Mortgage Supply and Capital Regulation in a Low-Rate Environment

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What explains banks’ different mortgage lending behavior?

Source: Swiss National Bank (SNB).
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Regulatory Development

- Basel 2.5, III & TBTF 1, 2 have strengthened capital requirements.
- Substantial heterogeneity in capital requirements.

Table: 2020 Capital Regulation

<table>
<thead>
<tr>
<th>Bank Category</th>
<th>Criteria (CHF in billions)</th>
<th>Total Risk-weighted Capital Ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total assets ≥ 250</td>
<td>26.8</td>
</tr>
<tr>
<td>2</td>
<td>Total assets ≥ 100</td>
<td>18.8</td>
</tr>
<tr>
<td>3</td>
<td>Total assets ≥ 15</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>Total assets ≥ 1</td>
<td>11.2</td>
</tr>
<tr>
<td>5</td>
<td>Total assets &lt; 1</td>
<td>10.5</td>
</tr>
</tbody>
</table>

Source: The Basel III framework came into effect in Switzerland in January 2013. Required capital ratio data are taken from banks’ annual report.
Goal of This Paper

Stylized facts:
1) An increase in mortgage lending as the policy rate falls;
2) An increase in small banks’ market share.

- We present a two-period partial equilibrium model consistent with the stylized facts.
- We use the model to study banks’ risk taking and analyze policies (countercyclical capital buffers & negative rate exemption).
The Impact of Reduction in the Policy Rate and Tightening of Capital Requirements

The required risk-based capital ratio

Mortgages

Mortgage and deposit rates

Domestic banks market share
Counterfactuals:

(1) $R$ Fixed

(2) Constant Capital Requirements
Both the decreasing monetary policy rate and the asymmetric tightening of capital requirements are necessary to generate an increase in house prices, a mortgage expansion and market share dispersion as experienced in Switzerland since 2008.

Comparative statics:
- Strong cash demand limits banks’ lending capacity.
- Variable market power amplifies domestic banks’ mortgage expansion.
- Default risk concentrated in small domestic banks.

Policy experiment: CCyB helps in reducing credit growth.

Thank You