Banks Exposure to Interest Rate Risk and the Transmission of Monetary Policy

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Research Question

• Through their function as qualitative asset transformers, financial intermediaries are exposed to non-diversifiable risks, specifically liquidity and interest rate risk.

• This paper: How do differences in banks’ income sensitivity to interest rates influence their lending behavior following a monetary policy shock?

• **Interest rate sensitivity**: Income gap, defined as the difference between assets and liabilities that mature in less than one year.

• A novel approach of how banks transmit monetary policy; empirical evidence makes a strong case.
Major Results

Using a sample consisting of quarterly data on US bank holding companies from 1986 to 2011:

- **Result I**: Banks retain significant exposure to interest rate risk (average income gap is 13.5% of total assets, but exhibits significant cross-sectional variation).

- **Result II**: Banks do not fully hedge their interest rate exposure.

- **Result III**: Income gap has a strong explanatory power on the sensitivity of lending to changes in interest rates.

**Cash-flow channel**: Interest rate risk exposure affects banks’ cash-flows → affecting their lending ability when external funding is costly.
Comment I - Paper in Perspective

- Paper is mainly related to the bank lending channel: evidence that monetary policy affects the economy through the credit supply.

- **Main contribution**: establishing a novel channel through which monetary policy shocks are transmitted via banks' lending (the income gap effect is orthogonal to all the other effects found by the bank lending literature).

- **Focus of my discussion**: the mechanism through which the income gap effect may generate/perceived to be generating the transmission of monetary policy through lending.
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The bank can protect EITHER the market value of equity or net interest income, but not both → explains why banks do not hedge (at least completely) interest rate risk?
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- **Hellwig (1994):** banks allocate interest rate risk to their depositors (by offering contracts that do not necessarily repay deposits at par), and focus on liquidity risk;
Comments III - Choice of Income Gap

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**First Question**: What are the characteristics (leverage, funding structure, regulatory capital position, etc.) of the banks with high and low income gaps?
Comments IV - Mechanism

- Paper seems to be somewhat dismissive of the equity channel (in favor of the cash flow channel).

- Generally speaking, if a bank is asset sensitive (net interest income rises when rates rise), it is likely to have a **negative duration gap** suggesting that assets are more price sensitive than liabilities, on average.

- **In this case**: as interest rates $\uparrow \implies$ bank’s equity capital $\uparrow$ lending ability $\uparrow$ **risk taking ability** $\uparrow \implies$ same result of the paper.

- **Another view**: interest rates $\uparrow \implies$ Net Interest Income $\uparrow$ future cash flows $\uparrow$ bank’s (market value) equity $\uparrow$ lending ability $\uparrow \implies$ same result of the paper.
Deposits are sticky and deposit rates are very sluggish to adjust.
Responses of deposit interest rates to market rates is very low.
Comments IV - Suggestions

- Does risk taking activities accompany larger lending amounts by banks with high interest rate sensitivity? Suggestion: investigate bad loans.

- One way to disentangle between different mechanisms: Impact of a rise in short term interest rates may depend on the shape of the entire yield curve.

- For example: a rise in short term rates from a flat yield curve (observed several times in the sample period) is likely to have a different effect from one when yield curve is very steep.
**Conclusion**

- Very interesting paper on a very important question, introducing a novel channel through which monetary policy is transmitted.

- Suggestions: a more comprehensive analysis of the mechanism behind the results will enhance significantly the paper’s contribution; this will have wider welfare implications on how interest rate risks are shared in the economy.