Discussion on “The Promises and Pitfalls of Robo-Advising” by D’Acunto, Prabhala, and Rossi

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Summary and Outline

□ Main Results:
  ➢ On adoption (who adopt?)
  ➢ On the impacts (before vs. after among adopters)
    ✓ Diversification
    ✓ Trading and performance
    ✓ Behavioral biases

□ Outline of my talk:
  1. Big picture question: the economics of robo-advising
  2. Welfare implications (and how to empirically assess them)
  3. Empirical findings (identification issues and others)
  4. Interpretation: plausible mechanisms for the changes
  5. Institutional background
Comment 1. The Economics of Robo-advising

- Comparing robo vs. human advisors
  - Incentives (potential conflicts of interest)
  - Human biases and cognitive limitations
  - Convenience in implementation
  - Economy of scale
  - ...

Comment 1. The Economics of Robo-advising

- Incentives
- The “phishing equilibrium”
  - *Phishing For Phools*, Akerlof and Shiller, 2016
  - Free markets, with their incentives to produce what people want, can deliver a cornucopia;
  - On the other hand, they also create an equilibrium that is highly suitable for enterprises to manipulate and take advantage of human weaknesses to maximize profits.
  - E.g., brokerage firms design products to induce excessive trading in order to maximize brokerage fees.

- Now, think about the diversification tool in this study
  - A true disciple of Markowitz → passive investment → no trade
  - The opposite of what a brokerage firm would like to see
  - Understanding these incentives would be important
Comment 2. Welfare Implications

- The normative question: what is the optimal advice we should give investors?
  - Very hard one. No consensus after several decades of research. Conclusions depend on assumptions and approaches.
  - In practice, some investment advice tools are based on concepts from Markowitz’s Portfolio Theory and take a passive approach, while others incorporate active management.

- The positive question: can a given advising tool improve the status quo for investors?
  - The approach of this paper.
Comment 2. Welfare Implications

- The right empirical metrics for assessing welfare gain/loss
  - After-fee Sharpe ratio
  - The paper finds that (for certain groups) portfolio volatility ↓ and market adjusted return ↑, but fees also ↑.
Comment 3. Empirical Findings

- Identification issues
  - Selection on *need to change* and *willingness to change*. Concerned that these people will make changes anyway without the robo-advisor.
  - This paper proposes an **identification strategy**:
    - promotion phone calls: reached vs. missed
  - This is a clever one, but there are still remaining issues – the missed ones are not randomly missed; I *choose* not to answer phone calls from the broker because I don’t want to listen to the advice.
Comment 3. Empirical Findings

- Now, back to the results without instrument

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<th># stocks</th>
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<td>Behavioral Biases</td>
<td>several kinds</td>
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Comment 3. Empirical Findings

What alternative forces can possibly drive these changes?

1. Person-specific effects
   - Can be taken care of by taking a single difference (as the authors have done)

2. Time-specific effects (e.g., time trend in investor behaviors, potentially related to market conditions)
   - Suggestion: may construct a matched sample from the non-adopters and look at the diff-in-diff

3. Person \times time effects (e.g., more active investors are more likely to react to certain market conditions that have been going on during this period)
   - Would be hard to address without proper identification strategies
Comment 4. The Mechanisms

- What are the plausible channels for the observed changes?

  - Results on diversification are in line with our intuition
    - Returns
    - Trading activities (fees)
    - Attention (log-ins)
    - Behavioral biases
      - e.g. disposition effect
      - preference-based explanations

- Suggest the authors to better understand the mechanisms

  I struggle a bit to see why these changes happen after a one-shot recommendation on diversification.

  May due to the excitement of having a new tool. Can these effects last?
Comment 5. Institutional Background

- More background information would be helpful to understand and interpret the empirical findings
  - The black box of the robo-advising tool
    - What functions does it perform (customized recommendations or not? does it consider investors’ risk profile or preference?)
    - How specifically does it make the recommendations (maybe show a snapshot of the interface)?
    - Implementation methods? …
  - Institutional background of the traditional financial advisory vs. digital advisory industry in India
  - Retail investors in India
Other Minor Comments for the Authors

- It is not quite clear how portfolio performance and single trade performance are calculated. Net of fees? Using the actual holding period or hypothetical returns over a certain horizon?

- I don’t think there is consensus that disposition effect is due to gambler’s fallacy (mistakes in belief). Actually, leading and prevalent explanations are all based on preferences (realization utility, prospect theory)
Conclusions

- Highly important and relevant topic. Being the first one to empirically tackle this question, this paper deserves a lot of credit.

- Present a set of interesting findings.

- Suggest the authors to
  - Sort out the incentives of related parties and their implications;
  - Better understand the mechanisms underlying the documented changes;
  - Provide more background information and contexts for the readers.