

Supplementary Materials to:
Measuring Investor Attention Using Google Search

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These Supplementary Materials contain additional discussion and analyses referenced in the main paper.

SM1: Ticker-Level Search Volume and the Fraction of Search Determined to be Investor-Related

SM2: Complete tabulation of Table 4

SM3: Additional specifications of Table 4

SM4: Simulation Results of Induced Increase in Ticker Search on Random Days

SM5: Complete tabulation of Table 7

SM6: Published studies using Google ticker SVI

SM1: Ticker-Level Search Volume and the Fraction Determined to be Investor-Related

This table lists the average ticker searches (e.g., “AAPL”) per firm-month (in units of one) for each of the 490 tickers in our sample (*Keyword Search*) for our sample period (column (i)). Column (ii) lists the percentage of searches determined to be investor-related (*Investor Search*). “Investor-related” searches are determined based on the contents of the click-through website. Specifically, we designate a website as investor-related if it “likely provides current information for investors about the ticker being searched.” See Section 2 for further details. Column (iii) lists estimated ticker search (e.g., “AAPL”) that is presumed to be investor-related (i.e., (i)×(ii)). Column (iv) lists the average ticker-stock searches (e.g., “AAPL stock”) per firm month (in units of one) for each of the 490 tickers in our sample (*TS-Keyword Search*) for our sample period. Column (v) lists the percentage of searches determined to be investor-related (*TS-Investor Search*). Column (vi) lists estimated ticker-stock search (e.g., “AAPL stock”) that is presumed to be investor-related (i.e., (i)×(ii)). *Indicates the ticker search results show a market summary box.

Ticker	Name	Ticker Search			Ticker Stock Search		
		(i) <u>Keyword Search</u>	(ii) <u>Investor Search</u>	(iii) <u>Estimated Search</u> <u>(i)×(ii)</u>	(iv) <u>TS-Keyword Search</u>	(v) <u>TS-Investor Search</u>	(vi) <u>Estimated Search</u> <u>(iv)×(v)</u>
A	Agilent Technologies Inc	1,519,412	0.7%	10,028	6,415	75.4%	4,834
AA	Alcoa Inc	523,333	1.5%	7,955	58,700	78.0%	45,792
AAL	American Airlines Group	41,855*	76.0%	31,797	586,538	85.3%	500,317
AAP	Advance Auto Parts	48,755	17.4%	8,493	9,692	73.6%	7,137
AAPL	Apple Inc.	1,141,600*	70.8%	808,481	1,953,846	80.8%	770,994
ABBV	AbbVie	17,995*	62.9%	11,310	66,538	86.8%	57,775
ABC	AmerisourceBergen Corp	1,192,950	0.1%	716	9,792	41.0%	4,012
ABT	Abbott Laboratories	85,850	7.6%	6,559	69,931	87.0%	60,812
ACN	Accenture plc	33,610	5.6%	1,892	32,500	77.5%	25,188
ADBE	Adobe Systems Inc	22,750*	70.6%	16,055	65,585	79.4%	52,042
ADI	Analog Devices Inc.	41,850	1.3%	527	15,615	73.3%	11,454
ADM	Archer-Daniels-Midland Co	39,845	5.0%	1,980	22,700	77.7%	17,649
ADP	Automatic Data Processing	1,396,000	0.3%	4,048	24,292	91.9%	22,322
ADS	Alliance Data Systems	192,000	2.7%	5,088	12,854	83.0%	10,669
ADSK	Autodesk Inc	121,525*	84.5%	102,701	17,323	87.9%	15,227
AEE	Ameren Corp	18,020*	3.3%	586	4,800	84.4%	4,051
AEP	American Electric Power	138,750*	0.8%	1,096	21,077	85.1%	17,928
AES	AES Corp	165,450	1.0%	1,671	11,862	0.0%	0
AET	Aetna Inc	27,375	6.8%	1,853	566	92.3%	523
AFL	AFLAC Inc	38,440	0.8%	296	26,100	68.5%	17,879
AGN	Allergan plc	23,320*	53.5%	12,465	1,252	94.3%	1,181
AIG	American International Group Inc.	71,600	24.9%	17,800	28,531	65.1%	18,577
AIV	Apartment Investment & Mgmt	1,656*	10.6%	175	18,608	86.0%	16,007
AIZ	Assurant Inc	1,859*	30.0%	557	1,746	69.4%	1,212
AJG	Arthur J. Gallagher & Co.	1,789*	3.9%	70	3,338	78.1%	2,605
AKAM	Akamai Technologies Inc	13,230*	56.2%	7,430	15,800	86.8%	13,711
ALB	Albemarle Corp	247,000*	60.1%	148,447	32,262	89.7%	28,955
ALK	Alaska Air Group Inc	11,575*	48.9%	5,665	44,992	69.0%	31,031
ALL	Allstate Corp	152,625	2.1%	3,175	10,208	20.5%	2,097
ALLE	Allegion	5,824*	30.2%	1,759	883	78.0%	689
ALXN	Alexion Pharmaceuticals	20,240*	69.5%	14,067	8,600	90.8%	7,808
AMAT	Applied Materials Inc	20,305*	74.1%	15,050	89,808	78.9%	70,867
AME	Ametek	25,630*	1.8%	454	7,954	81.8%	6,506
AMG	Affiliated Managers Group Inc	31,370	0.3%	82	2,769	79.7%	2,207
AMGN	Amgen Inc	25,455*	81.6%	20,761	17,508	85.3%	14,936
AMP	Ameriprise Financial	76,300	0.6%	427	5,192	74.2%	3,852
AMT	American Tower Corp A	39,160	25.9%	10,142	32,062	78.1%	25,031
AMZN	Amazon.com Inc	611,450*	66.9%	409,243	1,095,846	73.5%	240,198
AN	AutoNation Inc	143,571	0.6%	818	5,115	93.2%	4,769
ANTM	Anthem Inc.	26,945	1.6%	437	11,723	73.2%	8,585
AON	Aon plc	29,695	5.3%	1,562	12,577	82.9%	10,423

Ticker	Name	Ticker Search			Ticker Stock Search		
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		<u>Keyword Search</u>	<u>Investor Search</u>	<u>Estimated Search (i)×(ii)</u>	<u>TS-Search</u>	<u>TS-Investor Search</u>	<u>Estimated Search (iv)×(v)</u>
APA	Apache Corporation	147,450	0.2%	236	51,054	69.8%	35,641
APC	Anadarko Petroleum Corp	75,800	0.3%	197	467	84.1%	393
APD	Air Products & Chemicals Inc	53,450	3.2%	1,726	12,846	48.8%	6,273
APH	Amphenol Corp A	5,590*	6.8%	382	4,138	70.2%	2,905
ATVI	Activision Blizzard	39,565*	79.3%	31,387	56,208	85.4%	48,018
AVB	AvalonBay Communities Inc.	6,217*	22.0%	1,366	6,508	85.8%	5,586
AVGO	Avago Technologies	23,065*	28.0%	6,447	52,615	85.2%	44,833
AVY	Avery Dennison Corp	1,720*	66.1%	1,137	1,885	90.9%	1,713
AWK	American Water Works Company Inc	16,685	1.2%	207	14,585	85.6%	12,482
AXP	American Express Co	12,960*	80.0%	10,367	31,808	89.5%	28,462
AYI	Acuity Brands Inc	12,686*	7.4%	932	2,538	96.3%	2,444
AZO	AutoZone Inc	66,235	7.3%	4,815	12,215	73.0%	8,912
BA	Boeing Company	181,941*	21.6%	39,226	873,462	78.5%	685,318
BAC	Bank of America Corp	316,300*	59.8%	189,116	379,154	91.1%	345,258
BAX	Baxter International Inc.	5,953*	54.3%	3,230	5,469	83.4%	4,561
BBBY	Bed Bath & Beyond	8,818*	74.1%	6,530	135,892	90.5%	122,928
BBT	BB&T Corporation	2,035,000*	0.2%	3,663	11,908	14.1%	1,677
BBY	Best Buy Co. Inc.	26,015*	53.4%	13,884	48,823	88.9%	43,399
BCR	Bard (C.R.) Inc.	11,506	6.7%	770	82	100.0%	82
BDX	Becton Dickinson	8,415*	49.2%	4,143	11,477	75.7%	8,692
BEN	Franklin Resources	56,100	4.5%	2,530	6,831	70.4%	4,812
BFA	Brown-Forman Corporation	14,425	0.1%	10	215	34.0%	73
BFB	Brown-Forman Corporation	2,650	90.3%	2,394	2,969	43.2%	1,283
BIIB	BIOGEN IDEC Inc.	28,805*	92.2%	26,564	44,585	88.5%	39,471
BK	The Bank of New York Mellon	50,794	3.5%	1,757	14,777	83.0%	12,263
BLK	BlackRock	10,694*	19.7%	2,109	23,346	72.7%	16,970
BLL	Ball Corp	11,900*	63.6%	7,571	7,685	96.3%	7,402
BMJ	Bristol-Myers Squibb	41,205*	48.5%	19,980	75,808	87.9%	66,658
BRKA	Berkshire Hathaway	9,550*	80.4%	7,676	7,162	87.5%	6,268
BRKB	Berkshire Hathaway	71,785*	73.4%	52,705	113,115	84.1%	95,107
BSX	Boston Scientific	8,030*	85.4%	6,854	18,215	82.0%	14,945
BWA	BorgWarner	8,770*	1.3%	111	6,815	82.0%	5,588
BXP	Boston Properties	938*	28.0%	263	7,331	72.1%	5,289
C	Citigroup Inc.	1,220,000	8.8%	106,750	146,923	90.5%	133,024
CA	CA Inc.	275,118	0.3%	853	1,312	95.8%	1,257
CAG	ConAgra Foods Inc.	18,545*	2.6%	486	8,531	91.4%	7,796
CAH	Cardinal Health Inc.	17,890	28.6%	5,115	12,831	79.9%	10,255
CAT	Caterpillar Inc.	1,179,000	6.1%	71,447	130,423	82.6%	107,716
CB	Chubb Limited	1,045,588*	3.1%	32,518	10,500	78.3%	8,223
CBG	CBRE Group	9,000	2.3%	209	233	66.7%	155
CBS	CBS Corp.	1,029,200	0.1%	823	10,500	63.2%	6,631
CBSA	CBS Corp.	7,935	0.0%	0	20	63.2%	13
CCI	Crown Castle International Corp.	35,080	5.1%	1,775	32,108	60.0%	19,252
CCL	Carnival Corp.	18,015*	13.5%	2,437	773,615	87.8%	19,746
CELG	Celgene Corp.	38,310*	39.7%	15,224	693	93.5%	648
CERN	Cerner	77,725	7.1%	5,526	9,431	69.5%	6,551
CF	CF Industries Holdings Inc	59,353	7.3%	4,345	6,662	80.5%	5,364
CFG	Citizens Financial Group	9,595*	34.9%	3,350	10,023	80.3%	8,049
CHD	Church & Dwight	22,455	6.4%	1,428	6,338	65.2%	4,133
CHK	Chesapeake Energy	134,250*	70.8%	95,009	28,831	71.7%	20,669
CHRW	C. H. Robinson Worldwide	5,284*	58.5%	3,092	5,185	76.4%	3,963
CI	CIGNA Corp.	60,500*	3.1%	1,894	14,585	72.8%	10,616
CINF	Cincinnati Financial	2,023*	80.1%	1,620	6,669	87.5%	5,837
CL	Colgate-Palmolive	181,941	7.5%	13,646	11,754	76.4%	8,979
CLX	The Clorox Company	4,338*	63.1%	2,737	27,362	88.6%	24,251
CMA	Comerica Inc.	58,130	4.7%	2,720	5,723	88.0%	5,033
CMCSA	Comcast A Corp	28,220*	51.4%	14,508	12,762	93.6%	11,948

		Ticker Search			Ticker Stock Search		
		(i)	(ii)	(iii)	(iv)	(v)	(vi)
		<u>Keyword</u>	<u>Investor</u>	<u>Estimated</u>	<u>TS-</u>	<u>TS-</u>	<u>Estimated</u>
<u>Ticker</u>	<u>Name</u>	<u>Search</u>	<u>Search</u>	<u>(i)×(ii)</u>	<u>Search</u>	<u>Search</u>	<u>(iv)×(v)</u>
CME	CME Group Inc.	52,975	76.2%	40,378	16,454	85.9%	14,129
CMG	Chipotle Mexican Grill	98,075	80.5%	78,911	51,508	84.2%	43,390
CMI	Cummins Inc.	23,465*	14.0%	3,287	18,031	95.8%	17,276
CMS	CMS Energy	202,200	0.1%	121	3,669	94.9%	3,481
CNC	Centene Corporation	37,910	7.4%	2,817	12,092	84.3%	10,189
CNP	CenterPoint Energy	7,890*	24.2%	1,905	8,338	93.7%	7,817
COF	Capital One Financial	27,990*	53.3%	14,905	29,600	83.5%	24,704
COG	Cabot Oil & Gas	39,550	9.2%	3,623	7,392	63.7%	4,710
COL	Rockwell Collins	50,450*	11.4%	5,736	208	97.5%	203
COP	ConocoPhillips	99,350*	31.9%	31,693	58,538	87.8%	51,385
COST	Costco Co.	62,382*	40.1%	25,021	75,231	79.7%	59,997
CPB	Campbell Soup	23,765	4.6%	1,100	11,577	88.8%	10,280
CRM	Salesforce.com	142,750	8.2%	11,648	342,462	85.1%	291,435
CSCO	Cisco Systems	81,975*	47.3%	38,766	94,846	86.3%	81,871
CSRA	CSRA Inc.	22,155	1.8%	401	1,091	100.0%	1,091
CSX	CSX Corp.	56,150	26.6%	14,913	74,115	59.6%	44,173
CTAS	Cintas Corporation	92,750*	27.0%	25,043	6,354	74.2%	4,715
CTL	CenturyLink Inc	19,347*	52.9%	10,236	11,168	86.7%	9,678
CTSH	Cognizant Technology Solutions	67,075*	66.7%	44,719	10,077	46.8%	4,713
CTXS	Citrix Systems	6,055*	84.5%	5,115	5,254	61.0%	3,205
CVS	CVS Health	3,424,000*	0.4%	11,984	247,385	86.0%	212,751
CVX	Chevron Corp.	60,800*	43.0%	26,132	124,231	88.3%	109,696
CXO	Concho Resources	5,160*	6.8%	351	3,556	94.0%	3,342
D	Dominion Resources	823,000	6.2%	51,273	24,292	61.9%	15,037
DAL	Delta Air Lines	39,180	30.3%	11,887	314,231	82.0%	257,764
DE	Deere & Co.	165,000*	33.7%	55,589	37,908	77.9%	29,542
DFS	Discover Financial Services	31,670	3.8%	1,194	34,585	53.3%	18,417
DG	Dollar General	35,276	22.1%	7,796	35,538	85.3%	30,296
DGX	Quest Diagnostics	5,089*	33.4%	1,700	11,262	89.3%	10,057
DHI	D. R. Horton	4,929*	14.6%	721	18,854	78.4%	14,772
DHR	Danaher Corp.	17,935*	21.8%	3,903	17,992	83.6%	15,045
DIS	The Walt Disney Company	136,805*	64.5%	88,294	339,308	77.3%	262,387
DISCA	Discovery Communications-A	1,906*	77.2%	1,471	27,177	89.8%	24,416
DISCK	Discovery Communications-C	1,212*	97.4%	1,180	4,051	94.6%	3,832
DLR	Digital Realty Trust	5,580*	25.7%	1,435	11,285	79.1%	8,924
DLTR	Dollar Tree	5,550*	41.6%	2,307	12,608	100.0%	12,608
DNB	Dun & Bradstreet	14,529	2.3%	340	3,446	80.5%	2,775
DO	Diamond Offshore Drilling	208,941	0.7%	1,358	692	82.0%	567
DOV	Dover Corp.	5,300*	82.8%	4,389	2,200	88.2%	1,940
DPS	Dr. Pepper Snapple Group	131,500	0.2%	237	366	91.8%	336
DRI	Darden Restaurants	42,700	9.3%	3,958	24,185	79.5%	19,222
DTE	DTE Energy Co.	126,500	18.2%	23,048	17,400	81.4%	14,157
DUK	Duke Energy	15,455*	59.7%	9,220	28,192	70.9%	19,982
DVA	DaVita Inc.	44,830*	5.2%	2,318	6,485	89.2%	5,787
DVN	Devon Energy Corp.	10,647*	46.7%	4,976	39,731	89.6%	35,591
EA	Electronic Arts	187,235	16.9%	31,718	39,608	86.2%	34,126
EBAY	eBay Inc.	44,300,000	0.0%	0	92,731	71.9%	66,646
ECL	Ecolab Inc.	7,100*	40.0%	2,836	6,031	67.5%	4,070
ED	Consolidated Edison	245,118	3.6%	8,898	23,008	91.8%	21,114
EFX	Equifax Inc.	11,535*	53.7%	6,193	3,131	77.8%	2,436
EIX	Edison Int'l	4,508*	67.6%	3,046	9,223	57.1%	5,267
EL	Estee Lauder Cos.	90,676	5.8%	5,232	10,338	85.2%	8,806
EMN	Eastman Chemical	5,706*	82.3%	4,693	4,831	94.1%	4,548
EMR	Emerson Electric Company	35,390	13.6%	4,817	11,908	88.2%	10,499
ENDP	Endo International	64,588*	59.2%	38,243	14,062	56.3%	7,917
EOG	EOG Resources	8,665*	24.6%	2,129	27,923	68.6%	19,155
EQIX	Equinix	12,937*	17.7%	2,285	15,277	88.0%	13,442

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		<u>Keyword</u>	<u>Investor</u>	<u>Estimated</u>	<u>TS-</u>	<u>TS-</u>	<u>Estimated</u>
<u>Ticker</u>	<u>Name</u>	<u>Search</u>	<u>Search</u>	<u>(i)×(ii)</u>	<u>keyword</u>	<u>Investor</u>	<u>Search</u>
					<u>Search</u>	<u>Search</u>	<u>(iv)×(v)</u>
EQR	Equity Residential	2,035*	17.0%	346	8,508	90.6%	7,709
EQT	EQT Corporation	17,915*	14.0%	2,499	15,085	82.1%	12,391
ES	Eversource Energy	348,294*	0.3%	1,045	7,200	96.9%	6,976
ESRX	Express Scripts	11,330*	83.4%	9,454	278	90.8%	253
ESS	Essex Property Trust Inc	70,625	2.2%	1,547	5,969	94.5%	5,638
ETFC	E*Trade	6,118*	96.7%	5,913	998	81.8%	816
ETN	Eaton Corporation	18,340	16.0%	2,938	15,262	94.7%	14,459
ETR	Entergy Corp.	10,230*	14.5%	1,485	4,815	100.0%	4,815
EW	Edwards Lifesciences Corp.	170,631	0.9%	1,467	14,938	83.0%	12,403
EXC	Exelon Corp.	18,235*	67.7%	12,351	9,485	55.4%	5,258
EXPD	Expeditors Int'l	4,329*	28.5%	1,233	3,769	70.8%	2,668
EXPE	Expedia Inc.	15,035*	51.5%	7,746	28,431	73.2%	20,811
EXR	Extra Space Storage	3,494*	29.9%	1,044	3,623	88.4%	3,201
F	Ford Motor	3,999,412*	1.1%	45,193	475,923	72.3%	344,283
FAST	Fastenal Co	91,775	1.4%	1,285	10,823	81.5%	8,821
FB	Facebook	5,671,176	1.6%	90,739	949,308	80.8%	767,231
FBHS	Fortune Brands Home & Security	1,456*	5.5%	80	1,815	91.0%	1,652
FCX	Freeport-McMoran Cp & Gld	57,220*	60.2%	34,418	96,423	86.4%	83,348
FDX	FedEx Corporation	13,650*	81.3%	11,093	92,731	12.1%	11,183
FE	FirstEnergy Corp	78,853	1.6%	1,238	25,108	58.4%	14,661
FFIV	F5 Networks	9,795*	65.0%	6,363	5,331	31.8%	1,694
FIS	Fidelity National Information Services	29,500	2.7%	794	13,138	88.0%	11,557
FISV	Fiserv Inc	34,200*	69.9%	23,916	13,808	70.2%	9,697
FITB	Fifth Third Bancorp	8,339*	19.8%	1,652	9,215	84.3%	7,766
FL	Foot Locker Inc	89,265	25.6%	22,807	10,508	80.4%	8,447
FLIR	FLIR Systems	37,990	0.6%	228	13,677	79.8%	10,913
FLR	Fluor Corp.	8,385*	12.6%	1,059	22,300	92.4%	20,607
FLS	Flowserve Corporation	5,178*	3.2%	163	2,262	85.0%	1,922
FMC	FMC Corporation	22,115	9.4%	2,077	6,300	92.4%	5,818
FOX	Twenty-First Century Fox Class B	1,471,250	0.4%	6,179	6,338	84.9%	5,382
FOXA	Twenty-First Century Fox Class A	3,288*	88.3%	2,904	6,723	78.2%	5,255
FRT	Federal Realty Investment Trust	3,950*	47.1%	1,858	10,285	90.3%	9,286
FSLR	First Solar Inc	37,610*	69.0%	25,962	29,231	91.4%	26,723
FTI	FMC Technologies Inc.	4,900	1.8%	89	15,415	90.6%	13,966
FTR	Frontier Communications	33,465*	38.8%	12,998	5,031	81.8%	4,117
FTV	Fortive Corp	52,250	1.6%	826	2,462	54.9%	1,350
GD	General Dynamics	37,453*	38.1%	14,258	46,192	84.0%	38,787
GE	General Electric	170,143	32.6%	55,467	972,923	86.7%	318,831
GGP	General Growth Properties Inc.	6,080*	10.1%	617	387	100.0%	387
GILD	Gilead Sciences	91,700*	61.3%	56,166	104,577	85.6%	89,539
GIS	General Mills	68,600	2.7%	1,873	24,208	80.0%	19,362
GLW	Corning Inc.	14,585*	65.0%	9,473	26,054	91.6%	23,873
GM	General Motors	1,486,471*	2.5%	37,608	459,769	81.6%	375,080
GOOG	Alphabet Inc Class C	1,026,300*	27.7%	283,977	210,769	83.5%	175,950
GOOGL	Alphabet Inc Class A	547,300*	19.5%	106,778	103,115	84.8%	87,462
GPC	Genuine Parts	14,195	10.6%	1,505	7,569	83.7%	6,334
GPN	Global Payments Inc	3,220*	23.1%	743	14,938	92.8%	13,864
GPS	Gap (The)	437,800	1.1%	4,641	53,715	77.7%	41,747
GRMN	Garmin Ltd.	9,340*	52.3%	4,886	4,769	87.7%	4,183
GS	Goldman Sachs Group	118,824*	52.5%	62,347	80,462	84.5%	67,974
GT	Goodyear Tire & Rubber	75,588	5.9%	4,422	31,454	76.7%	24,125
GWW	Grainger (W.W.) Inc.	4,350*	10.7%	464	3,054	74.3%	2,270
HAL	Halliburton Co.	29,680*	31.0%	9,207	1,953,846	83.4%	1,630,289
HAS	Hasbro Inc.	53,200	20.1%	10,688	6,300	97.1%	6,116
HBAN	Huntington Bancshares	10,806*	47.5%	5,132	16,938	88.2%	14,946
HBI	Hanesbrands Inc	10,165*	46.2%	4,693	15,646	85.4%	13,365
HCA	HCA Holdings	40,660	3.7%	1,517	26,892	68.9%	18,523

Ticker	Name	Ticker Search			Ticker Stock Search		
		(i)	(ii)	(iii)	(iv)	(v)	(vi)
		<u>Keyword Search</u>	<u>Investor Search</u>	<u>Estimated Search (i)×(ii)</u>	<u>TS-Search</u>	<u>TS-Investor Search</u>	<u>Estimated (iv)×(v)</u>
HCN	Welltower Inc.	22,476	23.4%	5,259	145	94.5%	137
HCP	HCP Inc.	13,045*	47.3%	6,174	1,173	88.4%	1,037
HD	Home Depot	101,971*	30.3%	30,938	173,077	93.8%	162,364
HES	Hess Corporation	14,275*	8.7%	1,239	9,238	100.0%	9,238
HIG	Hartford Financial Svc.Gp.	10,340*	13.0%	1,344	7,646	91.8%	7,022
HOG	Harley-Davidson	39,470*	7.5%	2,952	21,077	93.1%	19,623
HOLX	Hologic	3,072*	75.1%	2,307	7,685	87.7%	6,737
HON	Honeywell Int'l Inc.	33,060*	12.9%	4,268	35,377	92.0%	32,536
HP	Helmerich & Payne	363,647	0.5%	1,855	19,185	83.0%	15,927
HPE	Hewlett Packard Enterprise	32,465	30.5%	9,895	29,585	70.9%	20,979
HPQ	HP Inc.	16,455*	70.5%	11,606	39,362	90.5%	35,623
HRB	Block H&R	4,915*	52.7%	2,591	12,485	89.8%	11,215
HRL	Hormel Foods Corp.	4,700*	17.4%	816	11,646	68.8%	8,016
HRS	Harris Corporation	10,270	4.4%	448	1,189	63.7%	757
HSIC	Henry Schein	2,446*	81.7%	1,999	1,720	82.4%	1,417
HST	Host Hotels & Resorts	9,650*	4.9%	473	4,200	94.3%	3,960
HSY	The Hershey Company	4,430*	58.3%	2,581	19,738	63.6%	12,547
HUM	Humana Inc.	84,150	1.5%	1,287	7,308	92.3%	6,749
IBM	International Bus. Machines	169,200	21.4%	36,192	311,000	88.2%	274,364
ICE	Intercontinental Exchange	213,450	3.1%	6,574	14,692	0.0%	0
IFF	Intl Flavors & Fragrances	10,030	0.8%	77	6,069	71.4%	4,335
ILMN	Illumina Inc	60,925*	77.3%	47,113	26,285	89.1%	23,417
INTC	Intel Corp.	109,900*	63.6%	69,863	218,462	43.7%	95,490
INTU	Intuit Inc.	6,826*	53.7%	3,662	11,508	85.8%	9,869
IP	International Paper	332,529	0.1%	266	15,785	97.4%	15,370
IPG	Interpublic Group	12,015	1.8%	214	4,769	60.1%	2,865
IR	Ingersoll-Rand PLC	49,682*	3.2%	1,585	3,254	98.5%	3,206
IRM	Iron Mountain Incorporated	9,905*	13.5%	1,340	34,877	92.6%	32,310
ISRG	Intuitive Surgical Inc.	18,410	77.0%	14,168	34,792	91.5%	31,845
ITW	Illinois Tool Works	13,920	4.7%	649	14,262	84.8%	12,098
IVZ	Invesco Ltd.	1,395*	41.9%	585	11,346	85.9%	9,747
JBHT	J. B. Hunt Transport Services	1,671*	100.0%	1,671	2,477	97.7%	2,420
JCI	Johnson Controls	12,775	16.5%	2,104	10,185	70.9%	7,221
JEC	Jacobs Engineering Group	4,119*	26.7%	1,101	365	99.9%	365
JNJ	Johnson & Johnson	32,235	70.8%	22,835	274,154	68.7%	188,371
JNPR	Juniper Networks	8,763*	65.5%	5,741	4,769	100.0%	4,769
JPM	JPMorgan Chase & Co.	124,700*	56.3%	70,206	272,154	0.0%	0
JWN	Nordstrom	11,295*	76.6%	8,654	53,762	83.6%	44,934
K	Kellogg Co.	805,353	0.1%	564	14,492	92.4%	13,391
KEY	KeyCorp	131,500*	1.4%	1,815	20,954	76.4%	16,011
KHC	Kraft Heinz Co	9,425*	42.3%	3,985	41,408	88.4%	36,609
KIM	Kimco Realty	86,800	13.4%	11,623	4,938	86.9%	4,292
KLAC	KLA-Tencor Corp.	5,416*	21.3%	1,153	9,723	98.3%	9,559
KMB	Kimberly-Clark	5,621*	50.2%	2,822	21,415	70.6%	15,123
KMI	Kinder Morgan	27,750*	81.8%	22,697	70,923	89.4%	63,419
KMX	Carmax Inc	6,869*	60.5%	4,158	12,869	86.6%	11,150
KO	The Coca Cola Company	129,118*	48.2%	62,248	164,462	83.5%	137,392
KORS	Michael Kors Holdings	6,540	34.5%	2,257	1,697	90.1%	1,530
KR	Kroger Co.	44,871*	72.6%	32,594	43,492	87.7%	38,142
KSS	Kohl's Corp.	11,570*	12.7%	1,468	59,531	73.0%	43,481
KSU	Kansas City Southern	40,760	1.6%	656	10,154	36.1%	3,667
L	Loews Corp.	1,220,000	2.3%	27,938	1,792	68.1%	1,220
LB	L Brands Inc.	43,865*	24.4%	10,690	23,154	87.3%	20,218
LEG	Leggett & Platt	58,850	0.3%	165	5,285	82.9%	4,383
LEN	Lennar Corp.	16,353	2.3%	376	13,462	86.8%	11,689
LENB	Lennar Corp.	90	0.0%	0	510	100.0%	510
LH	Laboratory Corp. of America Holding	32,641	20.7%	6,770	9,500	34.5%	3,281

		Ticker Search			Ticker Stock Search		
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		<u>Keyword</u>	<u>Investor</u>	<u>Estimated</u>	<u>TS-</u>	<u>TS-</u>	<u>Estimated</u>
<u>Ticker</u>	<u>Name</u>	<u>Search</u>	<u>Search</u>	<u>(i)×(ii)</u>	<u>Search</u>	<u>Search</u>	<u>(iv)×(v)</u>
LKQ	LKQ Corporation	160,500	0.3%	514	11,646	94.9%	11,052
LLL	L-3 Communications Holdings	52,800*	17.6%	9,266	402	97.1%	390
LLY	Lilly (Eli) & Co.	14,820*	67.9%	10,066	36,585	90.7%	33,175
LM	Legg Mason	27,100*	2.2%	585	693	96.3%	667
LMT	Lockheed Martin Corp.	49,675*	47.4%	23,531	95,923	83.7%	80,336
LNC	Lincoln National	3,993*	37.9%	1,515	8,177	85.3%	6,978
LNT	Alliant Energy Corp	2,756*	12.2%	335	252,308	80.9%	204,142
LOW	Lowe's Cos.	62,775	29.1%	18,242	69,423	75.7%	52,525
LRCX	Lam Research	14,805*	79.5%	11,764	41,431	87.1%	36,066
LUK	Leucadia National Corp.	5,012	50.4%	2,528	152	100.0%	152
LUV	Southwest Airlines	41,145*	61.3%	25,201	195,769	100.0%	195,769
LYB	LyondellBasell	2,289*	41.4%	947	8,562	78.3%	6,701
M	Macy's Inc.	1,502,941*	2.2%	33,065	119,923	82.4%	98,853
MA	Mastercard Inc.	258,941*	8.7%	22,502	69,654	95.0%	66,192
MAC	Macerich	634,000	0.5%	3,297	55,031	89.1%	49,011
MAR	Marriott Int'l.	197,300	21.2%	41,729	31,877	81.2%	25,897
MAS	Masco Corp.	61,175	0.3%	171	1,938	81.6%	1,582
MAT	Mattel Inc.	53,450*	18.9%	10,123	8,346	74.6%	6,224
MCD	McDonald's Corp.	42,806*	54.1%	23,154	70,462	87.2%	61,471
MCHP	Microchip Technology	5,700*	68.1%	3,883	11,546	86.9%	10,038
MCK	McKesson Corp.	14,720*	74.6%	10,975	14,231	96.4%	13,713
MCO	Moody's Corp	46,225	1.5%	698	5,108	96.0%	4,905
MDLZ	Mondelez International	4,685*	33.8%	1,582	13,723	56.4%	7,747
MDT	Medtronic plc	37,540	17.9%	6,723	35,023	75.9%	26,596
MET	MetLife Inc.	79,775	82.2%	65,583	13,723	88.0%	12,072
MHK	Mohawk Industries	2,426*	9.3%	224	5,077	88.7%	4,503
MKC	McCormick & Co.	5,912	5.7%	339	9,223	73.9%	6,815
MLM	Martin Marietta Materials	32,015	13.0%	4,172	7,331	73.1%	5,359
MMC	Marsh & McLennan	17,110	3.8%	650	6,585	96.6%	6,362
MMM	3M Company	70,100*	21.2%	14,875	72,808	82.8%	60,278
MNK	Mallinckrodt Plc	11,294*	50.6%	5,717	10,867	90.6%	9,849
MNST	Monster Beverage	5,453*	58.7%	3,202	11,631	91.1%	10,595
MO	Altria Group Inc	224,824*	28.1%	63,108	145,538	90.6%	131,930
MON	Monsanto Co.	44,500	30.9%	13,737	630	96.3%	607
MOS	The Mosaic Company	41,130	5.0%	2,052	20,215	92.5%	18,693
MPC	Marathon Petroleum	45,730	8.2%	3,732	95,269	82.2%	78,311
MRK	Merck & Co.	32,241*	47.4%	15,295	72,154	87.3%	62,998
MRO	Marathon Oil Corp.	40,170	27.6%	11,075	193,231	100.0%	193,231
MS	Morgan Stanley	334,500	2.8%	9,466	45,146	83.4%	37,661
MSFT	Microsoft Corp.	191,050*	70.9%	135,359	779,000	78.3%	609,723
MSI	Motorola Solutions Inc.	127,575	0.2%	242	15,254	73.0%	11,138
MTB	M&T Bank Corp.	93,875	0.3%	291	11,192	95.7%	10,707
MU	Micron Technology	188,467*	36.4%	68,527	233,077	89.7%	208,977
MUR	Murphy Oil	7,806	59.5%	4,643	14,908	64.6%	9,629
MYL	Mylan N.V.	14,605*	74.0%	10,814	3,304	84.2%	2,783
NAVI	Navient	27,870	2.8%	775	5,269	86.1%	4,537
NBL	Noble Energy Inc	13,285	1.4%	185	3,635	81.5%	2,963
NDAQ	NASDAQ OMX Group	2,173*	68.3%	1,485	4,131	92.6%	3,823
NEE	NextEra Energy	50,600*	8.3%	4,175	103,885	92.4%	95,990
NEM	Newmont Mining Corp. (Hldg. Co.)	17,465	65.6%	11,459	23,900	86.8%	20,733
NFLX	Netflix Inc.	205,450*	51.2%	105,129	638,000	84.2%	537,196
NFX	Newfield Exploration Co	2,130*	18.4%	393	214	76.1%	163
NI	NiSource Inc.	82,735*	0.3%	248	4,254	73.6%	3,132
NKE	Nike	43,265*	53.0%	22,943	188,538	76.9%	145,061
NLSN	Nielsen Holdings	1,681*	77.8%	1,307	1,835	78.8%	1,446
NOC	Northrop Grumman Corp.	29,625*	14.8%	4,379	30,985	84.1%	26,074
NOV	National Oilwell Varco Inc.	25,765	13.9%	3,568	11,531	0.0%	0

Ticker	Name	Ticker Search			Ticker Stock Search		
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		<u>Keyword Search</u>	<u>Investor Search</u>	<u>Estimated Search (i)×(ii)</u>	<u>TS-Search</u>	<u>TS-Investor Search</u>	<u>Estimated Search (iv)×(v)</u>
NRG	NRG Energy	47,035	5.4%	2,559	26,631	86.6%	23,049
NSC	Norfolk Southern Corp.	19,715*	9.0%	1,780	15,654	93.3%	14,610
NTAP	NetApp	14,415*	64.7%	9,325	10,323	85.4%	8,812
NTRS	Northern Trust Corp.	3,476*	59.3%	2,061	1,900	72.5%	1,377
NUE	Nucor Corp.	78,275*	21.8%	17,033	33,415	86.8%	28,998
NVDA	Nvidia Corporation	477,150*	73.9%	352,757	1,290,231	87.0%	1,123,017
NWL	Newell Rubbermaid Co.	5,184*	66.3%	3,438	11,408	79.3%	9,043
NWS	News Corp. Class B	410,500	0.0%	41	633	51.3%	325
NWSA	News Corp. Class A	3,115	1.9%	59	1,335	71.0%	949
O	Realty Income Corporation	658,529	7.4%	48,665	72,385	84.5%	61,129
OI	Owens-Illinois Inc.	7,113*	4.9%	351	3,662	78.4%	2,872
OKE	ONEOK	7,089*	21.0%	1,487	62,308	85.9%	53,516
OMC	Omnicom Group	10,890	1.2%	135	5,708	97.1%	5,545
ORCL	Oracle Corp.	137,730*	73.3%	100,997	59,169	81.1%	48,016
ORLY	O'Reilly Automotive	10,815*	13.3%	1,441	15,762	85.3%	13,442
OXY	Occidental Petroleum	21,255*	18.1%	3,843	267,615	0.0%	0
PAYX	Paychex Inc.	2,919*	47.2%	1,377	71,892	89.9%	64,652
PBCT	People's United Financial	2,331*	72.2%	1,682	25,392	42.8%	10,860
PBI	Pitney-Bowes	14,540*	8.4%	1,214	16,800	94.8%	15,918
PCAR	PACCAR Inc.	4,144*	22.5%	934	6,231	87.1%	5,426
PCG	PG&E Corp.	10,695*	20.6%	2,201	58,208	81.2%	47,282
PCLN	Priceline.com Inc	40,475*	73.3%	29,676	834	93.9%	783
PDCO	Patterson Companies	3,475*	55.1%	1,913	2,992	65.2%	1,952
PEG	Public Serv. Enterprise Inc.	55,635*	5.2%	2,915	11,600	38.7%	4,495
PEP	PepsiCo Inc.	90,714*	5.9%	5,370	40,500	87.7%	35,510
PFE	Pfizer Inc.	46,190*	78.3%	36,162	1,548,077	81.8%	1,265,863
PFG	Principal Financial Group	15,490*	38.3%	5,934	18,792	74.0%	13,910
PG	Procter & Gamble	52,735*	18.4%	9,709	149,231	85.8%	128,070
PGR	Progressive Corp.	8,130*	30.2%	2,454	13,723	89.2%	12,245
PH	Parker-Hannifin	96,588	0.6%	599	9,715	79.7%	7,742
PHM	Pulte Homes Inc.	23,400*	24.2%	5,656	6,869	83.2%	5,716
PKI	PerkinElmer	10,360	0.1%	7	5,485	84.0%	4,606
PLD	Prologis	7,242*	45.3%	3,284	7,846	86.6%	6,798
PM	Philip Morris International	142,059*	14.0%	19,831	35,485	83.6%	29,680
PNC	PNC Financial Services	1,472,000	0.1%	1,472	28,385	63.6%	18,059
PNR	Pentair Ltd.	6,485	1.1%	74	2,700	94.0%	2,539
PNW	Pinnacle West Capital	21,050	2.2%	457	4,800	97.1%	4,661
PPG	PPG Industries	40,000	61.5%	24,612	24,231	100.0%	24,231
PPL	PPL Corp.	121,250	0.8%	1,019	42,977	77.6%	33,337
PRGO	Perrigo	5,067*	81.0%	4,104	2,177	82.5%	1,796
PRU	Prudential Financial	92,305*	55.1%	50,851	42,131	87.9%	37,042
PSA	Public Storage	122,500	0.5%	662	8,169	81.1%	6,621
PSX	Phillips 66	33,090*	28.5%	9,427	51,431	87.9%	45,228
PVH	PVH Corp.	15,190	6.5%	986	8,846	78.1%	6,905
PWR	Quanta Services Inc.	7,665	2.7%	210	5,608	90.7%	5,087
PX	Praxair Inc.	31,324*	0.9%	273	274	100.0%	274
PXD	Pioneer Natural Resources	5,539*	44.1%	2,445	12,323	66.9%	8,244
PYPL	PayPal	36,355*	77.1%	28,019	196,077	91.6%	179,665
QCOM	QUALCOMM Inc.	165,800*	74.8%	124,085	159,000	81.9%	130,173
QRVO	Qorvo	9,489*	70.5%	6,686	21,900	82.9%	18,159
R	Ryder System	805,353	0.4%	2,980	13,723	50.1%	6,871
RCL	Royal Caribbean Cruises Ltd	15,085	10.9%	1,649	217,538	100.0%	217,538
REGN	Regeneron	27,515*	68.2%	18,754	60,462	86.7%	52,439
RF	Regions Financial Corp.	40,688*	19.3%	7,861	17,462	83.7%	14,621
RHI	Robert Half International	3,973*	23.2%	920	1,406	68.8%	968
RHT	Red Hat Inc.	11,375*	59.0%	6,710	977	72.8%	712
RIG	Transocean	50,450*	50.5%	25,477	116,346	81.2%	94,461

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RL	Polo Ralph Lauren Corp.	23,159*	25.7%	5,947	6,215	77.4%	4,810
ROK	Rockwell Automation Inc.	15,500*	12.0%	1,854	5,462	68.5%	3,743
ROP	Roper Industries	14,155*	0.8%	112	3,108	72.8%	2,263
ROST	Ross Stores	6,955*	61.6%	4,286	6,892	80.4%	5,543
RRC	Range Resources Corp.	8,870*	28.9%	2,563	14,085	81.9%	11,537
RSG	Republic Services Inc	5,432*	16.7%	905	4,900	49.7%	2,437
RTN	Raytheon Co.	17,245*	83.2%	14,341	3,454	85.9%	2,968
SBUX	Starbucks Corp.	67,750*	49.5%	33,509	86,769	86.0%	74,578
SCG	SCANA Corp	27,920*	1.5%	419	170	71.9%	122
SCHW	Charles Schwab Corporation	8,465*	39.3%	3,330	11,908	87.2%	10,379
SEE	Sealed Air Corp.	84,050	4.7%	3,942	2,808	94.5%	2,653
SHW	Sherwin-Williams Company	17,408*	47.6%	8,284	22,338	94.8%	21,188
SIG	Signet Jewelers	46,450	1.1%	520	14,877	82.3%	12,250
SJM	Smucker (J.M.)	4,711*	72.1%	3,396	7,508	33.8%	2,540
SLB	Schlumberger Ltd.	14,380*	38.1%	5,474	55,577	86.5%	48,080
SLG	SL Green Realty	13,436*	0.7%	99	9,169	87.6%	8,031
SNA	Snap-On Inc.	34,280	4.0%	1,361	5,046	79.8%	4,027
SNI	Scripps Networks Interactive Inc.	6,435	16.2%	1,041	74	100.0%	74
SO	Southern Co.	173,471*	14.9%	25,899	36,054	86.0%	30,992
SPG	Simon Property Group Inc	260,250	0.2%	468	114,538	77.8%	89,053
SPGI	S&P Global Inc.	2,054	82.7%	1,698	9,062	79.8%	7,231
SRCL	Stericycle Inc	2,950*	72.1%	2,127	217,538	91.5%	199,134
SRE	Sempra Energy	18,755	13.2%	2,472	10,169	81.3%	8,267
STI	SunTrust Banks	85,700	1.1%	926	560	94.4%	529
STT	State Street Corp.	12,384*	42.8%	5,302	368,385	93.6%	344,735
STX	Seagate Technology	17,750*	30.9%	5,483	40	87.7%	35
STZ	Constellation Brands	9,236*	69.5%	6,418	17,569	89.5%	15,728
SWK	Stanley Black & Decker	5,550*	80.8%	4,484	6,138	61.6%	3,782
SWKS	Skyworks Solutions	20,240*	38.8%	7,859	37,108	86.9%	32,243
SWN	Southwestern Energy	12,725*	72.3%	9,200	34,854	91.2%	31,776
SYF	Synchrony Financial	5,947*	93.7%	5,574	9,992	82.6%	8,253
SYK	Stryker Corp.	5,357*	68.0%	3,640	7,962	65.0%	5,178
SYMC	Symantec Corp.	60,875*	74.0%	45,041	216	82.0%	177
SYY	Sysco Corp.	7,368*	53.8%	3,963	16,077	89.6%	14,408
T	AT&T Inc	1,077,647	25.1%	270,489	444,077	50.9%	226,168
TAP	Molson Coors Brewing Company	140,500	0.2%	225	26,477	85.6%	22,670
TAPA	Molson Coors Brewing Company	123,300	0.0%	0	30	85.6%	26
TDC	Teradata Corp.	16,160*	21.8%	3,528	11,500	69.3%	7,973
TDG	TransDigm Group	4,559*	55.6%	2,536	6,400	88.6%	5,668
TEL	TE Connectivity Ltd.	22,115*	0.6%	135	3,938	75.5%	2,971
TGNA	Tegna	989*	60.3%	597	1,435	95.2%	1,367
TGT	Target Corp.	20,840*	48.1%	10,030	104,808	86.4%	90,596
TIF	Tiffany & Co.	20,890	12.7%	2,655	3,909	70.9%	2,771
TJX	TJX Companies Inc.	38,730	4.1%	1,588	31,677	79.4%	25,142
TMK	Torchmark Corp.	2,870*	17.1%	491	124	64.3%	80
TMO	Thermo Fisher Scientific	24,950*	5.5%	1,375	33,477	65.6%	21,958
TRIP	TripAdvisor	71,500	1.6%	1,173	19,285	69.3%	13,355
TROW	T. Rowe Price Group	7,455	17.4%	1,299	6,108	0.0%	0
TRV	The Travelers Companies Inc.	4,635*	35.3%	1,634	7,015	0.0%	0
TSCO	Tractor Supply Company	5,540	68.0%	3,767	13,892	85.3%	11,855
TSN	Tyson Foods	73,125	1.8%	1,331	24,915	74.9%	18,654
TSS	Total System Services	53,780	5.2%	2,813	257	100.0%	257
TWX	Time Warner Inc.	14,120	75.6%	10,676	1,729	89.0%	1,539
TXN	Texas Instruments	23,585*	84.1%	19,844	27,000	85.6%	23,101
TXT	Textron Inc.	15,790*	34.4%	5,430	12,054	73.0%	8,795
UA	Under Armour	102,618	19.8%	20,288	26,346	86.8%	22,868
UAL	United Continental Holdings	79,675	23.5%	18,692	388,923	0.0%	0

Ticker	Name	Ticker Search			Ticker Stock Search		
		(i)	(ii)	(iii)	(iv)	(v)	(vi)
		<u>Keyword Search</u>	<u>Investor Search</u>	<u>Estimated Search (i)×(ii)</u>	<u>TS-keyword Search</u>	<u>TS-Investor Search</u>	<u>Estimated Search (iv)×(v)</u>
UDR	UDR Inc	7,545	1.3%	97	2,254	86.3%	1,945
UHS	Universal Health Services Inc.	35,260	0.4%	130	5,315	82.0%	4,356
ULTA	Ulta Salon Cosmetics & Fragrance Inc	2,818,500	0.5%	12,683	46,323	87.1%	40,338
UNH	United Health Group Inc.	41,720	6.8%	2,845	74,923	78.8%	59,054
UNM	Unum Group	35,020	0.0%	0	8,762	87.0%	7,622
UNP	Union Pacific	13,235*	64.4%	8,526	26,100	97.0%	25,314
UPS	United Parcel Service	3,645,000	0.3%	10,206	347,385	79.7%	276,796
URBN	Urban Outfitters	10,825	16.7%	1,802	4,115	93.5%	3,848
URI	United Rentals Inc.	59,775	4.0%	2,367	10,254	51.2%	5,255
USB	U.S. Bancorp	74,000	2.2%	1,643	29,662	42.0%	12,467
UTX	United Technologies	26,585*	60.7%	16,132	5,869	88.9%	5,217
V	Visa Inc.	854,235*	3.3%	28,275	107,231	88.9%	95,275
VAR	Varian Medical Systems	16,450	1.1%	173	1,464	92.0%	1,346
VFC	V.F. Corp.	8,100*	21.3%	1,722	9,808	74.4%	7,302
VIAB	Viacom Inc.	4,200*	83.3%	3,500	43,800	76.3%	33,419
VLO	Valero Energy	14,729*	50.9%	7,490	56,808	95.5%	54,235
VMC	Vulcan Materials	8,085*	8.9%	716	6,885	90.2%	6,212
VNO	Vornado Realty Trust	1,525*	42.0%	641	6,777	78.1%	5,292
VRSK	Verisk Analytics	3,050*	82.7%	2,522	2,854	70.2%	2,004
VRSN	Verisign Inc.	3,188*	78.4%	2,499	2,777	85.3%	2,368
VRTX	Vertex Pharmaceuticals Inc	9,070*	59.8%	5,426	55,323	90.2%	49,929
VTR	Ventas Inc	6,330*	28.8%	1,825	39,577	75.0%	29,687
VZ	Verizon Communications	75,676*	56.7%	42,939	178,462	88.1%	157,171
WAT	Waters Corporation	72,275*	0.2%	116	1,815	91.9%	1,669
WBA	Walgreens Boots Alliance	18,347*	34.0%	6,234	84,731	87.7%	74,292
WDC	Western Digital	20,635*	45.6%	9,412	49,285	84.1%	41,439
WEC	Wisconsin Energy Corporation	9,680	3.6%	345	14,523	58.1%	8,431
WFC	Wells Fargo	82,825*	63.7%	52,726	284,000	88.2%	250,545
WHR	Whirlpool Corp.	9,422*	66.7%	6,286	12,162	89.3%	10,864
WLTW	Willis Towers Watson	1,056*	37.7%	398	1,623	74.4%	1,208
WM	Waste Management Inc.	33,971*	2.0%	693	33,046	88.8%	29,348
WMB	Williams Cos.	11,685*	63.8%	7,455	16,331	81.4%	13,295
WMT	Wal-Mart Stores	66,975*	69.1%	46,266	239,538	86.7%	207,703
WRK	Westrock Co	2,720*	13.1%	355	10,677	93.1%	9,945
WU	Western Union Co	33,100*	1.8%	596	3,177	96.8%	3,077
WY	Weyerhaeuser Corp.	18,147*	21.9%	3,980	15,862	81.2%	12,886
WYN	Wyndham Worldwide	4,129	52.4%	2,162	306	96.5%	295
WYNN	Wynn Resorts Ltd	40,253*	41.9%	16,870	112,269	73.0%	81,945
XEC	Cimarex Energy	1,750*	84.0%	1,470	3,423	83.6%	2,862
XEL	Xcel Energy Inc	4,333*	35.3%	1,528	6,538	63.5%	4,153
XL	XL Capital	18,965	4.7%	889	47,549	65.4%	31,111
XLNX	Xilinx Inc	6,495*	67.1%	4,357	17,215	88.3%	15,206
XOM	Exxon Mobil Corp.	122,300*	84.0%	102,683	381,231	83.9%	319,738
XRAY	Dentsply Sirona	98,300	2.4%	2,340	3,269	89.5%	2,925
XRX	Xerox Corp.	5,774*	78.8%	4,549	17,692	82.4%	14,585
XYL	Xylem Inc.	1,185*	25.4%	301	2,062	89.1%	1,837
YUM	Yum! Brands Inc	31,845*	42.5%	13,518	18,331	76.3%	13,994
ZBH	Zimmer Biomet Holdings	2,900*	59.5%	1,725	4,954	91.1%	4,514
ZION	Zions Bancorp	74,450	0.3%	194	4,085	67.6%	2,761
ZTS	Zoetis	2,917*	95.6%	2,787	8,646	94.2%	8,142

SM2 – Complete tabulation of Table 4: SVI around EAs, by decile of *Noise Search*, with controls and week fixed effects

This table presents the full results from the analyses Panel B of Table 4. Panel A of this table is for SVI, Panel B of this table is for ASVI, and Panel C of this table is for ASVI2. See Table 4 for further details. Variable definitions are provided in Appendix A. T-statistics are in parentheses. Standard errors are clustered by firm. *, **, *** indicates statistical significance at the $p < 0.10, 0.05, 0.01$ level, respectively.

Panel A: SVI

	<u>Pooled</u>	<u>By Decile of <i>Noise Search</i></u>									
		<u>1 [Low]</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10 [High]</u>
<i>SVI</i>	7.879*** (5.17)	12.340*** (6.60)	19.330*** (7.73)	14.592*** (3.98)	11.955*** (5.31)	4.801 (1.60)	4.834** (2.09)	-3.350 (-0.99)	-0.221 (-0.06)	5.029 (1.27)	4.470** (2.07)
<i>News Articles_{i,t}</i>	0.345* (1.92)	0.586*** (4.15)	0.303 (1.36)	0.794** (2.34)	0.378* (1.71)	0.771* (1.85)	0.524* (1.98)	0.996** (2.35)	0.302 (0.71)	-0.308 (-0.61)	-0.469** (-2.36)
<i>Abs Return_{i,t}</i>	92.780*** (7.53)	89.380*** (5.08)	129.000*** (5.29)	171.300*** (6.31)	118.000*** (3.32)	72.510*** (3.11)	74.890*** (2.95)	85.010*** (3.21)	1.013 (0.04)	43.250 (1.38)	28.000 (0.57)
<i>MVE_{i,q}</i>	0.773** (2.04)	1.287*** (2.81)	0.591 (0.91)	0.701 (0.80)	0.227 (0.18)	2.045** (2.04)	1.887 (1.51)	2.570* (1.92)	3.765*** (3.39)	1.508 (1.07)	1.421 (1.51)
<i>Trading Volume_{i,t}</i>	0.417 (0.44)	0.881 (0.72)	0.116 (0.11)	-0.230 (-0.19)	3.296* (1.74)	8.439*** (3.09)	2.713 (0.82)	4.501 (1.11)	-1.286 (-0.42)	6.290 (1.61)	-1.370 (-0.32)
<i>Spread_{i,t}</i>	-52.370 (-1.255)	116.800** (2.532)	120.30** (2.212)	4.168 (0.05)	-70.130 (-0.91)	-290.200*** (-2.73)	-130.900 (-1.42)	-16.960 (-0.16)	101.600 (1.05)	-105.200 (-1.08)	-71.730 (-0.53)
<i>Fourth Qtr_{i,t}</i>	-0.593 (-1.17)	-0.790 (-0.93)	-0.301 (-0.43)	-0.682 (-0.56)	-0.377 (-0.38)	2.088 (0.97)	-1.493 (-1.06)	2.067 (1.44)	-0.294 (-0.21)	-4.973** (-2.55)	-0.517 (-0.29)
<i>Total EAs_t</i>	0.134*** (6.52)	0.085* (1.99)	0.091 (1.47)	0.027 (0.45)	0.064 (0.98)	0.189*** (2.81)	0.266*** (4.13)	0.100 (1.51)	0.172** (2.57)	0.099* (1.71)	0.142** (2.04)
<i>Analyst Following_{i,t}</i>	-5.042** (-2.31)	-4.889* (-1.90)	-7.719** (-2.39)	-3.975 (-0.71)	-5.912 (-1.32)	-8.297* (-1.90)	4.477 (0.67)	0.105 (0.015)	-1.882 (-0.28)	-11.920* (-1.78)	-2.955 (-0.74)
<i>Institutional Ownership_{i,q}</i>	-6.195 (-1.05)	-6.135 (-0.91)	-11.680 (-1.14)	-8.618 (-0.56)	-12.080 (-0.56)	-42.510* (-1.78)	-33.350 (-1.59)	-3.362 (-0.13)	0.865 (0.05)	-47.890** (-2.51)	34.070** (2.44)
<i>BTM_{i,q}</i>	0.538* (1.73)	0.132 (0.31)	-0.294 (-0.53)	0.777 (1.44)	-0.314 (-0.42)	-1.561* (-1.89)	-0.014 (-0.02)	0.521 (0.58)	1.155 (1.47)	-0.491 (-0.49)	0.973 (1.23)
Constant	43.740*** (5.44)	19.530** (2.21)	45.240*** (2.70)	30.090* (1.69)	49.400** (2.09)	77.260*** (2.79)	37.310 (1.42)	16.430 (0.66)	18.140 (0.87)	101.300*** (3.68)	22.990* (1.72)
Year-Week FE	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
N	245,015	24,970	24,048	24,549	24,548	25,050	24,283	24,549	24,048	24,922	24,048
Adjusted R-squared	0.030	0.132	0.111	0.128	0.064	0.135	0.126	0.105	0.240	0.142	0.147

Panel B: ASVI

	Pooled	By Decile of Noise Search									
		1 [Low]	2	3	4	5	6	7	8	9	10 [High]
<i>ASVI</i>	0.470*** (13.08)	1.858*** (6.19)	1.901*** (5.98)	1.539*** (5.28)	0.723*** (4.76)	0.186 (1.36)	-0.012 (-0.06)	0.168* (1.86)	0.106 (1.58)	0.046** (2.03)	0.001 (0.04)
<i>News Articles_{i,t}</i>	0.010*** (8.32)	0.054*** (5.38)	0.031*** (4.78)	0.027*** (2.84)	0.023*** (4.91)	0.019* (1.73)	0.032 (1.27)	0.005** (2.12)	-0.002 (-0.39)	0.002 (0.81)	-0.001 (-1.01)
<i>Abs Return_{i,t}</i>	3.098*** (9.82)	14.110*** (5.81)	13.890*** (5.72)	8.694*** (4.48)	5.913*** (3.53)	0.573 (0.41)	3.651* (1.76)	0.066 (0.10)	-2.818 (-0.83)	-0.647 (-1.54)	-0.070 (-0.20)
<i>MVE_{i,q}</i>	0.000 (0.45)	-0.029* (-1.90)	-0.028 (-1.60)	-0.021* (-1.69)	-0.006 (-0.61)	-0.003 (-0.26)	-0.050 (-1.39)	-0.004 (-1.02)	-0.025 (-1.23)	-0.006 (-1.19)	0.000 (0.30)
<i>Trading Volume_{i,t}</i>	-0.028*** (-6.65)	-0.124*** (-2.96)	-0.141*** (-3.30)	-0.104*** (-2.88)	-0.073** (-2.56)	-0.047 (-1.65)	-0.122 (-1.43)	-0.015 (-1.19)	0.031 (0.62)	-0.027* (-1.70)	-0.006 (-0.90)
<i>Spread_{i,t}</i>	4.269*** (9.47)	16.580*** (4.17)	11.330*** (3.78)	13.760*** (3.84)	8.707*** (3.26)	4.841** (2.39)	0.438 (0.14)	2.641** (2.29)	-0.004 (-0.01)	1.627 (1.40)	0.602 (1.32)
<i>Fourth Qtr_{i,t}</i>	-0.032** (-2.20)	-0.252** (-2.40)	-0.041 (-0.69)	0.009 (0.19)	-0.054 (-0.90)	-0.018 (-0.54)	0.011 (0.17)	0.016 (0.82)	0.076 (0.87)	-0.133* (-1.94)	-0.023 (-0.65)
<i>Total EAs_t</i>	-0.005*** (-5.24)	-0.008 (-1.17)	-0.018** (-2.53)	-0.027*** (-3.18)	-0.018** (-2.56)	-0.013*** (-2.73)	0.008 (1.44)	-0.004 (-1.10)	0.010 (0.95)	-0.002 (-1.15)	-0.001 (-0.38)
<i>Analyst Following_{i,t}</i>	-0.002 (-0.19)	-0.060 (-0.72)	-0.016 (-0.28)	-0.031 (-0.27)	0.031 (1.06)	0.013 (0.35)	-0.130 (-0.58)	-0.008 (-0.31)	0.193 (1.00)	0.011 (0.46)	0.002 (0.28)
<i>Institutional Ownership_{i,q}</i>	0.069*** (2.81)	0.315 (1.48)	0.232 (1.45)	-0.038 (-0.25)	0.078 (0.41)	0.458** (2.37)	0.503 (1.53)	-0.022 (-0.18)	-0.133 (-0.82)	0.102* (1.70)	-0.003 (-0.12)
<i>BTM_{i,q}</i>	-0.003** (-2.36)	-0.021** (-2.33)	0.005 (0.57)	-0.014* (-2.00)	0.001 (0.074)	0.002 (0.43)	-0.010 (-0.47)	-0.002 (-0.75)	0.010 (0.67)	0.006 (1.52)	-0.000 (-0.15)
Constant	-0.033 (-0.99)	0.195 (0.71)	0.099 (0.309)	0.369 (1.22)	-0.034 (-0.15)	-0.293 (-1.28)	0.498 (0.69)	0.088 (0.91)	-0.367 (-0.75)	-0.028 (-0.25)	0.020 (0.80)
Year-Week FE	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
N	245,015	24,970	24,048	24,549	24,548	25,050	24,283	24,549	24,048	24,922	24,048
Adjusted R-squared	0.037	0.077	0.084	0.065	0.043	0.015	0.018	0.029	0.008	0.027	0.009

Panel C: ASVI2

	Pooled	By Decile of Noise Search									
		1 [Low]	2	3	4	5	6	7	8	9	10 [High]
<i>ASVI2</i>	0.297*** (13.50)	0.702*** (9.32)	0.759*** (9.31)	0.672*** (8.02)	0.379*** (6.41)	0.199*** (3.77)	0.147*** (3.74)	0.073* (1.68)	0.086*** (2.69)	0.0367* (1.87)	0.002 (0.12)
<i>News Articles_{i,t}</i>	0.008*** (8.52)	0.020*** (6.46)	0.015*** (6.62)	0.011*** (3.46)	0.010*** (4.00)	0.006*** (2.84)	0.006** (2.14)	0.005*** (2.72)	0.001 (1.08)	0.010 (0.75)	-0.002 (-1.26)
<i>Abs Return_{i,t}</i>	2.054*** (9.11)	4.106*** (5.12)	4.732*** (5.41)	3.633*** (5.15)	2.866*** (3.68)	0.965* (1.75)	1.484*** (2.88)	0.212 (0.50)	0.714** (2.01)	-0.329 (-1.12)	-0.067 (-0.20)
<i>MVE_{i,q}</i>	0.001 (1.01)	0.003 (0.73)	-0.002 (-0.30)	-0.003 (-0.69)	-0.004 (-0.91)	-0.001 (-0.48)	-0.002 (-0.42)	-0.001 (-0.62)	0.003 (0.84)	-0.002 (-0.64)	0.000 (0.32)
<i>Trading Volume_{i,t}</i>	-0.022*** (-7.24)	-0.036** (-2.61)	-0.047*** (-3.51)	-0.047*** (-5.32)	-0.039*** (-4.62)	-0.021*** (-2.82)	-0.020 (-1.63)	-0.006 (-0.85)	-0.004 (-0.43)	-0.011 (-1.20)	-0.011* (-1.87)
<i>Spread_{i,t}</i>	3.441*** (9.69)	8.782*** (5.53)	6.615*** (6.48)	6.546*** (5.25)	4.940*** (4.99)	1.911*** (2.75)	1.222 (1.40)	1.814** (2.44)	-0.228 (-0.46)	0.864 (1.30)	0.411 (1.19)
<i>Fourth Qtr_{i,t}</i>	-0.027** (-2.20)	-0.095** (-2.42)	-0.016 (-0.42)	-0.011 (-0.45)	-0.032 (-0.64)	-0.011 (-0.45)	-0.008 (-0.25)	0.029 (1.67)	0.000 (0.004)	-0.116** (-2.18)	-0.020 (-0.63)
<i>Total EAs_t</i>	-0.004*** (-4.68)	-0.007* (-1.85)	-0.012*** (-3.51)	-0.013*** (-3.57)	-0.008** (-2.20)	-0.003 (-0.99)	-0.001 (-0.32)	-0.001 (-0.44)	0.001 (0.43)	-0.002 (-1.06)	-0.001* (-1.81)
<i>Analyst Following_{i,t}</i>	-0.006 (-1.15)	-0.042 (-1.39)	-0.017 (-0.72)	-0.008 (-0.26)	0.013 (1.06)	0.011 (1.02)	0.011 (0.66)	-0.007 (-0.54)	-0.017 (-1.38)	-0.022 (-1.67)	0.000 (0.02)
<i>Institutional Ownership_{i,q}</i>	0.022 (1.49)	0.059 (0.80)	0.091 (1.54)	-0.073 (-1.27)	-0.039 (-0.67)	0.127** (2.11)	0.042 (0.98)	-0.017 (-0.28)	-0.024 (-0.91)	-0.020 (-0.69)	0.015 (0.75)
<i>BTM_{i,q}</i>	-0.002** (-2.42)	-0.006 (-1.54)	0.001 (0.39)	-0.007*** (-2.88)	-0.001 (-0.29)	0.001 (0.48)	0.003 (1.36)	-0.001 (-0.63)	-0.004** (-2.17)	-0.000 (-0.12)	0.001 (1.20)
Constant	-0.006 (-0.27)	0.023 (0.24)	-0.031 (-0.31)	0.139 (1.59)	0.033 (0.51)	-0.118 (-1.39)	-0.057 (-1.03)	0.021 (0.43)	0.081* (1.86)	0.133*** (2.99)	0.005 (0.27)
Year-Week FE	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
N	245,015	24,970	24,048	24,549	24,548	25,050	24,283	24,549	24,048	24,922	24,048
Adjusted R-squared	0.025	0.063	0.066	0.063	0.044	0.017	0.024	0.021	0.021	0.032	0.016

SM3 – Additional Specifications of Table 4

This table presents the γ_1 coefficient from estimating alternative versions of Equation (9) Untabulated controls include: *News Articles, Abs Return, MVE, Analyst Following, Trading Volume, Spread, Fourth Qtr, Total EAs, Inst Own, BTM*, and *Year-Week* fixed effects. The dependent variable is *SVI, ASVI, or ASVI2*. Variable definitions are provided in Appendix A and t-statistics are in parentheses. Standard errors are clustered by firm. *, **, *** indicates statistical significance at the $p < 0.10, 0.05, 0.01$ level, respectively.

Panel A excludes one- and two-letter tickers and the “ambiguous” tickers listed in the header of Table 3. Panel B repeats Panel A but excludes 10 additional ambiguous tickers that were added to the S&P 500 after DRT’s sample period: *AMG, CERN, DAL, FOX, LEG, LUV, MAC, O, SIG, V*. Panel C includes only tickers for which a Google search produces a market summary box, as indicated in Table SM1 of our Supplementary Materials. Panel D tabulates results that include untabulated firm fixed effects.

Panel A: With controls and week fixed effects, and dropping “ambiguous” tickers listed in Table 3 and one-letter and two-letter tickers

	Pooled	By Decile of Noise Search									
		1 [Low]	2	3	4	5	6	7	8	9	10 [High]
Observations	205,702	24,469	23,547	23,547	22,544	19,539	19,539	19,539	18,036	17,908	17,034
Average Noise Search	0.655	0.176	0.311	0.431	0.572	0.730	0.830	0.908	0.959	0.985	0.997
γ_1 for <i>SVI</i>	9.958*** (8.91)	12.400*** (6.49)	19.060*** (7.59)	17.500*** (5.33)	11.850*** (5.21)	4.863*** (3.22)	5.933** (2.29)	0.150 (0.05)	7.331*** (2.87)	0.997 (0.47)	3.122 (1.54)
Adjusted R-squared	0.026	0.142	0.123	0.101	0.101	0.063	0.132	0.071	0.188	0.085	0.193
γ_1 for <i>ASVI</i>	0.547*** (13.20)	1.855*** (6.05)	1.946*** (6.04)	1.547*** (4.95)	0.785*** (4.85)	0.251 (1.45)	-0.038 (-0.15)	0.198* (1.78)	0.108 (1.06)	0.057* (1.76)	-0.002 (-0.11)
Adjusted R-squared	0.044	0.080	0.086	0.067	0.046	0.018	0.022	0.032	0.010	0.034	0.011
γ_1 for <i>ASVI2</i>	0.345*** (13.69)	0.706*** (9.18)	0.775*** (9.44)	0.673*** (7.45)	0.408*** (6.57)	0.257*** (3.87)	0.177*** (3.66)	0.081 (1.58)	0.118*** (2.75)	0.045 (1.63)	0.001 (0.03)
Adjusted R-squared	0.030	0.065	0.067	0.065	0.047	0.021	0.029	0.025	0.025	0.040	0.020

Panel B: With controls and week fixed effects, and dropping an updated list of “ambiguous” tickers and one-letter and two-letter tickers

	Pooled	By Decile of Noise Search									
		1 [Low]	2	3	4	5	6	7	8	9	10 [High]
Observations	201,694	24,469	23,547	23,046	22,544	19,038	19,539	19,038	18,036	17,407	15,030
Average Noise Search	0.689	0.177	0.311	0.432	0.574	0.729	0.827	0.912	0.960	0.985	0.997
γ_1 for <i>SVI</i>	10.16*** (8.93)	12.40*** (6.48)	19.060*** (7.59)	17.930*** (5.39)	11.850*** (5.20)	5.129*** (3.45)	5.933** (2.29)	0.841 (0.30)	7.331*** (2.87)	1.031 (0.47)	1.915 (0.79)
Adjusted R-squared	0.026	0.142	0.123	0.104	0.101	0.043	0.132	0.082	0.188	0.091	0.199
γ_1 for <i>ASVI</i>	0.557*** (13.19)	1.855*** (6.07)	1.946*** (6.03)	1.587*** (5.01)	0.785*** (4.84)	0.252 (1.43)	-0.038 (-0.15)	0.201* (1.77)	0.108 (1.05)	0.062* (1.88)	-0.002 (-0.11)
Adjusted R-squared	0.030	0.065	0.067	0.066	0.047	0.021	0.029	0.025	0.025	0.043	0.027
γ_1 for <i>ASVI2</i>	0.349*** (13.64)	0.706*** (9.13)	0.775*** (9.43)	0.690*** (7.57)	0.408*** (6.571)	0.257*** (3.76)	0.177*** (3.66)	0.082 (1.56)	0.118*** (2.74)	0.046 (1.62)	-0.003 (-0.14)
Adjusted R-squared	0.027	0.065	0.066	0.065	0.045	0.018	0.024	0.022	0.022	0.035	0.022

Panel C: With controls and week fixed effects, and keeping only tickers for which Google brings up a stock price information box

	Pooled	By Decile of Noise Search									
		1 [Low]	2	3	4	5	6	7	8	9	10 [High]
Observations	152,303	22,044	22,545	23,046	23,546	17,535	15,531	11,022	7,515	6,513	3,006
Average Noise Search	0.568	0.176	0.310	0.432	0.573	0.730	0.826	0.902	0.960	0.985	0.997
γ_1 for <i>SVI</i>	12.41*** (8.87)	12.74*** (6.477)	20.08*** (7.944)	16.05*** (4.272)	12.58*** (5.575)	7.249*** (4.229)	6.473** (2.159)	1.740 (0.531)	6.212** (2.173)	-0.760 (-0.296)	3.154 (1.642)
Adjusted R-squared	0.052	0.155	0.106	0.157	0.081	0.137	0.213	0.106	0.397	0.612	0.624
γ_1 for <i>ASVI</i>	0.706*** (13.36)	1.151*** (8.69)	1.358*** (8.77)	1.164*** (8.02)	0.621*** (6.26)	0.303*** (2.93)	0.255*** (3.59)	0.138 (1.23)	0.140 (1.71)	-0.004 (-0.09)	-0.033 (-0.89)
Adjusted R-squared	0.055	0.093	0.118	0.108	0.072	0.023	0.036	0.039	0.030	0.102	0.078
γ_1 for <i>ASVI2</i>	0.441*** (13.85)	0.744*** (9.36)	0.791*** (9.35)	0.716*** (8.44)	0.393*** (6.44)	0.249*** (3.34)	0.179*** (3.66)	0.048 (0.58)	0.112 (1.54)	-0.0059 (-0.13)	-0.029 (-0.86)
Adjusted R-squared	0.034	0.066	0.068	0.067	0.046	0.017	0.027	0.025	0.024	0.105	0.064

Panel D: With controls and week fixed effects, and adding firm fixed effects

	Pooled	By Decile of Noise Search									
		1 [Low]	2	3	4	5	6	7	8	9	10 [High]
Observations	245,015	24,970	24,048	24,549	24,548	25,050	24,283	24,549	24,048	24,922	24,048
Average Noise Search	0.689	0.177	0.311	0.432	0.574	0.729	0.827	0.912	0.960	0.985	0.997
γ_1 for <i>SVI</i>	6.925*** (13.04)	12.850*** (7.73)	17.790*** (9.71)	15.570*** (7.24)	9.994*** (6.17)	4.375*** (4.05)	4.393*** (3.17)	2.550* (1.94)	3.188*** (3.27)	0.820 (1.33)	0.071 (0.094)
Adjusted R-squared	0.700	0.396	0.476	0.550	0.622	0.643	0.643	0.670	0.731	0.738	0.680
γ_1 for <i>ASVI</i>	0.438*** (12.74)	1.123*** (8.77)	1.247*** (8.29)	1.011*** (7.46)	0.573*** (6.28)	0.203*** (2.88)	0.185*** (3.33)	0.117** (2.09)	0.059 (1.42)	0.028 (1.40)	-0.007 (-0.54)
Adjusted R-squared	0.040	0.077	0.104	0.097	0.052	0.026	0.025	0.019	0.016	0.023	0.011
γ_1 for <i>ASVI2</i>	0.270*** (12.78)	0.719*** (9.41)	0.721*** (8.44)	0.623*** (7.89)	0.353*** (6.31)	0.154*** (3.09)	0.114*** (3.02)	0.063 (1.54)	0.052 (1.62)	0.030 (1.38)	-0.005 (-0.34)
Adjusted R-squared	0.022	0.049	0.054	0.054	0.028	0.012	0.013	0.011	0.011	0.016	0.006

SM4 – Simulation Results of Induced Increase in Ticker Search on Random Days

A weakness with the analyses in Table 4 is that it is possible that true *Investor_Search* around earnings announcements is lower for firms that have higher *Noise_Search*, in which case it is impossible to isolate the effects of measurement error. We address this concern using simulations in which we induce specified increases in *Investor_Search* around random dates. Our procedures are as follows:

- 1) Drop all EA days and replace each with a randomly selected non-EA day (*Random_Day*).
- 2) Induce a specific amount of *Investor_Search* on each *Random_Day*. For example, the ticker UNM has *Noise_Search* of 99.2%, so inducing a 100% increase in *Investor_Search* increases SVI by 0.8. For a ticker with 0% *Noise_Search*, inducing a 100% increase in *Investor_Search* increases SVI by 100.¹ Calculate ASVI and ASVI2 using the updated data.
- 3) Estimate model (8) where *Random_Day* replaces EA to see whether the model rejects the null that the *Random_Day* coefficient is equal to zero at a 5 percent level of confidence (two-tailed).
- 4) Repeat this process 1,000 times, selecting *Random_Day* with replacement.

Panels A through C below summarize the simulation results for SVI, ASVI, and ASVI2. For each simulation of 1,000 trials, we report the average γ_1 estimate and percent of trials that reject the null that there is no difference in search. The rows have induced increases in *Investor_Search* ranging from 5% to 500%. The shaded cells reject the null in at least 50 percent of trials. Controls and fixed effects are untabulated. Standard errors are clustered by firm.

Starting with 5% inducement for SVI in Panel A, column (i) finds an average pooled coefficient of 0.410. In total 41.9% of trials reject the null hypothesis, indicating that a pooled sample of roughly 245,000 observations is unlikely to identify a 5% increase in *Investor_Search*. Looking at columns (ii) through (xi) in Panel A, the γ_1 estimates and t-statistics tend to decline as *Noise_Search* increases. However, coefficient estimates are not reliably significant even in the lowest deciles of *Noise_Search*, primarily due to the reduction in sample size relative to column (i). These results indicate that samples of roughly 24,500 are unlikely to identify 5% increases in *Investor_Search* even among firms with the least *Noise_Search*.

The lower rows in Panel A show that rejection rates improve as the induced increase in *Investor_Search* grows. At 10%, the pooled model identifies an increase in SVI in 94.0% of trials. However, the deciles continue to perform poorly, especially those higher in *Noise_Search*. Even with a 500% inducement in *Investor_Search* in the bottom row of Panel A, only 18.9% of trials reject the null in the highest decile of *Noise_Search*. Panels B and C show that ASVI and ASVI2 generally perform even worse than SVI in rejecting the null hypothesis.

The important takeaway from this section is to confirm that *Noise_Search* causes attenuated coefficient estimates, even when we are sure that increases in true *Investor_Search* are the same for all firms.

¹ As discussed, Google scales SVI from 0 to 100 within each ticker. To maintain consistency between our induced search and true SVI, we also rescale SVI from 0 to 100 after inducing *Investor_Search*. That said, untabulated results produce larger coefficients but highly similar rejection rates if we do not rescale SVI.

Panel A: SVI

		(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)
		Pooled	Decile Partitions on Noise Search									
Induced Increase			1 [Low]	2	3	4	5	6	7	8	9	10 [High]
5%	Avg. coefficient	0.410	0.627	0.682	0.684	0.682	0.489	0.399	0.236	0.043	0.001	0.020
	rejected at 5%	41.9%	14.6%	14.4%	15.6%	13.8%	9.0%	8.8%	6.0%	3.7%	2.4%	2.6%
10%	Avg. coefficient	0.801	1.262	1.413	1.352	1.360	1.005	0.759	0.421	0.129	0.034	0.028
	rejected at 5%	94.0%	42.4%	48.4%	45.8%	40.6%	21.3%	17.6%	9.3%	5.0%	2.6%	2.7%
15%	Avg. coefficient	1.191	1.894	2.141	2.019	2.036	1.519	1.119	0.606	0.215	0.069	0.036
	rejected at 5.0%	99.9%	76.9%	80.7%	79.2%	73.3%	44.4%	30.1%	13.8%	6.2%	3.1%	2.7%
20%	Avg. coefficient	1.579	2.524	2.865	2.683	2.709	2.032	1.478	0.791	0.301	0.104	0.044
	rejected at 5.0%	100.0%	92.5%	95.7%	94.4%	91.1%	68.7%	45.8%	20.4%	7.0%	3.2%	2.9%
25%	Avg. coefficient	1.966	3.150	3.587	3.345	3.379	2.543	1.837	0.975	0.387	0.139	0.052
	rejected at 5.0%	100.0%	99.1%	99.8%	99.3%	98.7%	86.3%	64.1%	27.6%	8.9%	3.8%	2.9%
50%	Avg. coefficient	3.868	6.22	7.122	6.573	6.66	5.061	3.623	1.898	0.816	0.313	0.092
	rejected at 5.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	99.6%	73.0%	20.9%	7.0%	2.9%
100%	Avg. coefficient	7.399	11.840	13.547	12.454	12.618	9.819	7.103	3.732	1.673	0.662	0.172
	rejected at 5.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	99.9%	61.1%	17.4%	4.1%
200%	Avg. coefficient	13.088	20.304	23.067	21.632	21.777	17.840	13.389	7.329	3.380	1.359	0.333
	rejected at 5.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	99.3%	46.3%	5.8%
300%	Avg. coefficient	17.262	25.756	29.312	27.913	28.17	23.983	18.568	10.763	5.07	2.053	0.493
	rejected at 5.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	79.4%	9.0%
500%	Avg. coefficient	22.843	31.858	36.334	35.330	36.194	32.336	26.294	16.879	8.352	3.428	0.812
	rejected at 5.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	99.5%	18.9%

Panel B: ASVI

		(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)
		Pooled	Decile Partitions on Noise Search									
Induced Increase			1 [Low]	2	3	4	5	6	7	8	9	10 [High]
5%	Avg. coefficient	0.018	0.058	0.038	0.027	0.030	0.017	-0.005	0.008	-0.001	0.002	0.001
	rejected at 5%	3.9%	6.0%	3.9%	2.4%	3.4%	0.8%	0.3%	1.8%	0.3%	1.3%	0.5%
10%	Avg. coefficient	0.039	0.119	0.083	0.067	0.055	0.035	0.021	0.013	-0.002	0.002	0.001
	rejected at 5%	20.7%	12.8%	14.2%	7.5%	7.8%	3.9%	0.1%	2.8%	0.1%	0.8%	0.8%
15%	Avg. coefficient	0.059	0.177	0.127	0.101	0.082	0.052	0.031	0.018	0.001	0.003	0.001
	rejected at 5.0%	55.0%	27.1%	35.2%	19.6%	16.7%	7.6%	0.2%	4.1%	0.1%	0.8%	0.8%
20%	Avg. coefficient	0.079	0.234	0.17	0.134	0.108	0.069	0.041	0.023	0.003	0.004	0.001
	rejected at 5.0%	85.7%	43.0%	58.5%	38.3%	32.4%	13.1%	0.2%	5.4%	0.1%	0.8%	0.9%
25%	Avg. coefficient	0.098	0.291	0.213	0.167	0.135	0.085	0.051	0.028	0.005	0.005	0.001
	rejected at 5.0%	96.3%	62.1%	77.7%	55.9%	49.8%	22.6%	0.5%	7.2%	0.1%	0.9%	1.0%
50%	Avg. coefficient	0.193	0.566	0.427	0.324	0.268	0.167	0.085	0.053	0.017	0.011	0.002
	rejected at 5.0%	99.7%	98.1%	99.7%	98.1%	97.3%	75.5%	4.9%	22.8%	0.3%	1.9%	1.1%
100%	Avg. coefficient	0.377	1.092	0.822	0.642	0.513	0.329	0.196	0.104	0.041	0.02	0.004
	rejected at 5.0%	100.0%	99.3%	100.0%	100.0%	100.0%	98.9%	47.0%	70.5%	2.1%	3.9%	1.6%
200%	Avg. coefficient	0.684	1.928	1.463	1.169	0.932	0.613	0.374	0.203	0.089	0.039	0.007
	rejected at 5.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	92.4%	98.8%	11.9%	15.0%	2.7%
300%	Avg. coefficient	0.916	2.519	1.92	1.57	1.255	0.844	0.528	0.300	0.136	0.059	0.01
	rejected at 5.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	95.2%	99.8%	30.8%	34.2%	3.7%
500%	Avg. coefficient	1.228	3.234	2.469	2.084	1.693	1.179	0.773	0.478	0.228	0.097	0.016
	rejected at 5.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	96.4%	100.0%	81.3%	75.2%	8.0%

Panel C: ASV12

		(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)
		Pooled	Decile Partitions on Noise Search									
Induced Increase			1 [Low]	2	3	4	5	6	7	8	9	10 [High]
5%	Avg. coefficient	0.013	0.034	0.027	0.024	0.018	0.012	0.007	0.006	0.002	0.002	0.000
	rejected at 5%	22.2%	11.9%	10.4%	9.1%	7.8%	6.9%	4.3%	4.8%	2.9%	3.1%	2.6%
10%	Avg. coefficient	0.026	0.064	0.055	0.047	0.037	0.025	0.015	0.01	0.004	0.002	0.000
	rejected at 5%	65.4%	24.6%	25.7%	22.6%	17.4%	12.3%	9.3%	6.9%	3.8%	3.1%	2.4%
15%	Avg. coefficient	0.038	0.092	0.082	0.071	0.055	0.036	0.023	0.014	0.005	0.003	0.001
	rejected at 5.0%	92.5%	41.9%	46.8%	44.5%	29.9%	19.7%	14.5%	9.5%	5.2%	3.8%	2.8%
20%	Avg. coefficient	0.050	0.119	0.108	0.093	0.072	0.048	0.031	0.018	0.007	0.004	0.001
	rejected at 5.0%	99.3%	60.9%	66.5%	64.1%	45.0%	29.4%	20.5%	13.2%	6.1%	3.9%	2.9%
25%	Avg. coefficient	0.062	0.146	0.134	0.113	0.09	0.059	0.037	0.023	0.01	0.004	0.001
	rejected at 5.0%	100.0%	76.6%	79.1%	78.2%	60.3%	40.6%	28.2%	17.6%	6.0%	4.0%	2.3%
50%	Avg. coefficient	0.117	0.268	0.252	0.215	0.172	0.115	0.073	0.042	0.019	0.007	0.002
	rejected at 5.0%	100.0%	99.4%	100.0%	99.2%	98.5%	82.2%	64.8%	40.8%	14.9%	5.1%	3.1%
100%	Avg. coefficient	0.213	0.465	0.449	0.393	0.316	0.218	0.146	0.081	0.036	0.015	0.003
	rejected at 5.0%	100.0%	100.0%	100.0%	100.0%	100.0%	99.8%	99.0%	85.0%	39.5%	14.7%	3.9%
200%	Avg. coefficient	0.365	0.753	0.744	0.665	0.549	0.394	0.273	0.154	0.071	0.029	0.006
	rejected at 5.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	83.9%	34.7%	5.6%
300%	Avg. coefficient	0.484	0.962	0.962	0.868	0.735	0.541	0.384	0.221	0.104	0.043	0.008
	rejected at 5.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	97.2%	57.2%	7.8%
500%	Avg. coefficient	0.666	1.248	1.271	1.171	1.012	0.778	0.573	0.344	0.167	0.07	0.013
	rejected at 5.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	91.1%	16.3%

SM5 – Complete tabulation of Table 7: TS-SVI around EAs, by decile of *TS-Noise Search*, with controls and week fixed effects

This table presents the full results from the analyses in Table 7. Panel A of this table is for TS-SVI, Panel B of this table is for TS-ASVI, and Panel C of this table is for TS-ASVI2. See Table 7 for further details. Variable definitions are provided in Appendix A. T-statistics are in parentheses. Standard errors are clustered by firm. *, **, *** indicates statistical significance at the $p < 0.10, 0.05, 0.01$ level, respectively.

Panel A: TS-SVI

	Pooled	By Decile of <i>TS-Noise Search</i>									
		1 [Low]	2	3	4	5	6	7	8	9	10 [High]
γ_1 for TS-SVI	3.487*** (5.52)	3.887*** (3.34)	2.704* (1.67)	2.700* (1.37)	1.838 (1.12)	6.553*** (3.53)	4.192** (2.12)	1.977 (1.14)	5.323*** (3.24)	1.914* (1.36)	5.221** (2.17)
<i>News Articles</i> _{<i>i,t</i>}	0.283*** (4.32)	0.051 (0.74)	0.168 (1.05)	0.504** (2.44)	0.427** (2.04)	0.189 (1.15)	0.303* (1.94)	0.640*** (3.51)	0.017 (0.12)	0.298** (2.32)	-0.031 (-0.12)
<i>Abs Return</i> _{<i>i,t</i>}	42.600*** (5.74)	31.800* (1.74)	30.650 (1.50)	44.400* (1.99)	28.960 (1.44)	35.560 (1.31)	9.205 (0.38)	32.920** (2.08)	80.430*** (3.76)	45.100*** (2.99)	65.200*** (3.24)
<i>MVE</i> _{<i>i,q</i>}	1.407*** (8.56)	1.265*** (3.23)	0.301 (0.47)	1.879*** (4.44)	1.206** (2.48)	1.936*** (5.82)	1.386*** (3.53)	1.096** (2.55)	1.623*** (3.56)	1.766*** (5.19)	1.442** (2.28)
<i>Trading Volume</i> _{<i>i,t</i>}	2.219*** (5.60)	2.268* (1.87)	-0.263 (-0.26)	0.936 (0.89)	0.637 (0.45)	3.473*** (5.18)	3.199** (2.41)	3.710*** (3.09)	2.114** (2.32)	3.374*** (4.11)	1.052 (0.84)
<i>Spread</i> _{<i>i,t</i>}	3.128 (0.15)	6.507 (0.17)	36.630 (0.63)	15.690 (0.29)	37.590 (0.70)	13.990 (0.33)	56.890 (0.75)	-19.530 (-0.38)	9.615 (0.22)	-16.260 (-0.47)	-59.080 (-1.09)
<i>Fourth Qtr</i> _{<i>i,t</i>}	0.185 (0.82)	-0.683 (-1.41)	-0.272 (-0.58)	0.838 (1.61)	0.943* (1.71)	0.901 (1.12)	-0.288 (-0.36)	-0.125 (-0.14)	-0.180 (-0.33)	0.968** (2.18)	-0.734 (-0.96)
<i>Total EAs</i> _{<i>t</i>}	0.0561** (2.17)	0.122 (1.45)	0.0094 (0.13)	0.059 (0.67)	0.094 (1.21)	0.067 (0.97)	0.096 (1.21)	-0.101 (-1.18)	0.095 (1.12)	0.072 (0.87)	0.044 (0.51)
<i>Analyst Following</i> _{<i>i,t</i>}	0.773 (0.84)	1.132 (0.87)	2.369 (1.23)	-1.458 (-0.51)	2.416 (0.91)	-3.388** (-2.30)	2.742 (1.00)	1.021 (0.58)	-0.230 (-0.09)	0.144 (0.07)	2.920 (0.96)
<i>Institutional Ownership</i> _{<i>i,q</i>}	-15.980*** (-5.36)	-15.560* (-1.79)	-24.490*** (-3.13)	-2.259 (-0.32)	-10.350 (-1.51)	-26.250*** (-5.21)	-2.676 (-0.16)	-29.210*** (-3.18)	-27.960*** (-3.87)	-16.420*** (-3.27)	-15.000* (-1.94)
<i>BTM</i> _{<i>i,q</i>}	0.011 (0.09)	-0.137 (-0.40)	-0.336 (-0.86)	0.448 (1.13)	0.006 (0.02)	-0.270 (-0.85)	-0.438 (-0.89)	-0.604* (-1.94)	0.395 (1.14)	0.510** (2.17)	0.483 (0.95)
Constant	9.054** (2.22)	8.735 (0.93)	23.370** (2.21)	0.647 (0.06)	1.459 (0.12)	26.220*** (3.54)	-7.024 (-0.40)	22.500** (2.56)	21.110** (2.08)	3.740 (0.49)	2.319 (0.28)
Year-Week FE	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Observations	245,015	24,549	24,549	24,548	24,784	24,549	24,048	24,970	24,047	24,549	24,422
Adjusted R-squared	0.078	0.049	0.052	0.087	0.094	0.138	0.063	0.144	0.077	0.110	0.074

Panel B: TS-ASVI

	Pooled	By Decile of TS-Noise Search									
		1 [Low]	2	3	4	5	6	7	8	9	10 [High]
γ_1 for TS-ASVI	0.928*** (10.24)	1.080*** (2.89)	0.745*** (2.80)	0.666*** (2.88)	0.690*** (3.47)	0.940*** (3.31)	1.218*** (4.49)	1.045*** (3.55)	1.015*** (3.49)	0.812** (2.36)	0.925*** (3.05)
<i>News Articles</i> _{<i>i,t</i>}	0.005 (1.57)	0.014 (0.90)	0.011 (1.25)	0.017 (1.58)	-0.001 (-0.13)	0.005 (0.68)	-0.005 (-0.68)	-0.004 (-0.38)	0.001 (0.14)	0.011 (0.88)	0.009 (0.99)
<i>Abs Return</i> _{<i>i,t</i>}	5.324*** (4.99)	6.618 (1.66)	4.993 (1.52)	11.39*** (2.71)	5.342* (1.84)	6.970** (2.17)	2.303 (0.93)	3.111 (0.88)	0.723 (0.25)	5.855 (1.63)	6.165 (1.52)
<i>MVE</i> _{<i>i,q</i>}	-0.062*** (-11.79)	-0.046*** (-3.01)	-0.055*** (-3.22)	-0.105*** (-8.12)	-0.072*** (-3.81)	-0.063*** (-5.55)	-0.071*** (-5.21)	-0.065*** (-4.49)	-0.058*** (-3.91)	-0.044** (-2.59)	-0.055*** (-3.02)
<i>Trading Volume</i> _{<i>i,t</i>}	-0.156*** (-13.00)	-0.134*** (-2.96)	-0.149*** (-3.26)	-0.157*** (-4.57)	-0.167*** (-3.28)	-0.118*** (-4.15)	-0.163*** (-3.92)	-0.230*** (-6.52)	-0.170*** (-6.43)	-0.177*** (-4.21)	-0.152*** (-3.93)
<i>Spread</i> _{<i>i,t</i>}	5.036*** (4.02)	2.168 (0.57)	4.926 (1.07)	0.914 (0.28)	1.971 (0.66)	3.870 (1.03)	4.545 (1.48)	8.967* (1.79)	16.430*** (3.80)	5.939 (1.37)	3.430 (0.82)
<i>Fourth Qtr</i> _{<i>i,t</i>}	-0.060** (-2.55)	-0.154** (-2.02)	-0.138 (-1.29)	-0.006 (-0.06)	-0.009 (-0.22)	0.067 (1.35)	-0.122* (-1.88)	-0.079 (-1.51)	-0.120** (-2.35)	0.020 (0.14)	-0.106 (-1.20)
<i>Total EAs</i> _{<i>t</i>}	-0.010* (-1.69)	0.012 (0.59)	-0.018 (-0.89)	0.004 (0.17)	0.010 (0.56)	-0.030* (-1.97)	-0.005 (-0.29)	-0.033* (-1.90)	-0.042** (-2.41)	0.023 (1.08)	-0.023 (-1.40)
<i>Analyst Following</i> _{<i>i,t</i>}	-0.034 (-1.16)	-0.087 (-1.33)	-0.139* (-1.90)	0.063 (0.85)	-0.062 (-0.63)	0.018 (0.23)	0.037 (0.57)	-0.001 (-0.03)	0.058 (0.86)	0.074 (0.97)	-0.201* (-2.00)
<i>Institutional Ownership</i> _{<i>i,q</i>}	0.636*** (6.59)	0.869*** (3.05)	0.795** (2.68)	-0.139 (-0.70)	0.353 (1.28)	0.627*** (3.54)	0.075 (0.21)	0.770*** (2.96)	1.139*** (4.64)	0.748*** (4.11)	0.942*** (3.94)
<i>BTM</i> _{<i>i,q</i>}	-0.007* (-1.77)	-0.013 (-1.03)	0.006 (0.35)	-0.022** (-2.02)	-0.008 (-0.64)	0.017 (1.18)	-0.005 (-0.43)	0.021 (1.59)	-0.026** (-2.65)	-0.010 (-0.83)	-0.020 (-1.49)
Constant	0.622*** (5.23)	0.493 (1.58)	0.746* (1.72)	1.284*** (4.74)	0.938** (2.21)	0.313 (1.27)	0.946** (2.47)	0.537* (1.68)	0.031 (0.08)	-0.037 (-0.14)	0.992*** (3.52)
Year-Week FE	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Observations	245,015	24,549	24,549	24,548	24,784	24,549	24,048	24,970	24,047	24,549	24,422
Adjusted R-squared	0.008	0.006	0.007	0.007	0.006	0.004	0.007	0.009	0.011	0.007	0.006

Panel C: TS-ASVI2

	Pooled	By Decile of TS-Noise Search									
		1 [Low]	2	3	4	5	6	7	8	9	10 [High]
γ_1 for TS-ASVI2	0.316*** (10.27)	0.307*** (3.16)	0.263*** (2.76)	0.462*** (4.96)	0.254*** (3.12)	0.425*** (5.04)	0.499*** (5.24)	0.264*** (3.24)	0.398*** (3.82)	0.266** (2.41)	0.216** (2.29)
<i>News Articles</i> _{<i>i,t</i>}	0.020*** (10.08)	0.009* (1.90)	0.017** (2.51)	0.015** (2.43)	0.032*** (6.56)	0.016*** (3.44)	0.010 (1.60)	0.022*** (4.01)	0.013* (1.81)	0.021*** (3.07)	0.021*** (4.45)
<i>Abs Return</i> _{<i>i,t</i>}	3.335*** (6.60)	1.802 (1.11)	4.292*** (3.48)	7.833*** (5.04)	2.810** (2.49)	3.172* (1.77)	2.866** (2.38)	3.524*** (3.21)	3.962*** (3.26)	1.795 (1.25)	1.743 (1.04)
<i>MVE</i> _{<i>i,q</i>}	0.027*** (5.63)	-0.000 (-0.02)	0.010 (0.69)	0.055*** (3.31)	0.035*** (3.01)	0.051*** (4.91)	0.048*** (3.30)	0.017 (0.90)	0.024 (1.43)	0.008 (0.52)	0.015 (0.98)
<i>Trading Volume</i> _{<i>i,t</i>}	0.059*** (5.52)	0.058 (0.86)	0.046* (1.85)	0.048 (1.12)	0.052* (1.83)	0.081*** (4.34)	0.072 (1.60)	0.051 (1.19)	0.050* (1.80)	0.087** (2.28)	0.042 (1.57)
<i>Spread</i> _{<i>i,t</i>}	3.832*** (5.62)	3.691* (1.94)	3.453* (1.98)	1.393 (0.73)	2.720* (1.96)	5.646*** (2.78)	4.173** (2.03)	3.563* (1.80)	4.806** (2.30)	2.055 (1.00)	5.475** (2.60)
<i>Fourth Qtr</i> _{<i>i,t</i>}	-0.005 (-0.42)	0.020 (0.69)	-0.087 (-1.31)	0.012 (0.304)	-0.047 (-1.38)	0.019 (0.39)	0.026 (0.71)	-0.022 (-0.49)	-0.002 (-0.07)	0.014 (0.35)	-0.052 (-1.39)
<i>Total EAs</i> _{<i>t</i>}	-0.004* (-1.73)	-0.003 (-0.45)	-0.002 (-0.32)	-0.013 (-1.65)	0.000 (0.00)	-0.007 (-1.37)	0.006 (0.91)	-0.013* (-1.83)	-0.009 (-1.33)	0.006 (0.78)	-0.002 (-0.29)
<i>Analyst Following</i> _{<i>i,t</i>}	-0.014 (-0.57)	-0.047 (-1.10)	-0.019 (-0.33)	-0.207** (-2.20)	0.022 (0.44)	-0.127* (-1.90)	0.046 (0.61)	0.094 (0.95)	0.020 (0.27)	-0.102 (-1.58)	0.139* (2.00)
<i>Institutional Ownership</i> _{<i>i,q</i>}	-0.432*** (-5.11)	-0.717*** (-2.71)	-0.295 (-1.51)	-0.194 (-0.79)	-0.204 (-1.33)	-0.231 (-1.08)	-0.325 (-0.79)	-0.719** (-2.26)	-0.885** (-2.54)	-0.248 (-1.17)	-0.595*** (-2.97)
<i>BTM</i> _{<i>i,q</i>}	-0.006 (-1.48)	-0.016 (-1.52)	-0.005 (-0.48)	0.015 (1.19)	0.001 (0.14)	-0.028** (-2.43)	0.010 (0.71)	-0.018 (-1.27)	0.002 (0.16)	-0.001 (-0.14)	-0.002 (-0.19)
Constant	-0.647*** (-5.71)	-0.156 (-0.59)	-0.619** (-2.59)	-0.538 (-1.47)	-1.008*** (-3.79)	-0.531* (-1.91)	-1.189*** (-2.91)	-0.492 (-1.35)	-0.380 (-1.06)	-0.553** (-2.19)	-0.911*** (-3.71)
Year-Week FE	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Observations	245,015	24,549	24,549	24,548	24,784	24,549	24,048	24,970	24,047	24,549	24,422
Adjusted R-squared	0.019	0.012	0.016	0.024	0.024	0.030	0.025	0.028	0.024	0.017	0.021

SM6 - Published Papers Using Google SVI as a Measure of Attention (through mid-2022)

Year	Author(s)	Title	Journal
2011	Da, Engelberg, and Gao	In search of attention	<i>Journal of Finance</i>
2011	Bank, Larch, and Peter	Google search volume and its influence on liquidity and returns of German stocks	<i>Financial Markets and Portfolio Management</i>
2011	Joseph, Wintoki, and Zhang	Forecasting abnormal stock returns and trading volume using investor sentiment: Evidence from online search	<i>International Journal of Forecasting</i>
2012	Drake, Roulstone, and Thornock	Investor information demand: Evidence from Google searches around earnings announcements	<i>Journal of Accounting Research</i>
2012	Bordino, Battiston, Caldarelli, Cristelli, Ukkonen and Weber	Web Search Queries can predict stock market volumes	<i>PLoS ONE</i>
2012	Choi and Varian	Predicting the present with Google Trends.	<i>Economic Record 88</i>
2012	Vlastakis and Markellos	Information demand and stock market volatility	<i>Journal of Banking & Finance</i>
2013	Aouadi, Arouri, and Teulon	Investor attention and stock market activity: Evidence from France	<i>Economic Modelling</i>
2013	Carrière-Swallow and Labbé	Nowcasting with Google Trends in an emerging market	<i>Journal of Forecasting</i>
2013	Jiang and Li	Investor sentiment and IPO pricing during pre-market and aftermarket periods: Evidence from Hong Kong	<i>Pacific-Basin Finance Journal</i>
2013	Korkeamaki and Takalo	Valuation of innovation and intellectual property: The case of the iPhone	<i>European Management Review</i>
2013	Kristoufek	Can Google Trends search queries contribute to Risk Diversification	<i>Nature</i>
2013	Preis, Moat, and Stanley	Quantifying Trading Behavior in Financial Markets Using Google Trends	<i>Nature</i>
2013	Luo, Zhang, and Duan	Social media and firm equity value	<i>Information Systems Research</i>
2013	Siganos	Google attention and target price run ups	<i>International Review of Financial Analysis</i>
2013	Xiong and Bharadwaj	Asymmetric roles of advertising and marketing capability in financial returns to news: Turning bad into good and good into great	<i>Journal of Marketing Research</i>
2013	Xu and Zhang	Impact of Wikipedia on market information: Evidence on management disclosure and investor reaction	<i>MIS Quarterly</i>
2013	Zhang, Shen, Zhang, and Xiong	Open-source information, investor attention, and asset pricing	<i>Economic Modelling</i>
2014	Gwilym, Kita, Wang	Speculate against speculative demand	<i>International Review of Financial Analysis</i>
2014	Knittel and Stango	Celebrity endorsements, firm value, and reputation risk: Evidence from the Tiger Woods scandal	<i>Management Science</i>
2014	Liu, Ye and Li	Impacts of interactions between news attention and investor attention on stock returns: Empirical investigation on financial shares in China.	<i>Journal of Management Sciences in China</i>
2014	Takeda and Wakao	Google search intensity and its relationship with returns and trading volume of Japanese stocks	<i>Pacific-Basin Finance Journal</i>
2014	Vaughan	Discovering business information from search engine query data	<i>Online Information Review</i>
2014	Vozlyublennaia	Investor attention, index performance, and return predictability	<i>Journal of Banking & Finance</i>
2014	Zhang, An, Feng	Can online searches be used to forecast stock market performance?	<i>Journal of Financial Research</i>
2015	Brown, Stice, and White	Mobile Communication and Local Information Flow: Evidence from Distracted Driving Laws	<i>Journal of Accounting Research</i>
2015	Cergol and Omladic	What can Wikipedia and Google tell us about stock prices under different market regimes?	<i>Ars Mathematica Contemporanea</i>
2015	deHaan, Shevlin, Thornock	Market (In)Attention and the Strategic Scheduling and Timing of Earnings Announcements	<i>Journal of Accounting and Economics</i>

2015	Ding and Hou	Retail investor attention and stock liquidity	<i>Journal of International Financial Markets, Institutions & Money</i>
2015	Drake, Roulstone, and Thornock	The Determinants and Consequences of Information Acquisition via EDGAR	<i>Contemporary Accounting Research</i>
2015	Goddard, Kita and Wang	Investor attention and FX market volatility	<i>Journal of International Financial Markets, Institutions & Money</i>
2015	Hoopes, Reck, Slemrod	Taxpayer Search for Information: Implications for Rational Attention	<i>American Economic Journal: Economic Policy</i>
2015	Kristoufek	Power-law correlations in finance-related Google searches, and their cross-correlations with volatility and traded volume	<i>Physica A: Statistical Mechanics and its Applications</i>
2015	Li, Ma, Wang, Zhang	How does Google search affect trader positions and crude oil prices?	<i>Economic Modelling</i>
2016	Bijl, Kringhaug, Molnar, Sandvik	Google Searches and Stock Returns	<i>International Review of Financial Analysis</i>
2016	Curtis, Richardson, and Schmardebeck	Investor attention and the pricing of earnings news	<i>Handbook of Sentiment Analysis in Finance</i>
2017	Drake, Jennings, Roulstone and Thornock	The co-movement of Investor Attention	<i>Management Science</i>
2016	Fang, Huang, Karpoff	Short Selling and Earnings Management: A Controlled Experiment	<i>Journal of Finance</i>
2017	Ben-Rephael, Da, Israelsen	It Depends on Where You Search: Institutional Investor Attention and Underreaction to News	<i>Review of Financial Studies</i>
2017	Boulland and Dessaint	Announcing the Announcement	<i>Journal of Banking & Finance</i>
2017	Chi and Shantikumar	Local Bias in Google Search and the Market Response around Earnings Announcements	<i>The Accounting Review</i>
2017	Colaco, De Cesari, and Hegde	Retail Investor Attention and IPO Valuation	<i>European Financial Management</i>
2017	Kong, Lin, Liu	Does Information Acquisition Alleviate Market Anomalies? Categorization Bias in Stock Splits	<i>Review of Finance</i>
2017	Madsen	Anticipated Earnings Announcements and the Customer–Supplier Anomaly	<i>Journal of Accounting Research</i>
2017	Welagedara, Deb, and Singh	Investor attention, analyst recommendation revisions, and stock prices	<i>Pacific-Basin Finance Journal</i>
2018	Chang and Kwon	Ambiguities in valuing information technology firms: Do internet searches T help?	<i>Journal of Business Research</i>
2018	Chronopoulos, Papadimitriou, and Vlastakis	Information demand and stock return predictability	<i>Journal of International Money and Finance</i>
2018	Frank and Sanati	How does the stock market absorb shocks?	<i>Journal of Financial Economics</i>
2018	Hasan, Kumas, Smith	Market ambiguity and individual investor information demand	<i>Journal of Contemporary Accounting & Economics</i>
2018	Kupfer and Zorn	Valuable information in early sales proxies: The use of Google search ranks in portfolio optimization	<i>Journal of Forecasting</i>
2018	Mbanga, Darrat, and Park	Investor sentiment and aggregate stock returns: the role of investor attention	<i>Review of Quantitative Finance and Accounting</i>
2018	Pantzalis and Ucar	Allergy onset and local investor distraction	<i>Journal of Banking & Finance</i>
2018	Reyes	Limited attention and M&A announcements	<i>Journal of Empirical Finance</i>
2018	Reyes	Negativity Bias in Attention Allocation: Retail Investors' Reaction to Stock Returns	<i>International Review of Finance</i>
2018	Reyes and Waissbluth	Saddled with Attention: Overreaction to Bankruptcy filings	<i>Review of Quantitative Finance and Accounting</i>
2018	Wang, Choi, Siraj	Local investor attention and post-earnings announcement drift	<i>Review of Financial Studies</i>
2018	Gargano and Rossi	Does It Pay to Pay Attention?	<i>Review of Financial Studies</i>

2018	Pantzalis and Ucar	Allergy onset and local investor distraction	<i>Journal of Banking & Finance</i>
2019	Chen and Lo	Online search activities and investor attention on financial markets	<i>Asia Pacific Management Review</i>
2019	Swamy, Dharani and Takeda	Investor Attention and Google Search Volume Index: Evidence from an Emerging Market using Quantile Regression Analysis.	<i>Research in International Business and Finance</i>
2019	Heyman, Lescauwae, and Stieperaere	Investor Attention and Short-term Return Reversals.	<i>Finance Research Letters</i>
2019	Lučivjanská, Molnár, and Villa	Google searches and stock market activity: Evidence from Norway	<i>Finance Research Letters</i>
2019	Huang, Huang, Lin	Attention allocation and return co-movement: Evidence from repeated natural experiments	<i>Journal of Financial Economics</i>
2019	Madsen and Niessner	Is Investor Attention for Sale? The Role of Advertising in Financial Markets	<i>Journal of Accounting Research</i>
2020	Blankespoor, deHaan, and Marinovic	Disclosure Processing Costs, Investors' Information Choice, and Equity Market Outcomes: A Review	<i>Journal of Accounting and Economics</i>
2020	Cheng, Huang, Hu	Investor attention and stock price movement.	<i>Journal of Behavioral Finance</i>
2020	Subramaniam and Chakraborty	Investor Attention and Cryptocurrency Returns: Evidence from Quantile Causality Approach.	<i>Journal of Behavioral Finance</i>
2020	Hu and Xiangfei	Does individual investors' online search activities reduce information asymmetry? Evidence from stock exchanges' comment letters in China	<i>Asia-Pacific Journal of Accounting & Economics</i>
2020	Choi, Gao and Jiang	Attention to Global Warming	<i>The Review of Financial Studies</i>
2020	Cziraki, Mondria, and Wu	Asymmetric attention and stock returns.	<i>Management Science</i>
2020	Chen, Wang, and Wang	Corporate social responsibility and information flow	<i>Accounting & Finance</i>
2020	Dang and Nguyen	Valuation Effect of Emotionality in Corporate Philanthropy	<i>Journal of Business Ethics</i>
2020	Gavish, Qadan, and Yangil	Net Buyers of Attention-Grabbing Stocks? Who Exactly Are They?	<i>Journal of Behavioral Finance</i>
2020	Zambrana	Asset Management and Financial Conglomerates: Attention Through Stellar Funds	<i>Management Science</i>
2020	Tao, Brooks, and Bell	Tomorrow's fish and chip paper? Slowly incorporated news and the cross-section of stock returns	<i>The European Journal of Finance</i>
2020	Cookson and Niessner	Why Don't We Agree? Evidence from a Social Network of Investors	<i>Journal of Finance</i>
2020	Chiu, Lourie, Nekrasov, and Teoh	Cater to Thy Client: Analyst Responsiveness to Institutional Investor Attention	<i>Management Science</i>
2020	Focke, Ruenzi, and Ungeheuer	Advertising, Attention, and Financial Markets	<i>Review of Financial Studies</i>
2020	Clifford, Fulkerson, Jame, and Jordan	Saliency and Mutual Fund Investor Demand for Idiosyncratic Volatility	<i>Management Science</i>
2020	Cookson and Niessner,	Why don't we agree? Evidence from a social network of investors	<i>The Journal of Finance</i>
2021	Desagre and D'Hondt	Googlization and retail trading activity	<i>Journal of Behavioral and Experimental Finance</i>
2021	Chen, Wang and Wang	Corporate social responsibility and information flow	<i>Accounting and Finance</i>
2021	Liaukonytė and Žaldokas	Background noise? TV advertising affects real-time investor behavior.	<i>Management Science</i>
2021	Chen, Schmidt and Wang	Retail investor risk-seeking, attention and the January effect.	<i>Journal of Behavioral and Experimental Finance</i>
2021	Kupfer and Schmidt	In search of retail investors: the effect of retail investor attention on odd lot trades	<i>Journal of Empirical Finance</i>
2021	Liu and Krystiniak	Investor Attention and Merger Announcements	<i>Journal of Behavioral Finance</i>
2021	Behrendt and Prange	What are you searching for? On the equivalence of proxies for online investor attention.	<i>Financial Research Letters</i>
2021	Chen, Chen, Lai	Internet search, fund flows and fund performance	<i>Journal of Banking and Finance</i>
2021	Chai, Dai, Gharghori, Hong	Internet search intensity and its relation with trading activity and stock returns	<i>International Review of Finance</i>
2021	Ozik, Sadka, Shen	Flattening the illiquidity curve: retail trading during the COVID-19 lockdown	<i>Journal of Financial and Quantitative Analysis</i>
2021	Chen, Schmidt, Wang	Retail investor risk-seeking, attention, and the January effect	<i>Journal of Behavioral and Experimental Finance</i>
2021	Nekrasov, Teoh, Wu	Visuals and attention to earnings news on twitter	<i>Review of Accounting Studies</i>

2022	Foederer and Schuetz	Data breach announcements and stock market reactions a matter of timing?	<i>Management Science</i>
2022	Israeli, Kasznik, and Sridharan	Unexpected distractions and investor attention to corporate announcements	<i>Review of Accounting Studies</i>
2022	Ballinari, Audrino, and Sigrist	When does attention matter? The effect of investor attention on stock market volatility around news releases.	<i>International Review of Financial Analysis</i>
2022	Chen, Tang, Yao, Zhou	Investor Attention and Stock Returns	<i>Journal of Financial and Quantitative Analysis</i>
2022	Wu, Tsai, Lu, Zhang	Google searches around analyst recommendation revision announcements: evidence from the Taiwan stock markets	<i>International Review of Economics and Finance</i>
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2022	Ben-Rephael, Da, Eason, Israelsen	Who Pays Attention to SEC Form 8-K?	<i>The Accounting Review</i>
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2022	Hirshleifer, Sheng	Macro news and micro news: Complements or substitutes?	<i>Journal of Financial Economics</i>
2022	Saxena, Chakraborty	Does it pay to pay attention to attention? Evidence from an emerging market	<i>Managerial Finance</i>
2022	Hafeez, Kabir, Wongchoti	Are retail investors really passive? Shareholder activism in the digital age	<i>Journal of Business, Finance, and Accounting</i>
2022	Barber, Huang, Odean, Schwarz	Attention-Induced Trading and Returns: Evidence from Robinhood Users	<i>Journal of Finance</i>