ONLINE APPENDIX TO

"WHY DO INVESTORS LIKE SHORT-LEG SECURITIES?
EVIDENCE FROM A TEXTUAL ANALYSIS OF INVESTOR BUY
RECOMMENDATIONS"

This figure displays the questions from an online survey sent to 100 institutional investors to generate the survey-based wordlists as detailed in Section 3.2.1.

QAge. How old are you?

1. 21-24
2. 25-34
3. 35-44
4. 45-54
5. 55-64
6. 65+
7. Prefer not to say

QGender. Please indicate your gender

1. Male
2. Female
3. Prefer not to say

QExperience. Approximately how many years have you worked as a wealth manager / fund manager?

QAmount. What is your company's overall assets under management (AUM)?

1. Under $10 million
2. $10 million to $99.9 million
3. $100 million to $249.9 million
4. $250 million to $1 billion
5. $1 billion to $2.49 billion
6. $2.5 billion or more
7. Prefer not to answer

QMainQuestion. For each of the next three questions, please list up to five **nouns, verbs or adjectives** (**NOT specific tickers, company names, industries or product names/brands**) that you would use:

Q1. to describe a stock that, to you, is a "safe-haven asset:" a stock that does relatively well when times are bad. If you would never invest in such a stock, **please leave everything blank** and simply move on to the next question.

Q2. to describe a stock that has been doing well and that you expect will continue to do very well or, in general, a stock that you are very confident will earn above-normal returns. If you would never invest in such a stock, **please leave everything blank** and simply move on to the next question.

Q3. to describe a stock that offers somewhat of a gamble: the stock will most likely not produce above-normal returns, but, if it does, the payoff will be enormous. If you would never invest in such a stock, **please leave everything blank** and simply move on to the next question.

Online Appendix Figure A2
First Survey Sent to Retail Investors

This figure displays the questions from an online survey sent to 303 retail investors to generate the survey-based wordlists as detailed in Section 3.2.2.

QAge. How old are you?

1. 21-29
2. 30-44
3. 45-59
4. 60+
5. Prefer not to say

QGender. Please indicate your gender

1. Male
2. Female
3. Prefer not to say

QExperience. Which of the following categories best describes your investment experience?

1. Novice investor
2. Investor with intermediate experience
3. Professional investor
4. Prefer not to say

QAmount. What is the approximate value of your household's net investable assets in USD? In calculating your net investable assets, do not include your personal properties such as a car, home, and cottage. Simply add up all your savings and investments and subtract your consumer debt (credit cards and loans).

1. Under $500
2. $500 to $2,000
3. $2,001 to $10,000
4. $10,001 to $25,000
5. $25,001 to $100,000
6. $100,001 to $300,000
7. $301,000 to $500,000
8. $500,001 to $1,000,000
9. More than $1,000,000
10. Prefer not to answer

QAttention. How frequently do you check your investment account?

1. About every day (daily)
2. About once a week (weekly)
3. About once a month (monthly)
4. About once every three months (quarterly)
5. About once a year (yearly)
6. Less frequently than once a year
7. Prefer not to answer

QInteractions. How frequently do you discuss stocks (or other investment-related topics) with family members, friends or co-workers?

1. About every day (daily)
2. About once a week (weekly)
3. About once a month (monthly)
4. About once every three months (quarterly)
5. About once a year (yearly)
6. Less frequently than once a year
7. Prefer not to answer

QMainQuestion. For each of the next three questions, please list up to five **nouns, verbs or adjectives** (**NOT specific tickers, company names, industries or product names/brands**) that you would use:

Q1. To describe a stock that, to you, is a "safe-haven asset:" a stock that does relatively well when times are bad. If you would never invest in such a stock, **please leave everything blank** and simply move on to the next question.

Q2. To describe a stock that has been doing well and that you expect will continue to do very well or, in general, a stock that you are very confident will earn above-normal returns. If you would never invest in such a stock, **please leave everything blank** and simply move on to the next question.

Q3. To describe a stock that offers somewhat of a gamble: the stock will most likely not produce above-normal returns, but, if it does, the payoff will be enormous. If you would never invest in such a stock, **please leave everything blank** and simply move on to the next question.
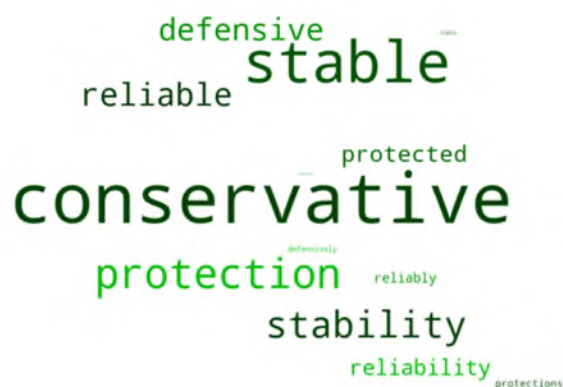
Online Appendix Figure A3
Word Clouds for Institutional Investors' Survey-Based Safety, Supremacy and Lottery Words

This figure displays word clouds for the safety, supremacy and lottery words analysts and SA contributors use in their buy recommendations. The safety, supremacy and lottery words are rooted in a survey sent to 100 institutional investors (Section 3.2.1).

Analyst Reports:

SA Articles:
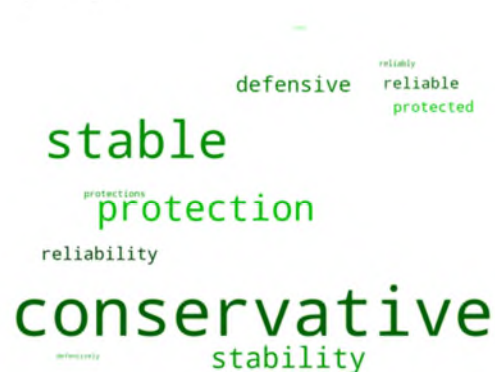
Online Appendix Figure A4
Word Clouds for Retail Investors' Survey-Based Safety, Supremacy and Lottery Words

This figure displays word clouds for the safety, supremacy and lottery words analysts and SA contributors use in their buy recommendations. The safety, supremacy and lottery words are rooted in a survey sent to 303 retail investors (Section 3.2.2).

Analyst Reports:

SA Articles:

Online Appendix Figure A5
Sample Analyst Reports

This figure displays the first page of three sell-side analyst reports. The first report makes disproportionately frequent use of safety words as per the institutional investors survey-based wordlists, while the second and third reports make disproportionately frequent uses of supremacy and lottery words, respectively. The red areas mark the sections of the analyst reports that we parse.

First report ("safety"):

June 6, 2012
INDUSTRIAL: Industrial Machinery (Ind'l)
Company Update

KeyBanc
Capital Markets

RBC Bearings Incorporated:
ROLL:Continue to Favor Defensive Nature & Balance Sheet Catalyst; Reiterate BUY

KeyBanc Capital Markets Inc.
Member NYSE/FINRA/SIPC

Steve Barger: (216) 689-0210 — sbarger@keybanccm.com
Alexander Walsh: (216) 689-0496 — awalsh@keybanccm.com

Rating	BUY
Price	$44.41
12- Mo. Price Target	$51.00
Dividend	$0.00
Yield	NM
52- Wk. Range	$29 - $49
Trading Volume (000)	84
Market Cap. (mm)	$994.8
Shares Out. (mm)	22.40
Book Value/Share	$17.23
Total Debt (mm)	$1.1
Total Debt/Cap	0.3%
Cap Ex (mm)	$15.0
Cash (mm)	$68.6

EPS (Net) Summary

FY Mar	2012A	2013E	2014E
1Q	$0.48	$0.58	--
2Q	$0.52	$0.63	--
3Q	$0.54	$0.61	--
4Q	$0.69	$0.85	--
Prior	$0.62	--	--
YEAR	$2.23	$2.67	$3.22
Prior	$2.17	$2.67	$3.22
First Call	--	$2.65E	$3.04E
P/E	19.9x	16.6x	13.8x

ACTION STATEMENT
After reviewing RBC Bearings Incorporated's (ROLL-NASDAQ) fiscal 4Q12 results and listening to the subsequent conference call, we are maintaining our above consensus estimates and are reiterating our **BUY** rating and $51 price target. Overall, ROLL remains one of the highest quality names on our list given the more defensive nature of the Company's primary end markets along with its consistent execution, enviable margin profile and net debt negative balance sheet. In our view, this is evident in the recently reported fiscal 4Q12 results, which came in at $0.69, above our and consensus estimates of $0.62, driven by better than expected operating margins of 21.6% (vs. our model of 20.5%) and slightly higher revenue ($111 million vs. our estimate of $106 million). With regard to ROLL's end market exposure, we remind investors about 47% of the Company's revenue is derived from the aerospace markets, which appear to be in the early stages of a multi-year production ramp given the extended backlogs at the OEMs (please see charts below). Additionally, while ROLL's industrial business will remain levered to industrial production, we believe it should be able to achieve 2-3x GDP growth reflecting its continued innovation and ability to get price. Moreover, we expect these factors to provide for a less cyclical earnings and revenue profile relative to many of its peers (e.g. Kennametal Inc. [KMT-NYSE], Lincoln Electric Holdings, Inc. [LECO-NASDAQ], NN, Inc. [NNBR-NASDAQ]). To that point, ROLL's largest quarter-over-quarter revenue decline during the last downturn was roughly 32% vs. the average decline of 44% in the peer group (see charts below). Additionally, we continue to view ROLL's balance sheet as a source of stability with no debt, approximately $70 million of cash and a $150 million revolver that largely remains undrawn. All that said, despite our somewhat more cautious view on the macro environment, this is a name we continue to favor and are maintaining our above consensus estimates of $2.67 in FY13 (vs. FC of $2.65) and $3.22 in FY14 (vs. FC of $3.04). Overall, we think ROLL is a company investors should want to own, and it becomes a particularly attractive story in times of uncertainty given its defensive nature. As such, we are reiterating our **BUY** rating and $51 price target.

KEY INVESTMENT POINTS
Overall, ROLL remains one of the highest quality names on our list given the more defensive nature of the Company's primary end markets along with its consistent execution, enviable margin profile and net debt negative balance sheet. As such, are maintaining our above consensus estimates of $2.67 in FY13 (vs. FC of $2.65) and $3.22 in FY14 (vs. FC of $3.04), despite taking a more cautious approach to the broader environment. Moreover, we are reiterating our **BUY** rating and $51 price target.

We expect ROLL's aerospace related business to grow in the 10- 15% range going forward given the production profiles at the major OEMs. Specifically, Boeing and Airbus currently enjoy a backlog of about 8,500 planes (or roughly six to eight years of production) and the scheduled production rates call for an 11% CAGR through calendar year 2014. Additionally, we expect ROLL to achieve an incremental several hundred basis points of growth from the shifting production profiles toward larger aircrafts. For context, ROLL's content per plane on the A350 and the 787 is around $120,000-$140,000 compared to the content on the 737 of about $80,000- $90,000.

FOR IMPORTANT DISCLOSURES AND CERTIFICATIONS, PLEASE REFER TO PAGES 8 - 9 OF THIS NOTE.

1

Second report: ("supremacy"):

NORTHCOAST RESEARCH

April 22, 2014

PPG Industries Inc (NYSE: PPG)

Kevin Hocevar, CFA - Research Analyst
216.468.6924
kevin.hocevar@northcoastresearch.com

PPG: Very Strong 1Q14; Reiterate BUY; Increasing PT to $220

Company Update		BUY
Price Target Increase		
Estimate Change		

Materials
    Chemicals-Diversified

Price (04/21/2014)	196.54
Target Price	$220.00
Market Cap (M)	27,255.3
52 Wk Hi - Low	201.59 - 140.81
Enterprise Value (M)	29,182.3
Average Daily Volume (3 Months)	911,927
Float Outstanding (M)	130.3
Shares Outstanding (M)	138.7
Short Interest	1.2(M)
Short Ratio	1.5
Total Debt to Total Assets	21.5%
Total Debt (M)	3,406.0
Total Common Equity (M)	4,932.0
Preferred Equity (M)	0.0
Cash & Equivalents (M)	1,745.0
Dividend	$2.28

Overview

- PPG reported record 1Q14 adjusted EPS of $1.98 which topped NCR estimate of $1.76 and consensus estimate of $1.87. Note that street expectations were in a wide range due to the recently divested Transitions Optical business – and overall, 1Q14 performance more than fully replaced earnings from the divestiture as virtually every business performed above expectations from both a sales and earnings perspective.
- PPG achieved global volume growth of 5% in 1Q14 – its highest level in 3 years. Growth rates accelerated in each region compared to recent quarters, including Europe where volumes were up 5% as PPG believes it is in the early stages of an economic recovery.
- Total operating income of $483 million increased 22% vs. 1Q13 and 7% above NCR estimates, driven by strong volumes and robust margins in Performance Coatings and Industrial Coatings. Excellent earnings leverage stemming from aggressive cost savings coupled with improved demand levels drove margins higher and led to increased profitability as both Performance and Industrial Coatings segment margins grew 100bps above NCR estimates.
- Performance Coatings benefitted from another quarter of strong growth as acquisitions (AkzoNobel, Deft, Hi-Temp) contributed 23% to sales while legacy architectural coatings contributed the remaining 4% of the 27% growth vs. 1Q13. Architectural Coatings EMEA volumes increased mid-single digits while Auto Refinish and Aerospace continued to show solid results, reporting positive volumes across every region.
- Industrial Coatings volumes increased 7%, largely due to Auto OEM where 10% volumes outpaced the industry growth rate of 4%. Glass segment volumes grew 3% due to global fiber glass demand, partially offset by lower flat glass volumes.
- PPG has now delivered 15 straight quarters of record adjusted EPS. Given our belief that PPG will continue to post solid double-digit earnings growth for at least the next few years, we are raising our 2014E EPS to $9.60 (was $9.20) and 2015E EPS to $11.00 (was $10.40).

EPS ($)	2013	2014	2015
Q1	1.58a	1.98a	--
Prior	--	1.76e	--
Q2	2.45a	2.86e	--
Prior	--	2.77e	--
Q3	2.44a	2.79e	--
Prior	--	2.71e	--
Q4	1.81a	1.97e	--
Prior	--	1.96e	--
FY Dec	8.28a	9.60e	11.00e
Prior	--	9.20e	10.40e
P/E	23.7x	20.5x	17.9x

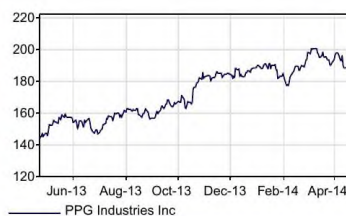| EBITDA ($M) Adjusted	2013	2014	2015
Q1	--	--	--
Q2	--	--	--
Q3	--	--	--
Q4	--	--	--
FY Dec	2,274a	2,406a	2,595e
Prior	--	2,355e	2,513e
Enterprise Value/EBITDA	12.8x	12.1x	11.2x

Conclusion

1Q14 was a great quarter for PPG. The company displayed robust margins stemming from both strong volumes and increased leverage – and its cash position continues to grow, closing the quarter with $3 billion in cash even after repurchasing $200 million worth of shares (1.1 million shares) during the quarter. End markets by region appear to be healthy with Europe turning the corner and providing PPG the next avenue for a recovery. We expect the strong momentum in 1Q14 to carry forward into the balance of the year, and as a result we are reinforcing our BUY rating on shares of PPG and increasing our PT to $220 (was $215) as we have confidence in our estimates going forward.

PPG Industries Inc

Important: Please read disclosures and disclaimers on page 5 of the report.

Online Appendix Figure A5. Continued.

Third report: ("lottery"):

J.P.Morgan

Lone Pine Resources

Recent Selloff More Severe than Near-Term Risks Warrant; Adj Ests & Lowering PT to $8; Maintain OW

We had the opportunity to meet with LPR's management team this week in Calgary following disappointing 1Q12 results and a very rocky subsequent share price performance. We addressed issues from liquidity to spending to the near-term Evi outlook, and although we believe the stock may now be most suitable for risk-seeking investors, we believe there is solid support for equity value beyond the current share price from the Evi asset alone, suggesting an underappreciated core development. We have decreased our price target to $8/share; however, with the shares trading at $3.42/share, we maintain our OW rating.

- **New guidance tempers 2012 outlook.** LPR reduced full-year volume guidance by 7% to 90 mmcfepd to reflect 1Q12 Evi operational issues. Consequently, LPR now expects a 30% liquids weighting (previously 35%), reducing the outlook for 2012E cash flow generation. Furthermore, net production expenses were increased to $2.10/mcfe (previously $1.80-$1.90/mcfe) and DD&A is now seen at $3.50/mcfe.

- **Evi alone supporting upside from current share price.** Despite a reduced production and cash flow outlook for 2012E, we believe the current share price is more than supported by the Evi asset alone. We value LPR's 2P reserves base at $780 mm and see an additional $450 mm in value from the Evi play's unbooked resources, based on our risked NAV. Adjusting for corporate expenses and our estimate of net debt at YE2012, this supports an equity value of just over $8/share.

- **Challenged gas price environment weighs on natural gas resource value.** With natural gas prices holding at around the $2/mcf mark, we believe LPR's natural gas opportunities are unlikely to command any meaningful value from investors, and we have removed the contribution from unbooked natural gas resources and more heavily discounted the value of 2P natural gas reserves in our valuation.

- **Sufficient liquidity to fund 2012 capex program.** Although 1Q12 capex of $78 mm reflected a busy winter drilling season, we believe capex will drop substantially in 2Q due to spring breakup. LPR maintained capex guidance of $200-$220 mm for full-year 2012E, and on our estimates, LPR will need to draw on $34 mm in borrowings to fund the remainder of this year's capital spending.

- **Adjusting estimates and lowering PT to $8/share.** We now forecast a 2012E loss of $0.03 per share, 2013E EPS of $0.79 per share and 2012E adjusted EBITDA of $144 mm. We are also lowering our PT to $8/share but maintain our OW rating.

Overweight

LPR, LPR US
Price: $3.42

▼ **Price Target: $8.00**
Previous: $13.00

Integrated Oils

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J.P. Morgan Securities LLC

Price Performance

	YTD	1m	3m	12m
Abs	-33.6%	-18.0%	-31.3%	-60.7%
Rel	-38.7%	-15.8%	-26.2%	-55.4%

Lone Pine Resources Inc. (LPR;LPR US)

FYE Dec	2011A	2012E (Prev)	2012E (Curr)	2013E (Prev)	2013E (Curr)
EPS - Recurring ($)					
Q1 (Mar)	-	0.05	(0.07)A	-	-
Q2 (Jun)	0.11	0.07	(0.01)	-	-
Q3 (Sep)	0.12	0.18	0.03	-	-
Q4 (Dec)	0.01	0.24	0.06	-	-
FY	0.22	0.54	(0.03)	1.19	0.79
Bloomberg EPS FY ($)	0.49	0.56	0.56	1.06	1.06

Source: Company data, Bloomberg, J.P. Morgan estimates.

Company Data

Price ($)	3.42
Date Of Price	17-May-12
52-week Range ($)	13.09 - 3.38
Mkt Cap ($ mn)	290.79
Fiscal Year End	Dec
Shares O/S (mn)	85
Price Target ($)	8.00
Price Target End Date	31 Dec 12

See page 7 for analyst certification and important disclosures.

www.morganmarkets.com

Online Appendix Figure A6
Sample Seeking Alpha Articles

This figure displays the first page of three SA opinion articles. The first article makes disproportionately frequent use of safety words as per the institutional investors survey-based wordlists, while the second and third articles make disproportionately frequent uses of supremacy and lottery words, respectively.

First article ("safety"):

Online Appendix Figure A6. Continued.

Second article: ("supremacy"):

Written by

Bridger Research
We are investment
research professionals
covering a broad range
of equities, REITs and
other asset classes...
more

Follow

892 Followers

Send message

All Portfolios ⌄

Symbol	Price	% Chg ▾
HDSN	11.29	6.71%
VIST	13.89	4.67%
BA	178.36	2.01%
UAL	44.42	1.67%
MS	90.91	1.09%
FLT	191.68	0.97%

Expand Portfolio

Long Ideas   Tech

Ansys: Stock Is Ready For A Rally

Dec. 11, 2018 1:47 PM ET | **ANSYS, Inc. (ANSS)** | 2 Comments | 1 Like

Summary

- ANSYS is a market leader with a broad portfolio of engineering simulation software solutions that help customers to improve their operational efficiency and profitability.

- The company offers a strong business model with double-digit organic revenue growth rate, best-in-class operating margins and strong cash generation.

- Significant growth opportunities in the automotive and autonomous vehicle industries with the latest release of ANSYS 19.2.

Investment Thesis

ANSYS, Inc. (NASDAQ:ANSS) is a leader in engineering simulation software & services and offers a great business model with diversified recurring revenue, strong cash generation and a significant growth opportunity driven by the digital revolution. There is an increased market demand for engineering simulation solutions, as companies face intensified pressures like increased product complexity, reduced time to market and lower sales cycles. ANSYS's engineering simulation products offer a strong competitive advantage based on technology leadership and reputation for simulating products across multiple physics with the highest accuracy. The company is a best-in-class leader in its niche industry and consistently maintains a double-digit revenue growth rate combined with industry-leading operating margin. I expect from the company to scale its business with the go-to-market strategy across large enterprises, important partnerships, and acquisitions of best-in-class technologies. That can drive further shareholder value-creation by achieving Target 2020 double-digit organic revenue growth rate, together with maintaining best-in-class operating margins and returning excess capital through share buybacks over the next 3 - 5 years.

Online Appendix Figure A6. Continued.

Third article: ("lottery"):

Written by

Elephant Analytics
Marketplace
Author of **Distressed Value Investing.** Unique insight into distressed opportunities to target outsized returns.

Follow

10.05K Followers

Send message

Current   ⌄

+ Add   🔗   ✏

Symbol	Price	% Chg ▾
DQ	49.61	6.09%
HIMX	7.13	2.74%
EDU	33.14	1.47%
BRK.B	306.39	0.13%
NCNA	0.80	-0.03%

Expand Portfolio

Long Ideas   Basic Materials

Magnum Hunter: The Waiting Game Continues

Sep. 17, 2015 8:40 AM ET | **Magnum Hunter Resources Corp. (MHRCQ)** | 49 Comments

Summary

- Magnum Hunter's CEO Gary Evans previously mentioned that he was hopeful of a Eureka Hunter sale announcement by the end of August.

- It is now mid-September and it appears that investors are becoming impatient for some news, which is reflected in its share price decline.

- However, Magnum Hunter still has a net asset value estimated at multiple times its current price.

- With its short interest, a Eureka Hunter sale for a reasonable price or any another asset sale that ensures Magnum Hunter's survival for a prolonged period could trigger a squeeze.

- Magnum Hunter's fundamentals remain quite messy due to its large debts and high fixed payment costs. I think it may be worth a minor speculative play at $0.50 though.

Magnum Hunter Resources (MHR) continues to fall amidst a continued oil and natural gas slump as investors get tired of waiting for an announcement on the Eureka Hunter pipeline sale as well as other potential moves. As well, Magnum Hunter has received notice that it is no longer in compliance with the NYSE's listing standards due to its stock price dropping below $1.00 during a preceding 30 trading day period.

Despite the lack of positive news, I think Magnum Hunter may now be worth looking at as a risky speculative play though. It has a high short interest and any major asset sale would put off bankruptcy concerns for a while, likely leading to a bit of a short squeeze. As well, Magnum Hunter's net asset value is theoretically multiple times its current share price, although concern remains over its ability/willingness to monetize these assets in a timely manner.

Online Appendix Figure A7
Second Survey Sent to Institutional Investors

This figure displays the questions from an online survey sent to 450 institutional investors, designed to identify which of their recent stock purchases were primarily driven by perceived safety, supremacy, or lottery preferences, as detailed in Section 4.3.

QLocation. In which location are you primarily based for your job?

1. Australia
2. Brazil
3. Canada
4. China
5. France
6. Germany
7. India
8. Italy
9. Japan
10. Mexico
11. Singapore
12. South Korea
13. Spain
14. UK
15. USA
16. Other

QAge. How old are you?

1. Under 21
2. 21-24
3. 25-34
4. 35-44
5. 45-54
6. 55-64
7. 65+
8. Prefer not to say

QGender. What is your gender?

1. Male
2. Female
3. Prefer not to say

QOrganization. Which of the following best describes the organisation that you work for?

1. Endowment fund
2. Family office
3. Foundation
4. Independent financial adviser firm
5. Insurance group
6. Pension fund
7. Private bank
8. Mutual fund
9. Sovereign wealth fund
10. Wealth management firm
11. Other (please specify)

Online Appendix Figure A7. Continued.

QExperience. Approximately how many years have you worked as a wealth manager / fund manager?

1. 2 years or less
2. 3-5 years
3. 6-10 years
4. 11-20 years
5. More than 20 years

QInvestmentType. Which of the following investment types do you currently have money allocated to in your role as an investment professional/fund manager? Note: Only include investments you made yourself or directly instructed a third party to make for you.

1. Individual stocks (Publicly Traded Equity)
2. Mutual funds or exchange-traded funds (ETFs)
3. Derivatives (Options, Futures, or Forwards)
4. Cryptocurrencies
5. None of the above

QAmount. What is your organization's total assets under management (in US dollars)?

1. Less than $10 million
2. $10 million to $99.9 million
3. $100 million to $249.9 million
4. $250 million to $999.9 million
5. $1 billion to $4.99 billion
6. $5 billion to $9.99 billion
7. $10 billion to $19.99 billion
8. $20 billion to $49.99 billion
9. $50 billion or more
10. Don't know

QInvolvement. Within your role, are you involved in investment decision making for a listed equity portfolio that is managed by in-house teams?

1. No
2. Yes
3. Don't know

QMainQuestion. Consider the following three reasons for purchasing a stock:

1. "Safety:" The primary appeal of this stock is that it adds safety to your overall portfolio. This is a stock that you believe exhibits stability, consistency, and resilience during economic downturns or adverse conditions.
2. "Supremacy:" This particular stock has been doing well, and you expect it will continue to do very well. In other words, you're extrapolating good past performance. Alternatively, or in addition, you are extremely confident that something good will happen to the company.
3. "Upside Potential:" The primary appeal of this stock is its potential for substantial gains in a short period. Unlike in "Supremacy," where you are certain of a positive outcome, here you acknowledge that there is significant risk and uncertainty. Still, the stock's potential for substantial gains is compelling enough to buy.
Now think of all the ***individual stocks*** you purchased over the past 12 months, even if you no longer own them. We are only interested in your **individual stock investments** (not the industries or funds you're invested in, not the products or services offered by the companies you're invested in). If you bought more than eight stocks, please consider only the first eight stocks that come to your mind.
Please list below all stocks for which "Safety" was the primary motivation for buying the stock. Leave the list blank if none of your purchases were primarily driven by "Safety." Please repeat this exercise for "Supremacy" and "Upside Potential."

Q1. Type the names of the stocks you bought primarily for "Safety" (separated by a comma):

```
```

Q2. Type the names of the stocks you bought primarily for "Supremacy" (separated by a comma):

```
```

Q3. Type the names of the stocks you bought primarily for "Upside Potential" (separated by a comma):

```
```

Online Appendix Figure A8
Second Survey Sent to Retail Investors

This figure displays the questions from an online survey sent to 314 US retail investors, designed to identify which of their recent stock purchases were primarily driven by perceived safety, supremacy, or lottery preferences, as detailed in Section 4.3.

QLocation. Where do you live?

1. Australia
2. Brazil
3. Canada
4. China
5. France
6. Germany
7. India
8. Italy
9. Japan
10. Mexico
11. Singapore
12. South Korea
13. Spain
14. UK
15. USA
16. Other

QAge. How old are you?

1. Under 21
2. 21-24
3. 25-34
4. 35-44
5. 45-54
6. 55-64
7. 65+
8. Prefer not to say

QGender. What is your gender?

1. Male
2. Female
3. Prefer not to say

QInvestmentType. Which of the following investment types do you currently have money allocated to in your role as an investment professional/fund manager? Note: Only include investments you made yourself or directly instructed a third party to make for you.

1. Individual stocks (Publicly Traded Equity)
2. Mutual funds or exchange-traded funds (ETFs)
3. Derivatives (Options, Futures, or Forwards)
4. Cryptocurrencies
5. None of the above

QAmount. Approximately how much money do you currently have in "investable assets," in US Dollars?

In your approximation, please include only
   - cash on hand and in bank accounts
   - investments in stocks, mutual funds, ETFs, derivatives, and cryptocurrencies.

Please exclude other assets you may hold, such as your home, vehicles, or collectibles.

1. Less than $1,000
2. $1,000 to $9,999
3. $10,000 to $24,999
4. $25,000 to $49,999
5. $50,000 to $99,999
6. $100,000 to $249,999
7. $250,000 to $499,999
8. $500,000 to $999,999
9. More than $1,000,000
10. Prefer not to say

QAttention. Approximately how often do you make changes to any of the above investment types? This could be a change to the amount invested or a change in investment type.

1. Less often than once a year
2. Once a year
3. Once every few months/quarterly
4. Once a month
5. 2-3 times a month
6. On a weekly basis

QKnowledge. How would you describe your level of investment knowledge?

1. Complete beginner
2. Rudimentary (i.e. understand some basic principles)
3. Intermediate
4. Advanced
5. Expert

QMainQuestion. Consider the following three reasons for purchasing a stock:

1. "Safety:" The primary appeal of this stock is that it adds safety to your overall portfolio. This is a stock that you believe exhibits stability, consistency, and resilience during economic downturns or adverse conditions.
2. "Supremacy:" This particular stock has been doing well, and you expect it will continue to do very well. In other words, you're extrapolating good past performance. Alternatively, or in addition, you are extremely confident that something good will happen to the company.
3. "Upside Potential:" The primary appeal of this stock is its potential for substantial gains in a short period. Unlike in "Supremacy," where you are certain of a positive outcome, here you acknowledge that there is significant risk and uncertainty. Still, the stock's potential for substantial gains is compelling enough to buy.
Now think of all the ***individual stocks*** you purchased over the past 12 months, even if you no longer own them. We are only interested in your **<u>individual stock</u> investments** (<u>not</u> the industries or funds you're invested in, <u>not</u> the products or services offered by the companies you're invested in). If you bought more than eight stocks, please consider only the first eight stocks that come to your mind.
Please list below all stocks for which "Safety" was the primary motivation for buying the stock. Leave the list blank if none of your purchases were primarily driven by "Safety." Please repeat this exercise for "Supremacy" and "Upside Potential."

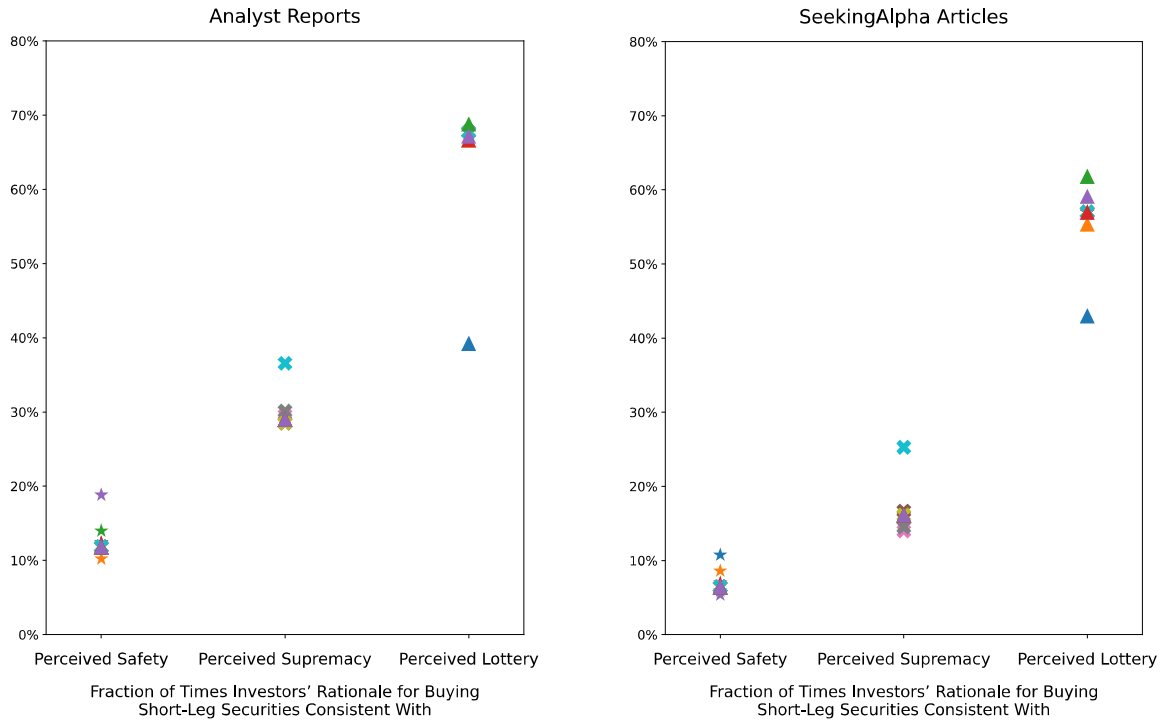Online Appendix Figure A8. Continued.

Q1.   Type the names of the stocks you bought primarily for "Safety" (separated by a comma):

```
```

Q2.   Type the names of the stocks you bought primarily for "Supremacy" (separated by a comma):

```
```

Q3.   Type the names of the stocks you bought primarily for "Upside Potential" (separated by a comma):

```
```

Online Appendix Figure A9
Why do Investors Like Short-Leg Securities? – Sensitivity Analyses

This figure reports the frequency with which a particular reason is used to explain the buy recommendation of a stock that resides in the short leg of an anomaly. The analyses are identical to those in Panel A of Table 2, except that we vary our wordlists. Specifically, we examine for each of the five most frequently used safety words, each of the five most frequently supremacy words and each of the five most frequently used lottery words whether its removal changes our conclusion. We plot the results for the 15 variations of our wordlists.

1. BERT and FinBERT

BERT (Bidirectional Encoder Representations from Transformers), introduced by Devlin et al. (2019), is a neural network model built on the Transformer architecture, designed to capture contextual relationships within text. It employs Masked Language Modeling (MLM), in which certain words are hidden (replaced with a [MASK] token), and the model learns to predict the missing words based on surrounding context. Each word (or sub-word token) is first converted into a numerical vector representation (an "embedding"), which maps the token into a high-dimensional space where semantic relationships can be captured. BERT then applies "self-attention mechanisms," which allow the model to weigh the importance of each word relative to others, enabling it to capture dependencies even across long sentences. Through this process, BERT learns contextual word representations, meaning that the same word can have different meanings depending on its surrounding text (e.g., understanding "bank" differently in "river bank" versus "bank loan").

In our analysis, we apply FinBERT (Huang, Wang, and Yang, 2023), a variant of BERT. The primary distinction between BERT and FinBERT lies in their training data. BERT is a general-purpose language model trained on large, generic text corpora, including Wikipedia and BookCorpus,[1] equipping it with a broad understanding of everyday language. In contrast, FinBERT is pre-trained on financial text, using a large dataset that includes analyst reports, corporate filings, and earnings conference call transcripts. This domain-specific pre-training should enhance FinBERT's ability to understand the unique terminology, syntactic structures, and stylistic conventions prevalent in financial language. As a result, FinBERT should be able to better interpret financial text compared to models trained solely on general-domain data.

2. Fine-Tuning FinBERT

While FinBERT's pre-training on financial texts provides a strong foundation for understanding financial language, was'we further fine-tune the model for our specific task.

2.1 Constructing the Initial Training Dataset

We use analyst reports and Seeking Alpha (SA) articles containing buy recommendations. These articles are segmented into individual sentences, and those with fewer than 20 characters are excluded to remove excessively short or ambiguous statements. This preprocessing results in a corpus of around 32.2 million unique sentences from 1,032,719 analyst reports and 4.2 million unique sentences from 73,061 SA articles.

To construct an initial labeled dataset for model training, we implement the following multi-stage process:

First, we randomly select 2,000 sentences from analyst reports and SA articles. We manually label each sentence as either falling into one of our three categories ("relevant") or not ("irrelevant"):
- Perceived safety ($Label_{safety} = 1$ for relevant, 0 for irrelevant)
- Perceived supremacy ($Label_{supremacy} = 1$ or 0)
- Perceived lottery ($Label_{lottery} = 1$ or 0)

Second, we extract and manually label an additional 3,000 sentences from our corpus containing at least one safety, supremacy or lotter word.

Third, to broaden linguistic diversity and enhance the model's ability to generalize beyond simple keyword matches, we use GPT to generate additional sentences. This augmentation process is guided by three distinct prompts, each tailored to one of the three preference categories (illustrated here using the perceived lottery category as an example):

---

[1] BookCorpus is a large collection of free novel books written by unpublished authors, which contains 11,038 books (around 74M sentences and 1G words) across 16 different sub-genres.

a) Generating candidate sentences for $Label_{lottery} = 1$
"We define a stock with 'perceived lottery' characteristics as one that resembles a lottery ticket in terms of its possible returns: typically, the stock yields below-normal returns, but under the right conditions it could deliver substantial payoffs. These stocks exhibit right-skewed return distributions. As a stock analyst, please generate 20 sentences recommending a stock because of its 'perceived lottery' characteristic, ensuring that each sentence includes the word 'potential' or its derivatives or synonyms."
b) Generating candidate sentences for $Label_{lottery} = 0$
"...As a stock analyst, please generate 20 sentences recommending a stock that does not exhibit 'perceived lottery' characteristics using the keyword 'potential' or its derivatives or synonyms."
c) Generating sentences with alternative linguistic expressions
"...As a stock analyst, please generate 20 sentences that follow the structure and style of the following example: '{example_sentence}' Ensure each sentence maintains a similar linguistic pattern while varying the wording."

We review all GPT-generated sentences and discard any that appear ambiguous in relation to the corresponding prompts. The inclusion of GPT-generated sentences serves several key purposes. First, it expands the dataset by incorporating less commonly expressed linguistic patterns. Second, it enhances syntactic and stylistic diversity, thereby improving the model's ability to generalize beyond literal keyword matches. Third, it provides a set of nuanced positive and negative examples, enabling the model to better distinguish subtle differences in the features of a stock that are appealing to the authors of analyst reports and SA articles.

The dataset generated in the above three stages ("baseline dataset") serves as the foundation for training and fine-tuning our classification model.

2.2 Iterative Model Training and Data Augmentation

We adopt an iterative approach to train our binary classification models for our three key perception categories: perceived safety, supremacy, and lottery. Each model is designed to classify a given sentence as either relevant or irrelevant to its respective perception category.

We train these models in multiple rounds and continuously augment the training data with new examples, thereby systematically improving classification accuracy and efficiency. We detail the process below, using the perceived lottery category as an illustrative example.

Step 1: Model Training
We randomly split our baseline dataset into training (81%), validation (9%), and test (10%) subsets.
- We train the model on the training set.
- We monitor performance and adjust hyperparameters on the validation set to prevent overfitting.
- We evaluate the model's generalization ability on the test set.

We update FinBERT's pre-trained weights over multiple epochs using backpropagation and gradient descent to minimize classification error. The fine-tuning process employs the following hyperparameters: a learning rate of $2e^{-5}$, a batch size of 48 for both training and evaluation, three training epochs, a weight decay of 0.01, and AdamW optimizer. We evaluate the model performance at the conclusion of each epoch, and retain the model exhibiting the highest accuracy. This process produces a fine-tuned FinBERT model optimized to classify sentences as relevant or irrelevant to the perceived lottery category.

Step 2: Model Application
Next, we apply our model to a large pool of unlabeled sentences to identify the cases our model finds the most challenging. We select 30,000 unlabeled sentences randomly extracted from our corpus of analyst reports and SA articles and classify each sentence using the model.

For each sentence, our model assigns:
- A binary label (1 = relevant to the lottery perception, 0 = irrelevant).
- A probability score (ranging from 0.5 to 1.0) to indicate classification confidence.

Sentences with probability scores near 0.5 represent high uncertainty, while scores closer to 1.0 indicate high confidence in the classification. We sort the 30,000 sentences in ascending order of confidence and select the 500 sentences with the lowest probability scores for further examination. These borderline cases represent the most ambiguous or challenging examples for the model.

Focusing on these low-confidence cases is efficient because they highlight the model's weaknesses and provide valuable training examples. As the model's performance improves in subsequent iterations, it produces fewer low-confidence predictions, reducing the number of sentences requiring manual review accordingly.

Step 3: Manual Review and Targeted Data Augmentation
We manually review and annotate the 500 uncertain sentences identified in Step 2. By identifying and correcting misclassifications, we gather high-impact training examples that the model previously struggles with. These examples are especially valuable for refining the model, as they help clarify the decision boundary between relevant and irrelevant classes.

This targeted data augmentation is more efficient than indiscriminately expanding the training dataset, as it focuses on the model's specific weaknesses. We then use the augmented dataset to retrain the model in the next iteration, improving its accuracy and classification performance.

Steps 1 through 3 form one iteration of the training cycle. In each iteration, we fine-tune the model on the augmented dataset from the previous round and then apply it to identify a new set of uncertain sentences for manual annotation and inclusion in the dataset. We continue this iterative process until the model's performance plateaus, defined as an increase in validation F1-score of less than 0.001 for two consecutive epochs.

The final annotated dataset used for training the classification models consists of 7,778 sentences for perceived safety, 10,301 for perceived supremacy, and 10,253 for perceived lottery. The table below summarizes the key performance metrics for each classification model. The accuracy measures the proportion of correctly predicted cases among all predictions. The F1-score, which ranges between 0 and 1, provides a balanced measure combining both precision (correct positive predictions relative to total positive predictions) and recall (correct positive predictions relative to total actual positive instances), with a higher F1-score indicating superior performance. The loss represents the discrepancy between the predicted outcomes and the actual values, with lower values indicating better performance.

Model	N_Annotated_Sentences	Test_Accuracy	Test_F1	Test_Loss
perceived safety	7,778	97.94%	0.980	0.084
perceived supremacy	10,301	97.38%	0.974	0.083
perceived lottery	10,253	97.95%	0.979	0.078

When evaluated on held-out test sets, our final models achieve test accuracies of 97.94% (perceived safety), 97.38% (perceived supremacy), and 97.95% (perceived lottery). The corresponding F1-scores are 0.980, 0.974, and 0.979, respectively, accompanied by notably low losses. Overall, these results suggest that our iterative model training and dataset augmentation strategy significantly enhances model accuracy and generalization, while efficiently optimizing annotation efforts for maximum impact.

2.3 Constructing Article-Level Measures

After finalizing the three fine-tuned FinBERT models, we apply them to classify the entire corpus of 36 million unique sentences extracted from analyst reports and SA articles with buy recommendations. Each model assigns a binary classification label to every sentence within its respective perception category, while simultaneously generating a probability score (ranging from 0.5 to 1.0) to indicate classification confidence.

To aggregate sentence-level classifications to the article level, we develop a series of measures, which we describe below. **bert** is our primary measure and the one our results in Table 5 are based on. The results based on the other measures are very similar and available upon request.

- **bert**$_{\%safety\_words}$ (Proportion of Safety-Sentence Words): This measure represents the proportion of words in sentences classified as "perceived safety." It is calculated by summing of the number of words across all sentences classified as "perceived safety" and dividing by the total number of words in the article.
- **bert_cw**$_{\%safety\_words}$ (Confidence-Weighted Proportion of Safety-Sentence Words): This measure is a weighted version of *bert*$_{\%safety}$, where each sentence's contribution is weighted by its classification probability score. This approach gives greater weight to sentences classified with higher confidence.
- **bert**$_{safety\_words}$ (Count of Safety-Sentence Words): This measure calculates the total word count of all sentences within the article classified as "perceived safety."
- **bert_cw**$_{safety\_words}$ (Confidence-Weighted Count of Safety-Sentence Words): This is similar to *bert_cw*$_{\%safety\_words}$, but it uses the total word count instead of a proportion. Each sentence's word count is weighted by its classification probability.

Online Appendix Table A1
Descriptive Statistics Regarding Institutional Investors Survey Participants

This table reports the responses to the institutional investors background questions displayed in Online Appendix Figure A1.

	Number [Fraction] of Institutional Investors	
QAge		
25-34	2	[2%]
35-44	20	[20%]
45-54	29	[29%]
55-64	35	[35%]
65+	13	[13%]
Prefer not to say	1	[1%]
QGender		
Female	10	[10%]
Male	87	[87%]
I prefer not to say	3	[3%]
QExperience		
< 10 years	3	[3%]
10-19 years	28	[28%]
20-29 years	50	[50%]
30 years +	19	[19%]
QAmount		
$10 million to $99.9 million	19	[19%]
$100 million to $249.9 million	25	[25%]
$250 million to $999.9 million	15	[15%]
$1 billion to $2.49 billion	7	[7%]
$2.5 billion+	34	[34%]

Online Appendix Table A2
Descriptive Statistics Regarding Retail Investors Survey Participants

This table reports the responses to the retail investors background questions displayed in Online Appendix Figure A3.

	Number [Fraction] of Retail Investors	
QAge		
21-29	68	[22.4%]
30-44	139	[45.9%]
45-59	63	[20.8%]
60 or more	32	[10.6%]
I prefer not to say	1	[0.3%]
Qgender		
Female	93	[30.7%]
Male	210	[69.3%]
I prefer not to say	0	[0%]
Qexperience		
Novice investor	118	[38.9%]
Investor with intermediate experience	178	[58.7%]
Professional investor	7	[2.3%]
I prefer not to say	0	[0%]
Qamount		
Less than $500	24	[7.9%]
$500 to $2,000	18	[5.9%]
$2,001 to $10,000	33	[10.9%]
$10,001 to $25,000	45	[14.9%]
$25,001 to $100,000	66	[21.8%]
$100,001 to $300,000	55	[18.2%]
$300,001 to $500,000	20	[6.6%]
$500,001 to $1,000,000	18	[5.9%]
More than $1,000,000	14	[4.6%]
I prefer not to say	10	[3.3%]
Qattention		
About every day	79	[26.1%]
About once a week	109	[36.0%]
About once a month	78	[25.7%]
About once every three months	25	[8.3%]
About once a year	3	[1.0%]
Less frequently than once a year	5	[1.7%]
I prefer not to say	4	[1.3%]
Qinteractions		
About every day	20	[6.6%]
About once a week	87	[28.7%]
About once a month	97	[32.0%]
About once every three months	43	[14.2%]
About once a year	18	[5.9%]
Less frequently than once a year	24	[7.9%]
Never	13	[4.3%]
I prefer not to say	1	[0.3%]

Online Appendix Table A3
Why Do Investors Like Short-Leg Securities? – Alternate Benchmark

This table reports the frequency with which investors use a particular reason to explain their buy recommendations of stocks that reside in the short leg of an anomaly. The analyses are analogous to those in Panel A of Table 2. But to evaluate whether the fractions of safety, supremacy and lottery words in the buy recommendations of short-leg securities is "atypically high", we compare them to those in the buy recommendations written by the same analyst in the same month on non-short-leg securities.

	Fraction of Times Investors Explain [Primarily Explain] Their Dis-Like of Long-Leg Securities Through			
	Perceived Safety (1)	Perceived Supremacy (2)	Perceived Lottery (3)	Inconclusive
Sell-Side Analyst Reports	16% [13%]	29% [17%]	60% [47%]	23%
Seeking Alpha Articles	6% [6%]	6% [4%]	45% [45%]	46%

Online Appendix Table A4
Why Do Investors Like Short-Leg Securities? – Evidence by Firm Characteristic

This table reports the results from Panel A in Table 2 separately for each of the 186 firm characteristics. For each of 186 firm characteristics, we compute the average *Safety [%]*, *Supremacy [%]*, and *Lottery [%]* across the buy recommendations of short-leg securities; we also compute the average fractions across the buy recommendations written on all other stocks. We then compute the difference between the former and the latter (on a relative basis) and test whether the difference is positive and statistically significant at the 5% level. We report the relative difference and the corresponding *t*-statistic in parentheses if the difference is positive and statistically significant at the 5% level. We bold the difference that is the largest economically speaking. An empty cell implies that the difference is not positive and statistically significant at the 5% level.

Firm Characteristic	Do Sell-Side Analyst Buy Recommendations of Short-Leg Securities Disproportionately Frequently Use						Do Seeking Alpha Buy Recommendations of Short-Leg Securities Disproportionately Frequently Use					
	Safety Words?		Supremacy Words?		Lottery Words?		Safety Words?		Supremacy Words?		Lottery Words?	
52 Week High					**8%**	**(18.82)**					**13%**	**(8.48)**
Δ Asset Turnover			**10%**	**(27.03)**								
Δ Capex (Three Years)					**8%**	**(18.10)**					**8%**	**(4.98)**
Δ Capex (Two Years)					**11%**	**(25.52)**					**17%**	**(8.78)**
Δ Capital Inv (Industry Adj)					**5%**	**(10.83)**					**10%**	**(5.39)**
Δ Current Operating Assets			**13%**	**(39.60)**	2%	(6.53)			**6%**	**(4.77)**		
Δ Current Operating Liabilities			**11%**	**(36.33)**	5%	(14.58)					**4%**	**(2.49)**
Δ Equity to Assets					**16%**	**(46.04)**					**12%**	**(8.25)**
Δ Financial Liabilities					**6%**	**(15.31)**					**4%**	**(2.60)**
Δ Long-Term Investment	**10%**	**(12.64)**										
Δ Net Financial Assets					**11%**	**(28.48)**					**9%**	**(5.84)**
Δ Net Noncurrent Op Assets			2%	(7.23)	**6%**	**(14.43)**					**7%**	**(4.65)**
Δ Net Operating Assets			1%	(3.07)	**4%**	**(12.33)**						
Δ Net Working Capital					**10%**	**(21.31)**					**14%**	**(7.26)**
Δ Order Backlog												
Δ PPE and Inv/Assets					**3%**	**(7.84)**						
Δ Recommendation												
Δ Taxes					**3%**	**(7.47)**					**4%**	**(2.62)**

Online Appendix Table A4. Continued.

Firm Characteristic	Do Sell-Side Analyst Buy Recommendations of Short-Leg Securities Disproportionately Frequently Use						Do Seeking Alpha Buy Recommendations of Short-Leg Securities Disproportionately Frequently Use					
	Safety Words?		Supremacy Words?		Lottery Words?		Safety Words?		Supremacy Words?		Lottery Words?	
Abnormal Accruals					10%	(19.16)					13%	(6.35)
Accruals					6%	(12.45)					11%	(5.06)
Active Shareholders												
Advertising Expense			16%	(36.87)	6%	(11.16)					8%	(3.57)
Amihud's Illiquidity	7%	(16.09)	3%	(14.01)					3%	(3.66)		
Analyst Earnings Per Share					35%	(82.90)					31%	(16.53)
Analyst Optimism			8%	(19.99)	4%	(9.04)					6%	(2.93)
Analyst Value					29%	(51.58)					31%	(11.97)
Asset Growth					13%	(36.70)					9%	(6.60)
Bid-Ask Spread	14%	(4.45)					30%	(2.10)				
Book Leverage (Annual)	32%	(33.90)										
Book to Market Using December ME			2%	(8.61)	12%	(34.04)					6%	(4.47)
Book to Market, Original (Stattman 1980)			14%	(47.81)	2%	(7.17)			14%	(11.28)		
Brand Capital Investment							14%	(3.94)				
Breadth of Ownership												
CAMP Beta							39%	(6.82)			13%	(4.16)
Cash Flow to Market					25%	(39.36)					29%	(12.27)
Cash Productivity			20%	(69.95)	6%	(18.84)			15%	(13.32)		
Cash to Assets							15%	(4.29)				
Cash-Based Operating Profitability					25%	(42.89)					34%	(14.69)
Cash-Flow to Price Variance					6%	(9.39)					12%	(5.66)
Composite Debt Issuance			5%	(12.37)	10%	(20.47)					6%	(3.29)
Composite Equity Issuance					17%	(36.10)					23%	(11.02)
Conglomerate Return												
Consensus Recommendation												

Online Appendix Table A4. Continued.

Firm Characteristic	Do Sell-Side Analyst Buy Recommendations of Short-Leg Securities Disproportionately Frequently Use			Do Seeking Alpha Buy Recommendations of Short-Leg Securities Disproportionately Frequently Use		
	Safety Words?	Supremacy Words?	Lottery Words?	Safety Words?	Supremacy Words?	Lottery Words?
Convertible Debt Indicator			**6% (17.90)**			
Coskewness			**6% (12.92)**			**12% (6.38)**
Coskewness Using Daily Returns	**2% (2.24)**		1% (2.61)	8% (2.19)		**9% (3.93)**
Credit Rating Downgrade	**7% (6.31)**					
Customer Momentum						
Customers Momentum						
Days with Zero Trades (1M)			**5% (14.45)**			**10% (7.79)**
Days with Zero Trades (12M)			**6% (17.08)**			**5% (4.18)**
Days with Zero Trades (6M)			**6% (16.92)**			**7% (5.64)**
Decline in Analyst Coverage			**9% (2.04)**			
Deferred Revenue			**17% (23.58)**			**25% (7.85)**
Dividend Omission						
EPS Forecast Dispersion			**9% (18.88)**			**14% (7.45)**
EPS Forecast Revision						**6% (3.93)**
Earnings Announcement Return						**7% (4.89)**
Earnings Consistency			**6% (8.02)**			**19% (5.89)**
Earnings Forecast Revisions			**10% (19.24)**			**14% (7.52)**
Earnings Forecast to Price			**45% (45.81)**			**25% (6.83)**
Earnings Surprise						
Earnings Surprise Streak			**10% (14.82)**			**24% (9.18)**
Earnings Surprise of Big Firms						
Earnings-to-Price Ratio		**14% (36.58)**	9% (19.60)		6% (3.62)	**9% (4.65)**
Efficient Frontier Index		**13% (35.81)**	7% (16.51)			
Employment Growth		1% (4.77)	**8% (24.69)**			**6% (4.72)**
Enterprise Component of BM	**3% (4.51)**			**8% (2.80)**		4% (2.59)

Online Appendix Table A4. Continued.

Firm Characteristic	Do Sell-Side Analyst Buy Recommendations of Short-Leg Securities Disproportionately Frequently Use						Do Seeking Alpha Buy Recommendations of Short-Leg Securities Disproportionately Frequently Use					
	Safety Words?		Supremacy Words?		Lottery Words?		Safety Words?		Supremacy Words?		Lottery Words?	
Enterprise Multiple			21%	(59.18)	10%	(23.83)			8%	(5.94)	8%	(4.77)
Equity Duration					28%	(53.98)					31%	(15.58)
Exchange Switch												
Excluded Expenses	4%	(5.73)	1%	(2.01)	3%	(8.40)						
Firm Age - Momentum					2%	(2.37)						
Firm Age Based on CRSP	10%	(15.93)					22%	(9.87)				
Frazzini-Pedersen Beta							63%	(5.75)			24%	(4.11)
Governance Index			6%	(3.38)								
Gross Profits / Total Assets					43%	(87.63)					49%	(22.71)
Growth in Advertising Expenses			10%	(20.39)	7%	(11.57)					9%	(3.74)
Growth in Book Equity					12%	(31.45)					8%	(5.14)
Growth in Long Term Operating Assets					11%	(24.93)					15%	(8.18)
Idiosyncratic Risk (3 Factor)					15%	(39.66)					26%	(16.85)
Idiosyncratic Risk (AHT)					28%	(54.44)					36%	(19.50)
Idiosyncratic Skewness (3F Model)	2%	(3.13)	11%	(42.78)	6%	(19.46)					6%	(4.73)
Industry Concentration (Assets)	4%	(5.03)	6%	(17.14)					9%	(6.10)		
Industry Concentration (Equity)	2%	(2.47)	8%	(21.96)					5%	(3.86)		
Industry Concentration (Sales)	2%	(2.80)	7%	(19.08)					8%	(5.75)		
Industry Momentum												
Industry Return of Big Firms					2%	(2.49)						
Initial Public Offerings			10%	(29.52)	9%	(24.06)			9%	(6.23)	15%	(8.21)
Inst. Ownership Among High Short Interest					18%	(3.07)						
Inst. Ownership and Forecast Dispersion												
Inst. Ownership and Idio Vol												
Inst. Ownership and Market to Book												

Online Appendix Table A4. Continued.

Firm Characteristic	Do Sell-Side Analyst Buy Recommendations of Short-Leg Securities Disproportionately Frequently Use			Do Seeking Alpha Buy Recommendations of Short-Leg Securities Disproportionately Frequently Use		
	Safety Words?	Supremacy Words?	Lottery Words?	Safety Words?	Supremacy Words?	Lottery Words?
Inst. Ownership and Turnover						
Intangible Return Using BM		**17%** **(51.83)**	14% (36.60)		**11%** **(8.50)**	3% (2.19)
Intangible Return Using CFtoP		**16%** **(43.66)**	13% (30.14)		3% (2.06)	**4%** **(2.27)**
Intangible Return Using EP		**17%** **(45.93)**	11% (26.75)			
Intangible Return Using Sale2P		**24%** **(72.71)**	10% (26.38)		**15%** **(12.13)**	
Intermediate Momentum			**11%** **(20.78)**			**22%** **(11.14)**
Inventory Growth		**14%** **(41.27)**			**12%** **(9.53)**	
Inventory Growth2			**13%** **(24.68)**			**8%** **(4.28)**
Investment to Revenue			**3%** **(6.06)**			**11%** **(5.17)**
IPO and Age			**9%** **(3.44)**			
IPO and No R&D Spending		**20%** **(16.08)**			**42%** **(6.43)**	
Junk Stock Momentum						
Leverage Component of BM						
Long-Run Reversal		**11%** **(36.78)**	7% (20.90)		**6%** **(4.96)**	
Long-Term EPS Forecast	2% (5.50)		**8%** **(18.00)**			**9%** **(4.78)**
Long-vs-Short EPS Forecasts			**6%** **(11.54)**			**8%** **(3.45)**
Market Leverage		11% (35.90)	**20%** **(55.31)**			**16%** **(11.21)**
Maximum Return Over Month			**16%** **(42.91)**			**25%** **(16.28)**
Medium-Run Reversal	4% (13.20)		**10%** **(26.04)**	3% (2.41)		**8%** **(5.41)**
Mohanram G-Score			**4%** **(5.29)**		**14%** **(4.88)**	13% (3.73)
Momentum (12 Month)			**10%** **(18.25)**			**15%** **(7.79)**
Momentum (6 Month)			**8%** **(15.68)**			**11%** **(6.79)**
Momentum Based on FF3 Residuals						
Momentum in High Volume Stocks			**5%** **(7.51)**			**10%** **(4.48)**
Momentum without the Seasonal Part			**6%** **(12.52)**			**11%** **(6.41)**

Online Appendix Table A4. Continued.

Firm Characteristic	Do Sell-Side Analyst Buy Recommendations of Short-Leg Securities Disproportionately Frequently Use			Do Seeking Alpha Buy Recommendations of Short-Leg Securities Disproportionately Frequently Use		
	Safety Words?	Supremacy Words?	Lottery Words?	Safety Words?	Supremacy Words?	Lottery Words?
Net Debt Financing			6% (14.91)			
Net Debt to Price						
Net Equity Financing			29% (69.03)			32% (17.83)
Net External Financing			30% (73.36)			40% (20.74)
Net Income / Book Equity			27% (60.27)			29% (16.08)
Net Operating Assets			3% (7.53)			
Net Payout Yield			27% (48.74)			38% (15.07)
O Score			36% (52.94)			55% (19.33)
Off Season Long-Term Reversal		5% (15.48)	13% (37.76)		3% (2.33)	9% (6.73)
Off Season Reversal Years 11-15		6% (14.43)	7% (15.31)			5% (2.57)
Off Season Reversal Years 16-20		8% (16.91)	5% (9.61)			
Off Season Reversal Years 6-10			12% (28.98)			
Operating Cash Flows to Price			26% (44.53)			32% (13.77)
Operating Leverage	46% (40.48)			27% (5.94)		
Operating Profitability R&D Adjusted			29% (45.66)			29% (12.51)
Operating Profits / Book Equity			16% (33.52)			20% (9.50)
Option Volume to Average		2% (4.69)	2% (4.46)			12% (5.21)
Option to Stock Volume		3% (10.68)	4% (12.07)			
Order Backlog						
Organizational Capital				7% (3.88)		
Past Trading Volume	4% (8.96)	3% (15.38)		3% (3.25)		
Pastor-Stambaugh Liquidity Beta			11% (27.66)			15% (10.27)
Payout Yield			10% (19.64)			9% (4.21)
Pension Funding Status						
Percent Operating Accruals						

Online Appendix Table A4. Continued.

Firm Characteristic	Do Sell-Side Analyst Buy Recommendations of Short-Leg Securities Disproportionately Frequently Use						Do Seeking Alpha Buy Recommendations of Short-Leg Securities Disproportionately Frequently Use					
	Safety Words?		Supremacy Words?		Lottery Words?		Safety Words?		Supremacy Words?		Lottery Words?	
Percent Total Accruals			3%	(8.57)							7%	(3.32)
Piotroski F-Score					14%	(5.80)						
Predicted Analyst Forecast Error			9%	(18.30)	12%	(20.09)					12%	(4.43)
Price	3%	(6.93)	15%	(60.70)	2%	(6.65)	4%	(1.97)	10%	(11.18)		
Price Delay Coeff			4%	(12.66)	3%	(9.04)			4%	(3.31)	5%	(3.61)
Price Delay R-Square	13%	(17.49)	3%	(8.45)			14%	(4.14)	6%	(3.93)		
Price Delay with Standard Error Adjusted	2%	(3.83)			1%	(3.79)			3%	(2.57)	4%	(2.79)
Probability of Informed Trading					16%	(2.96)						
Put Volatility Minus Call Volatility					7%	(12.56)					19%	(9.26)
R&D Ability	35%	(13.52)	26%	(21.46)					20%	(3.92)		
R&D Over Market Cap			5%	(16.27)					15%	(11.07)		
Real Dirty Surplus	1%	(2.80)	2%	(6.49)								
Real Estate Holdings					9%	(15.43)					19%	(7.44)
Return Seasonality Last Year					13%	(26.05)					18%	(9.20)
Return Seasonality Years 11-15					8%	(15.44)					11%	(4.92)
Return Seasonality Years 16-20			4%	(7.99)	9%	(15.04)					9%	(4.05)
Return Seasonality Years 2-5					12%	(24.00)					21%	(10.38)
Return Seasonality Years 6-10					9%	(17.40)					14%	(6.44)
Return Skewness			9%	(32.55)	8%	(24.02)					9%	(6.24)
Return on Assets (Quarterly)					40%	(83.70)					48%	(23.71)
Revenue Growth Rank			5%	(15.84)	9%	(23.71)						
Revenue Surprise												
Sales Growth Over Inventory Growth					3%	(4.81)						
Sales Growth Over Overhead Growth					17%	(29.94)					12%	(5.73)
Sales-to-Price					40%	(100.50					38%	(21.69)

Online Appendix Table A4. Continued.

Firm Characteristic	Do Sell-Side Analyst Buy Recommendations of Short-Leg Securities Disproportionately Frequently Use			Do Seeking Alpha Buy Recommendations of Short-Leg Securities Disproportionately Frequently Use		
	Safety Words?	Supremacy Words?	Lottery Words?	Safety Words?	Supremacy Words?	Lottery Words?
Share Issuance (1 Year)			17% (40.65)			30% (14.93)
Share Issuance (5 Year)			17% (33.18)			24% (11.87)
Share Turnover Volatility			27% (25.11)			10% (3.08)
Short Interest			8% (23.07)			9% (7.23)
Short Term Reversal			13% (34.89)			13% (9.38)
Size	8% (18.07)	4% (20.02)			3% (4.47)	
Suppliers Momentum						
Systematic Volatility			6% (18.39)			10% (7.53)
Tail Risk Beta			5% (10.79)	28% (8.46)		
Takeover Vulnerability						
Tangibility	9% (9.16)	9% (20.25)		8% (2.31)		
Taxable Income to Income						
Total Accruals			13% (34.35)			8% (5.58)
Total Assets to Market		17% (63.00)	18% (56.84)		7% (6.84)	9% (7.39)
Volatility Smirk Near the Money						18% (6.08)
Volume Trend			11% (23.46)			24% (12.34)
Volume Variance						
Volume to Market Equity			2% (4.98)			7% (5.66)

Online Appendix Table A5
Why Do Investors Like Short-Leg Securities? – Moderating Factor

This table reports the frequency with which investors use a particular reason to explain their buy recommendations of stocks that reside in the short leg of an anomaly. The analyses are identical to those in Panel A of Table 2, except that we now report results for different subsets of firm characteristics. We compute for each of the 186 firm characteristics the average market capitalization of the stocks in the short leg. As discussed in Section 4.2, extrapolative tendencies are likely stronger for larger stocks; non-traditional preferences are likely more relevant when evaluating smaller stocks. Panel A reports the results for the firm characteristics whose average market capitalization of the short-leg securities is above the median ("less likely to be lottery based). Panel B reports the results for the firm characteristics whose average market capitalization of the short-leg securities is below the median ("more likely to be lottery based).

	Fraction of Times Investors Explain [Primarily Explain] Their Liking of Short-Leg Securities Through			
	Perceived Safety (1)	Perceived Supremacy (2)	Perceived Lottery (3)	Inconclusive
*Panel A: Among Anomalies **Less** Likely to be Lottery Based*				
Sell-Side Analyst Reports	22% [14%]	48% [28%]	53% [31%]	27%
Seeking Alpha Articles	11% [10%]	26% [18%]	35% [30%]	42%
*Panel B: Among Anomalies **More** Likely to be Lottery Based*				
Sell-Side Analyst Reports	2% [2%]	10% [6%]	83% [78%]	13%
Seeking Alpha Articles	3% [2%]	5% [3%]	78% [77%]	17%

Online Appendix Table A6

Do Analyst and SA Views Reflect Views of the General Investor Population?

This table reports results from regressions of buy-sell order imbalances and DGTW-adjusted stock returns on the tones of sell-side analyst reports and articles published on Seeking Alpha. The buy-sell order imbalances metric captures the net difference between the number of buy orders and sell orders executed for a particular stock within a single trading day. The DGTW-adjusted stock returns are calculated as the deviation between a given stock's raw return on a specific day and the return on a value-weighted portfolio of firms of similar size, book-to-market ratios, and past returns (Daniel, Grinblatt, Titman, and Wermers, 1997). Our sample encompasses 11,721,278 stock/day observations for the buy-sell order imbalances and 12,143,210 stock/day observations for the DGTW-adjusted stock returns. These observations span the time period from January 2006 through December 2021. To construct $Tone_{Sell\text{-}Side\ Analysts}$, we compute for each stock, at the end of each day, the average tone across all sell-side analyst reports published on the corresponding stock on the corresponding day. Tone is the number of positive words in the report minus the number of negative words divided by the total number of words in the report. We account for negation. To construct $Tone_{Seeking\ Alpha}$, we compute for each stock, at the end of each day, the average tone across all Seeking Alpha articles published on the corresponding stock on the corresponding day. $Sentiment_{Dow\ Jones\ Newswires}$ is the average composite sentiment score ("CSS") in RavenPack across Dow Jones Newswires on the corresponding stock on the corresponding day. We also construct $I_{Sell\text{-}side\ Analysts}$, $I_{Seeking\ Alpha}$, and $I_{Dow\ Jones\ Newswires}$, which equal one if there are sell-side analyst reports, Seeking Alpha articles and Dow Jones Newswires published on the corresponding stock on the corresponding day, respectively. $Tone_{Sell\text{-}Side\ Analysts}$, $Tone_{Seeking\ Alpha}$, and $Sentiment_{Dow\ Jones\ Newswires}$ are set to zero when there are no sell-side analyst reports, no Seeking Alpha articles, and no Dow Jones Newswire published on the corresponding stock on the corresponding day, respectively. T-statistics are reported in parentheses and are based on standard errors adjusted for heteroscedasticity and clustered by day. *, **, and *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

	Buy-Sell Order Imbalances			DGTW-Adjusted Stock Returns		
	(1)	(2)	(3)	(4)	(5)	(6)
$Tone_{Sell\text{-}Side\ Analysts}$	0.364***		0.363***	0.362***		0.360***
	(15.55)		(15.51)	(76.41)		(76.30)
$Tone_{Seeking\ Alpha}$		0.299***	0.297***		0.149***	0.126***
		(6.92)	(6.88)		(19.22)	(16.42)
$Sentiment_{Dow\ Jones\ Newswires}$	0.063***	0.064***	0.063***	0.034***	0.035***	0.034***
	(14.91)	(15.17)	(14.91)	(60.89)	(61.42)	(60.87)
$I_{Sell\text{-}Side\ Analysts}$	0.022***		0.022***	0.001***		0.001***
	(38.13)		(38.10)	(14.27)		(14.32)
$I_{Seeking\ Alpha}$		0.015***	0.012***		0.000***	0.000***
		(18.28)	(15.00)		(4.16)	(3.18)
$I_{Dow\ Jones\ Newswires}$	0.023***	0.025***	0.023***	0.001***	0.001***	0.001***
	(23.81)	(25.90)	(23.70)	(15.93)	(17.44)	(15.92)
# Obs.	11,721,278	11,721,278	11,721,278	12,143,210	12,143,210	12,143,210
Adj. R^2	0.001	0.001	0.001	0.003	0.001	0.003

Online Appendix Table A7
Analysts' Long-Term Earnings Growth Forecasts and Their Use of Supremacy Words

This table reports results from regressions of analysts' long-term earnings growth forecasts on the tone and the fractions of safety, supremacy and lottery words in the corresponding written reports. *Tone [%]* is the number of positive words minus the number of negative words scaled by the total number of words. *Safety [%]* is the number of safety words scaled by the total number of words. *Supremacy [%]* is the number of supremacy words scaled by the total number of words. *Lottery [%]* is the number of lottery words scaled by the total number of words. We winsorize variables at the top and bottom 1%. *T*-statistics are reported in parentheses and are based on standard errors adjusted for heteroscedasticity and clustered by day. *, **, and *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Tone [%]	0.941***		0.827***	1.184***		1.052***	1.011***		0.900***
	(15.25)		(12.52)	(18.23)		(15.17)	(16.25)		(13.54)
Safety [%]		-0.238	-0.633		-0.689	-1.162**		-0.657	-1.078*
		(-0.43)	(-1.14)		(-1.20)	(-2.03)		(-1.17)	(-1.92)
Supremacy [%]		2.044***	1.067***		2.497***	1.265***		2.117***	1.086***
		(10.50)	(5.15)		(12.09)	(5.78)		(10.36)	(5.02)
Lottery [%]		0.162	-0.021		0.552*	0.336		0.515*	0.341
		(0.61)	(-0.08)		(1.93)	(1.18)		(1.86)	(1.23)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes
Analyst FE	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
# Obs.	40,971	40,971	40,971	40,606	40,606	40,606	40,606	40,606	40,606
Adj. R^2	0.452	0.450	0.452	0.526	0.524	0.527	0.545	0.543	0.545

Online Appendix Table A8
Why Do Investors Like Short-Leg Securities? – Removing "Potential" and "Upside"

This table reports the frequency with which investors use a particular reason to explain their buy recommendations of stocks that reside in the short leg of an anomaly. The analyses are analogous to those in Panel A of Table 2. But we now exclude "potential" and "upside" from the lottery wordlist.

	Fraction of Times Investors Explain [Primarily Explain] Their Dis-Like of Long-Leg Securities Through			
	Perceived Safety (1)	Perceived Supremacy (2)	Perceived Lottery (3)	Inconclusive
Sell-Side Analyst Reports	12% [8%]	29% [16%]	70% [62%]	15%
Seeking Alpha Articles	7% [5%]	16% [12%]	54% [52%]	31%

Online Appendix Table A9
Why Do Investors Like Short-Leg Securities? – Sensitivity Analyses

This table reports the frequency with which investors use a particular reason to explain their buy recommendations of stocks that reside in the short leg of an anomaly. The analyses are identical to those in Panel A of Table 2, except that we now de-mean the fractions of safety, supremacy and lottery words at the sell-side analyst/SA contributor level (Panel A) or consider sell-side analyst reports written by All-Star Analysts only (Panel B). In Panels C and D, we compute weighted averages of the fraction of safety, supremacy, and lottery words instead of equal-weighting analyst reports and Seeking Alpha (SA) articles. In Panel C, we weigh SA articles based on the total number of likes and comments the contributor's articles have garnered. In Panel D, we weigh analyst reports and SA articles based on the positivity of the market reaction in the first two days to a given buy recommendation; buy recommendations that trigger a negative market response are assigned a weight of zero. In additional tests, we consider only analyst reports and SA articles on stocks that have consistently been in the short leg over the previous three months (Panel E) or the previous six months (Panel F).

	Fraction of Times Investors Explain [Primarily Explain] Their Liking of Short-Leg Securities Through			
	Perceived Safety (1)	Perceived Supremacy (2)	Perceived Lottery (3)	Inconclusive
Panel A: Fractions Demeaned at Sell-Side Analyst / Seeking Alpha Contributor Level				
Sell-Side Analyst Reports	11% [5%]	30% [15%]	59% [56%]	24%
Seeking Alpha Articles	5% [5%]	17% [13%]	50% [49%]	33%
Panel B: "Influential Sell-Side Analysts"				
Sell-Side Analyst Reports written by All-Star Analysts Only	8% [7%]	27% [13%]	65% [57%]	23%
Panel C: "Influential Seeking Alpha Contributors"				
Seeking Alpha Articles weighted by # Contributor Likes	11% [10%]	10% [5%]	61% [58%]	27%
# Contributor Comments Received	11% [10%]	18% [9%]	59% [55%]	26%
Panel D: Sell-Side Analyst Reports and Seeking Alpha Articles Weighted By Positivity of Market Reaction				
Sell-Side Analyst Reports	13% [5%]	28% [17%]	64% [54%]	24%
Seeking Alpha Articles	12% [9%]	21% [16%]	54% [50%]	25%

	Fraction of Times Investors Explain [Primarily Explain] Their Liking of Short-Leg Securities Through			
	Perceived Safety (1)	Perceived Supremacy (2)	Perceived Lottery (3)	Inconclusive
Panel E: Stocks Consistently in the Short Leg over Previous Three Months				
Sell-Side Analyst Reports	11% [8%]	28% [19%]	68% [56%]	17%
Seeking Alpha Articles	8% [7%]	15% [10%]	52% [49%]	34%
Panel F: Stocks Consistently in the Short Leg over Previous Six Months				
Sell-Side Analyst Reports	12% [9%]	29% [18%]	62% [50%]	24%
Seeking Alpha Articles	10% [9%]	14% [11%]	49% [44%]	35%

Online Appendix Table A9
Why Do Investors Like Short-Leg Securities? – Discussion

1. Analyst and SA Contributor Writing Styles

In another sensitivity analysis, we assess the robustness of our findings by demeaning the fractions at the sell-side analyst and SA contributor level. This approach ensures that our results are not driven by time-invariant individual analyst or contributor word choice preferences. Panel A of Online Appendix Table A9 shows that including analyst- or contributor fixed effects does not impact our results.

2. Higher Quality Reports and Articles

Our main analysis utilizes the entire population of text data. On the one hand, this avoids selective sampling. On the other hand, our full sample contains considerable noise. Here, we refine our analysis by focusing on analyst reports and SA articles that may be less noisy.

In Panel B of Online Appendix Table A9, we restrict our analysis to All-Star Analysts. All-Star Analysts may produce higher-quality reports (Desai, Liang, and Singh, 2000). Their recommendations may also more accurately reflect or influence institutional investors' perceptions. The results indicate that All-Star Analysts primarily favor short-leg securities for their perceived safety in 7% of cases, supremacy in 13%, and lottery-like potential in 57%. These fractions closely resemble those in Panel A of Table 2.

We consider three additional measures of quality. Since these measures are continuous, we now compute weighted averages of analyst reports and SA articles, with higher quality reports or articles, as per our measures, being assigned a greater weight. Our first two additional quality measures are specific to SA articles: the number of likes and the number of comments that SA contributors have received as of the publication date of the corresponding SA article. We assume that articles written by "All-Star SA contributors" are of higher quality and better reflect or influence retail investors' perceptions. The findings in Panel C of Online Appendix Table A9 show that the value-weighted results are very similar to our equal-weighted results in Panel A of Table 2.

Our third measure can be computed for both analyst reports and SA articles: the cumulative stock return over the first two days following a buy recommendation. We assume that buy recommendations that elicit more positive market reactions are of higher quality and better reflect investors' perceptions. If the market reaction is negative, we set the weight to zero. The results in Panel D of Online Appendix Table A9 show that "higher-quality" analyst reports disproportionately emphasize perceived safety in 5% of cases, supremacy in 17%, and lottery-like features in 54%. For "higher-quality" SA articles, the corresponding percentages are 9%, 16%, and 50%, respectively. Again, these numbers are very similar to those in Panel A of Table 2.

3. Reports and Articles on Consistent Short-Leg Securities

Another possible source of noise comes from stocks falling only briefly into the short leg. For instance, investors may genuinely like high-volatility stocks for their lottery-like features. However, if a stock only temporarily exhibits high volatility, investors may not view this stock as a true high-volatility stock and not rationalize their liking of this particular stock in lottery terms.

To reduce such noise, we refine our analysis by focusing on stocks that have consistently remained in the short leg over an extended period. Specifically, we restrict our analysis to buy recommendations issued in month t for stocks that have consistently been in the short leg from months $t-3$ through t ("the entire previous quarter") or from months $t-6$ through t ("the entire previous six months").

The results, presented in Panel E of Online Appendix Table A9, indicate that for stocks that have consistently been in the short leg over the previous quarter, analysts primarily favor them for their perceived safety in 8% of cases, supremacy in 19%, and lottery potential in 56%. For SA articles, the corresponding fractions are 7%, 10%, and 49%, respectively. The results are very similar for stocks that remain in the short leg over the past six months (Panel F of Table 6).

Online Appendix Table A10
Why Do Investors Dis-Like Long-Leg Securities?

This table reports the frequency with which a particular reason is used to explain the sell recommendation of a stock that resides in the long leg of an anomaly. The analyses are analogous to those in Panel A of Table 2, except that we now base our inferences on the occurrence of negated safety words, negated supremacy words and negated lottery words and test whether these negated words appear unusually often in the sell recommendations for long-leg securities compared with the sell recommendations for non-long-leg securities. Panel A reports the results from dictionary-based analyses. Panel B reports the results based on BERT.

	Fraction of Times Investors Explain [Primarily Explain] Their Dis-Like of Long-Leg Securities Through the Lack of			
	Perceived Safety (1)	Perceived Supremacy (2)	Perceived Lottery (3)	Inconclusive
Panel A: Dictionary-Based Approach				
Sell-Side Analyst Reports	7% [7%]	4% [3%]	4% [4%]	87%
Seeking Alpha Articles	1% [1%]	1% [1%]	1% [1%]	98%
Panel B: BERT				
Sell-Side Analyst Reports	17% [15%]	29% [17%]	31% [30%]	38%
Seeking Alpha Articles	8% [7%]	21% [14%]	27% [23%]	55%

Online Appendix Table A11
Why Do Investors Not "Sufficiently" Like Long-Leg Securities?

The analyses underlying this table are analogous to those in Panel A of Table 2. But we now evaluate whether the fractions of safety, supremacy and lottery words in the buy recommendations of long-leg securities is "atypically low" compared to those in the buy recommendations of short-leg securities. Panel A reports the results from dictionary-based analyses. Panel B reports the results based on BERT.

	Fraction of Times the Use of _____ Words is Unusually Low in Long-Leg Securities			
	Safety (1)	Supremacy (2)	Lottery (3)	Inconclusive
Panel A: Dictionary-Based Approach				
Sell-Side Analyst Reports	33% [12%]	43% [31%]	48% [33%]	23%
Seeking Alpha Articles	19% [11%]	36% [30%]	34% [27%]	31%
Panel B: BERT				
Sell-Side Analyst Reports	33% [19%]	45% [28%]	47% [34%]	18%
Seeking Alpha Articles	25% [16%]	41% [31%]	36% [31%]	22%

Online Appendix Table A12
Which Investors Are More Likely to Gamble?

In this table we report coefficient estimates derived from linear probability models of being a "gambler" on various investor characteristics. In March/April 2024, we surveyed 450 institutional investors, asking them to reflect on the stocks they purchased over the past year. If an investor bought more than eight stocks, we instructed them to consider the first eight that came to mind. For each stock, we asked whether they primarily bought the stock for its perceived safety, supremacy, or lottery-like features. In June 2024, we asked the same question to 314 U.S. retail investors. We estimate two linear probability models at the investor level. Column (1) is based on retail investors' survey responses and Column (2) is based on institutional investors' responses. The dependent variable in both models equals 1 if, for a particular investor, the number of stocks purchased for their perceived lottery-like features is greater than the number of stocks purchased for their perceived safety or the number of stocks purchased for their perceived supremacy. In our survey, retail investors are asked how old they are and given various age ranges to choose from. Our independent variable *Rank(Age)* equals 1 if retail investors responded *"21-24,"* 2 if they responded "*25-34*," 3 if they responded "*35-44*," 4 if they responded "*45-54*," and 5 if they responded "*55-64*". *I(Female)* equals 1 if investors declare themselves to be female and zero otherwise. We ask retail investors "*How secure do you currently feel about your financial situation?*" Investors can choose from "*1 (Not at all secure)*" through "*4 (Moderately secure)*" to "*7 (Extremely secure)*." Our independent variable *Rank(Perceived Financial Security)* equals investors' chosen score. Institutional investors are asked the following question: "*For how many years have you worked as an investment professional/fund manager?*" Our independent variable *Rank(Tenure)* equals 1 if institutions responded *"5 years or less,"* 2 if they responded "*6-10 years*," 3 if they responded "*11-20 years*," and 4 if they responded "*More than 20 years*." We also ask institutional investors "*How would you rate your current job security?*" Investors can choose from "*1 (Not at all secure)*" through "*4 (Moderately secure)*" to "*7 (Extremely secure.*" Our independent variable *Rank(Perceived Job Security)* equals investors' chosen score. The institutional investors in our survey reside in four regions: APAC, Europe, North America and Latin America. In our model based on institutional investors' responses, we include region fixed effects. We report *t*-statistics in parentheses.

	US Retail Investors (1)	Institutional Investors (2)
Rank(Age)	0.023 (0.59)	
Rank(Tenure)		0.037 (1.29)
I(Female)	-0.078 (-0.95)	-0.059 (-0.72)
Rank(Perceived Financial Security)	0.042 (1.57)	
Rank(Perceived Job Security)		0.009 (0.50)
Region Fixed Effects	No	Yes
N	314	450
R^2	0.033	0.056