Discussion of "Stock Market Returns and Consumption" by Marco Di Maggio, Amir Kermani & Kaveh Majlesi

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  - Observe detailed portfolio composition (i.e. individual stock holdings) not consolidated balance sheets
- What they find:
  - MPC out of capital gains falling in wealth (from about 0.13 to 0.05)
  - High MPC out of dividends across the distribution

Why we should care

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  - Paper can provide estimates since has entire population
- Monetary policy, fiscal policy, aggregate shocks, all imply redistribution of resources across households
  - Effect of policy depends on the *covariance* between the implied redistribution and the distribution of MPCs
  - Almost all models (RANK/TANK/HANK) effectively assume the wealthy behave approx as if RA
- Can provide key evidence to help discipline our macro models

Wealth Effects on Consumption

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- Problem: changes in wealth due contain endogenous and exogenous components

$$\begin{aligned} W_{it} &= \sum_j W^j_{it} = \sum_j p^j_t X^j_{it} \\ \sum_j W^j_{it} &= \sum_j R^j_t W^j_{it-1} + Y_{it} - C_{it} \end{aligned}$$

where X^j are holdings of asset j with price p^j, and $R^j = \frac{p^j_t}{p^j_{t-1}} + d^j_t$.

Decomposing Wealth Effects on Consumption

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&= \Delta W_{it}^{Endo} + \Delta W_{it}^{Exo}
\end{aligned}$$

- ΔW_{it}^{Endo}: endogenous wealth component due to shift in portfolio
- ΔW_{it}^{Exo}: exogenous change due to prices
- Can similarly decompose dividend returns

Decomposing Wealth Effects on Consumption

- Wealth effect on consumption response to exogenous changes in wealth. Suggests the following estimator:

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&= \Delta W_{it}^{Exo,Exp} + \Delta W_{it}^{Exo,Un}
\end{aligned}$$

Decomposing Wealth Effects on Consumption

- One could then estimate

$$\Delta C_{it} = \gamma_t + \beta^{Exp} \Delta W_{it}^{Exo,Exp} + \beta^{Un} \Delta W_{it}^{Exo,Un} + Z_{it}' \alpha + \epsilon_{it}$$

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- Compare to specification the authors use

$$\begin{aligned} \Delta C_{it} &= \gamma_t + \beta \Delta \hat{W}_{it} + Z_{it}' \alpha + \epsilon_{it} \\ \Delta \hat{W}_{it} &= \gamma_t + \zeta \Delta W_{it}^{Exo} + Z_{it}' \alpha + \nu_{it} \end{aligned}$$

- Because using administrative data, no information on expectations, so have to combine expected and unexpected components of the change in wealth

Comment I: Specification

$$\begin{aligned}\Delta C_{it} &= \gamma_t + \beta \Delta \hat{W}_{it} + Z'_{it}\alpha + \epsilon_{it} \\ \Delta \hat{W}_{it} &= \gamma_t + \zeta \Delta W^{Exo}_{it} + Z'_{it}\alpha + \nu_{it}\end{aligned}$$

- ΔW^{Exo}_{it} is clearly relevant for ΔW_{it}, but does it satisfy the exclusion restriction?
- Do exogenously changes in wealth only change C via the endogenous changes in wealth?
- Simple buffer stock model where asset price follows random walk:
  - Consider innovation to stock price $\Rightarrow \Delta W^{Exo}_{it} = \Delta W^{Exo,Un}_{it}$
  - Consumption changes by $MPC_{it} \times \Delta W^{Exo}_{it}$
  - Wealth changes by $(1 - MPC_{it}) \times \Delta W^{Exo}_{it}$
  - Suggests β biased upwards by $\frac{1}{(1-MPC_{it})}$

Comment II: Normalization

- Authors normalize variables by average of three lags of disposable income
  - Disposable income includes realized capital gains, interest and dividends
  - Not equivalent analogue to permanent income in buffer stock models
- Buffer stock models implicitly assume hometheticity in permanent income
- Empirically, savings rates increasing in income (e.g. De Nardi, French & Jones 2009, Krueger, Mitman & Perri 2016, Straub 2018...)

Comment III: Dividends

- Authors find much larger MPCs out of dividends than capital gains
- Mention dividend changes more persistent $\Rightarrow$ suggests picking up $\Delta W^{Exo,Exp}$, the expected change in wealth component, which is not the wealth effect
- Could it also be a story of rational inattention?
  - Imagine dividends get paid in cash to bank account
  - Households may rationally not pay attention to brokerage account, while paying attention to bank account
  - How are dividends distributed? Reinvested?

Comment IV: Smaller comments

1. Authors really estimate an MPS, not an MPC. Includes durables, home improvement, etc

2. Why not include (albeit limited) demographic controls? MPC, e.g. should time varying with age

3. Unclear why to control for lagged changes in wealth

4. Could test for liquidity constraints by estimating separately for positive and negative changes in asset prices

Concluding thoughts

- Overall, very nice paper exploiting unique data set to go after important empirical moments
- Provides crucial missing evidence on consumption behavior of the top end of the wealth distribution
- Looking forward to the next version