Discussion of van den Heuvel (2018)
The Welfare Effects of Bank Liquidity and Capital Requirements

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[1]The views expressed herein are solely mine and do not necessarily reflect the ones of the Federal Reserve Bank of San Francisco or the Federal Reserve System.

Research Question

What are the welfare effects of liquidity and capital requirements?

→ **Key idea: Derive simple formulas from a model that can be matched to the data**

→ **No need to take a stand on preferences, but use asset returns instead**

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Model & Frictions

- Banking model without aggregate risk
- Banks can choose riskiness of loan portfolio
  - Choose σ_t in $R_t^L + \sigma_t \epsilon_t$ where mean(ϵ_t)<0
  - Potentially excessive due to deposit insurance and limited liability
- Banks face occasional withdrawls from depositors
  - Bank fails due to liquidity stress if $B < wD$
  - Occurs with fixed probability $1 - p$

$\rightarrow$ Model suggests a division of labor:
capital requirements deal with excessive credit risk
and liquidity requirements address liquidity risk

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Social Planner Problem

$$V_0(\theta) = \max_{\{c_t, d_t, b_t, L_t, K_{t+1}\}_{t=0}^{\infty}} \sum_{t=0}^{\infty} \beta^t u(c_t, d_t, b_t)$$

$$s.t.\ \overline{B} - b_t \geq \lambda d_t,\ (1-\gamma)L_t + \overline{B} - b_t \geq d_t, K_t \geq L_t$$

resource constraint

for $\sigma = 0, \lambda \geq w$!

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Simple Formulas

- Gross welfare cost of liquidity requirement

$$v_{LIQ} = \frac{d}{c}\left(R^D + g_D(d, L) - R^B\right)(1-\lambda)^{-1}$$

- Gross welfare cost of capital requirement

$$v_{CAP} = \frac{L}{c}\Big(R^E - \widetilde{R}^D(\lambda) - (1-\lambda)^{-1} g_D(d, L)\Big)$$

$\rightarrow$ **Key result: Liquidity requirement less costly**

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Comments

Interpretation Main Exercise

- What are the **welfare costs** of an additional unit of required capital or liquidity?
  - ... in states without excessive credit risk-taking ...
  - ... and without liquidity stress
- The exercise does not tell us:
  - How does an additional unit of required capital or liquidity affect
    - **... the probability and the severity of financial crises**?
    - ... **overall welfare**?

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Crises in the Model $\neq$ Crises in the Data

- Crises occur out of ...
  - credit booms (Schularick and Taylor, 2012)
  - asset price booms (Jordà et al., 2015; Kiley, 2018)
  - worsening of current account (Kiley, 2018)
  - low productivity growth (Gorton and Ordoñez, 2016; Paul, 2018a)
  - rising income inequality (Kirschenmann et al., 2016; Paul, 2018a)
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Other Comments

1. Issue of risk-weights
2. Extreme assumption on illiquidity of loans
3. Historical asset returns depend on ...
    1. ... institutional setting (e.g., money market funds)
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