Interest Rates, Competition, and Complexity: Demand and Supply of Retail Financial Products

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Low Rates and Financial Innovation

- Low interest rates linked to important demand and supply effects in retail financial markets:
  - Yield-seeking behavior among retail investors (Lian et al., 2019)
  - Increase in complex products catered to households (Gilliver and Vallée, 2017)
  - However, interplay between demand and supply largely uncoupled
- Opposing views on financial innovation:
  - Beneficial (Ross, 1976; Calvet et al., 2022)
  - Exploitative (Henderson and Pearson, 2011; Li et al., 2018; Vokata, 2021)
  - Risk-generating (Gennaioli et al., 2012)
- Opposing views on interaction between strategic obfuscation and competition:
  - Competition increases complexity to shield rents (Coulon, 2009)
  - Competition decreases gains from obfuscation (Coulon and Manso, 2011)

Barrier Reverse Convertibles in Switzerland

- Sharp increase in outstanding volume of most popular retail investment product, so-called Barrier Reverse Convertibles (BRCs), during times of low interest rates
- Shift from Single-Underlying BRCs (Single) to Multi-Underlying BRCs (Multi) paralleled by decreasing market concentration

Barrier Reverse Convertibles in Switzerland

- Multi are more complex than Singles as their worst-of payoff profile depends on the worst-performing underlying out of multiple rather than just one stock

Why Switzerland?

- Therefore, Multis generally offer higher coupons & security buffers (lower barriers) than Singles
- This is illustrated here with two exemplary BRCs (issued on May 26, 2011, by same issuer)
- Whether these adjustments are sufficient to compensate for Multis’ higher risk is an empirical question

The Role of Interest Rates (Demand Side)

We ran an incentivized laboratory experiment with finance students:

- Low interest rates equately increase subjects willingness to invest in both Singles and Multis
- Subjects overvalue Multis compared to Singles because they underestimate complex, i.e., multi-dimensional down-side risk
- Level of interest rate does not affect relative willingness to pay for Multis over Singles, thus demand effects driven by low rates are unable to explain sharp increase in product complexity

The Role of Interest Rates (Demand Side)

We apply option pricing to estimate issuer margins (markups) at product issuance

- Controlling for granular fixed effects, average margins are 3.5 pp. higher for Multis than for Singles
- Margins decrease over time; however, this effect is much stronger for Singles (approx. 22bp per year, p-value < 0.001) than for Multis (approx. 6bp per year, p-value = 0.611)

Implications: Excessive Risk-Taking

- With sufficient complexity and insufficient investor learning, product differentiation increases search costs and reduces price pressure from competition
- Over time, we see a consistent increase in the variety of underlying combinations offered by Multis

Summary

- Low (real) interest rates create room for exploitative financial innovation, which, via competition-driven increase in product complexity, leads to uncompensated risk-taking by households
- Reason to be worried? In November 2019, structured investment products received approval of Swiss pension supervisory authority