

Discussion of “Foreign Reserves Management and Original Sin”

by Mick Devereux and Steve Wu

NBER IFM Meetings, 2022

Javier Bianchi¹

¹Federal Reserve Bank of Minneapolis

The views expressed herein are those of the authors and not necessarily those of the Federal Reserve Bank of Minneapolis or the Federal Reserve System.

Introduction

- Documents that increases in international reserves are associated with increases in the share of LC debt and lower risk premium
- Proposes a model with sovereign debt currency portfolio + CB reserves + risk premia

Introduction

- Documents that increases in international reserves are associated with increases in the share of LC debt and lower risk premium
- Proposes a model with sovereign debt currency portfolio + CB reserves + risk premia
- Great topic
- My discussion
 - Review key mechanism
 - Comments

Overview of Mechanism

1. Higher reserves \rightarrow reduce RER variability...

- Macprudential role (Arce et al. 2019; Davis et al. 2021)

2. Lower RER variability + IT \rightarrow lower NER variability...

$$P = e_t \mathcal{P} \left(\frac{P_t^N}{e_t} \right)$$

3. Lower NER variability \rightarrow lower exchange rate risk premia...

4. Lower risk premia \rightarrow Higher higher LC debt

Overview of Mechanism

1. Higher reserves \rightarrow reduce RER variability...
 - o Macprudential role (Arce et al. 2019; Davis et al. 2021)
2. Lower RER variability + IT \rightarrow lower NER variability...

$$P = e_t \mathcal{P} \left(\frac{P_t^N}{e_t} \right)$$

3. Lower NER variability \rightarrow lower exchange rate risk premia...
4. Lower risk premia \rightarrow Higher higher LC debt

Overview of Mechanism

1. Higher reserves \rightarrow reduce RER variability...
 - Macprudential role (Arce et al. 2019; Davis et al. 2021)
2. Lower RER variability + IT \rightarrow lower NER variability...

$$P = e_t \mathcal{P} \left(\frac{P_t^N}{e_t} \right)$$

3. Lower NER variability \rightarrow lower exchange rate risk premia...
4. Lower risk premia \rightarrow Higher higher LC debt

Overview of Mechanism

1. Higher reserves \rightarrow reduce RER variability...
 - o Macprudential role (Arce et al. 2019; Davis et al. 2021)
2. Lower RER variability + IT \rightarrow lower NER variability...

$$P = e_t \mathcal{P} \left(\frac{P_t^N}{e_t} \right)$$

3. Lower NER variability \rightarrow lower exchange rate risk premia...
4. Lower risk premia \rightarrow Higher higher LC debt

Comments

On Reserve Management

- Mechanism: reserves \rightarrow higher LC debt

On Reserve Management

- Mechanism: reserves \rightarrow higher LC debt
- Govt. debt is not a state variable in CB problem (by design)
 - Government choices irrelevant for CB

On Reserve Management

- Mechanism: reserves \rightarrow higher LC debt
- Govt. debt is not a state variable in CB problem (by design)
 - Government choices irrelevant for CB

How does this work?

- Govt. maximizes utility of public good
 - Consumption-saving problem, currency debt portfolio, e_t, π_t
 - Tax policy exogenous, spending in tradables, flex. prices

On Reserve Management

- Mechanism: reserves \rightarrow higher LC debt
- Govt. debt is not a state variable in CB problem (by design)
 - Government choices irrelevant for CB
- CB chooses FX intervention to maximize households' welfare
 - \Rightarrow CB does not need to consider how reserves affect govt. choices

On Reserve Management

- Mechanism: reserves \rightarrow higher LC debt
- Govt. debt is not a state variable in CB problem (by design)
 - Government choices irrelevant for CB
- CB chooses FX intervention to maximize households' welfare
 \Rightarrow CB does not need to consider how reserves affect govt. choices
- Decline in risk premia (and \uparrow LC debt) is by-product of CB policy

On Reserve Management

- Mechanism: reserves \rightarrow higher LC debt
- Govt. debt is not a state variable in CB problem (by design)
 - Government choices irrelevant for CB
- CB chooses FX intervention to maximize households' welfare
 \Rightarrow CB does not need to consider how reserves affect govt. choices
- Decline in risk premia (and \uparrow LC debt) is by-product of CB policy

Extreme separation a useful *starting point*, but need explicit connections for “management” of risk premia

On Reserve Management (ctd)

- Consider a model where govt. chooses LC debt & reserves
 - See Alfaro and Kanczuk (2019) for model with risk neutral investors

On Reserve Management (ctd)

- Consider a model where govt. chooses LC debt & reserves
 - See Alfaro and Kanczuk (2019) for model with risk neutral investors
- Higher LC debt & reserves provide hedging

On Reserve Management (ctd)

- Consider a model where govt. chooses LC debt & reserves
 - See Alfaro and Kanczuk (2019) for model with risk neutral investors
- Higher LC debt & reserves provide hedging
- ...But also increases incentives to devalue

On Reserve Management (ctd)

- Consider a model where govt. chooses LC debt & reserves
 - See Alfaro and Kanczuk (2019) for model with risk neutral investors
- Higher LC debt & reserves provide hedging
- ...But also increases incentives to devalue

Overall effects on risk premia?

On Reserve Management (ctd)

- Consider a model where govt. chooses LC debt & reserves
 - See Alfaro and Kanczuk (2019) for model with risk neutral investors
- Higher LC debt & reserves provide hedging
- ...But also increases incentives to devalue

Overall effects on risk premia?

- Empirically, control for NFA

What explains \uparrow in LC debt?

- Traditional explanation emphasizes higher inflation credibility
 - Ottonello and Perez (2019); Engel and Park (2022)
- Paper emphasizes that the increase in reserves is another contributing factor

What explains \uparrow in LC debt?

- Traditional explanation emphasizes higher inflation credibility
 - Ottonello and Perez (2019); Engel and Park (2022)
- Paper emphasizes that the increase in reserves is another contributing factor
- But what drives the increase in reserves in the first place?

What explains \uparrow in LC debt?

- Traditional explanation emphasizes higher inflation credibility
 - Ottonello and Perez (2019); Engel and Park (2022)
- Paper emphasizes that the increase in reserves is another contributing factor
- But what drives the increase in reserves in the first place?

Evaluate possible hypotheses with joint time-series

Role of multiple equilibria calibration?

- Only fundamental shocks—good equilibrium always selected
- Amplify role of pecuniary externalities?
 - Also strong pec. externalities with unique equilibrium
- Countercyclical FX policies?
 - Also true in unique equilibrium calibration (Arce et al. 2020)

Other Comments

- Paper emphasizes the discretionary nature of optimal policy
 - Time inconsistency for govt. choice for e_t , but not for CB
- No resource costs from reserve accumulation
 - No default risk
 - Lump sum taxes finance govt. losses
 - Intermediaries profits rebated to households

Other Comments

- Paper emphasizes the discretionary nature of optimal policy
 - Time inconsistency for govt. choice for e_t , but not for CB
- No resource costs from reserve accumulation
 - No default risk
 - Lump sum taxes finance govt. losses
 - Intermediaries profits rebated to households
- When profits are shipped abroad, policy no longer time consistent and significant effects on optimal policy (Arce et al. 2022)

Conclusions

- Interesting paper on exciting agenda
- Suggestions
 - Expand/clarify “reserve management” and role of risk premia
 - Tighten connection between model and data
 - Model simulations consistent with model regressions?
 - What drives the joint increase in LC debt and reserves?