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Discussion of: Revisiting the Cross-section of Expected Stock Returns: Evidence from a Textual Analysis of Buy Recommendations

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ABFER
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Leading explanations for anomaly returns

1. Risk framework
   - Stochastic discount factor
   - CAPM, consumption CAPM

2. Irrational framework
   - Overconfidence (Daniel, Hirshleifer, Subrahmanyam, 1998)
   - Extrapolation (Barberis, Shleifer, Vishny, 1998)

3. Non-standard preferences framework
   - Prospect theory
   - Cumulative prospect theory (Kahneman and Tversky)

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Other frameworks not considered here: Underreaction (Hong and Stein, 1998), social transmission bias (Han, Hirshleifer, Walden, 2022), Salience, etc.

Research question

Which of these framework(s) explains anomaly returns?

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Introduce a new way to address this question:

- Elicit investors' investment framework using textual analysis on sell-side analyst reports & Seeking Alpha articles.
- Key assumption: These writings either influence or reflect investors' beliefs/preferences.

Empirical approach

Data: A large corpus of investment articles

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New Method:

- Categorize the reasoning behind each recommendation into the three frameworks:
  1. Risk: "Safety"
  2. Irrational: "Exuberance" (Growth)
  3. Prospect theory: "Lottery"

Mapping textual content to investment frameworks

Create a new bag-of-words from textual analysis using a self-created surveys of:

- 100 institutional investors (CoreData Research)
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Example of words:

- Risk: *reliable*, *safe*, *secure*, *stable*, *steady*
- Exuberance: *consistent*, *excellent*,*growth*, *innovative*, *winner*
- Lottery: *exciting*, *gamble*, *potential*, *speculative*, *volatile*

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Analyze stocks on the short-side of the anomaly

- Value factor: Glamour/Growth decile of stocks
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Makes sense to look here:

- Short side of the anomaly usually generates a large fraction of the total return predictability
- Frameworks tend to explain the short side
- Requires enough buy recommendations

Main finding (1): Lottery reasons are the most common

	Risk Framework	Irrational Beliefs Framework	Non-Traditional Preferences Framework	Inconclusive
Panel A: Institutional Investors' Survey-Based Wordlists				
Sell-Side Analyst Reports	9% [7%]	29% [17%]	69% [58%]	19%
Seeking Alpha Articles	6% [6%]	15% [10%]	58% [54%]	29%
Panel B: Retail Investors' Survey-Based Wordlists				
Sell-Side Analyst Reports	21% [6%]	24% [14%]	70% [66%]	14%
Seeking Alpha Articles	9% [8%]	22% [13%]	64% [57%]	22%

Panel A: More Likely to be Irrational Beliefs Based / Less Likely to be Non-Traditional Preferences Based				
Sell-Side Analyst Reports	16% [12%]	47% [27%]	55% [37%]	23%
Seeking Alpha Articles	10% [10%]	24% [19%]	32% [26%]	45%
Panel B: Less Likely to be Irrational Beliefs Based / More Likely to be Non-Traditional Preferences Based				
Sell-Side Analyst Reports	1% [1%]	11% [6%]	82% [79%]	14%
Seeking Alpha Articles	2% [2%]	6% [2%]	84% [82%]	13%

Lottery is much stronger for small stocks

Main finding (2): By anomaly/factor

Firm Characteristic	Do Sell-Side Analyst Buy Recommendations of Short-Leg Securities Disproportionately Frequently Use					
	Safety Words?		Exuberance Words?		Lottery Words?	
Accrual					7%	(10.79)
Difference of Opinion					12%	(16.49)
Asset Growth					15%	(32.72)
Value			5%	(14.36)	14%	(31.65)
Gross Profitability					43%	(68.73)
Investment					8%	(14.65)
Composite Equity Issuance					11%	(23.05)
Idiosyncratic Volatility					20%	(36.98)
Expected Idiosyncratic Skewness			12%	(36.80)	6%	(14.51)
Long-term Reversal			10%	(27.98)	9%	(19.61)
Maximum Daily Return					18%	(37.66)
Momentum					9%	(13.64)
Net Stock Issuance					32%	(56.76)
External Finance					32%	(60.38)
Net Operating Assets					7%	(12.76)
O-Score					35%	(39.17)
Organizational Capital						
Failure Probability					11%	(3.39)
Return On Assets					42%	(66.17)
Post-Earnings Announcement Drift						
Short-Term Reversal					14%	(29.32)
Market Capitalization	7%	(14.65)	5%	(19.34)		

Overall impressions

Unique research question & approach:

- Horserace different theories
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The results are thought-provoking

- Interesting data point
- Prospect theory might matter a lot more than my prior
- Characteristics versus covariances

Comment 1: Why does sell-side research exist?

Why spend time writing research reports?

Career incentives

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Could career incentives explain the prevalence of the lottery framework in this setting?

Suggestion: Placebo and different benchmark

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1. Placebo
   - Find characteristics that are not associated with future returns.
   - Create a long-short portfolio on a random characteristic (e.g., revenues, depreciation)
   - Repeat your exercise in the extreme stocks
   - Null hypothesis: No frameworks should be significant

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2. Use the results from part 1 as the benchmark level of key words
   - Currently the benchmark is the average of all articles

Comment 1b: Analyst and anomalies

Investment professionals seem to trade/recommend investments in the wrong direction of anomalies

- Analysts: Engelberg, Mclean, Pontiff (2020), Li, Li, and Wei (2020)
- Institutions: Edelen, Ince, Kadlec (2016), Agarwal, Jiang, Wen (2022)

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Open ended questions: Can we learn more from your exercise?

Comment 2: Validation test

Lottery-like characteristics exhibit positive skewness in returns

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Suggestion:

- Validate your elicited results
- Prediction: Positive correlation of lottery word % with realized skewness

Comment 3: Exploit the cross-section of stock returns

Not sure if this is possible, but a suggestion...

Use the cross-section of stock returns:

- Within the short-leg, double sort:
- Identify stocks that have high versus low lottery words %
- Is the anomaly return concentrated in the high lottery word % sub-sample?

Final remarks

Addresses a fundamental question in asset pricing:

How to differentiate between various investor frameworks?

Introduces creative new methods

- Data selects the theory
- Surveying for bag of words
- Authors acknowledge the limitations of their approach