Introduction

- In a globally interconnected banking system, there can be spillovers from domestic macroprudential policies to foreign banks and vice versa.
- The lack of reciprocity of some macroprudential instruments may result in an increase in bank flows to countries with lower regulatory levels.
- This may decrease the effectiveness of macroprudential policies in the pursuit of global financial stability.

Research Questions

- How do macroprudential policies change the composition of debt between domestic and foreign?
- How does the lack of reciprocity affect welfare and financial stability?
- What is the optimal macroprudential policy that maximizes welfare?

Model Overview

- Two-country DSGE with entrepreneurs (borrowers) and households (savers).
- Collateral constraints for entrepreneurs.
- Entrepreneurs choose whether to borrow from domestic or foreign households.
- ALPHA is the share of borrowing which is pledged to domestic lenders.
- In the steady state, ALPHA will be positively related to the domestic LTV (mH) and inversely related to the foreign LTV (mF).

![Figure: Steady state value of alpha for different domestic and foreign LTVs](image)

- Dynamically, under a benchmark calibration, a domestic technology shock makes the proportion of domestic borrowing increase.

![Figure: Impulse-Responses to a Domestic Productivity Shock](image)

Macroprudential Policy

- Countercyclical rule on the LTV (m) responding to house prices (q)

\[ m = m_{SS} \phi^* q \]

- NO RECIPROCITY: The rule applied only to domestic LTV (mH) \( \rightarrow \phi^* = 0 \)
- RECIPROCITY: The rule applied to both domestic LTV (mH) and foreign LTV (mF)

Preliminary Results

<table>
<thead>
<tr>
<th>Financial Stability and Welfare</th>
<th>stdev (bh)</th>
<th>stdev (bf)</th>
<th>stdev (b)</th>
<th>Welfare gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>No MPru (Benchmark)</td>
<td>6.90</td>
<td>0.101</td>
<td>5.16</td>
<td>-</td>
</tr>
<tr>
<td>MPru No Reciprocity ( \phi^<em>_h=0.5, \phi^</em>_f=0 )</td>
<td>2.49</td>
<td>0.019</td>
<td>1.205</td>
<td>0.556</td>
</tr>
<tr>
<td>MPru Reciprocity ( \phi^<em>_h=0.5, \phi^</em>_f=0.1 )</td>
<td>2.45</td>
<td>0.012</td>
<td>1.202</td>
<td>0.583</td>
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</table>

- MACROPRU INCREASE WELFARE AND FINANCIAL STABILITY
- GAINS ARE LARGER IF THERE IS RECIPROCITY!

Optimal MPru Policy

<table>
<thead>
<tr>
<th>( \phi^*_h )</th>
<th>( \phi^*_f )</th>
<th>stdev(b)</th>
<th>Welfare gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.5</td>
<td>0.2</td>
<td>0.102</td>
<td>1.32</td>
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</tbody>
</table>

- OPTIMAL MACROPRU INVOLVES REGULATING BOTH DOMESTIC AND FOREIGN BANKS

Conclusions

- DSGE model with domestic and foreign lending.
- Borrowing tends to migrate to the less regulated country.
- When macroprudential policies are applied just to domestic borrowing, financial stability and welfare increase but not as much as if foreign branches are also regulated (reciprocity).
- Optimal macroprudential policy involves regulating both domestic and foreign banks.
- In order to enhance the effectiveness of macroprudential policies and achieve its goal of global financial stability, reciprocity is desirable.

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