Equity Premium Puzzle, Expectations and Covid-19: Evidence from Germany

– Next Steps –

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My 2nd year paper showed that:

- Lack of interest/ information very important, but not at heart of our models. Other *softfactors as well*. I can measure the (relative) importance
- Active vs Passive vs Non-participants vs Non-adjuster. Especially active vs passive buyers has been overlooked. How stable is each type?
- Young, wealthy invested: Expectations and time important. Covid related?

Next steps

2 Ways forward:

1. FIRE Model: Explicitly calibrating returns, participation, and adjustment costs
2. Switcher Model: Switching between non-participants, active and passive buyers

Agents in a FIRE model *'know'* the following

- Individual parameters:
  - CRRA
  - Discount Factor
  - Income dynamics
- Aggregate parameters:
  - Return and Volatility
  - Riskfree rate (alternative)
  - Participation and adjustment costs (if added)
- Complete history of returns, volatility, income realizations
- All choices: eg consumption and wealth paths

What have other models added? RETURNS

- Guiso, Sapienza, and Zingales (2008):
  Return = observed return + trust/distrust → Dispersion of returns by trust
- Malmendier and Nagel (2011):
  Return = function of age → Dispersion of returns by cohort
- Mateo:
  Return = function of beliefs/education → Dispersion of returns by education and individuals
- Arrondel, Calvo Pardo, Giannitsarou, and Haliassos (2022):
  Return = function of peers → Dispersion of returns by network

What have other models added? Costs

- Vissing-Jorgensen (2002): Per period stock market participation cost, fixed cost of trading, variable cost of trading stock

Additional factors:

- Information eg Awareness: Guiso and Jappelli (2005)
- Financial literacy: van Rooij, Lusardi, and Alessie (2011)
- Participating peers: Brown, Ivković, Smith, and Weisbenner (2008)
- Not interested eg Disliking thinking about it: Shapiro and Burchell (2012)

What can I add?

- Put them all together. Finding a functional form for returns, participation, and adjustment costs
- Return(beliefs, trust, peers, experience)
- Participation cost(Information, Literacy, Peers, Interest, Time)
- Adjustment costs(Peers, Time, Income)
- Calibrate total cost and value of each component
- Make counterfactual: aka let's shock something

What makes agents switch types?

- Types: non-participants vs non-adjuster vs active vs passive buyer
- We know demographics and reasons for each group
- BUT: How stable is each group? How frequent to agents switch?
- Participation to non-participation: 20% drop out in 2 year period (Brandsaas (2021))
- 25% Adjust in 2 year period (Bonaparte, Cooper, and Zhu (2012))

Data I would need for this

Problem with existing data:

- Frequency: SCF is biannual
- Change in market value does not mean people adjusted the portfolio

What do I need?

- High frequency data: Create a high frequency panel and follow each over a year?
- Retrospective: Ask agents when and why they bought. Eg retrieve a history by questionnaire

	Pros	Cons
FIRE Model	+ Close to litereature + Combining already existing models makes start easier + Comparison of factors	- Limited data to actually calibrate - Finding the 'right model' is hard
Switcher Model	+ Interesting gap in the litereature + Cool model implications + Could get help from Yujung Hwang	- Very time intensive and costly to conduct interview - Retrospective is biased, but panel is costly

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