Behavioral bias in number processing: Evidence from analysts' expectations

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First Word

- The paper is currently under *Revise and Resubmit* at the Journal of Economic Behavior and Organization. Congrats!

- The authors should only listen to the referee requests

- I however have comments that speak to this paper and maybe to future projects as well

- You should still feel free to ignore them!

My Take

Small prices ($0 < nominal stock price ≤ $10)
$10 < nominal stock price ≤ $20
$20 < nominal stock price ≤ $30
$30 < nominal stock price ≤ $40
Large prices ($40 < nominal stock price)
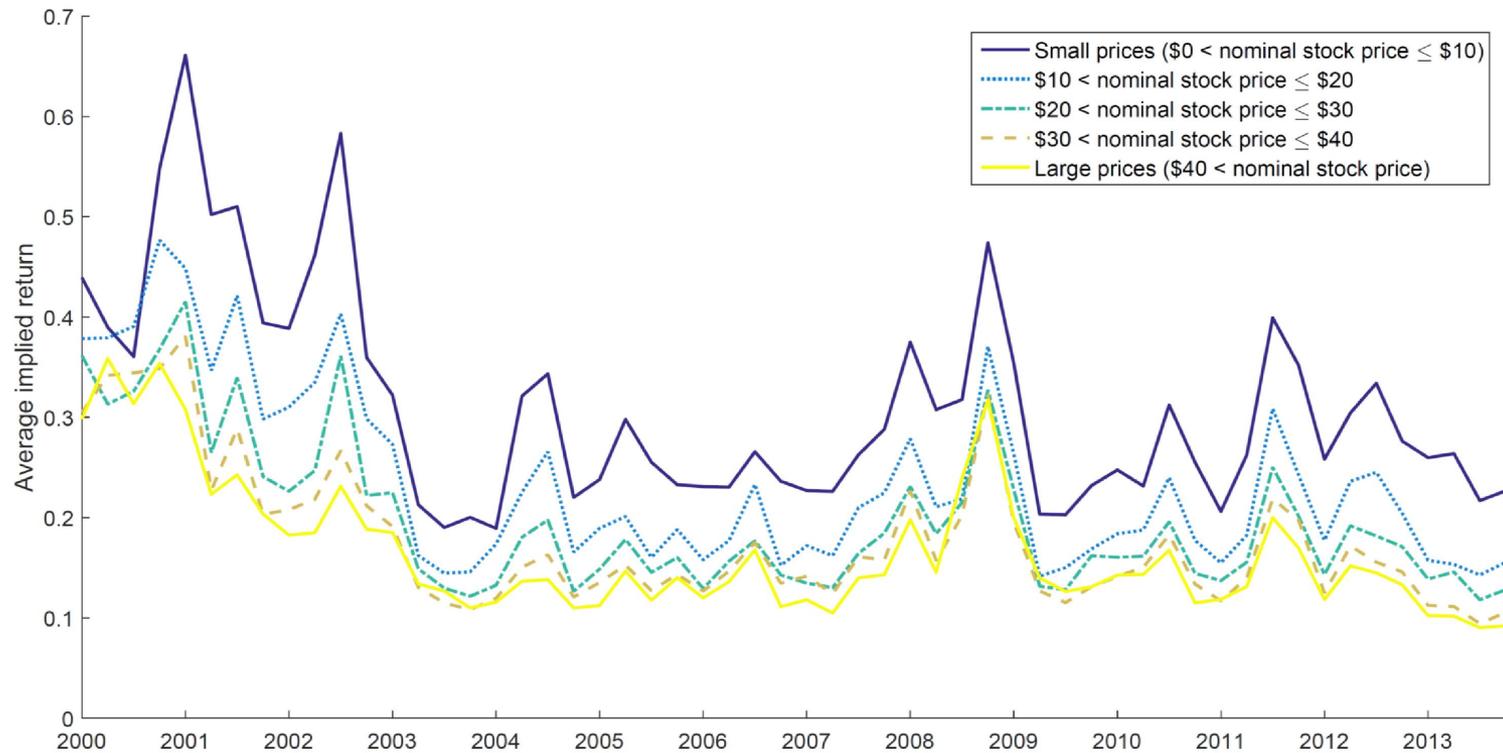
- **Returns implied by analysts' target prices are significantly larger for small price stocks**

Research Analysts: why shall we care?

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- Major global investment banks **have slashed their equity research budgets by more than half**, from a peak of $8.2 billion in **2008** to $3.4 billion in 2017, according to Frost Consulting

- The top 10 banks are expected to cut those budgets **by another 30 percent in the near term**, due largely to MiFID and the change in pricing model it brings, McKinsey projects.

- An analyst: "Contrast that with Silicon Valley. It's not even the money; it's the optimism that I envy. Those guys are building a brighter future and this just feels like death."

Research Analysts: All about the data?
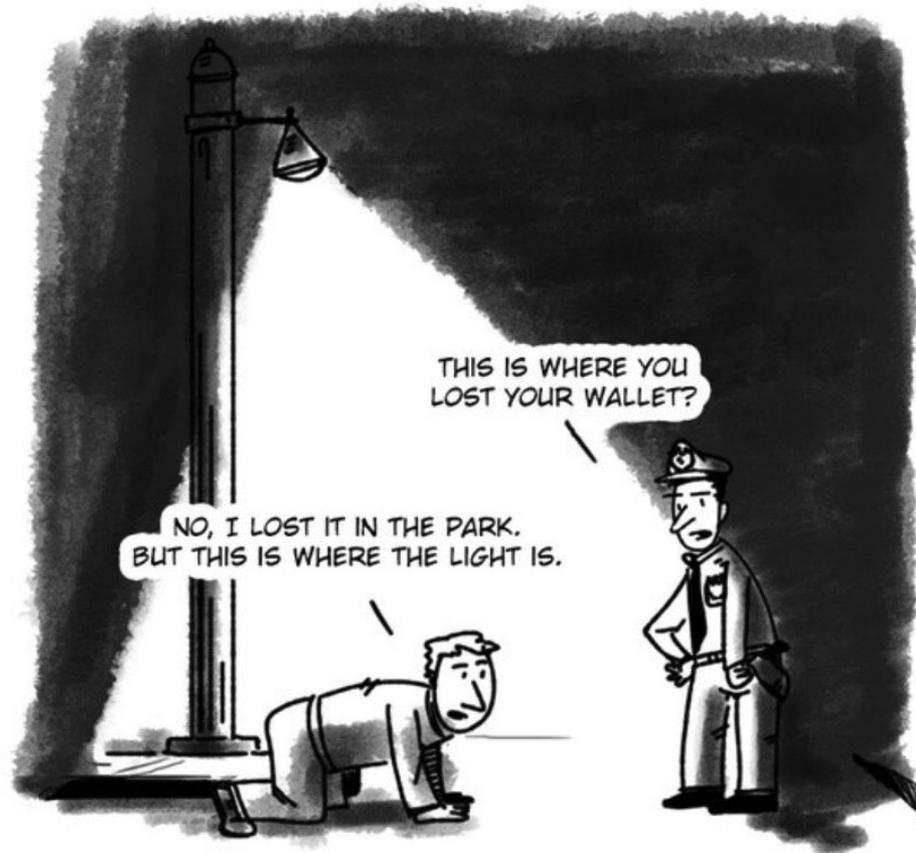
Research Analysts: why shall we care?

- However, despite being an endangered species, financial analysts (and their biases) might still have an **important impact on asset prices**

- It would help the motivation to provide **(recent) evidence** of it, both in general and specifically related to this study

- For instance, the authors could explore a **trading strategy** based on financial analysts behaviors

- Sell-side financial analyst behaviors might also be present in other finance workers. Discussing the **external validity** of the results, or testing the robustness of the results in other settings would be interesting

- The authors initiate this approach in the intro by mentioning that small stock prices co-move. I would push further in that direction

Research Analysts Behavioral Bias? (1/2)

- There is a **long documented list of biases** exhibited by financial analysts:
  - Conflict of interests
  - Over-optimism
  - Overconfidence
  - Herding
  - Recency bias
  - …

- It is therefore not necessarily surprising to find other potentially new biases

- In some ways, I would be more surprised if analysts did not exhibit any given bias!
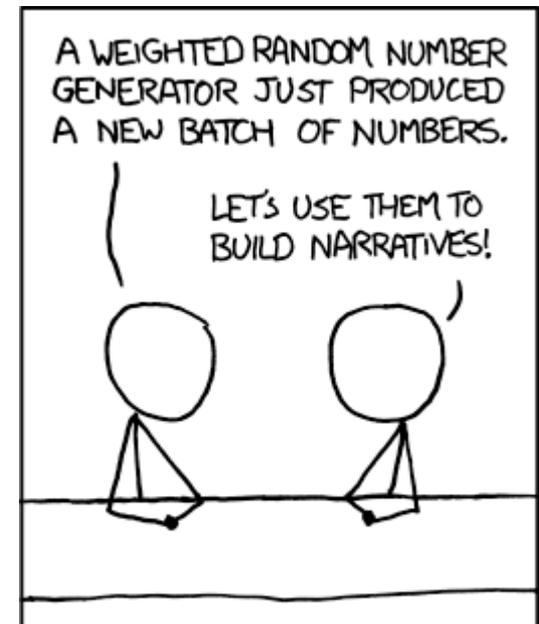
Research Analysts Behavioral Bias? (2/2)

- Why care about this one in particular?

  - **Magnitude** particularly large?
  - Specific distribution of the bias?
  - **Asset pricing impact** (can I make money out of this paper?)

- This bias could also impact other stakeholders' behaviors, who can **suffer from, exploit or cater to** this bias:
  - Investors
  - Firms, e.g. through stock split (Baker, Greenwood and Wurgler, 2009)

Potential Extension

- It would be interesting to study **how to de-bias** individuals that make financial forecasts/decisions

- **Running experiments** may be an increasingly appealing approach for such purpose

Alternative Explanations?

- Could the effect be driven by a **"tick-size" effect**, e.g. that analysts have to round their target to the closest euro / 10 cents, which is proportionally larger for small stocks?

- Could the effect be driven by **target price being sticky**, and some stocks having dropped in price during the sample period? Conditional on having a low stock price, it would be more likely to be one of these stocks

Table 3 (Main result): Comments

- The authors **regress target returns on firm characteristics**

- Why call this a Fama-McBeth regression? (Two stage: regressing asset returns on a set of factors to estimate the asset betas, and then estimating the risk premiums of the factors by regressing the asset returns on the asset betas for a fixed period)

- Why do the regression at the analyst-stock-month level, and not stock-month level? It puts more weight stocks with multiple coverage

- I would favor a **simpler and more transparent specification**, as identification should mainly come from the **cross-section** of stocks (and not the time series)

- I would like to first see the specification **without the interactions terms** with Negative IR (which is endogenous to the dependent variable)

Additional Comments

- Why is the effect so much stronger for small firms than for large ones?

- Stock split study is helpful. Table 6: why have stocks different starting points in terms of implied returns for treatment and control group? Shouldn't they be matched on similar characteristics before the split, not after?

Last Word

Nice project, again feel free to discard my grumpy comments

Congratulations on getting the AMF Prize!

I wish you good luck in the beginning of our career, which is both an exciting and tough period