Discussion of “Devaluations, Deposit Dollarization, and Household Heterogeneity” by Ferrante and Gornemann

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Stanford

Federal Reserve Board Research Webinar
April 8, 2022
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3. Recent answers from HANK: household balance sheet channel
   [eg de Ferra-Mitman-Romei, Auclert-Rognlie-Souchier-Straub,...]
   - Overall consumption ↓ because of adverse effect on real income and/or household foreign currency borrowing
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This paper: how do 2. and 3. *interact* given existing balance sheets?
What the authors do

- Take a HANK version of the Gali-Monacelli model [eg Auclert et al]
  - Household balance sheet channel for $C$
  - Aggregate $C$ sensitive to $Y$

- Add in a constrained bank+firm sector from Gertler-Karadi
  - Add bank balance sheet channel for $I$

- Calibrate to Uruguay evidence on currency comp. of balance sheets
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- Main result: significant interaction between the two channels
  - 1% depreciation \( \rightarrow \) consumption declines 1%, vs 0.5% in RANK
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- Additional results: deposit dollarization has large distributive effects
  - More unequal dollarization can easily double the consumption decline
My assessment

- Great paper!
  - Devaluations clearly have importance balance sheet and distributive effects across households and firms
  - Largely ignored by the international macro literature to date
  - Even though we have good data on these balance sheets!
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▶ My discussion
  ▶ Are devaluations contractionary?
  ▶ A sufficient statistic for the investment-balance sheet channel?
  ▶ Throughout: go over main modeling choices, comments on literature
Are devaluations contractionary?

- Model considers shocks to $i_t^*$ ↑ as cause of devaluation
- Difficult to evaluate causal effect of the depreciation per se in data
Are devaluations contractionary?

- Model considers shocks to $i_t^{*} \uparrow$ as cause of devaluation
- Difficult to evaluate causal effect of the depreciation per se in data
- Vicondoa (2019, JIE): effect from identified increase in US rate

Consumption appears to fall together with GDP: not just investment

Problem: US $i_t^{*} \uparrow$ typically associated with other effects
  [eg risk premia increasing, cf Miranda-Agrippino-Rey etc]
Are devaluations contractionary? contd.

- BIS 2020 survey of central banks: changing patterns of capital flows
- “What is the economic effect of local currency depreciation?”

Two ways to read this:
- Depreciations rarely are contractionary in practice
- Central bankers priors too shaped by expenditure switching models!

Could exploit model comparative statics to figure out when contractionary devaluations are more likely, and test in macro data
Are devaluations contractionary? contd.

▶ BIS 2020 survey of central banks: changing patterns of capital flows
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Gertler-Karadi meets HANK

- Very interesting combination! Why?

1. **Steady state**: intermediation spread $R^L - R^D$
   - Generates a kink with 0 wealth households
   - Natural mechanism for generating high average MPCs

2. **Dynamics**: bank net worth $n_t \downarrow$ implies
   - Lower investment $I_t \downarrow$ (so standard financial accelerator)
   - Higher intermediation spread $R^L_t - R^D_t \uparrow$
     - Redistributes away from borrowers
     - Since those have high MPCs, lowers consumption
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Some of this also in Lee-Luetticke-Ravn closed economy model
  - Clarify what is new/special to the open economy!
Sufficient statistic for the investment-balance sheet channel

- Currency mismatch implies revaluation effects from devaluation
- Conceptually, holding other aggregates fixed:
  - “1% decline in exchange rate $\rightarrow x\%$ decline in net worth
  $\rightarrow y\%$ decline in investment”
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- Step 1 depends on observable balance sheet information
- Step 2 depends on observable leverage in Gertler-Karadi:
  \[ q_t^k k_t = \varphi_t n_t \]
- Deriving such sufficient statistic would help justify calibration
  - Balance sheet and leverage are critical moments
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- Note: Maturity structure of assets and liabilities matters, not just currency mismatch. Could see how much it matters in the model.
Bank+firm maturity mismatch in calibration

- Are banks and firms really that currency mismatched?
- Many theories show currency hedging incentives are large
  - Bocola-Lorenzoni: banks issue foreign currency loans due to demand for currency deposits
  - Gopinath-Stein: firms hedge exposure from dollar-invoiced imports by borrowing in dollars
- Not all currency exposures are observed in data (eg swaps)
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- Should we calibrate to banks only? Banks+firms?
  - How granular is the information in the micro data?
- Note: DCP or LCP rather than PCP would change exposures
  - Would be interesting to see how much that matters.
How does the interaction work?

- Main mechanism: interaction bw. HANK and investment accelerator
- Two components in general equilibrium:
  1. Tightening of spreads $\rightarrow$ borrowing rate $\rightarrow$ $C$ via higher
  2. Decline of aggregate demand $\rightarrow$ labor income $\rightarrow$ $C$ via high MPCs
- Quantitative results show that 2 matters more
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- Quantitative results show that 2 matters more
- Closely related to Auclert-Rognlie-Straub $C - I$ complementarity:

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Final words

- Great paper!
  - improves our understanding of the transmission of currency changes to economic activity through foreign currency exposures
  - shows how bank and household balance sheet channels interact in GE

- Suggestions for improvement:
  - Relation to literature
  - Calibration (sufficient statistics, household+bank+firm portfolios)
  - Exploit comp. stats in the model to compare to macro evidence