

Monetary Aggregates and Liquidity in a Neo-Wicksellian Framework

by

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NKM

Links money market rate to CCAPM rate from Euler equation

Observation

Disconnect between money market rate and CCAPM rate

Goal

Introduction of financial institutions in the New Keynesian framework for policy analysis

Parallel

Equity Premium Puzzle: Disconnect between measured returns of assets and CCAPM rate from Euler equation

Rate of return puzzle: Why do agents hold assets that are dominated in return?

Solution

Take into account that assets provide transaction services.

Literature

Finance (e.g. Lagos 2005)

Studies equity premium puzzle and rate of return puzzle in a search based model where assets provide different transaction services

Search based monetary economics (e.g. Berentsen and Monnet (2006), Lester, Postlewaite and Wright (2007))

Optimal monetary policy in a model where assets provide endogenously derived transaction services.

Environment

Continuum of differentiated consumer goods

Fixed durable good. ★

Two sectors: manufacturing sector, banking sector

Large household

Household work for all firms and all banks ★

Assets in the utility function

Assets

Money m : provides liquidity services ϕ_m

Deposits d : provides liquidity services ϕ_d

Government bonds b : provide liquidity services ϕ_b

Riskfree bond a : no liquidity service \rightarrow Rate of return CCAPM

Banking sector

Perfectly competitive

Providing loans is costly: $l_b = Zn_b$

Liquidity management: $d_b = Z_b m_b^\delta b_b^{1-\delta}$ ★

Budget constraint: $l_b + m_b + b_b = d_b + a_b$

Government

Lump sum taxes, consumption g , prints money, issues bonds

Central bank

Open market operations: trade b vs m

Target rate is I_g

Fiscal policy

Target g/y

Tax policy b/y

Results

Government determines liabilities (***liquidity provision***)

$$liab_t = m_t + b_t$$

Central bank's open market operations define effective transaction balances (***liquidity buffering***)

$$d_{b,t} = Z_b m_{b,t}^\delta b_{b,t}^{1-\delta}$$

Disconnect between CCAPM interest rate and target rate

$$I_c - I_g > 0.$$

OMO: Has less real effects than in the standard NKM.

Observation I

Household work for all firms and all banks.

Perfect record keeping is feasible.

Monetary policy in a cashless society (Woodford).

Paper adds financial intermediation and various assets in the **same** environment.

Consequently, these institutions play no welfare enhancing role.

Questions

Is this a valid short-cut to understand the effects of monetary policy?

In particular, since in reality financial intermediation and assets play a welfare enhancing role.

Observation II

Liquidity management: $d_b = Z_b m_b^\delta b_b^{1-\delta}$

Is this reasonable?

Consider cash-less society $m \rightarrow 0$ then $d_b \rightarrow 0$.

Or remove government bonds $b \rightarrow 0$ then $d_b \rightarrow 0$.

Why not the more natural specification $d_b = Z_b * \pi * (m_b^\delta + b_b^{1-\delta})$?

The model does not work.

Observation III

HH must borrow to finance consumption of durable good, $l > \ell$.

The durable good provides no utility.

Strictly welfare decreasing since $l_b = Zn_b$.

Conclusion

Woodford (2006) “the neo-Wicksellian models are coherent as far as they go, but that they are incomplete.”

The paper is an attempt to fill this gap.

It would benefit from some microfoundations wrt to financial intermediation and asset demands.

Welfare analysis