FINANCIAL INNOVATION & THE MACROECONOMY

Procyclicality and Mortgage Lending

Susan M. Wachter
Sussman Professor
Professor of Real Estate and Finance
The Wharton School, University of Pennsylvania

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A Macroprudential Perspective

- Piazzesi and Schneider, “Payment and Asset Prices”
- Kumhof, “Banks are Not Intermediaries of Loanable Funds, and Why This Matters”
- Bulow, “Equity Recourse Notes: Creating Countercyclical Bank Capital”
- Lord Adair Turner, “Between Debt and the Devil”
Housing Finance Revolution: capital market integration and financial system risk

- Incompleteness – consequential with leverage
- Rationed and segmented housing finance until ‘90s
- Financial accelerator
  - 1997: Asian Financial Crisis
  - Subprime Crisis
  - Simultaneous bubbles in UK, Ireland and Spain (Bank-led)
- Credit bubbles propagate asset bubbles
Great Financial Crisis: The Mortgage Lending Boom

Sectoral contribution to U.S. gross debt
Percentage of GDP

Source: U.S. Federal Reserve, Bureau of Economic Analysis
The Mispricing of the Put Option

• Non-recourse, asset-backed loans (e.g., mortgages) imply a put option on the underlying asset (e.g., house)
  • Lender compensated by higher interest rate
• Short-term lenders may find it rational to extend risky loans without adequate interest rate spread (i.e. underpricing the risk)
  • Investors may be unaware of eroded underwriting standards due to complexity and heterogeneity
  • Results in credit supply surge
Mortgage Underwriting Standards
Mortgage Credit Supply

![Graph showing the supply of mortgage credit over time, with peaks in 2002 and 2006 labeled as Prime FRM Refi Boom and Nonprime ARM Boom. The graph tracks Conv/Conf/Jumbo, Refi, Nonprime, and ARM mortgages.]
The Price of Risk vs. Securitization Volume

Figure 12. PLS Issuance and Weighted Average PLS Spreads, 2003-2007

- Issuance Volume (in Billions)
- Mean Spread to Treasuries (bps)

- Volume
- Spread

2003 2004 2005 2006 2007
Endogeneity of Housing Prices to Credit

- Estimated Price-to-Rent Ratio using Private Label Securitization Rates
- Price-to-Rent Ratio
Time-series variation in OAS of MBS in TBA Market
# Marks of Investment Banks vs. Commercial Banks

## Relative Asset Marks of Securities Firms and Commercial Banks

<table>
<thead>
<tr>
<th>Bank</th>
<th>Commercial Real Estate</th>
<th>Subprime CDOs</th>
<th>Alt-A</th>
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<tbody>
<tr>
<td>Bank of America</td>
<td>96</td>
<td>44</td>
<td></td>
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<tr>
<td>Citibank</td>
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<td>46</td>
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<td>Wachovia Bank</td>
<td>91</td>
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<td>Morgan Stanley</td>
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<tr>
<td>Merrill Lynch</td>
<td>22</td>
<td></td>
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</tbody>
</table>

Source: Goldman Sachs (2008).
“Our task now is to implement intelligent policies to contain future bubbles and credit binges, and to make sure that those that do occur inflict a lot less damage on the economy.”

– Janet Yellen, 2014
Thank you

Susan M. Wachter

Sussman Professor

Professor of Real Estate and Finance

Co-Director – Penn Institute for Urban Research

The Wharton School, University of Pennsylvania

Tel: 215-898-6355

Cell: 610-299-9714

wachter@wharton.upenn.edu
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