

Discussion of
Foreseen Risks

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Motivation

- Empirical observation: big drops in economic activity are preceded by credit booms
- Causation?

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- Empirical observation: big drops in economic activity are preceded by credit booms
- Causation?
 - ▶ Frictionless view: none
 - ★ Just co-movement, cyclical investment financed with efficiently allocated credit
 - ▶ Macro with financial frictions: forward
 - ★ Credit booms cause big(ger) drops in economic activity by amplifying effect of negative shocks
 - ▶ **This paper:** reverse
 - ★ Rationally expected drops in economic activity cause boom in lending

Banks face a trade-off

- 1: Incentive to take risk: underpriced deposit insurance
 - ▶ Riskier assets \implies higher expected returns on assets in a risk-averse world, higher expected returns on equity even in a risk-neutral world
 - ▶ Persistently strong over the business cycle
- 2: Incentive NOT to take risk: franchise value i.e. PV of future rents
 - ▶ Wedge between asset returns and deposit rates (e.g. due to market power)
 - ▶ Failure \implies exit \implies loss of future rents
 - ▶ **When bank failure becomes more likely for exogenous reasons (expected economic downturn), this incentive becomes weaker**

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 - ▶ **When bank failure becomes more likely for exogenous reasons (expected economic downturn), this incentive becomes weaker**
- 1 more likely to dominate 2 when a downturn is expected
- Corollary: stabilization policies that increase bank franchise value stimulate the “wrong” type of lending – safe lending to governments instead of stimulative private lending
- Evidence: credit growth predicts GDP decline only in countries that have deposit insurance

What can we learn from a toy model?

- “Two-period” partial equilibrium model
- Time 0: Continuum of banks with equity e_0 , zero-rate deposits 1 invest ϕ into loans, $1 - \phi$ into safer government debt
- Time 1
 - ▶ w.p. $1 - p_L - p_C$ both assets repay \bar{R}^L and \bar{R}^G respectively
 - ▶ w.p. p_L loans default with recovery c_L , govt debt repays
 - ▶ w.p. p_C loans default, **govt debt defaults** with recovery $c_G > c_L$ (crisis)
 - ▶ R^L and R^G such that when $p_C > 0$,

$$\underbrace{(1 - p_L - p_C)\bar{R}^L + (p_L + p_C)c_L}_{E[R^L]} > \underbrace{(1 - p_C)\bar{R}^G + p_C c_G}_{E[R^G]} > 1$$

- Time 1: banks fail if next period equity is negative
 $e_1(\phi) = [\phi R^L + (1 - \phi)R^G](1 + e_0) - 1 < 0$
 - ▶ Assume $c_G < 1/e_0$ i.e. banks fail in a crisis regardless of portfolio choice ϕ
 - ▶ If only loans default, banks fail iff $\phi > \phi^*$

What can we learn from a toy model?

- Payoff

- ▶ Time 1, ..., T : Surviving banks invest in riskless portfolio, earn return $\bar{R} > 1$ per period
- ▶ Maximize expected terminal equity value

$$\max_{\phi} E[\underbrace{(\bar{R}^{T-1}(e_1(\phi) + 1) - 1)\mathbb{1}_{e_1 > 0}}_{V(\phi)}]$$

- ▶ Ability to earn $\bar{R} - 1$ excess return for T future period is source of franchise value

What can we learn from a toy model?

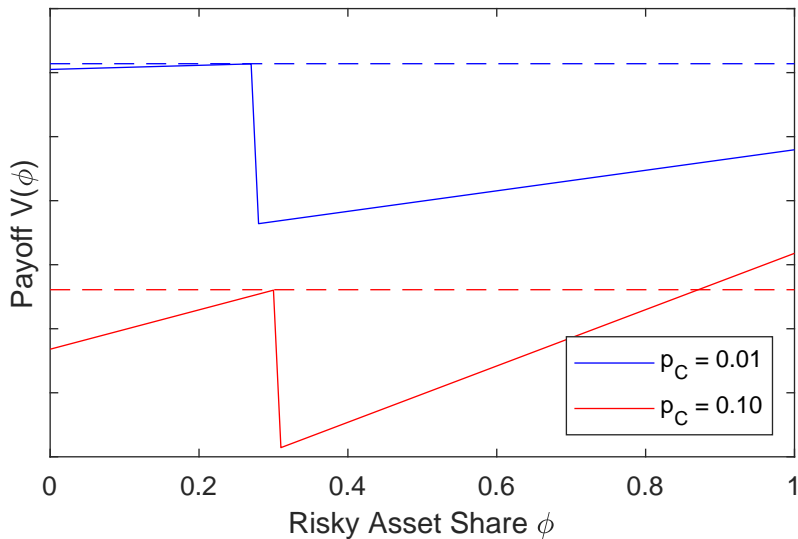
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- Bank Portfolio Choice: $E[R^L] > E[R^G]$ so invest at least ϕ^* into loans
 - ▶ Protect franchise value by keeping failure probability at p_C , invest only ϕ^* in loans
 - ▶ vs. invest $\phi = 1$ in loans, go for higher returns at the cost of higher failure probability $p_C + p_L$
 - ▶ $V(\phi^*) \geq V(1)$ depends on p_C , prob bank fails no matter what

Numerical Example: Portfolio Choice



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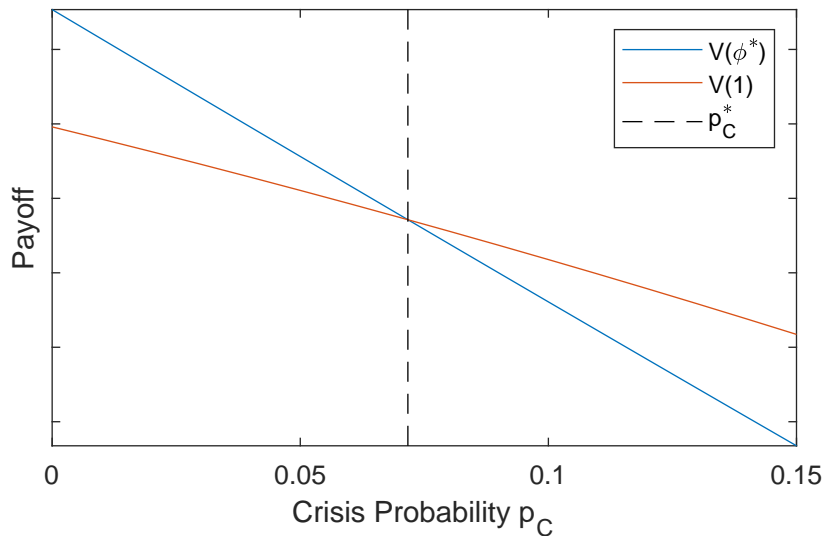
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 - ▶ $V(\phi^*) \geq V(1)$ depends on p_C , prob bank fails no matter what
 - ▶ Can show $\exists p_C^* \text{ s.t. } \forall p_C > p_C^* V(1) > V(\phi^*)$

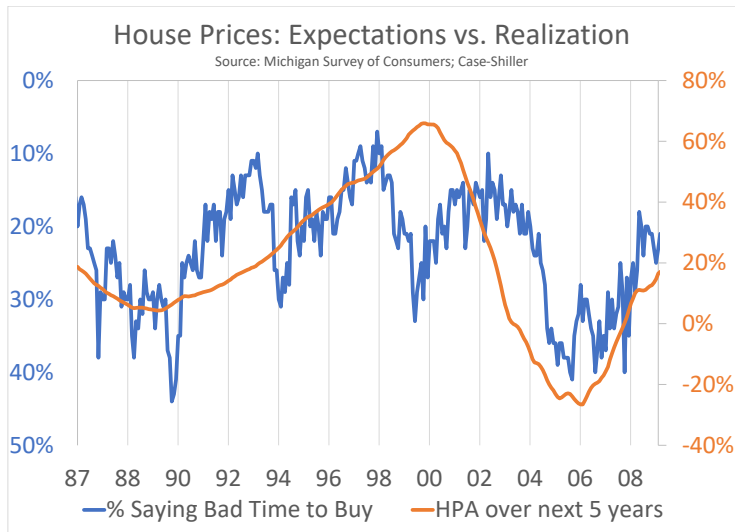
Numerical Example: Effect of Crisis Probability



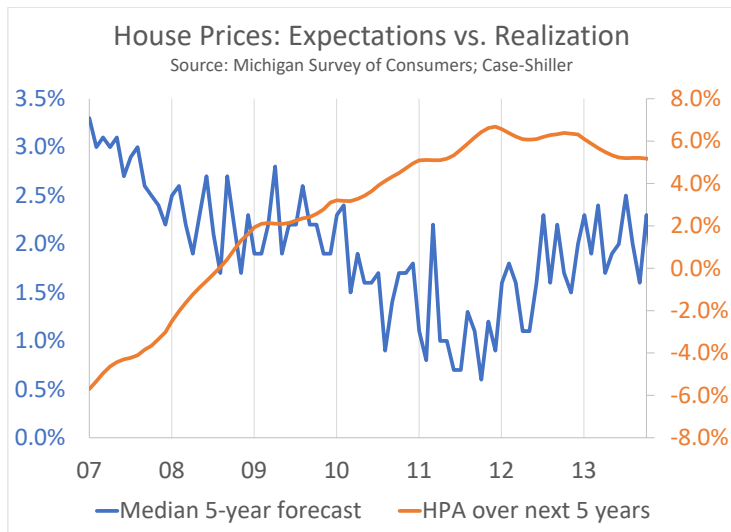
Comments

- Really interesting paper! Novel channel for comovement between bank credit and subsequent economic activity
- Impact of franchise value on bank risk-taking important in designing macroprudential policy
 - ▶ e.g. Elenev, Landvoigt, and Van Nieuwerburgh (2018)
- Comment on theory
 - ▶ Does the relatively safe asset need to be defaultable? In my toy model it does. Otherwise, can protect franchise value by investing in the safe asset only, regardless of how poorly loans end up performing.
- Comments on empirics
 - ▶ Motivation: did market participants “foresee” the Great Recession?
 - ▶ Motivation: did stabilization policies like CPP/QE cause shift to safe lending?
 - ▶ Evidence: should effect be stronger in countries with deposit insurance?

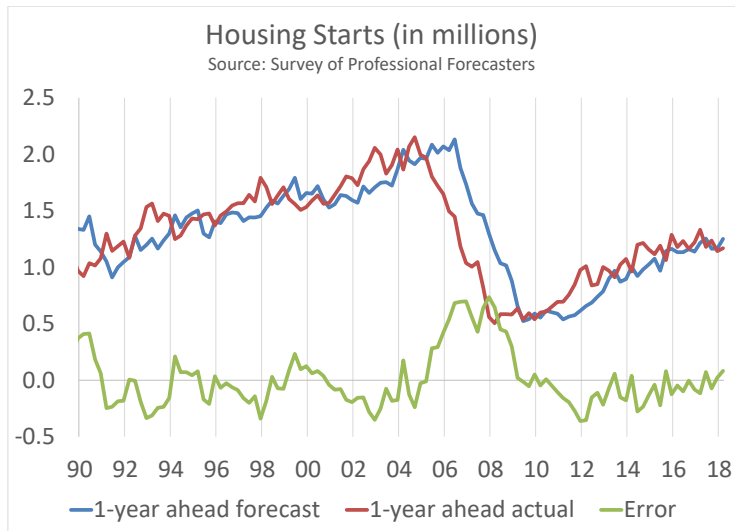
Did households “foresee” the Great Recession? Maybe yes?



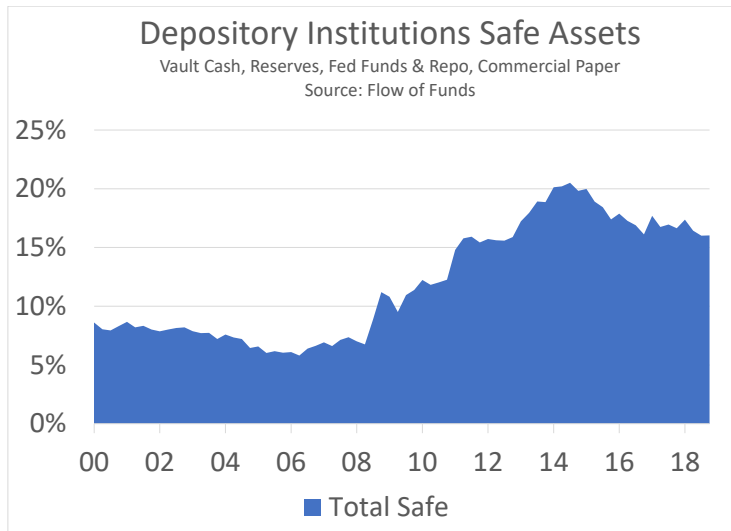
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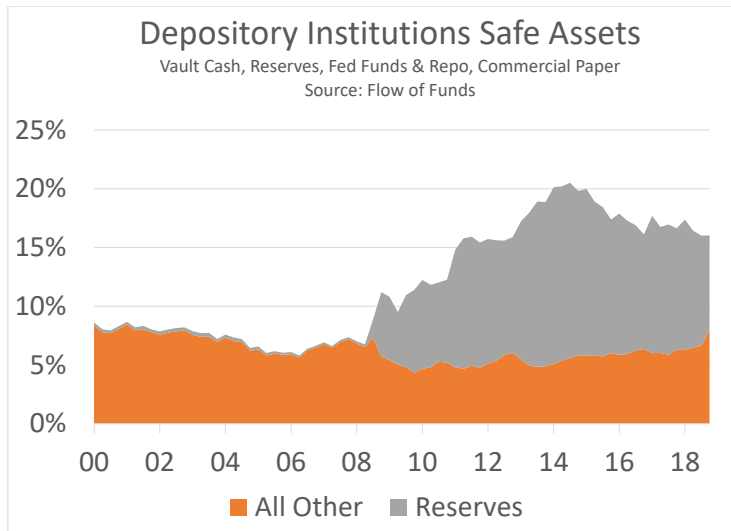
What about professional forecasters? Highest error



Did stabilization policies cause shift to safe lending?



Did stabilization policies cause shift to safe lending?



Evidence in the cross section?

- Fed balance sheet expansion necessarily leads to more aggregate bank reserves – hard to learn something from the time series
- Look for evidence of the channel in the cross-section instead
- My (very cursory) look at the data was fruitless
- In response to expected decrease in housing starts (leading indicator of economic activity),
 - ▶ All public banks increase cash/assets regardless of market/book ratio (franchise value)
 - ▶ All banks increase cash/assets, but lowest quintile by leverage (franchise value?) increases cash/assets by less than others

Should effect be stronger in countries with deposit insurance?

- Deposit insurance creates incentive to take more risk (channel 1)
- It does NOT by itself create franchise value (channel 2) – for that you need market power so government subsidy stays as a rent instead of getting passed on to borrowers
- Implicit government guarantees against systemic risk for the financial sector may exist even if there's no deposit insurance (e.g. China before 2015)
- Explicit deposit insurance neither necessary nor sufficient for the channel to operate, but market power is
- Solution: In predictive regressions, sort countries on banking sector HHI/other measure of bank competition instead

Conclusion

- I really enjoyed reading the paper!
 - ▶ Surprising counter-intuitive conclusion delivered by a simple and (ex-post!) intuitive channel
 - ▶ Potentially important to keep in mind when designing macroprudential policies, explaining the interaction between credit and business cycles
- Future steps: Can we do more to identify the channel in the data, compare magnitudes?