From Subprime Loans to Subprime Growth? Evidence for the Euro Area

James Vickery
Federal Reserve Bank of New York

Discussion of:
From Subprime Loans to Subprime Growth? Evidence for the Euro Area

James Vickery: New York Fed

2008 IMF Research Conference

November 13, 2008

Introduction

- Research question: How do financial constraints of banks, firms affect growth in the Euro area?

- General comment: Interesting, wide-ranging paper on a crucial public policy question.

    – Governments have committed large sums to financial rescue packages (e.g. $700bn under EESA).

    – How should these programs be best structured to reduce the real effects of financial crisis?

    – How much would economic growth suffer in the absence of such programs?

Roadmap

Paper is quite broad; I'll focus remarks on a couple of areas:

1. Summary of main findings.

2. Identifying the link between loan supply and real output.

3. Output losses from current crisis. Evidence of constrained loan supply?

Main Findings

A. One standard deviation increase in a bank's distance to default (DD) reduces the supply of bank lending by 1.5 percentage points.

B. A 10% increase in bank loan supply increases output by 1%.

C. Higher corporate bond spread leads to a lower growth rate in industrial output.

D. Bank default probabilities are sharply higher in 2008.

Calculation: Recent EU banking losses projected to reduce EU output by 2 percentage points.

Bank loan supply and output

- <u>Stylized fact</u>: Lending growth moves closely with output growth (correlation = 0.49 in US).

Why? Three views for why lending falls during recessions:

1. Lending declines passively in response to lower investment opportunities ["<u>real</u>" view].

2. Lending falls because firms and households become less creditworthy ["<u>balance sheet channel</u>" view].

3. Lending falls because of worsening bank balance sheets, which reduces bank lending capacity and risk appetite ["<u>bank lending channel</u>" view].

Very hard to disentangle these, although crucial for policy.

Transmission: loan supply to output

- Paper follows Driscoll (2004, JME):

  - Strategy: Regress output growth on loan growth; use money demand shocks as an instrument for loan growth.

  - The idea: positive shocks to money demand provide banks with additional loanable funds.

- Results:

  - 1% shock to money demand growth leads to 0.29% increase in loan growth (Table 3).

  - 1% exogenous increase in loan growth leads to 0.11% increase in GDP growth (Table 4).

Comments

- Results differ significantly from Driscoll's US findings.

Effect of:	US	EU
money demand shocks on loan growth	1.14***	0.29???
loan growth on output growth	**zero**	**0.11???**

Figures in table are sum of coefficients across lags. US coefficients taken from Column 1 of Tables 2 and 3 of Driscoll (2004).

- Why? A couple of possibilities:

  1. **Difference in monetary transmission mechanism?** (Angeloni, Kashyap et al, JMCB, 2004, find stronger investment channel in Europe than US).

  2. **Lack of statistical significance?** Look at f-stat on loan growth in second stage regression, as Driscoll does.

Comments (cont...)

- Estimates of relationship between loan supply and output are an average over the historical sample.

    – Transmission of loan supply to output likely stronger in the next year or two than during 'normal times', because financial constraints are more binding.

- Econometric comments:

    1. More robustness checks needed (use different measures of money supply etc.).

    2. Report tests of joint significance.
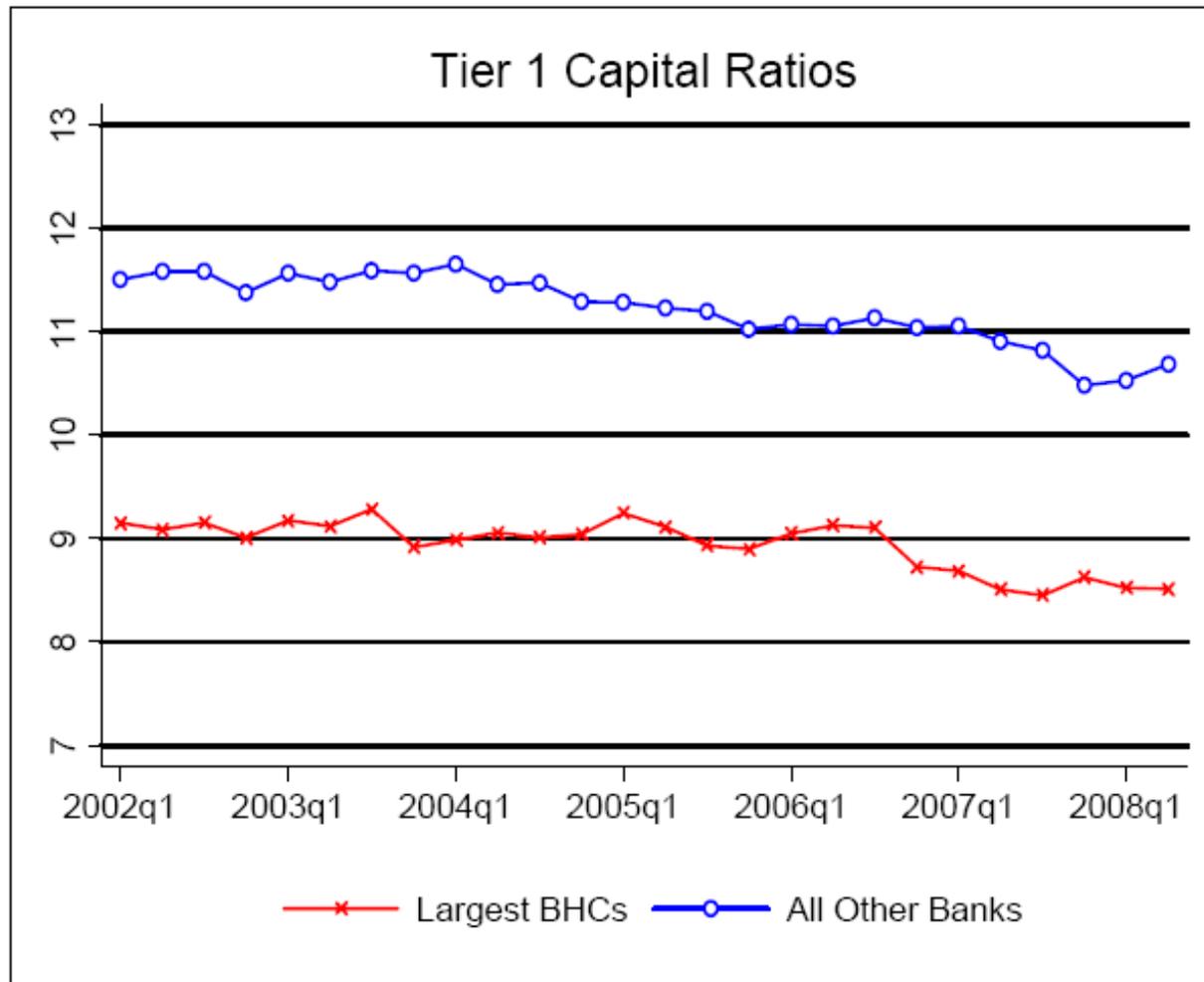
    3. Weak instruments problems?

Calculation of output losses

- Exceptional losses in euro-area commercial banks ~ $500bn, representing 14% of banks capital and reserves.
  - If capital ratio stays constant, loans also fall by 14%.
  - Assumes no offsetting earnings, and that no new capital is raised.

- By previous estimate, 14% decline in loans implies ~ 1.4% decline in GDP.
 - Effect larger if higher losses assumed: 1.9%-3.1% decline in output.

Output losses: Comments

- Timing of output losses? Could use dynamics of model combined with timing of bank losses to simulate this.

  – Related: How much of this $500bn has already occurred and been recognized?

- Mark-to-market losses versus book losses.

- How quickly will Euro-area banks attempt to get back to target capital ratio?

  – Banks may be happy to let capital ratio fall below long-run average for a period (as long as above regulatory minimum).

  – Evidence of long-run drift in capital structure in US [see next slide]. Slow adjustment is consistent with Baker and Wurgler (2003, JF) evidence for non-financial firms.

Capital ratios at US banks

Evidence from US mortgage market that financial shocks raise intermediation spreads...

30-Year FRM to 10-Year Treasury Spreads

Percent

Source: HSH Associates and Datastream
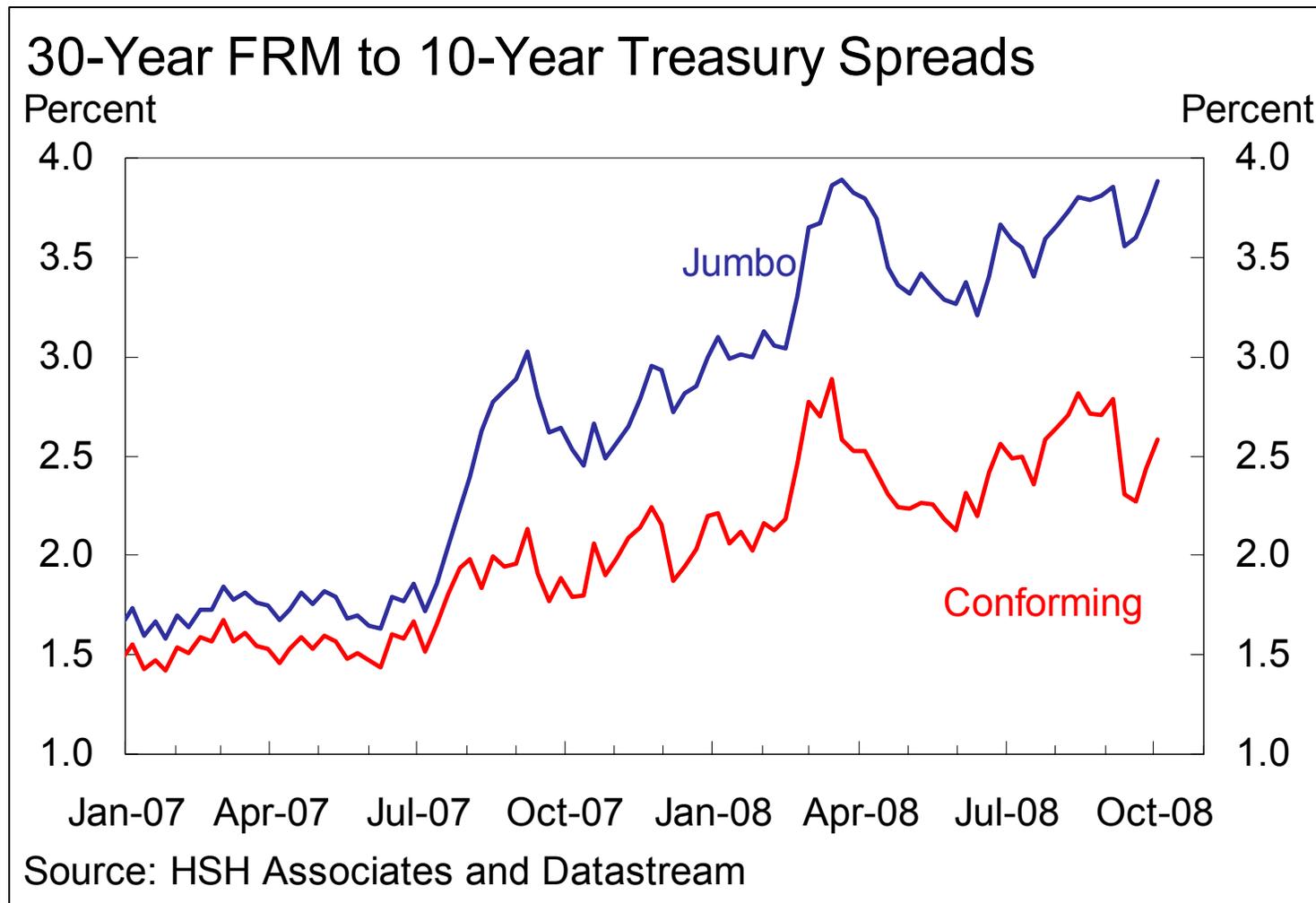
Conclusions

- Nice "broad brush" job pulling together evidence on link between loan supply and real economy.

    – Estimate of output loss from current crisis; useful for policymakers. More work needed here!

- Other suggestions:

    1. Think more about capital structure dynamics and dynamics of the transmission mechanism.

    2. Relate estimates more closely to other credit channel research for US and Europe.

    3. Think about identification; other exogenous variation in loan supply (e.g. Becker, 2006, JFE uses demographics as instrument for deposit supply).