Discussion of Cloyne, Ferreira and Surico "Housing Debt and the Heterogeneous Effects of Monetary Policy"

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Summary of the Paper

- This paper uses micro data and macro shocks to show light on the heteregeneous effect of monetary policy shocks in the UK.
  Dimensions of Heterogeneity: age, housing tenure, mortgage status.
  Individual level data from Family Expenditure Survey are used to construct time series for consumption / income of different types
- Similar exercise was done by Campbell and Cocco (2007, JME), who study heterogeneous effects of **regional** house price shocks for the UK.
- Here the focus on state-of-the-art monetary policy shocks

Main Results

Following a contractionary monetary policy shock, there is a lot of heterogeneity across age and housing tenure status.

1. Young people's consumption falls a lot.
2. Old people's consumption increases
3. Mortgagors' consumption (especially durables) falls a lot
4. Outright owners' consumption (including durables) falls little

The authors interpret these results as evidence that debt and housing market play a key role in explaining the heterogeneity.

Comments/Suggestions

My discussion will focus on three main issues:

1. Do differences in consumption reflect differences in income that are independent of housing and debt, or are they illustrative of something deeper?
2. What type of models are these differences consistent with?
3. What do we learn from the behavior of durables?

Outright Owners, Mortgagors, Renters

Trough of y, c, d after monetary shock (%)

	income	consumption	durables
Outright Owner	$-\mathbf{0.2}$	$+0.1$	$-\mathbf{0.4}$
Mortgagor	$-\mathbf{0.5}$	-0.2	$-\mathbf{1.6}$
Renter	-0.2	-0.1	$+0.3$
Aggregate	-0.4	-0.3	-1.6
Memo	$\Delta R = 0.25,\ \Delta q = -1$		

Outright Owners, Mortgagors, Renters

owner's budget constraint

$$c_t^O + q_t\left(h_t^O - h_{t-1}^O\right) + id_t^O + ik_t^O + b_t = w_t^O n_t^O + R_{t-1}b_{t-1}/\pi_t + rk_t k_{t-1}^O$$

mortgagor's budget constraint

$$c_t^M + q_t\left(h_t^M - h_{t-1}^M\right) + id_t^M + R_{t-1}b_{t-1}/\pi_t = w_t^M n_t^M + b_t$$

renter's constraint

$$c_t^R + id_t^R = w_t^R n_t^R$$

A monetary shock affects all these guys directly (through R) and indirectly (through q, b, w, n, π, rk)

Possible Drivers of the Results

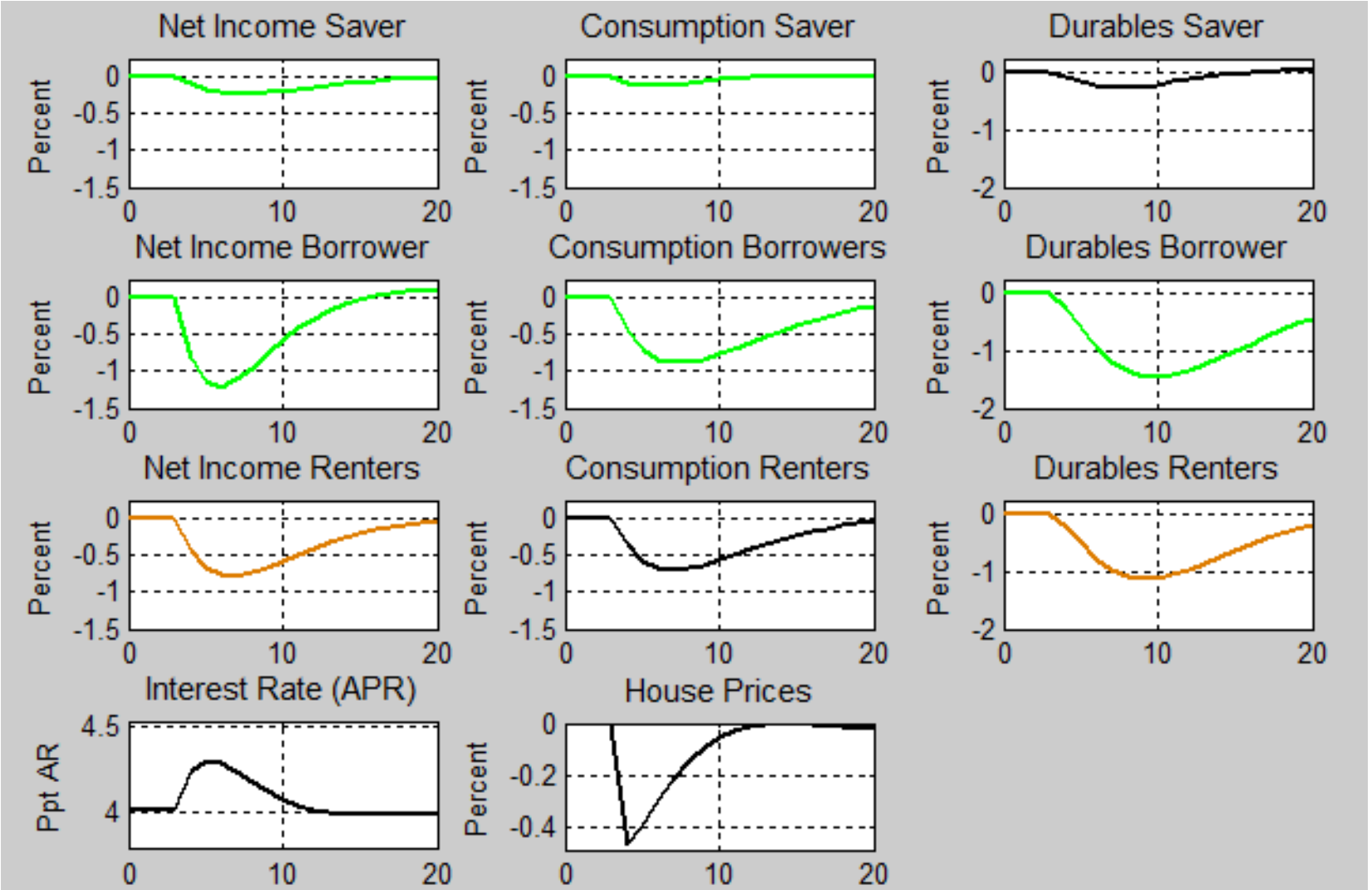
1. Young people or young borrowers have incomes that are more exposed to business cycles (wn effect) ...
2. Young people or young borrowers are exposed to a negative wealth effect from higher R or lower π ($R_{-1}b_{-1}/\pi$ effect)
3. Young people or young borrowers are forced to cut back on borrowing because of lower house prices (b effect)

My reading of the results is that all these channels are at work.
Further work should better disentangle some channels.

What Model are these Dynamics Consistent with?

- New-Keynesian model with collateral constraints and housing
  Two types: Patient and Impatient Homeowners
  Homeowners have preferences over $u(c, h, n)$
- Add durables (d) –> $u(c, d, h, n)$
  Treat durables as sticky price goods.
  Maybe questionable, maybe not
  Motor vehicles and parts 40%, Furniture and household equipment 35%,
  Other (jewelry, photo equipment, goods) 25%
- Add a separate category of renters who do not consume housing and have no assets
- Look at the responses to a 25bp increase in the interest rate

Responses to a Model's Monetary Shock

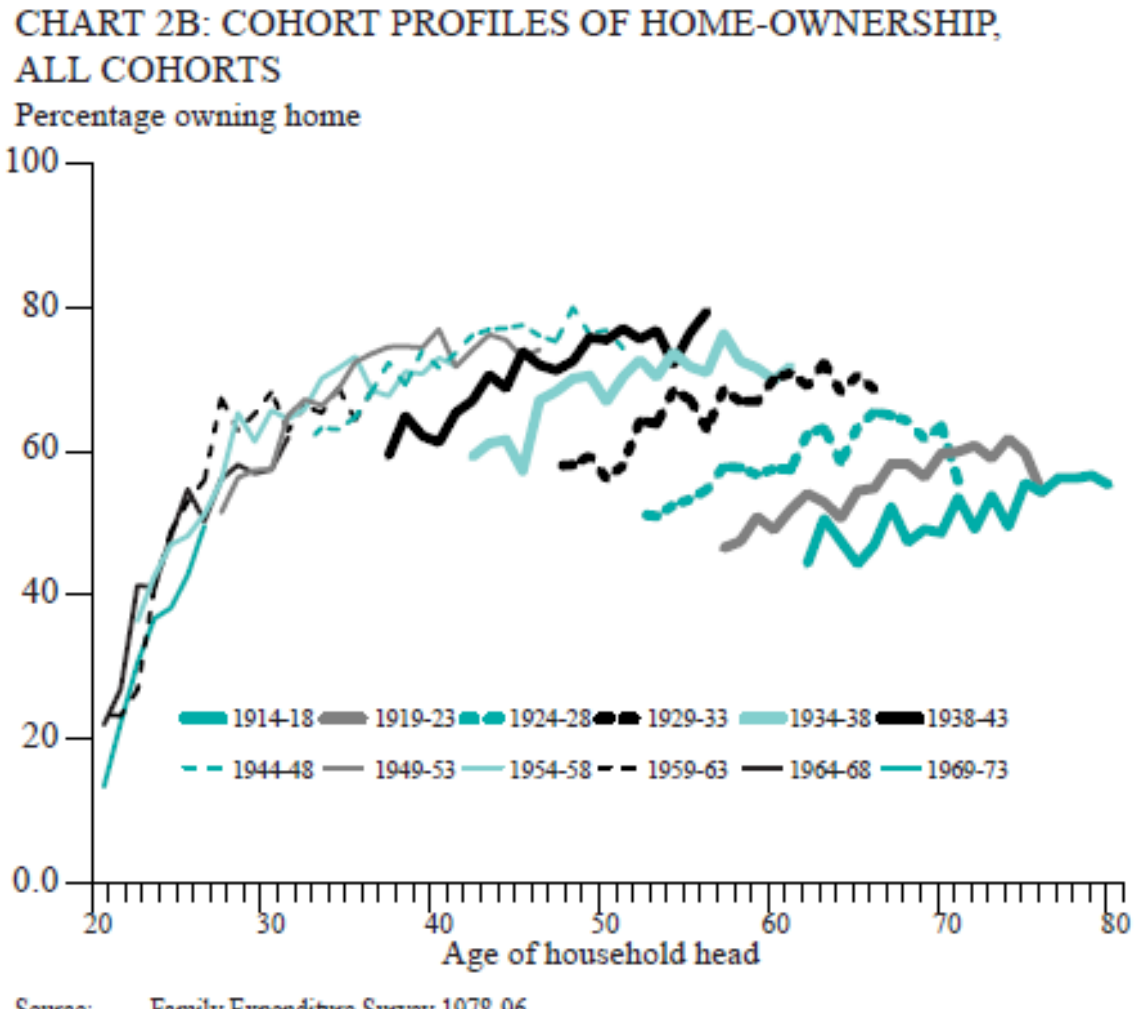


The Model's Verdict

1. The responses in the data from the paper are in agreement with those from a monetary model with debt and collateral constraints
2. The construction of time-series objects that look like model counterparts is an important step forward
3. Better modeling renters could prove useful, but attention should be paid to the details (more below)

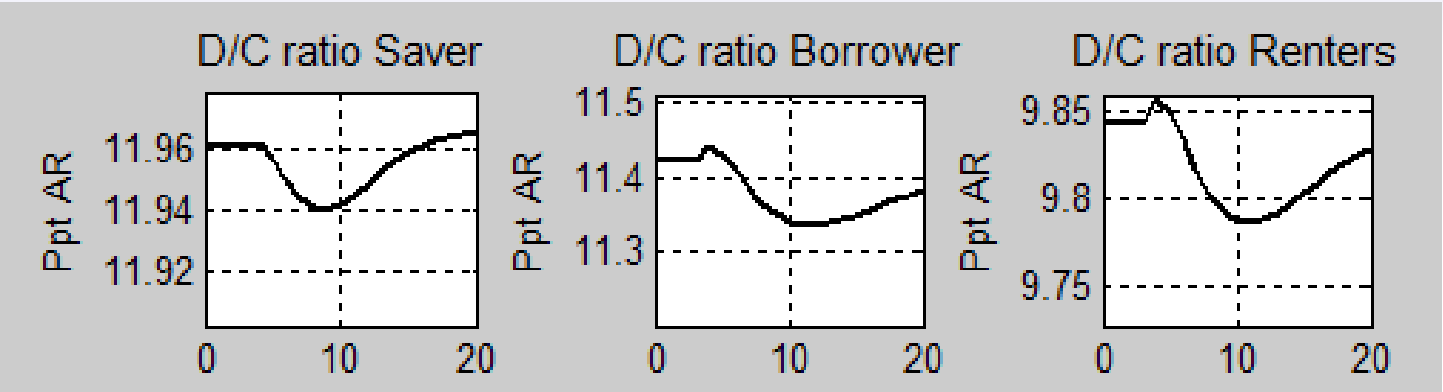
Renters

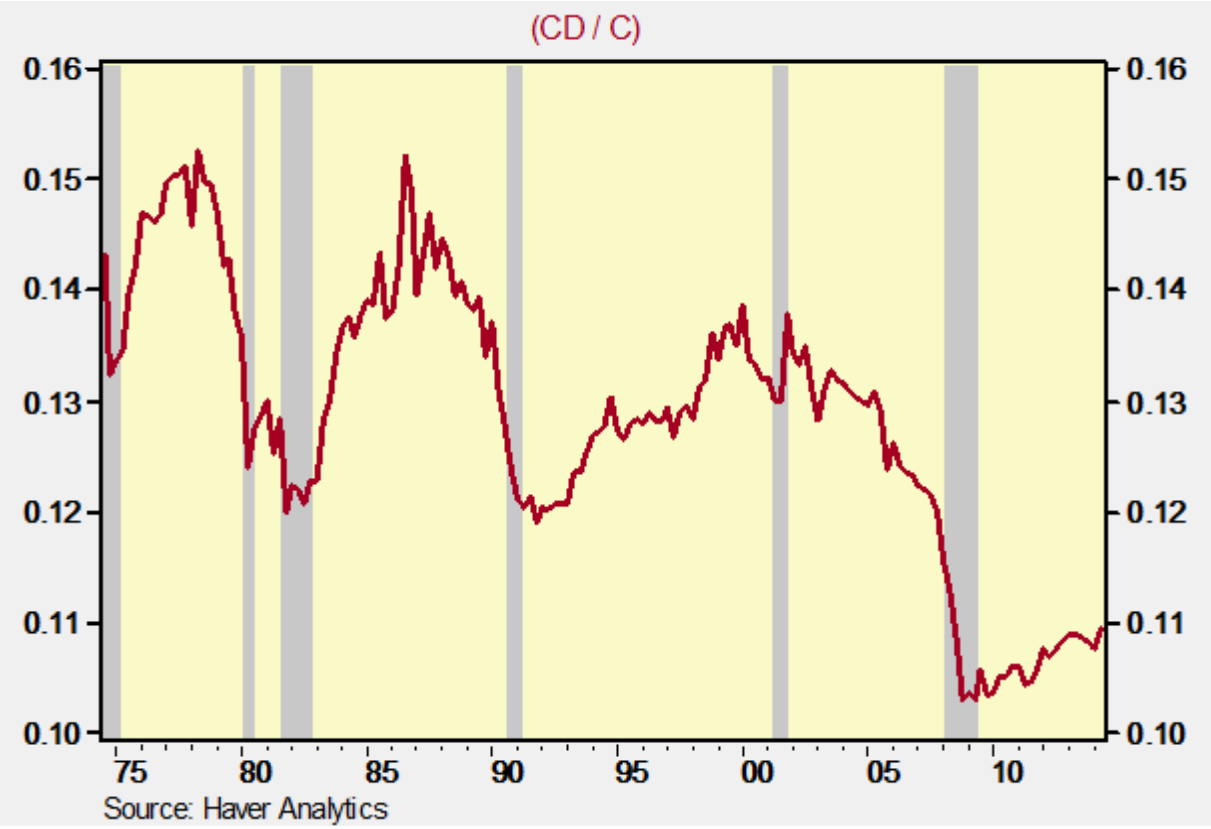
Are renters young constrained (their incomes are very correlated with aggregate state –> similar to mortgagors), or old people living on a pension (income less sensitive to aggregates –> similar to outright owners)?



Durables

- More work should be done to tease out the role of durables
- Many durables (cars) are semi-flex price goods that often require financing in order to be bought
- Just comparing size of responses is little informative (flow vs stock): after all, d/c should fall since the user cost of durables rises after a monetary shock
- Durables are more volatile in the data


D/C ratio Saver
Ppt AR
11.96
11.94
11.92
0
10
20
D/C ratio Borrower
Ppt AR
11.5
11.4
11.3
0
10
20
D/C ratio Renters
Ppt AR
9.85
9.8
9.75
0
10
20


(CD / C)
0.16
0.15
0.14
0.13
0.12
0.11
0.10
75
80
85
90
95
00
05
10
Source: Haver Analytics

Conclusions

What We Learned Already from This Paper

1. Monetary Policy Does Have Heterogeneous Effects
2. We can use the micro data to better inform macro models
3. We can use micro data to learn about the transmission mechanism

What We Want to Learn from Future Versions

1. Is it Income or Housing and Debt?
2. Should we Abandon Single Agent Models?
3. Are Durables Important?