From Banks’ Macrofinancing to Endogenous Money Creation under Flexible Prices
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Abstract
Two most celebrated rules in monetary economics, the Friedman rule and the Taylor rule, provide contradictory policy prescriptions. We argue neither of these rules offers a sufficient theoretical foundation for the role of interest rate and fiat money. Closely related to Kumhof, Tsomocos and Wang (KTW 2017), this paper builds a novel Dynamic Stochastic General Equilibrium model to integrate endogenous liquidity creation with financial intermediation under flexible prices, simply by recognising money creation as an outcome of bank financing. Without appealing to nominal rigidities and the Taylor rule, we achieve both short-term and long-term money non-neutrality, and shed light on price level determinacy. We find that, to improve welfare, monetary policy needs to be active while bank capital regulation needs to be accommodative. We find that the first-best allocation under the Friedman rule can not be achieved because banks need a positive interest rate to establish the commitment power of fiat money.

Fiat Money Creation  Credibility  Price-level determinacy  Zero Lower Bound  Money and Banking

Introduction

• The Great Recession has taught us that price stability does not guarantee financial stability (Fig 1)

• After the crisis, despite trillions of base money injected into the financial system, money supply has not kept up and inflation remains subdued while output gap is closing. Conventional DSGE models with financial accelerators find such phenomena puzzling (Fig 1)

• Mainstream monetary models tend to ignore the microfoundation of money through banks and use ad-hoc restrictions to refine equilibria – see critiques by John Cochrane (JPE 2011) and Chris Sims (AER 2013). Financial intermediaries are wrongly modelled as channels of loanable funds, see critiques and correction by Michael Kumhof (2014)

• Given such, this paper builds on KTW (2017) and microfound money creation, i.e. banks creating fiat money through a double-counting operation, or loans creating deposits – a known fact for over a century (Fig 2)

Methods

• Every transaction leads to a change on banks’ balance sheet - Deposits-in-Advance

• Firms cannot issue a ‘promise’ to buy labour before production

• While banks can issue such a promise because positive monetary interest establishes banks’ credibility via an IC constraint

Results

• Loans creating deposits and bank capital (default) are key to money non-neutrality and price-level determinancy with flexible prices

• Microfoundation of monetary interest rate rule derives from the commitment power of money and the credibility of the banking system

- Friedman rule (r=0) obtains only if we assume away moral hazards, first-best is obtained, i.e. frictionless barter economy equilibrium (eq1)

- We argue (r>0) is needed to ensure the credibility of money creation entity in reality, and the resulting welfare loss is justified (eq2)

- Investigates the perils of a prolonged period of Zero Lower Bound (ZLB)

- Conventional theory tends to discuss ZLB only as a constraint of monetary policy (Fig 3)

Results continued

• We argue further that prolonged ZLB is harmful to the real economy, because it reduces banks’ profit margin, in turn their franchise value, potentially violating banks’ IC constraint and resulting in capital misallocation (Fig 4)

Conclusions

• First try to bridge finance and monetary theory

• Friedman rule does not obtain in the presence of moral hazards

• Long period of ZLB is detrimental to growth

• Monetary policy should be active whereas banking regulation accommodative

References

Prototype of this paper: Kumhof, Tsomocos, and Wang (KTW2017), Goodhart, Shubik and Tsomocos (2013), Dubey and Debnath (2003), Bloise, Dreze and Polemarchakis (2003)


Loans creating deposits: Macleod, Schumpeter, Wickless, Minsky...

Other insightful references: Sims (2013 AER), Cochrane (2011 "The surprising power of money")