- When monetary/fiscal policies available and effective, desirable to keep MPP focused on financial stability
  - Using MPP for macroeconomic management likely overburdens MPP, with risk of overestimating what MPP can achieve and political economy risks
But each policy has side effects on the objectives of the other
Side effects

• Policy rates can affect financial stability:
  – by affecting *ex-ante* risk-taking incentives of individual agents or institutions, etc.
  – by affecting *ex-post* the tightness of borrowing constraints and thereby exacerbating asset price, exchange rate externalities, and leverage cycles

• MPP affect output by constraining borrowing and hence expenditure in a sector of the economy
No major complications to the conduct of both policies

• The conduct of both policies does not change markedly compared to a world without side effects, when policies operate perfectly
• However, in the real world, there are many complications as evidence and case studies show
• In addition, knowledge on MPP is still limited
  – See CGFS (2012), ECB’s (2012), IMF (2013) on MPP
1. If MPP work imperfectly, what are the implications for monetary policy?

• Reasons why MPP may not work perfectly:
  – Financial stability is not well-defined
  – Limited knowledge on the quantitative impact of MPP, on how they interact with monetary policy, each other
  – Institutional constraints may impede the optimal deployment of macroprudential instruments

• Imperfect MPP may give rise to costs

• Monetary policy may then have a residual role in ensuring financial stability (as in models w/o MPP, for “getting in the cracks”)
2. If monetary policy is constrained, what is the role for MPP?

- Where monetary policy is constrained, i.e., a currency union or small open economy with less independent monetary policy, the demands on MPP are greater
  - The resulting suboptimal monetary stance can make excessive risk-taking incentives stronger (e.g., euro area, other peggers), with larger booms and busts
- But where monetary policy lacks credibility or effectiveness, i.e., in countries where monetary policy is in progress, MPP should not be used as a substitute
3. Dealing with political economy and institutional constraints

- Just as political economy issues justify central bank independence, the same applies for MPP
- Safeguards include clear mandate, decision-making, accountability, and communication structures
- When policies work imperfectly, coordination issues arise (as with monetary ⇔ fiscal policy interactions)
- When both functions are housed within the central bank, coordination is improved, but more safeguards are needed to separate tasks and counter the risks of dual objectives
P.S. MPP also interact with other policies, raising more coordination questions.
Domestic Part: Conclusions
Interactions Monetary Policy and MPP

• When policies operate perfectly, interactions do not pose significant challenges to the conduct of both policies. But:
  • Constraints on one policy imply other one has to do more
  • Housing MPP in central bank can improve coordination, but then need safeguards against risks of dual objectives
• To have clear-cut policy advice, more work is needed on:
  – Effectiveness and interactions among MPP tools and intermediate targets
  – Coordination issues with other policies (e.g., fiscal, crisis management, microprudential)
  – Costs of MPP in terms of potential new distortions they may introduce
International Dimensions

• Monetary and exchange rate policies in small open economies (SOE) not always follow the standard model
• Spillovers exist from monetary policy in advanced countries and global financial cycles on SOEs
• Monetary policies and MPP hard to coordinate internationally (gains small/uncertain, cooperation difficult, with no forums, except some ex-post, in crises)
• Some countries may need to resort to capital flows management (CFM) policies
• How to balance and interface MPP and CFM tools?
Monetary and exchange rate policy in Small Open Economies (SOEs)

• De-facto, many small open economies seem to have:
  • Two targets: inflation and exchange rate
  • And two instruments: monetary policy and reserves
• Reflects in part concerns for international conditions on exchange rate, capital flows, financial stability
  • Given balance sheet mismatches, booms and other effects
• This SOE model can operate well
  • Provided interventions are limited, exchange rate kept close to fundamentals
  • Could still be second best, as it relies on distortions, limits to international arbitrage
International spillovers

- Monetary policy in advanced countries and global financial cycles spills over to SOEs
  - Occurs through asset prices and quantity (capital flows) channels, more than basic models “predict”
  - Behavior of internationally active banks important, as it drives (gross) credit flows, leading to booms/busts
- Exchange rate regime does not fully insulate
  - Monetary policy cannot be fully independent, e.g., even with floating exchange rate see local impacts
- Risks can arise to economic and financial stability
  - Can increase asset prices, and credit booms (and busts)
  - (Unconventional) monetary policy (exit) increase risks
Impact of US monetary policy shocks: nonpeggers’ interest rate affected too (reaction to 100 bp US shock)
Monetary policy and MPP are hard to coordinate internationally

• Monetary policy
  – Gains from cooperation are small in many models
    • Even when larger, uncertainty can preclude cooperation
  – Central banks are independent, accountable local

• MPP
  – Supply side: inward leakages, outward spillovers
  – Demand side: incomplete coverage, arbitrage
  – Very few methods (to date) to coordinate policies
    • So far only countercyclical buffers
    • In times of stress, even harder (e.g., ring-fencing)
Capital flow management (CFM) tools

• Given continued scope for spillovers and limits to coordination, CFM tools may be needed
• Some distinctions between MPP and CFM
  – Operational: type of capital flows (bank intermediated, gross vs. net flows); FX vs. LC
  – Legal: resident vs. non-resident
• But also much overlap & both may be needed
  – Regardless, use of MPP and CFM has to be guided
How to use and balance MPP and CFM tools?

- Monetary Policy
- Macroprudential Policy
- CFM Measures

- Price Stability
- Systemic Risk
- Stable Capital Flows
- Economic Activity
A three-way classification

1. MPP
   - Reduce systemic risk without discriminating based on residency or currency

2. FX-related prudential measures
   - Discriminate according to currency, not residency, of flow
   - Applied to regulated financial institutions, primarily banks

3. CFM
   - Discriminate between residents and non-residents in cross-border capital movements (OECD Code, 2009)
   - Economy-wide or sector/industry (usually finance) specific
   - Cover all flows or specific (debt, equity, FDI; short, long)
Examples of CFM, FX-, and other MPP

1. MPP
   - LTV ratios; Limits on credit growth and sectoral lending; Dynamic loan-loss provisions, and counter-cyclical capital requirements; Reserve requirements for local currency deposits; Levy on interest from consumer loans; Capital requirements for specific sectors and loans.

2. FX-related prudential measures
   - Limits on banks’ open FX (derivative) position (as a proportion of their capital), on FX lending by domestic banks, on ratio of banks FX loans and securities to FX borrowing; Reserve requirements on foreign currency deposits, special capital requirements for FX loans.

3. CFM
   - Unremunerated reserve requirements on non-resident deposits; Tax on capital gains for NR investments, on equity and bond inflows, on settlement of derivative contracts with NRs, fees on NR purchases of central bank paper; Licensing requirements; Outright limits or bans.
Comparing classifications
Functional vs. legal ...

<table>
<thead>
<tr>
<th>MPP</th>
<th>FX-related measures</th>
<th>CFMs</th>
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<tbody>
<tr>
<td>• LTV ratios</td>
<td>• Limit on net open FX position</td>
<td>• URR on inflow</td>
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<tr>
<td>• RR for LC deposits</td>
<td>• Limit on FX loans</td>
<td>• Taxes on inflow</td>
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<tr>
<td>• Credit growth limit</td>
<td>• Capital requirements for FX loans</td>
<td>• Administrative restrictions on inflow</td>
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<tr>
<td>• Counter-cyclical capital requirements</td>
<td>• Limit on FX derivative position</td>
<td>More likely to have an impact on capital inflow</td>
</tr>
<tr>
<td>• Sectoral limits on loan concentration</td>
<td>• RR on FX deposits</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Levy on non-deposit foreign liabilities</td>
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Less likely to have an impact on capital inflow

<table>
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<tr>
<th>Non-CFMs</th>
<th>Other CFMs</th>
<th>Residency-based CFMs</th>
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</thead>
<tbody>
<tr>
<td>• ‘Other measures’ from above</td>
<td>• RR on FX deposits</td>
<td>• URR on inflow</td>
</tr>
<tr>
<td>• Limit on net open FX position</td>
<td>• Levy on non-deposit foreign liabilities</td>
<td>• Taxes on inflow</td>
</tr>
<tr>
<td>• Limit on FX loans</td>
<td>• Limit on FX derivative position</td>
<td>• Administrative restrictions on inflow</td>
</tr>
<tr>
<td>• Capital requirements for FX loans</td>
<td>• RR on short dollar position</td>
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Less likely to have an impact on capital inflow

• Limit on FX derivative position
• Withholding tax on non-residents’ bond purchases
In practice, many countries use both MPP and CFM measures.

Correlations between MPP and CFM measures
How do macroeconomic and financial stability concerns and policies fit together?

Capital inflow surge

Macroeconomic concerns

Financial-stability risks

Primary responses

Macro policies:
exchange rate appreciation, reserves accumulation, fiscal and monetary policy mix

Prudential policies:
Strengthen/introduce prudential measures (Microprudential and MPP)

Macro policy options exhausted? Residual risks?

Impose/intensify CFMs (or measures that act like them) subject to multilateral considerations and macro test
Choice of instruments: flows intermediated through domestic banks

Flows to domestic banks

- Fragile external liability structure (maturity mismatch/sudden-stop risk)
  - CFMs / FX-related prudential
    - CFMs on banks (esp. short-term debt), e.g., taxes/reserve requirements
      - Legal or other impediments to CFMs?
        - FX-related prudential

- Currency risk (due to open FX position) or credit risk (due to unhedged borrower)
  - FX-related prudential
    - Open FX limits/higher capital requirements on loans to unhedged borrowers
      - Concerns about access to finance/distortions?
        - CFMs

- Credit boom/asset price bubble
  - Other prudential
    - Cyclical capital requirements, LTV limits

1/ Once macro policy space exhausted, and taking due account of multilateral considerations.
Choice of instruments: flows not intermediated through financial sector

Direct flows or through unregulated financial sector

- Fragile external liability structure (debt, especially short-term)
  - CFMs\(^1\)
    - CFMs to discourage debt instruments

- Currency risk (due to lack of natural or financial hedge)
  - CFMs\(^1\)
    - CFMs to discourage FX borrowing by unhedged entities

- Asset price bubble
  - CFMs\(^1\)
  - Broad-based CFMs

**Legal or other impediments to CFMs?**

**Borrower-based FX-measures**

\(^1\) Once macro policy space exhausted, and taking due account of multilateral considerations
Exceptions to decision chart

• Playing field for access of large firms vs. SMEs
  – Could make CFM preferable over MPP

• MPP may cause disintermediation to unregulated
  – Extend the perimeter? Not easy in short run
  – Regulatory arbitrage more likely with weak supervision; or with sophisticated financial institutions, and deep capital markets

• International obligations may prohibit, constrain use of CFMs
  – E.g., EU treaty, GATS, OECD code, bilateral treaties
International Dimensions: Conclusions
Interactions MPPs and CFMs

• Macroeconomic and MPP tools can go a long way to deal with global effects, including from UMP
  – Use and strengthen orthodox policies, toolkit before CFMs
  – Assure macro policy space exhausted, multilateral effects considered

• May need MPPs and CFMs to target specific risks
  – MPPs main instruments when flows intermediated through banks
  – CFMs controls main instrument when flows by-pass banks

• In designing CFMs, have to consider
  – Macro concerns imply broad, price-based controls for surges
  – Prudential concerns imply targeted on specific risks and possibly administrative CFM, even in case of persistent inflows
  – All design to reflect administrative ability, financial sophistication