

Discussion of
Huixin Bi, Eric Leeper, and Campbell Leith
Financial Intermediation and Government
Debt Default

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Overview

- ▶ Motivation
 - ▶ Address quantitatively the sovereign-bank nexus
 - ▶ By introducing endogenous sovereign default, and
 - ▶ Idiosyncratic bank runs/bank default
 - ▶ To a model with balance sheet constrained financial intermediaries

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 - ▶ Address quantitatively the sovereign-bank nexus
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 - ▶ To a model with balance sheet constrained financial intermediaries
- ▶ Methodology
 - ▶ DSGE model
 - ▶ Solved globally with occasionally binding constraints

Model

- ▶ Households
 - ▶ Bankers and workers with perfect consumption insurance
- ▶ Capital producing firms
 - ▶ Capital adjustment costs
- ▶ Intermediate good producing firms
 - ▶ Borrow to buy capital,
 - ▶ Rotemberg price adjustment costs
- ▶ Monetary policy
 - ▶ Taylor-type rule

Model, cont.

- ▶ Sovereign
 - ▶ Finances expenditures and services debt with distortionary taxes
 - ▶ Issues long-term nominal debt
 - ▶ Defaults stochastically as debt approaches 'fiscal limit'

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 - ▶ Finances expenditures and services debt with distortionary taxes
 - ▶ Issues long-term nominal debt
 - ▶ Defaults stochastically as debt approaches 'fiscal limit'
- ▶ Financial intermediaries
 - ▶ Hold long-term private and public debt
 - ▶ Face occasionally binding skin-in-the-game constraint
 - ▶ Can not issue equity
 - ▶ Can default with endogenous probability

Results

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 - ▶ Sovereign default has large and persistent effects
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- ▶ Praise
 - ▶ Highly policy relevant question
 - ▶ Very ambitious project
 - ▶ State-of-the-art methodology

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- ▶ In contrast to Bocola (2014). What explains the difference?
 - ▶ Haircut: 8%, in Bocola: 55% (based on Greek default)
 - ▶ Default probability: 20-30%, in Bocola, 2%
 - ▶ Expected loss is higher here, but in Bocola larger crisis.

Role of haircut (Δ), cont

- ▶ Optimal bank leverage (f_t , special case $\eta = 1$)

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- ▶ Low haircut: Would not a linearized model suffice?

Fiscal limit and outlook

- ▶ Currently: invariant logistic distribution

$$p_t^d = P(D_{t-1} \geq D_t^*) = \frac{\exp(\eta_1^d + \eta_2^d D_{t-1})}{1 + \exp(\eta_1^d + \eta_2^d D_{t-1})}$$

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- ▶ Alternatives:
 - ▶ Parameters of the distribution (η) are state dependent
 - ▶ Fiscal limit in terms of debt over GDP
 - ▶ Roll-over-crisis: fiscal limit depends on current fiscal surplus

Bank-run

- ▶ Idiosyncratic bank run/bank default
 - ▶ Assets are partly illiquid within period
 - ▶ High deposit withdrawals (liquidity shock) can lead to bankruptcy
 - ▶ Banks' assets are liquidated at fire-sale prices
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- ▶ Terminology
 - ▶ Bank run or bank default?
 - ▶ comp. Gertler-Kiyotaki, 2013: systematic bank run, multiple equilibria

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- ▶ What matters more?
 - ▶ Shorter expected time span: deteriorates net worth?
 - ▶ Higher deposit rates?

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 - ▶ Shorter expected time span: deteriorates net worth?
 - ▶ Higher deposit rates?
- ▶ Would not a linear solution deliver?

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- ▶ Conclusion on systemic risk depends on haircut
 - ▶ Needs to justify empirically a realistic haircut measure
- ▶ Would be nice if fiscal limit depended on outlook.
- ▶ What determines the impact of bank default?
- ▶ How important are the non-linearities quantitatively?