

Galaasen and Raja (2022): The Dynamics of Stock Market Participation

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Motivation: Optimal Household Portfolio Choice

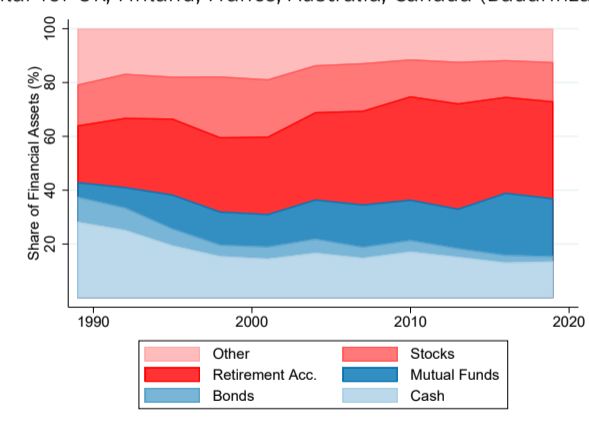
- **Household Asset Allocation**

- Median US household: 30% financial assets (70% nonfinancial assets incl. housing, vehicles); similar for UK, Finland, France, Australia, Canada (Badarinza et al, 2016)

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Data: SCF

→ (Direct) “stock market participation puzzle”, but overall rise in risky asset share

This Paper

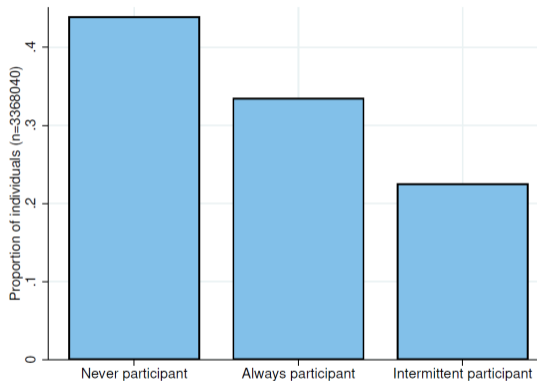
- Stock market entry and exit - drivers and rationalization
- **Key findings:**
 - Fact: evidence for intermittent stock market participation (Norwegian data, 1993-2018)
 - Mechanism: Experience effects that affect beliefs about stock returns
 - Quantification: Life-cycle portfolio choice model

This Paper

- Stock market entry and exit - drivers and rationalization
- **Key findings:**
 - Fact: evidence for intermittent stock market participation (Norwegian data, 1993-2018)
 - Mechanism: Experience effects that affect beliefs about stock returns
 - Quantification: Life-cycle portfolio choice model
- **Discussion points:**
 - ① Mechanism - micro-level evidence for experience effects vs. other channels
 - ② Model emphasis
 - ③ Model payoff / welfare

Evidence for Intermittent Stock Market Participation

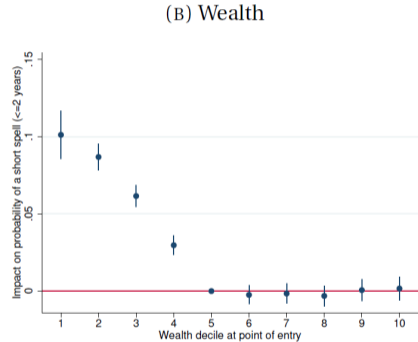
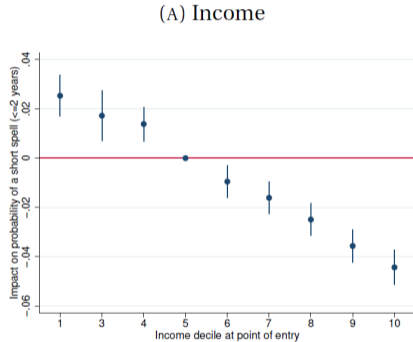
FIGURE 2: Types of individuals



→ Adding intermittent to always participants boosts participation by +60%, raising participation to close to 60%

Probability of Early Exit Decreases with Income and Wealth

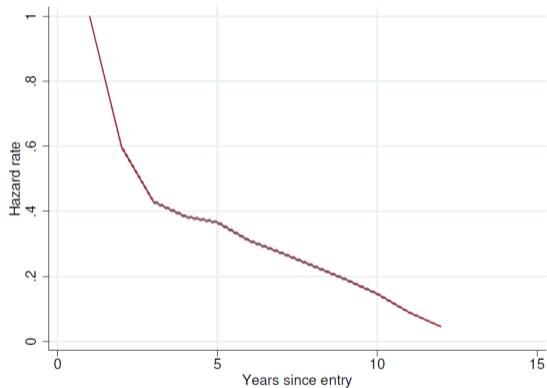
FIGURE 6: Impact of income and wealth on the probability of a short spell



- Other factors: gender, age, direct stock ownership itself; small negative effect of college degree, positive for single

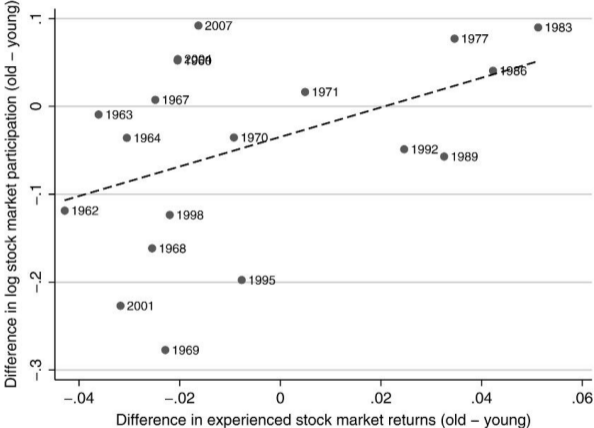
Decreasing Hazard of Exit

FIGURE 8: Baseline hazard function for exit from participation



- Initially high hazard, steep decline over first few years after entry

Comment 1: Mechanism - Micro-Level Evidence for Experience Effects On Exit/Re-entry?



Source: Malmendier and Nagel, 2011

Comment 1: Mechanism - Micro-Level Evidence for Experience Effects (cont'd)?

- More granular analysis - e.g. regression analysis including weighted returns
 - Assume fixed weighting scheme of returns (care more about recent returns) and include, e.g. in Table 2
 - Simple: exploit return history of old vs. young
 - More variation: returns across portfolios across households?

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 - Simple: exploit return history of old vs. young
 - More variation: returns across portfolios across households?
- Experience vs. disposition effect (vs. diagnostic expectations ...) ?
 - Sell winners too early, hold on to losers for too long (Shefrin–Statman 1985); closing the account (narrow framing) to obtain/avoid “realization utility” (Barberis–Xiong 2009, 2012)
 - Any nonlinear effects around 0? Direct exit after losses or avoiding to realize losses?
 - Vs. series of negative returns?
 - Calvet et al (2022): securities that protect households from losses can raise participation

Comment 1 (cont'd): Mechanism - Liquidity Shocks?

- Existing checks
 - Authors check for unemployment spells, divorce, house purchase, income drops
 - + No withdrawal from other safe liquid asset holdings
- Additional checks
 - Show event studies around liquidity events, and exit/entry (liquid asset holdings, stock holdings)? (Aastveit et al 2022)
 - High replacement rates in Norway? Idiosyncratic liquidity needs, other durables purchases?

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 - High replacement rates in Norway? Idiosyncratic liquidity needs, other durables purchases?
- Shouldn't rule out some interaction effect with liquidity needs?
 - E.g. Choukhmane et al (2022): early withdrawal from retirement accounts driven by liquidity needs & explained by household composition & parents
 - Heterogeneous effect across wealth distribution seems strongly suggestive of a liquidity motive for exit? (unless financial sophistication/experience effects nonlinear in wealth)

→ Guide model emphasis and quantification exercise (“model payoff”)

Comment 2: Life-Cycle Portfolio Choice Model

- Model I: Cocco-Gomes-Maenhout (2005) with fixed and per-period participation costs
 - Requires high per-period participation costs to generate short spells (2.8% of PI or \$1,300)
 - Exit only in early part of life / for low-wealth households

Comment 2: Life-Cycle Portfolio Choice Model

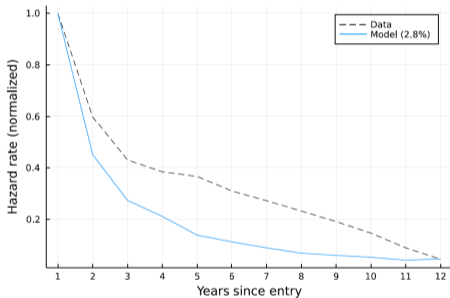
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 - Exit only in early part of life / for low-wealth households
- Model II: Model I + experience effects (+ noise in beliefs)
 - Households update belief about stock returns $\bar{R} \in \{\bar{R}_h, \bar{R}_l\}$ based on experienced returns
 - Generates short spells with more realistic participation costs
 - Notes on beliefs:
 - Calibration: $\bar{R}_h = 3.14\%$ (historical mean), $\bar{R}_l = -2\%$
 - Can only be too pessimistic - generates under-participation, but shuts off over-participation?
 - Require noise (baseline $\sigma_v = 1\%$) to generate re-entry

→ Compare ability of model I and II to “match moments” (“model horse race”)

Comparing Model-Implied Exit

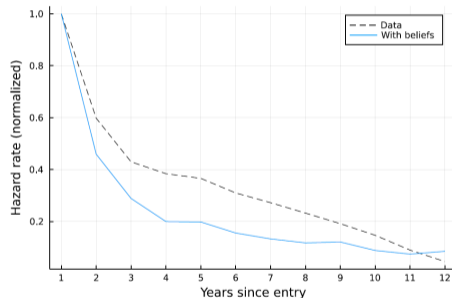
Model I

FIGURE E.22: Model without beliefs: hazard rate for exit



Model II

FIGURE 16: Model with beliefs: hazard rate for exit

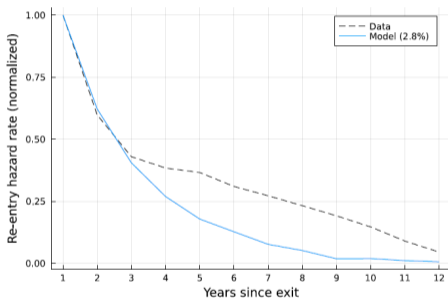


- Model II (marginally) improving on exit in later years, but needs noise to increase steepness early on

Comparing Model-Implied Re-entry

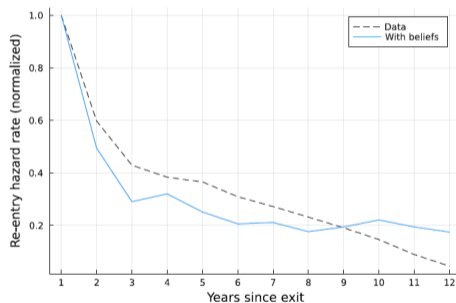
Model I

FIGURE E.25: Model without beliefs: hazard rate for reentry



Model II

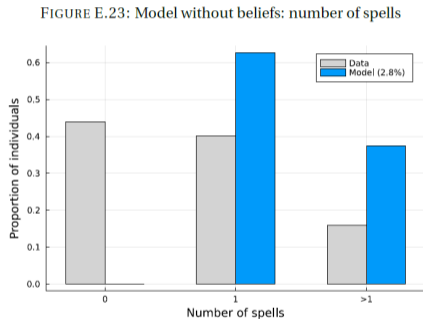
FIGURE 19: Model with beliefs: hazard rate for reentry



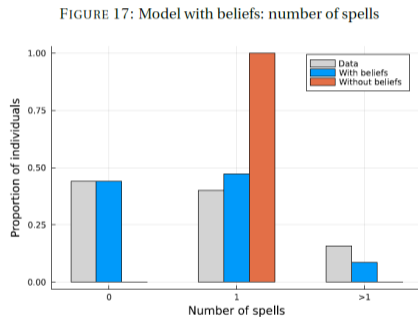
- Model II: more re-entry in later years compared to Model I (wealth accumulation + noise)

Comparing Number of Spells

Model I



Model II



- Model I not doing too badly

Comment 2: Life-Cycle Portfolio Choice Model (cont'd)

- Model horse race: I vs. II?
 - Need some force to generate exit: pessimistic beliefs, high participation costs
 - High participation costs early on could be consistent with some learning costs (more “costly” to participate if experiencing losses?)
 - Or unobserved liquidity needs / opportunity costs?
 - Need some force to generate re-entry: wealth accumulation over time + noise in beliefs
 - In the model, beliefs interact with liquidity/wealth to generate spells
 - Right now, noise in beliefs a bit of a free parameter to generate churn
- Alternative model emphasis: quantification of different channels?
 - Behavioral bias (experience effects, others)
 - Wealth/liquidity effects

Comment 3: “Model Payoff” & Welfare

- Differentiating between liquidity and other mechanisms matters for policy
 - Behavioral bias: Reduce liquidity of stock holdings? Encourage/subsidize commitment?
 - Liquidity shocks: Consumption smoothing vs. retirement wealth building
 - Run counterfactuals with different policy interventions, see how welfare benefits vary depending on short spells driven by bias vs. liquidity

Comment 3: “Model Payoff” & Welfare

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 - Run counterfactuals with different policy interventions, see how welfare benefits vary depending on short spells driven by bias vs. liquidity
- Campbell-Calvet-Sodini (2007): under-diversification vs. non-participation
 - Lower welfare cost of non-participation if non-participants are inefficient investors
 - Could check portfolio return and volatility of intermittent participants?
- Different effects for stock vs. mutual fund investors?
 - Temporary stock market participation: experience good (e.g. r/WallStreetBets)

Conclusion

- A really neat JMP: novel evidence + proposed mechanism + model
- Future revisions: mechanism + model payoff/welfare
- Best of luck!