Can Security Design Foster Household Risk-Taking?

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Summary

- Central Research Question:
  - Low stock market participation
  - Does security design matter? How?
  - Policy implications
- Highlights:
  - A novel angle: Capital Guaranteed Products (CGP) with non-linear payoff design
  - Fantastic Data: universe of CGP and household financial holdings data in Sweden, 2002-2007
  - Empirical analyses and theoretical modelling

Main Findings

- Empirical setting: the introduction of CGP in Sweden
  - Treatment group: households ever participated in CGP
  - Control group: non-participating households matched on risk taking level
  - Measure risk taking behavior by an index based on earned equity premium
  - A strong pattern of post-introduction risk-taking for the treatment group
  - More pronounced for households less willing to take risk ex ante
- Develop life-cycle model to reconcile the empirical findings
  - Preference based: both loss aversion and narrow framing
  - Belief based: pessimistic beliefs
- Welfare gains and policy implications

Replicating Capital Guaranteed Products

- Capital Guaranteed Products: retail investment products with
  - Exposure to the upside potential of risky assets
  - Downside risk protection (up to 100% of principal investment amount)
- Can be viewed as
  - (zero coupon) bond
  - Call option (on single asset, or index)
- Accessible to households
- Solution: security design, or information/transaction costs, or financial literacy?
  - Different policy implications

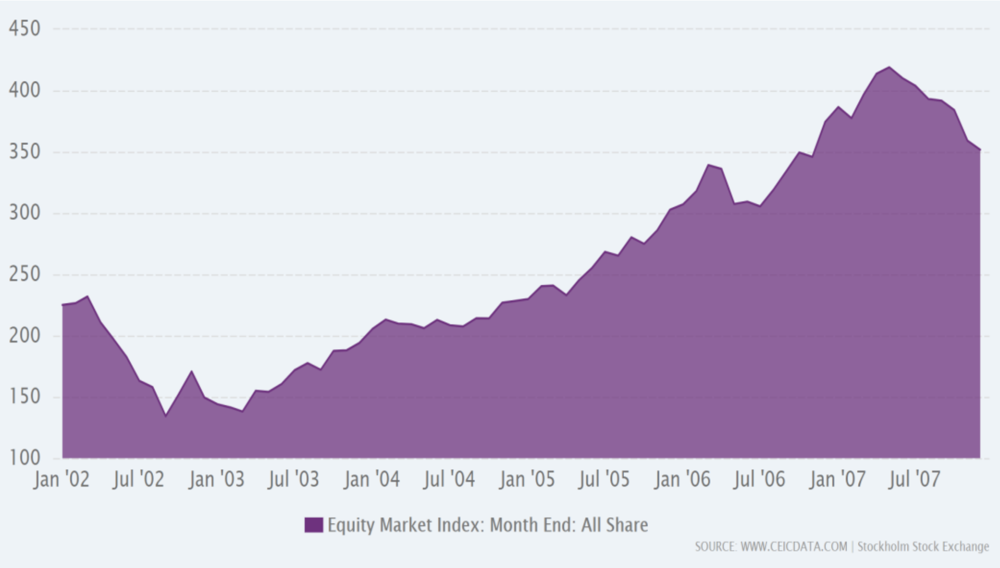
CGP vs. Equity Mutual Funds

- Issuers of CGP bear more risk
  - (Full) protection of invested capital and shared upside potential of risky assets
  - Exposed to downside risk
- In return, issuers need to
  - Lower their risky asset exposure
  - Charge a higher markup
- The paper documents, in their sample,
  - CGP offer slightly lower risk premium than mutual funds (2.7% vs. 3.3%)
  - Markup: 1.6% for CGP vs. 2.1% for mutual funds

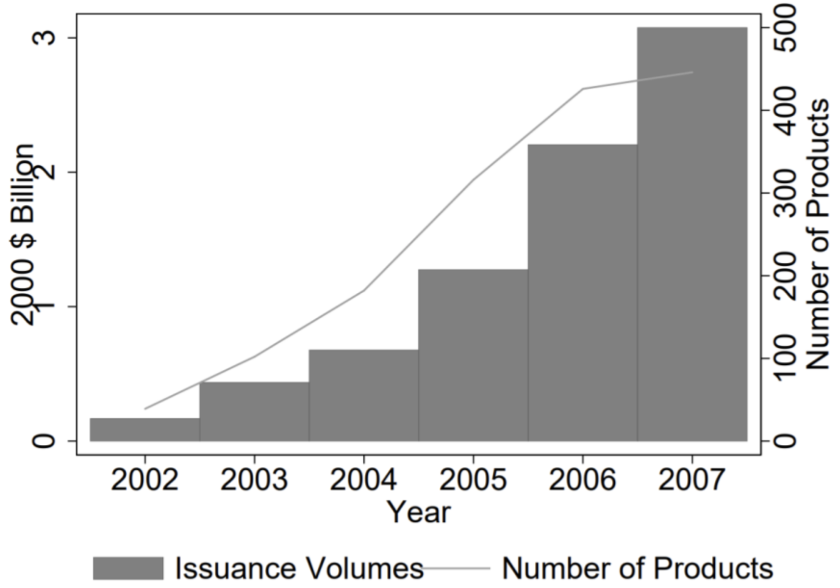
Possibilities…

- More CGPs are issued when the market is booming

OMX Stockholm All Share index



Yearly Issuance of CGP in Sweden



- Do CGP incur other types of transaction costs?
  - Commissions or other fees charged from the sales channel

Supply-side Consideration

- Bank's incentive to promote CGP unclear
  - CGPs are risky and less straightforward
  - Cross sectional variation in prices and other costs of CGPs
    - Across products & banks (with different sizes/market powers)
  - More information on the supply-side incentives will be helpful
- Challenges to banks' risk management
  - Risks borne by banks may increase financial fragility during the crisis
  - In sample, CGP investment beta is higher than mutual fund beta
- Policy implication

Identifying the Causal Effect of CGP

- Causal effect of the introduction of CGP on household risk taking
- Identification challenge: CGP participation can be endogenous to unobserved demand factors
- Solution: IV using bank supply shocks
  - Bank's CGP issuance per depositor, or
  - Idiosyncratic bank supply shocks by filtering out demand effects and trends
  - Estimated in estimation sample (1/2) and run 2SLS on the other half sample
- Supply of CGP is bank's choice
  - Maybe correlated with bank characteristics that affect CGP participation and household risk taking
  - Banks with more aggressive sales and marketing can better push both new products (CGP) and other risky products (e.g., mutual funds)

Risk Taking Behavior

- Risk taking index
  - Novel measure based on earned risk premiums of assets in the portfolio
  - Continuous measure that summarizes the overall risk taking inclination
- Would also like to see some direct evidence on the change in risk taking behavior
  - Do they increase # of risky assets in their portfolio in addition to CGP? Or
  - Do they change the asset composition of their portfolio (e.g. more towards equity, or towards securities with different beta within the same asset class)?
  - Straightforward, easy to interpret
  - Enrich our understanding of the effect of CGP on risk taking behavior
- CGP risk could be overestimated during 2002-2007 due to high correlation with the stock market movements?