Comments on "Asset Market Participation and Portfolio Choice"

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Why this topic is important

- Life-cycle choices of consumption and labor supply are rather well understood

- More recently, models can replicate also distributional aspects (i.e. large wealth and income dispersion)

- Portfolio choice is – relative to ℓ, c – a puzzle
  - No good data
  - Mostly stylized models

- Contribution of paper
  1. High quality data
  2. Introduction of new mechanism

- Very nice paper, a pleasure to read

- High quality administrative data from Norway (panel, 15 years)

- Careful estimation of life-cycle
  - stock market participation
  - stock investment share

  $\Rightarrow$ suggests that two different economic forces play a role

- Main findings
  - Participation probability hump-shaped, peaks around 50
  - Risky share highest when young (50%), declining afterwards

The paper in a nutshell: the model

- Relatively "standard" life-cycle portfolio choice model
  - Consumption-saving choice with borrowing constraint
  - Labor supply exogenous but income risky
  - Portfolio choice with two assets
  - Participation in risky assets has a
    - fixed per period cost (keeps agents out)

$$\mathbb{E}[i^r] = \frac{(i^s + \mathbb{E}[rp]) \times Inv^r - FixC}{Inv^r} \lessgtr i^s$$

  - and a small tail risk of losing everything (kicks agents out).

$$
\begin{aligned}
V_t = u(c) \quad &+ p \times \mathbb{E}[V_{t+1}(Inv^r + Inv^s; Y)] \\
&+ (1 - p) \times \mathbb{E}[V_{t+1}(0 + Inv^s; Y)]
\end{aligned}
$$

- Paper successfully replicates
  - Life-cycle participation in stock market
  - Conditional share of stocks in portfolio

Comments (1)

- How to reconcile model with broader portfolio choice?
  - Large share of household wealth in housing ($\sim 2/3$)
  - Share of housing in wealth decreasing during life-cycle
  - Evidence that housing crows out stocks (Chetty & Szeidl, 2012 but also FR, FI data)
  - What matters is not net wealth but "to distinguish between home equity wealth and mortgage debt". Elasticity of
    - stock share to mortgage debt (home equity) -0.3 (0.4)

- Housing investment as a substitute to risky investment?
  - Life-cycle pattern of housing ▸ HFCN Statisics
  - Model below data early in life ▸ Results

  $\Rightarrow$ Control for housing, mortgages, etc. (if possible)

Comments (2)

- Calibration of β low (0.85) & γ high (~ 10)
  - what is the life-cycle pattern of consumption & assets?
  - $\beta(1+r)\pi < 1 \Rightarrow$ bulk of consumption early in life
  - little asset accumulation (little wealth dispersion)
  - insurance motive (deferred consumption) weakened
- Financial literacy and stock market participation
  - Separate calibration of wealth distribution?
- Risk premium
  - Include also foreign equity (5-10% elsewhere) ▸ Survey Mehra
  - Model below data early in life
  - Sensitivity is an issue in the "equity premium puzzle" literature
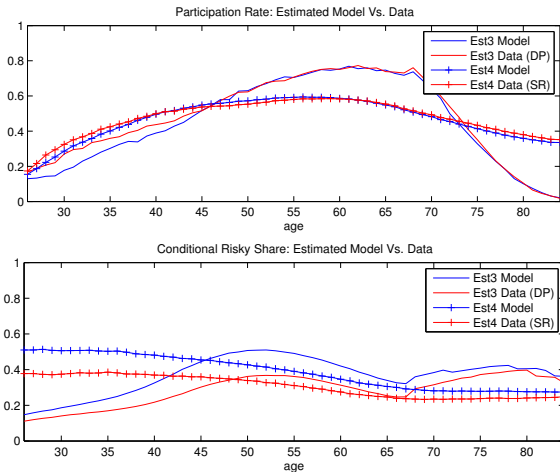- Estimation of labor efficiency profiles similar to portfolio decision?

Table : Household Balance Sheet

	Mortgages		Fin. Asssets	
	p(Mortgage)	Debt Share	Deposit Share	p(Stocks)
16-34	20.1	67.0	56.6	6.7
35-44	33.6	71.1	43.3	10.1
45-54	26.5	60.2	40.4	11.2
55-64	16.8	53.1	39.0	13.3
65-74	8.7	46.9	44.0	10.4
75+	1.9	43.4	46.0	7.6

Source: ECB Statistical Papers No. 2, Tables 2.6, 3.1, 3.3

- Young households keep funds for downpayment in save assets

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Model vs. Data

Participation Rate: Estimated Model Vs. Data

Conditional Risky Share: Estimated Model Vs. Data

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Table 2.1 US equity premium using different data sets.

Data set	Real return on a market index (%) Mean	Real return on a relatively riskless security (%) Mean	Equity premium (%) Mean
1802–2004 (Siegel)	8.38	3.02	5.36
1871–2005 (Shiller)	8.32	2.68	5.64
1889–2005 (Mehra–Prescott)	7.67	1.31	6.36
1926–2004 (Ibbotson)	9.27	0.64	8.63

Table 2.2 Equity premium for selected countries.

Country	Period	Mean real return		Equity premium (%)
		Market index (%)	Relatively riskless security (%)	
United Kingdom	1900–2005	7.4	1.3	6.1
Japan	1900–2005	9.3	−0.5	9.8
Germany	1900–2005	8.2	−0.9	9.1
France	1900–2005	6.1	−3.2	9.3
Sweden	1900–2005	10.1	2.1	8.0
Australia	1900–2005	9.2	0.7	8.5
India	1991–2004	12.6	1.3	11.3

Sources: Dimson et al. (2002) and Mehra (2007) for India.

Source: Mehra (2008)

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