Discussion of

"Automation and Inequality in Wealth Management"

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Summary

- Great paper. I wish that I had written it.
- My comments will focus on
  - Placing paper into broader literature
  - Challenges that arise when trying to extrapolate from treatment-on-treated (TOT) in selected sample of investors to intention-to-treat (ITT)
  - Challenges that households face when trying to estimate value-added by (costly) financial products

Motivating Empirical Fact

- Higher-income households save more and earn higher returns on investments than lower-income households

$$\leftarrow\rightarrow$$
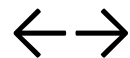
  Lower-income households tend to save too little and invest their savings in suboptimal portfolios

- **Differences in savings rates and investment returns directly contribute to wealth inequality**

Broadest Possible Research Question

- **Which policies and technologies are "best" at improving savings and investment decisions of middle-class and lower-class households?**
    - Need to take into account the costs and benefits to households *(e.g., financial education is beneficial but costly to offer and to acquire)*
    - Need to take stand on how to measure improvements
    - Need to understand why these households have been making different choices than our models

Explanations for differential behavior of lower-income households?

	Savings	Investing
• Higher value current consumption	X	
• **Lower financial literacy**	X	X
• Less trust in financial markets	X	X
• More behavioral frictions	X	X
• Higher search costs	X	X
• Abnormally risk averse		X
• **Supply-side constraints**		X

This paper: Middle-income households **know** they need help investing but previously lacked assets required to access better portfolios

1. Prior Interventions & Innovations

- Automatic enrollment in 401(k) plans for middle-income
  - *Long-run effects of auto-enrollment on savings are positive but modest*

- TDF as default investment option in 401(k) plans
  - *Associated with greater risk-taking by less-sophisticated households*

- State-sponsored retirement plans for low-income (OregonSaves)
  - *Increase savings but jobs with low/volatile income limit participation*

- **Launch of Betterment (2010) and Wealthfront (2012)**
  - ***Robo-advisors reduce cost of (taxable) portfolio delegation for high-wealth investors with traditional advisors and/or improve (taxable) portfolios of high-wealth DIY investors***

This Paper Studies Affect of Robo-Advisors on Lower- and Middle-Class Households

- Wealthfront drops minimum investment from $5000 to $500 in July 2015

- Change made possible by low cost of providing robo advice

- Demand by middle-class doubles; new participant median deposit drops from $5000 to $2000

- Robo-advised portfolios have higher expected returns and less volatility than DIY... but middle-income previously lacked liquid assets to invest in Wealthfront

- Relaxing supply constraint increases middle-income robo-advised household's welfare by 2%

2. Sample Selection

- Deposit Database: Income and inflows of all households who seek robo advice before or after reduction in investment minimum
  - *Aware of robo **+** trust robo **+** expect to benefit from robo*

- Portfolio Database: DIY and matched robo portfolios
  - *Aware of robo **+** curious enough to share financial account information with robo*

- 2016 Survey of Consumer Finance
  - Predict reliance on "INTERNET/ONLINE SERVICE" when "making decisions about saving and investments" and include inverse Mills ratio in some specifications
  - *My tabulation: **20.8%** list "INTERNET/ONLINE" first; **41.9%** list it eventually → **question is capturing much more than awareness of robo-advice***

3. Evaluating Costs

- Household should only demand financial product when increase in expected utility (relative to counterfactual) justifies the cost

  → *This can be a complicated calculation!*

- Wealthfront charges 0% up to $10k

  → *Middle-class households can ignore cost... but this limits amount of money that can benefit from **free** robo*

  → *Larger AUM pay higher % but receive more services*

- Open question whether middle-class households could accurately estimate how much they should be willing to pay for robo-advice

4. Intention to Treat

- Document that treatment-on-treated (TOT) is large and positive
  - Positive effect is not surprising, but magnitude is quite interesting

- Demand for robo in model is driven by knowledge of positive TOT versus possible distortion from minimum required investment
  - Friction? Middle-class distrust algorithms?
  - Friction? Households overestimate quality of DIY portfolios?
  - Both frictions will limit set of middle-class households who benefit from democratizing wealth management
  - Fact most middle-class households currently lack access to robo-advice in 401(k) plans limits benefit of robo to (much smaller) taxable accounts

5. Welfare Effects

- Table 1: I remain puzzled that median investment of $2000 (out of median liquid assets of $18000) can increase welfare by 2%
  - Model does not allow for mixed management; does it assume that the other $16000 is held in cash or managed by robo?

- What does Portfolio Database tell us about demand for robo?
  - Does demand respond to {Quality Counterfactual Robo – Quality DIY}?
  - Does sensitivity correlate with household income, wealth, etc.?

- Comparison between TDF and robo is extremely interesting... but highlights that households could have improved DIY with TDFs
  - Why do households know robo >> DIY but not that TDF > DIY

Conclusion

- Middle-class (and high-class) households benefit from access to free robo advice... because DIY portfolios ain't great

- Middle-class households benefit from lower minimum investment amount because they have fewer liquid assets

- Impressive use of parsimonious (fully rational) model

- Excellent example of how supply-side changes can improve financial outcomes of middle-class households

- Remains unclear what fraction of middle-class households know they would benefit from robo advice and are open to robo advice