State Dependent Effects of Monetary Policy: the Refinancing Channel

by **Martin Eichenbaum**, Sergio Rebelo, and Arlene Wong

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The "Big Picture"

Age old question in the theory of monetary policy:

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Manipulation of a short-term nominal interest rate

$$\xrightarrow{\quad ? \quad}$$

real economic activity

This paper

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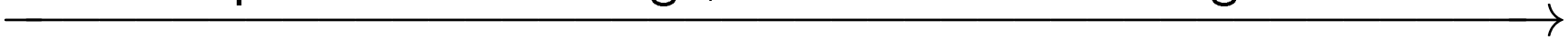
part of a first stage, otherwise taken as given



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$\longrightarrow$

changes in the mortgage interest rate

refinancing of mortgages to free up funds

$\longrightarrow$

consumption activity

Implications

1. Given that mortgage refinancing has fixed costs, the distribution of gaps between the frictionlessly optimal mortgage conditions and the actual mortgage conditions is an important state variable for the economy, and, in particular, for the potency of monetary policy.

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2. If fixed costs of refinancing decline over time, monetary policy might be more powerful on average, because the transmission from mortgage rates to consumption is more direct.

   POTENCY

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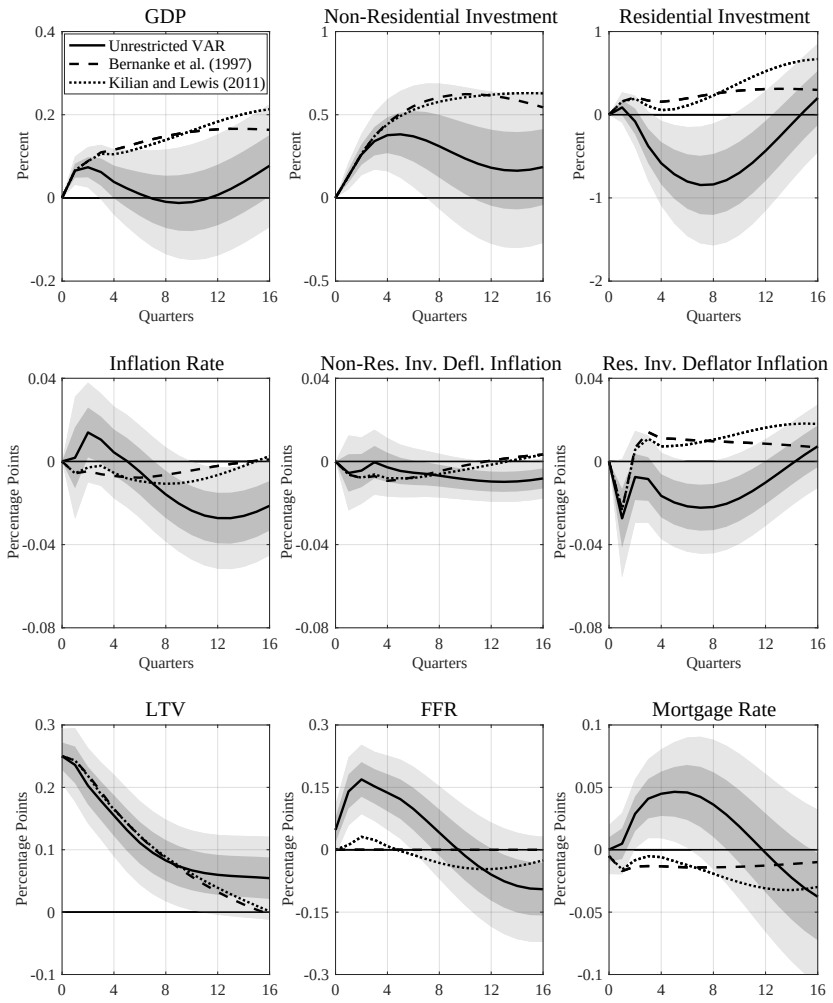
- Builds a partial equilibrium life-cycle model with housing and a refinancing decision to show both state-dependence and refinancing-cost-dependent potency of monetary policy.

I like the shift of focus to the credit demand side... Bachmann and Rüth (2018)



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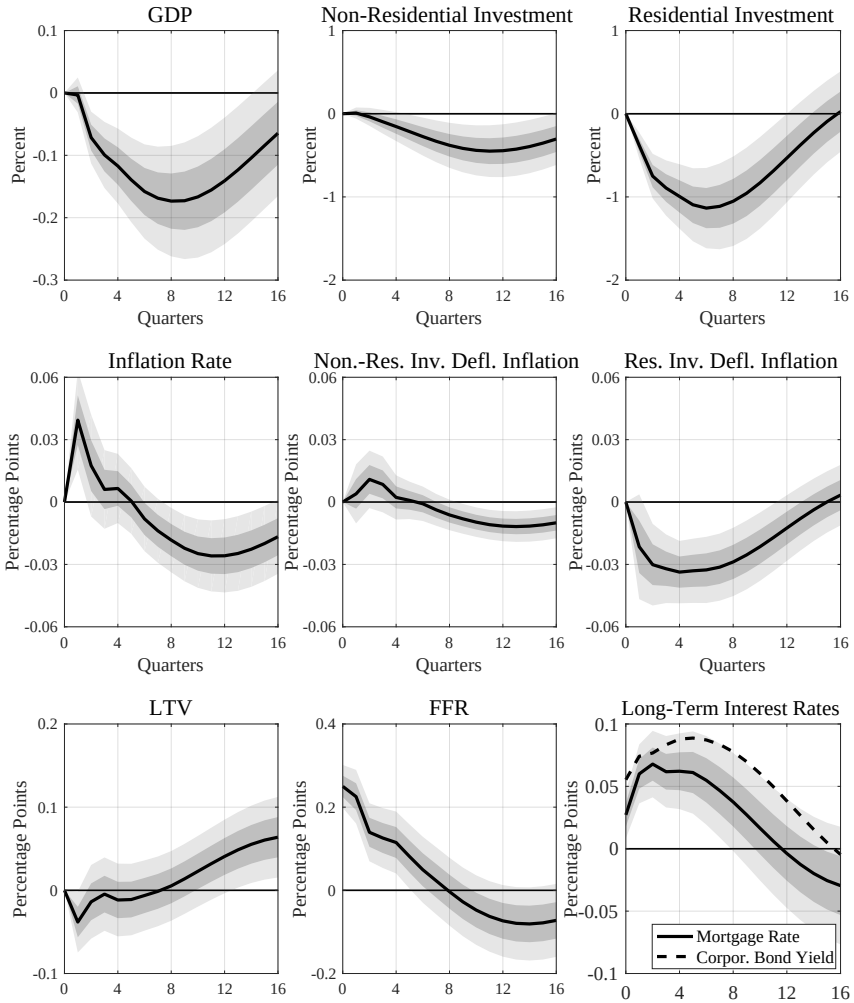

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2. More importantly: housing is just enormously interest rate elastic.

To the extent that we often have trouble finding large (direct) interest rate elasticities for consumption and business investment, the focus on housing is very much welcome, if we want to understand the transmission channel of monetary policy.

One last piece of evidence

LTV Shock	y_t	i_t^{nr}	i_t^r	π_t	π_t^{nr}	π_t^r	ltv_t	r_t	r_t^m
Impact	0.0	0.0	0.0	0.0	0.0	0.0	92.6	2.6	0.0
1 Year	4.3	6.8	1.6	0.6	0.2	2.2	78.5	14.9	4.2
2 Years	1.8	9.0	8.4	0.8	0.6	4.6	72.3	13.0	6.3
4 Years	1.1	6.0	10.1	6.5	2.9	5.9	59.7	9.8	4.0
FFR Shock	y_t	i_t^{nr}	i_t^r	π_t	π_t^{nr}	π_t^r	ltv_t	r_t	r_t^m
Impact	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.5	10.7
1 Year	5.7	0.4	19.1	4.7	1.1	7.2	0.8	36.2	25.4
2 Years	14.3	3.9	26.5	4.6	1.1	14.7	0.7	22.1	18.2
4 Years	16.9	10.5	25.2	10.0	4.8	15.9	3.6	15.8	9.6

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I would also like to learn more about the joint distribution of income and refinancing gaps / refinancing activity.

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- Is there evidence of reduced state-dependence of monetary policy over time in the time series?
- Is there evidence of reduced state-dependence of mortgage rate innovations in your cross-sectional regressions between the beginning and the end of the sample? Alternatively, show some rolling-window results for your cross-sectional regressions.

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You could test for that both in the time series and the cross-section.

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Only dilettantes would. ☺

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But I do confess to not quite understanding what some model elements are needed for:

- A rental market that one can frictionlessly switch into?
- The OLG structure, including retirees?

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2. Why present the results following a 100 bp monetary policy shock? The model is nonlinear, so this is potentially not an innocuous choice.

Summary

This is a very interesting paper that fits very nicely into the new literature linking micro and macro.

Minor things

- It wasn't clear to me what happens in the model to a mortgage upon premature death.
- On page 20, equation after "subject to the budget constraint": is the minus sign on "b"' correct?
- First part of the calibration section: if you think of the first period of life as age 0-25, then why not use ages 20-25 (instead of ages 20-29) to calibrate their assets?
- In the paragraph starting "To understand the mechanisms that underlie these effects...", one of the inequality signs for s_{jt} must be wrong.