

Online Appendix

Anomalies across the globe: Once public, no longer existent?

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Abstract

Table 1 provides an overview of the 241 anomalies relied on in the paper. Table 2 shows descriptive statistics of anomaly profitability at the country level. Table 3 replicates our baseline analysis (Table 4 in the paper) but conditions on subsets of return predictors, such as anomalies published in the top finance and accounting journals. Table 4 replicates our baseline analysis but conditions on a later sample period start or on U.S. stock months that are also jointly available in both Datastream and Worldscope. Table 5 shows the main findings from cross-country regressions aimed at testing whether the post-publication change in anomaly profitability is more pronounced in countries in which short selling is possible. Figure 1 visualizes our baseline analysis of post-publication effects in anomaly returns for the U.S. and other developed markets. Figure 2 is based on Figure 1 of this Online Appendix, but shows the relative (instead of the absolute) change in anomaly profitability.

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Table 1: Anomaly universe

ID	Description	Paper	ID	Description	Paper
1	Firm age	Barry and Brown (1984)	31	Accruals	Sloan (1996)
2	Long-term reversal	DeBondt and Thaler (1985)	32	Earnings announcement return	Chan et al. (1996)
3	Leverage	Bhandari (1988)	33	Momentum-PEAD	Chan et al. (1996)
4	Cash flow/ debt	Ou and Penman (1989)	34	Long-term earnings forecasts	Porta (1996)
5	Current ratio	Ou and Penman (1989)	35	Momentum-book/market	Asness (1997)
6	Delta current ratio	Ou and Penman (1989)	36	Standard deviation of analyst forecasts	Ackert and Athanassakos (1997)
7	Delta quick ratio	Ou and Penman (1989)	37	Change in absolute dividend	Benartzi et al. (1997)
8	Delta sales-to-investory	Ou and Penman (1989)	38	Reverse stock splits	Desai and Jain (1997)
9	Quick ratio	Ou and Penman (1989)	39	Stock splits	Desai and Jain (1997)
10	Sales/accounts receivable	Ou and Penman (1989)	40	Delta capex - delta industry capex	Abarbanell and Bushee (1998)
11	Sales/cash	Ou and Penman (1989)	41	Delta sales - delta inventory	Abarbanell and Bushee (1998)
12	Sales/inventory	Ou and Penman (1989)	42	Delta sales - delta sg&a	Abarbanell and Bushee (1998)
13	Short-term reversal	Jegadeesh (1990)	43	Firm strength	Abarbanell and Bushee (1998)
14	Twelve month momentum	Jegadeesh (1990)	44	O-score	Dichev (1998)
15	Analyst forecast revision	Stickel (1991)	45	Zmijewski bankruptcy risk	Dichev (1998)
16	Asset/book	Fama and French (1992)	46	Z-score	Dichev (1998)
17	Asset/market	Fama and French (1992)	47	Analyst value	Frankel and Lee (1998)
18	Book equity/market equity	Fama and French (1992)	48	Dollar trading volume	Brennan et al. (1998)
19	Delta depreciation-to-gross pp&e	Holthausen and Larcker (1992)	49	Share volume	Datar et al. (1998)
20	Depreciation-to-gross pp&e	Holthausen and Larcker (1992)	50	Analyst FY2 to FY1 estimate	Achour et al. (1998)
21	Momentum-reversal	Jegadeesh and Titman (1993)	51	Forecast revision ratio	Achour et al. (1998)
22	Standard momentum	Jegadeesh and Titman (1993)	52	Six month consensus forecast change	Achour et al. (1998)
23	Cash flow/market value of equity	Lakonishok et al. (1994)	53	Dividend yield	Naranjo et al. (1998)
24	Sales growth	Lakonishok et al. (1994)	54	Industry momentum	Moskowitz and Grinblatt (1999)
25	Dividend initiation	Michaely et al. (1995)	55	Industry reversal	Moskowitz and Grinblatt (1999)
26	Sales/price	Barbee et al. (1996)	56	Consecutive earnings increases	Barth et al. (1999)
27	Cash flow variance	Haugen and Baker (1996)	57	Share repurchases	Ikenberry et al. (1995)
28	Return on equity	Haugen and Baker (1996)	58	Coskewness	Harvey and Siddique (2000)
29	Volume trend	Haugen and Baker (1996)	59	F-Score	Piotroski (2000)
30	Volume/market value of equity	Haugen and Baker (1996)	60	Momentum-firm size	Hong et al. (2000)

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61	Momentum-res. analyst coverage	Hong et al. (2000)	91	Momentum-return consistency	Grinblatt and Moskowitz (2004)
62	Momentum-turnover	Lee and Swaminathan (2000)	92	Unexpected r&d increases	Eberhardt et al. (2004)
63	Volatility of dollar trading volume	Chordia et al. (2001)	93	Operating cash flow/market cap	Desai et al. (2004)
64	Volume variance	Chordia et al. (2001)	94	Change in analyst forecast-accrual	Barth and Hutton (2004)
65	Bankruptcy score	Shumway (2001)	95	Cash flow duration	Dechow et al. (2004)
66	Alpha momentum	Grundy and Martin (2001)	96	Change in consensus recommendation	Jegadeesh et al. (2004)
67	Down analyst forecast	Barber et al. (2001)	97	Book/Market-accruals	Bartov and Kim (2004)
68	Up analyst forecast	Barber et al. (2001)	98	Earnings persistence	Francis et al. (2004)
69	KZ financial constraints	Lamont et al. (2001)	99	Earnings predictability	Francis et al. (2004)
70	Price shock-turnover increase	Pritamani and Singal (2001)	100	Earnings smoothness	Francis et al. (2004)
71	Discretionary accruals	Xie (2001)	101	52-week high	George and Hwang (2004)
72	Analysts annual earnings forecast	Elgers et al. (2001)	102	Momentum-52-week high	George and Hwang (2004)
73	Advertising/market value of equity	Chan et al. (2001)	103	Tax/income	Lev and Nissim (2004)
74	R&D/market value of equity	Chan et al. (2001)	104	Analyst earnings surprise (stdev)	Mendenhall (2004)
75	R&D/sales	Chan et al. (2001)	105	Earnings surprise-dollar volume	Mendenhall (2004)
76	Analyst forecast revision-dispersion	Dische (2002)	106	Earnings surprise-idio. volatility	Mendenhall (2004)
77	Style autocorrelation (book/market)	Lewellen (2002)	107	Style reversal	Teo and Woo (2004)
78	Style autocorrelation (size)	Lewellen (2002)	108	Investment	Titman et al. (2004)
79	Dividend resumption	Boehme and Sorescu (2002)	109	Net operating assets	Hirshleifer et al. (2004)
80	Growth in inventory	Thomas and Zhang (2002)	110	Analyst dispersion in long-term growth	Anderson and Dyl (2005)
81	Illiquidity	Amihud (2002)	111	Accruals quality	Francis et al. (2005)
82	Analyst forecast dispersion	Diether et al. (2002)	112	Long-term reversal-price delay	Hou and Moskowitz (2005)
83	Bookmarket-distress	Griffin and Lemmon (2002)	113	Price delay	Hou and Moskowitz (2005)
84	Growth in ltnoa	Fairfield et al. (2003)	114	Price delay-idiosyncratic volatility	Hou and Moskowitz (2005)
85	Forecast revision-analyst coverage	Gleason and Lee (2003)	115	Price delay-PEAD	Hou and Moskowitz (2005)
86	Book/market-idiosyncratic volatility	Ali et al. (2003)	116	Forecast revision-cash flow duration	Jiang and Lee (2005)
87	Book/market-share price	Ali et al. (2003)	117	Forecast revision-volatility	Jiang and Lee (2005)
88	Book/market-zero return trading days	Ali et al. (2003)	118	Information uncertainty	Jiang and Lee (2005)
89	Return consistency	Watkins (2003)	119	Momentum-cash flow duration	Jiang and Lee (2005)
90	Momentum-liquidity	Lesmond et al. (2004)	120	Momentum-total volatility	Jiang and Lee (2005)

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121	G-Score	Mohanram (2005)	151	Leverage component of book/price	Penman and Richardson (2007)
122	Delta long-term debt	Richardson et al. (2005)	152	Enterprise component of book/price	Penman and Richardson (2007)
123	Delta shareholder equity	Richardson et al. (2005)	153	Momentum-costs of goods sold	Sagi and Seasholes (2007)
124	Total accruals	Richardson et al. (2005)	154	Momentum-revenue volatility	Sagi and Seasholes (2007)
125	Capital gain overhang	Grinblatt and Han (2005)	155	Industry lead-lag effect (earnings)	Hou (2007)
126	High frequency idiosyncratic risk	Ang et al. (2006b)	156	Industry lead-lag effect (returns)	Hou (2007)
127	Firm age-momentum	Zhang (2006)	157	Momentum-Sharpe ratio	Rachev et al. (2007)
128	Delta capex	Anderson and Garcia-Feijoo (2006)	158	Asset tangibility	Almeida and Campello (2007)
129	Industry-enhanced accruals	Chan et al. (2006)	159	Long-term seasonal reversal	Heston and Sadka (2008)
130	Forecast revision-cash flow variance	Zhang (2006)	160	Long-term seasonality	Heston and Sadka (2008)
131	Momentum-cash flow variance	Zhang (2006)	161	Medium-term seasonal reversal	Heston and Sadka (2008)
132	Momentum-forecast dispersion	Zhang (2006)	162	Medium-term seasonality	Heston and Sadka (2008)
133	Momentum-idiosyncratic volatility	Zhang (2006)	163	Idiosyncratic volatility-Liq./size/price	Bali and Cakici (2008)
134	Revenue surprises	Jegadeesh and Livnat (2006)	164	Low frequency idiosyncratic volatility	Bali and Cakici (2008)
135	Pension funding status	Franzoni and Marin (2006)	165	Share issuance (1-year)	Pontiff and Woodgate (2008)
136	Momentum-long-term reversal	Chan and Kot (2006)	166	Asset turnover	Soliman (2008)
137	IPO- r&d	Guo et al. (2006)	167	Delta asset turnover	Soliman (2008)
138	Total xfm	Bradshaw et al. (2006)	168	Delta profit margin	Soliman (2008)
139	Share issuance (5-year)	Daniel and Titman (2006)	169	Net working capital changes	Soliman (2008)
140	Industry Herfindahl index	Hou and Robinson (2006)	170	Noncurrent operating assets changes	Soliman (2008)
141	Downside beta	Ang et al. (2006a)	171	Profit margin	Soliman (2008)
142	Short-term reversal-liquidity	Avramov et al. (2006)	172	Change in analyst coverage	Scherbina (2008)
143	Short-term reversal-turnover	Avramov et al. (2006)	173	Asset growth	Cooper et al. (2008)
144	Analyst earnings surprise (book value)	Doyle et al. (2006)	174	Delta pp&e-delta inventory	Lyandres et al. (2008)
145	Analyst earnings surprise (price)	Doyle et al. (2006)	175	Distress risk	Campbell et al. (2008)
146	Turnover-adjusted zero return days	Liu (2006)	176	Idiosyncratic risk gobar FF3 model	Ang et al. (2009)
147	Idiosyncratic return momentum	Gutierrez and Pirinsky (2007)	177	Capital expenditure- pp&e	Polk and Sapienza (2009)
148	Market-leading industries (negative)	Hong et al. (2007)	178	Efficiency score	Nguyen and Swanson (2009)
149	Market-leading industries (positive)	Hong et al. (2007)	179	Earnings consistency	Alwathainani (2009)
150	Payout yield	Boudoukh et al. (2007)	180	Friday earnings surprises	DellaVigna and Pollet (2009)

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181	Tangability-asset value	Hahn and Lee (2009)	211	Cashs-assets	Palazzo (2012)
182	Tangability-payout ratio	Hahn and Lee (2009)	212	Time-series momentum	Moskowitz et al. (2012)
183	Cash-flow volatility	Huang (2009)	213	Neg. price shock-analyst rec.	Savor (2012)
184	PEAD-liquidity	Chordia et al. (2009)	214	Pos. price shock-analyst rec.	Savor (2012)
185	Industry-based sin stocks	Hong and Kacperczyk (2009)	215	Gross profitability	Novy-Marx (2013)
186	(Non-)lottery stocks	Kumar (2009)	216	Value-firm size	Israel and Moskowitz (2013)
187	Distracting earnings surprises	Hirshleifer et al. (2009)	217	High frequency book/market	Asness and Frazzini (2013)
188	Expected skewness	Boyer et al. (2010)	218	Productivity of cash	Rao et al. (2013)
189	Real estate holdings	Tuzel (2010)	219	Organization capital	Eisfeldt and Papanikolaou (2003)
190	Profitability	Balakrishnan et al. (2010)	220	Short-term residual reversal	Blitz et al. (2013)
191	Long-term reversal-idio. volatility	McLean (2010)	221	Analyst forecast revision-no. analysts	Czajka et al. (2013)
192	Customer-supplier relationship	Menzly and Ozbas (2010)	222	Expected dividend	Hartzmark and Solomon (2013)
193	Sustainable growth	Lockwood and Prombutr (2010)	223	Employee growth rate	Belo et al. (2014)
194	Percent operating accruals	Haifzalla et al. (2011)	224	Asset liquidity	Ortiz-Molina and Phillips (2014)
195	Percent total accruals	Haifzalla et al. (2011)	225	Shock in Amihud illiquidity	Bali et al. (2014)
196	Operating leverage	Novy-Marx (2011)	226	Shock in bid/ask spread	Bali et al. (2014)
197	Maximum daily return	Bali et al. (2011)	227	Continuous information arrival	Da et al. (2014)
198	Tax expense surprise	Thomas and Zhang (2011)	228	Tail risk	Kelly and Jiang (2014)
199	Long-term vs. short-term earnings forecasts	Da and Warachka (2011)	229	Momentum-asset growth	Nyberg and Pöyry (2014)
200	Residual momentum	Blitz et al. (2011)	230	Jackpot probability	Conrad et al. (2014)
201	R&D-financial constraints	Li (2011)	231	Absolute lagged return shock	Lu et al. (2014)
202	Asset growth-idiosyncratic volatility	Lipson et al. (2011)	232	Negative return shock	Lu et al. (2014)
203	Enterprise multiple	Loughran and McDonald (2011)	233	Positive return shock	Lu et al. (2014)
204	Inventory growth	Belo and Lin (2012)	234	Short term reversal-earnings	So and Wang (2014)
205	Short-term reversal-large stocks	de Groot et al. (2012)	235	Industry short-term reversal-large stocks	Hameed and Mian (2015)
206	Lagged industry momentum	Novy-Marx (2012)	236	Industry short-term reversal-no news	Hameed and Mian (2015)
207	Lagged momentum	Novy-Marx (2012)	237	Short term reversal-industry	Hameed and Mian (2015)
208	Lagged momentum-large firms	Novy-Marx (2012)	238	Financial institutions size (macap)	Gandhi and Lustig (2015)
209	Style lagged momentum	Novy-Marx (2012)	239	Financial institutions size (assets)	Gandhi and Lustig (2015)
210	Bid-ask spread	Corwin and Schultz (2012)	240	Operating profitability	Fama and French (2015)
			241	Operating profits-assets	Ball et al. (2015)

Table 2: Descriptive anomaly statistics at the county-level

This table shows descriptive statistics of anomaly returns and anomaly t -statistics at the country-level during the whole sample period, which runs from January 1980 to December 2015. *Equally (value)* denotes the average monthly long/short equally weighted (value-weighted) anomaly portfolio return. We consider the countries used in most of our empirical tests in the paper (USA + non-U.S. G7 countries + Australia). t -statistics are based on the heteroskedasticity-consistent standard errors of White (1980).

Panel A: USA		
Return weighting	equally	value
Mean return per anomaly (in % per month)	0.55	0.35
Standard deviation of mean return per anomaly	0.48	0.36
Fraction of mean return per anomaly > 0% per month	0.90	0.90
Fraction of mean return per anomaly > 0.5% per month	0.47	0.25
Average t -statistic per anomaly	3.08	2.55
Standard deviation of t -statistic	1.61	1.48
Fraction of t -statistics > 1.5	0.73	0.49
Panel B: Australia		
Return weighting	equally	value
Mean return per anomaly (in % per month)	0.74	0.60
Standard deviation of mean return per anomaly	0.84	0.80
Fraction of mean return per anomaly > 0% per month	0.85	0.80
Fraction of mean return per anomaly > 0.5% per month	0.56	0.44
Average t -statistic per anomaly	2.53	2.59
Standard deviation of t -statistic	1.61	1.88
Fraction of t -statistics > 1.5	0.63	0.49
Panel C: Canada		
Return weighting	equally	value
Mean return per anomaly (in % per month)	0.57	0.44
Standard deviation of mean return per anomaly	0.75	0.67
Fraction of mean return per anomaly > 0% per month	0.79	0.75
Fraction of mean return per anomaly > 0.5% per month	0.47	0.40
Average t -statistic per anomaly	1.76	1.06
Standard deviation of t -statistic	2.17	1.56
Fraction of t -statistics > 1.5	0.52	0.38

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Panel D: France		
	equally	value
Return weighting		
Mean return per anomaly (in % per month)	0.52	0.34
Standard deviation of mean return per anomaly	0.56	0.43
Fraction of mean return per anomaly > 0% per month	0.87	0.81
Fraction of mean return per anomaly > 0.5% per month	0.43	0.30
Average t -statistic per anomaly	2.21	1.06
Standard deviation of t -statistic	2.21	1.26
Fraction of t -statistics > 1.5	0.62	0.33
Panel E: Germany		
	equally	value
Return weighting		
Mean return per anomaly (in % per month)	0.52	0.40
Standard deviation of mean return per anomaly	0.51	0.51
Fraction of mean return per anomaly > 0% per month	0.87	0.82
Fraction of mean return per anomaly > 0.5% per month	0.45	0.36
Average t -statistic per anomaly	2.36	2.08
Standard deviation of t -statistic	1.18	1.36
Fraction of t -statistics > 1.5	0.64	0.40
Panel F: Italy		
	equally	value
Return weighting		
Mean return per anomaly (in % per month)	0.43	0.30
Standard deviation of mean return per anomaly	0.49	0.49
Fraction of mean return per anomaly > 0% per month	0.83	0.75
Fraction of mean return per anomaly > 0.5% per month	0.40	0.30
Average t -statistic per anomaly	1.59	0.81
Standard deviation of t -statistic	1.58	1.27
Fraction of t -statistics > 1.5	0.51	0.30
Panel G: Japan		
	equally	value
Return weighting		
Mean return per anomaly (in % per month)	0.22	0.18
Standard deviation of mean return per anomaly	0.43	0.35
Fraction of mean return per anomaly > 0% per month	0.67	0.69
Fraction of mean return per anomaly > 0.5% per month	0.20	0.19
Average t -statistic per anomaly	1.33	0.73
Standard deviation of t -statistic	2.25	1.33
Fraction of t -statistics > 1.5	0.38	0.24
Panel H: United Kingdom		
	equally	value
Return weighting		
Mean return per anomaly (in % per month)	0.55	0.36
Standard deviation of mean return per anomaly	0.73	0.56
Fraction of mean return per anomaly > 0% per month	0.81	0.79
Fraction of mean return per anomaly > 0.5% per month	0.47	0.30
Average t -statistic per anomaly	2.91	1.19
Standard deviation of t -statistic	3.44	1.61
Fraction of t -statistics > 1.5	0.66	0.40

Table 3: Anomalies and publication effects: Subsamples of return predictors

This table shows the main findings obtained from regressions of pooled anomaly returns on dummies for post-sample and post-publication periods. The analysis resembles our baseline analysis (see Table 4 in the paper), but we condition on subsets of anomalies. In Panel A, we only consider return predictors published in the *Journal of Finance*, the *Journal of Financial Economics*, the *Review of Financial Studies*, the *Journal of Accounting Research*, the *Journal of Accounting and Economics*, or the *Accounting Review*. In Panel B, we collapse anomalies at the paper level, i.e. we average the monthly returns of anomalies proposed in a given paper. All else equal, this procedure results in a paper proposing only one anomaly having the same weight in the analysis as a paper proposing several anomalies. In Panel C, we exclude “combined” anomalies, i.e. return predictors interacted with other return predictors. Examples include “enhanced” momentum strategies based on interactions of past returns with, for instance, high turnover or low residual analyst coverage. In Panel D, we only keep anomalies which are also taken into account in at least one of the following meta studies on return predictability: Green et al. (2013), Green et al. (2017), Harvey et al. (2016), Hou et al. (2018), and McLean and Pontiff (2016). *t*-statistics are reported in parentheses. Regressions include anomaly fixed effects or, for the pooled international sample, fixed effects for (country, anomaly) pairs. Standard errors are clustered by month. Two-tailed statistical significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

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Country	USA	International		U.S.	International	
universe		Pooled	Composite		Pooled	Composite
Return weighting	Equally weighted returns			Value-weighted returns		
Panel A: Only anomalies published in top journals						
Post-sample	-0.252*** (-3.31)	0.130** (2.37)	0.128** (2.46)	-0.105 (-1.22)	0.096 (1.46)	0.048 (0.70)
Post-publication	-0.402*** (-4.56)	0.110 (1.55)	0.112 (1.56)	-0.267*** (-2.73)	0.008 (0.11)	-0.011 (-0.16)
N	76,222	429,353	71,326	76,222	429,353	71,326
Panel B: Only one observation per paper						
Post-sample	-0.264*** (-3.03)	0.118** (2.13)	0.110* (1.88)	-0.118 (-1.26)	0.064 (1.06)	0.060 (0.89)
Post-publication	-0.459*** (-4.67)	0.096 (1.31)	0.096 (1.21)	-0.269** (-2.52)	-0.001 (-0.01)	-0.014 (-0.18)
N	66,219	379,728	61,930	66,219	379,728	61,930
Panel C: No combined anomalies						
Post-sample	-0.173** (-2.38)	0.120*** (2.72)	0.091* (1.94)	-0.079 (-1.10)	0.050 (1.06)	0.028 (0.52)
Post-publication	-0.323*** (-4.06)	0.131** (2.18)	0.130** (2.08)	-0.197** (-2.36)	0.015 (0.24)	-0.016 (-0.28)
N	77,815	444,081	73,049	77,815	444,081	73,049
Panel D: Only anomalies included in other meta studies						
Post-sample	-0.234*** (-3.11)	0.107** (2.05)	0.115** (2.17)	-0.133 (-1.57)	0.040 (0.67)	0.043 (0.65)
Post-publication	-0.402*** (-4.62)	0.095 (1.35)	0.117 (1.57)	-0.279*** (-3.03)	0.000 (0.01)	-0.004 (-0.06)
N	77,532	444,019	72,916	77,532	444,019	72,916

Table 4: Anomalies and publication effects: Later sample start or U.S. data availability in Datastream/Worldscope

This table resembles our baseline analysis (see Table 4 in the paper), but we set the beginning of the sample period to January 1995 (in Panels A to D) or run the U.S. tests only with stocks with joint availability in CRSP/Compustat and Datastream/Worldscope (in Panels E and F). The analysis in Panels E and F starts in July 1981. In all panels, we only consider return predictors for which at least five valid estimates for both in-sample, post-sample, and post-publication returns can be computed for (at least some) international markets. t -statistics are reported in parentheses. Regressions include anomaly fixed effects or, in the case of the pooled countries, fixed effects for (anomaly, country) pairs. Standard errors are clustered by month. Two-tailed statistical significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

Country universe	USA	G7+Australia Pooled	G7+Australia Composite
N	99,214	558,408	92,692
Panel A: Sample start 1995, regression coefficients, equally weighted returns			
N	47,012	311,269	46,976
Post-sample	-0.355*** (-3.05)	0.015 (0.19)	0.052 (0.72)
Post-publication	-0.533*** (-2.89)	-0.047 (-0.36)	-0.011 (-0.08)
Panel B: Implied relative changes in anomaly profitability, equally weighted returns			
Mean in-sample return	0.824	0.583	0.431
Post-sample change	-43%	3%	12%
Post-publication change	-65%	-8%	-2%
Panel C: Sample start 1995, regression coefficients, value-weighted returns			
N	47,012	311,269	46,976
Post-sample	-0.280** (-2.20)	-0.036 (-0.42)	-0.046 (-0.58)
Post-publication	-0.469** (-2.49)	-0.137 (-1.02)	-0.163 (-1.41)
Panel D: Implied relative changes in anomaly profitability, value-weighted returns			
Mean in-sample return	0.584	0.469	0.333
Post-sample change	-48%	-8%	-14%
Post-publication change	-80%	-29%	-49%
Panel E: U.S.stocks with joint Datastream/Worldscope data availability			
Country universe	USA	USA	
Return weighting	equally	value	
N	95,822	95,822	
Post-sample	-0.124 (-1.43)	-0.138* (-1.77)	
Post-publication	-0.238** (-2.27)	-0.238** (-2.55)	
Panel F: Implied relative changes in anomaly profitability			
Mean in-sample return	0.511	0.397	
Post-sample change	-24%	-35%	
Post-publication change	-47%	-60%	

Table 5: Anomalies and publication effects: Cross-country analysis of short-selling constraints

The following table reports findings from in total 32 cross-country regression specifications aimed at testing to what extent short selling restrictions at the country-level are related to post-publication changes in anomaly profitability. The dependent variable in all regressions is a single number that proxies for the average post-publication decline in anomaly profitability at the country level. In total, we employ eight different proxies. The first four are directly taken from our baseline analysis shown in Table 3 in the paper. More specifically, we consider the coefficient of the post-publication dummy with equally weighted anomaly returns (*Return change*, *ew* in the table below), the *t*-statistic for the post-publication dummy with equally weighted anomaly returns (*t-stat change*, *ew* in the table below), and analogous variables for value-weighted anomaly returns (*return change*, *vw* and *t-stat change*, *vw*). The alternative four proxies are similar, except that we control for general time effects by including month fixed effects in our baseline regression shown in Table 3 in the paper. We then use the coefficients on the post-publication dummy or alternatively the resulting *t*-statistics in the second-stage regression described below. We regress our proxies for the average post-publication change on a dummy which is one if short-selling is feasible and zero otherwise. In Panels A and B of the table shown below, we use the classification from McLean et al. (2009) which indicates if short selling is allowed or not. Our dummy is set to one if short selling was allowed by 1992 or earlier. In most countries where short selling is possible, shorting was already allowed “before 1990”. We add the few countries where shorting was allowed in 1991 or 1992. This approach is motivated by the fact that the vast majority of our anomalies was published after 1992. Only restricting the sample to countries where shorting was allowed “before 1990” vs countries where it was not allowed at all does not change our inferences. In Panels C and D, we make use of the additional information given in Table 1 of Bris et al. (2007), and set the dummy to one if short-selling is allowed (by 1992) and practiced. Otherwise, the dummy is zero. Panels A and C contain univariate results, in Panels B and D we additionally add average market capitalization, idiosyncratic volatility, and bid-ask spreads. These variables are averaged across all in-sample anomaly months for a given country, similarly as in Table 9 in the paper. To illustrate, for a given anomaly in a given month in a given country, we measure the average market capitalization of the stocks in the short and long leg. This value is then averaged across all in-sample anomaly months for this country. In the regressions, the firm characteristics are standardized to have zero mean and unit variance. *t*-statistics are reported in parentheses. Two-tailed statistical significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively. [continued overleaf]

Panel A: Short selling allowed, univariate results

Dependent variable	Without controlling for time effects			With controlling for time effects		
	Ret change, ew	t-stat change, vw	t-stat change, vw	Ret change, ew	t-stat change, ew	t-stat change, vw
Short selling dummy	-0.042 (-0.63)	-0.096 (-1.24)	-0.481 (-1.32)	-0.128** (-2.67)	-0.777** (-2.20)	-0.202*** (-3.59)
Constant	0.156*** (2.99)	0.109 (1.52)	0.425 (1.39)	0.153*** (4.12)	1.015*** (3.55)	0.194*** (5.05)
Observations	39	39	39	39	39	39
R-squared	0.010	0.054	0.049	0.154	0.118	0.224

Panel B: Short selling allowed, multivariate results

Dependent variable	Without controlling for time effects			With controlling for time effects		
	Ret change, ew	t-stat change, vw	t-stat change, vw	Ret change, ew	t-stat change, ew	t-stat change, vw
Short selling dummy	0.017 (0.18)	-0.055 (-0.61)	-0.330 (-0.74)	-0.158** (-2.19)	-1.096** (-2.20)	-0.255*** (-3.12)
Idiosyncratic volatility	0.003 (0.07)	-0.037 (-0.94)	-0.289 (-1.16)	-0.020 (-0.66)	-0.244 (-1.10)	-0.085* (-1.77)
Market capitalization	-0.072** (-2.15)	-0.069* (-1.84)	-0.382* (-1.99)	0.026 (0.84)	0.180 (0.84)	0.012 (0.46)
Bid-ask spread	-0.015 (-0.57)	0.001 (0.05)	-0.005 (-0.04)	0.012 (0.52)	0.043 (0.27)	0.025 (0.86)
Constant	0.118* (1.98)	0.0830 (1.07)	0.328 (0.96)	0.172*** (3.26)	1.220*** (3.11)	0.229*** (4.03)
Observations	39	39	39	39	39	39
R-squared	0.104	0.148	0.172	0.188	0.187	0.338

[continued overleaf]

Panel C: Short selling allowed and practiced, univariate results									
Dependent variable	Without controlling for time effects			With controlling for time effects			With controlling for time effects		
	Ret change, ew	t-stat change, vw	t-stat change, vw	Ret change, ew	t-stat change, vw	t-stat change, vw	Ret change, ew	t-stat change, vw	t-stat change, vw
Short selling dummy	-0.086 (-1.33)	-0.456 (-1.06)	-0.132** (-2.24)	-0.756** (-2.36)	-0.116** (-2.47)	-0.610* (-1.78)	-0.148** (-2.41)	-0.749** (-2.24)	-0.749** (-2.24)
Constant	0.169*** (3.92)	0.881*** (3.78)	0.109** (2.17)	0.465** (2.08)	0.124*** (3.49)	0.799*** (3.39)	0.134*** (2.78)	0.690*** (3.32)	0.690*** (3.32)
Observations	39	39	39	39	39	39	39	39	39
R-squared	0.046	0.031	0.111	0.130	0.137	0.079	0.131	0.122	0.122

Panel D: Short selling allowed and practiced, multivariate results									
Dependent variable	Without controlling for time effects			With controlling for time effects			With controlling for time effects		
	Ret change, ew	t-stat change, vw	t-stat change, vw	Ret change, ew	t-stat change, vw	t-stat change, vw	Ret change, ew	t-stat change, vw	t-stat change, vw
Short selling dummy	-0.052 (-0.56)	-0.453 (-0.80)	-0.108 (-1.54)	-0.692* (-1.79)	-0.131** (-2.12)	-0.773* (-1.91)	-0.168** (-2.67)	-0.907*** (-2.75)	-0.907*** (-2.75)
Idiosyncratic volatility	0.001 (0.02)	-0.198 (-0.57)	-0.039 (-1.01)	-0.305 (-1.25)	-0.020 (-0.58)	-0.240 (-0.98)	-0.083 (-1.42)	-0.569** (-2.16)	-0.569** (-2.16)
Market capitalization	-0.061 (-1.55)	-0.339 (-1.55)	-0.062* (-1.75)	-0.332* (-2.00)	0.019 (0.61)	0.110 (0.52)	-0.006 (-0.26)	-0.072 (-0.55)	-0.072 (-0.55)
Bid-ask spread	-0.021 (-0.84)	-0.225 (-1.28)	-0.001 (-0.03)	-0.023 (-0.15)	0.020 (0.71)	0.104 (0.59)	0.040 (0.98)	0.198 (1.13)	0.198 (1.13)
Constant	0.153*** (3.03)	0.879*** (3.11)	0.097* (1.79)	0.436* (1.71)	0.131*** (3.22)	0.874*** (3.28)	0.142*** (3.13)	0.762*** (3.69)	0.762*** (3.69)
Observations	39	39	39	39	39	39	39	39	39
R-squared	0.116	0.123	0.194	0.243	0.160	0.121	0.216	0.280	0.280

Figure 1: Post-publication change in anomaly profitability in bp per month

This figure visualizes the baseline results shown in Table 3 in the paper. More specifically, on a country-by-country level, the figure shows the post-publication change in anomaly profitability. We condition on countries that have been classified as MSCI developed markets during our whole sample period, which ranges from January 1980 to December 2015. Two-tailed statistical significance at the 10%, 5%, and 1% level is indicated by *, **, and ***, respectively.

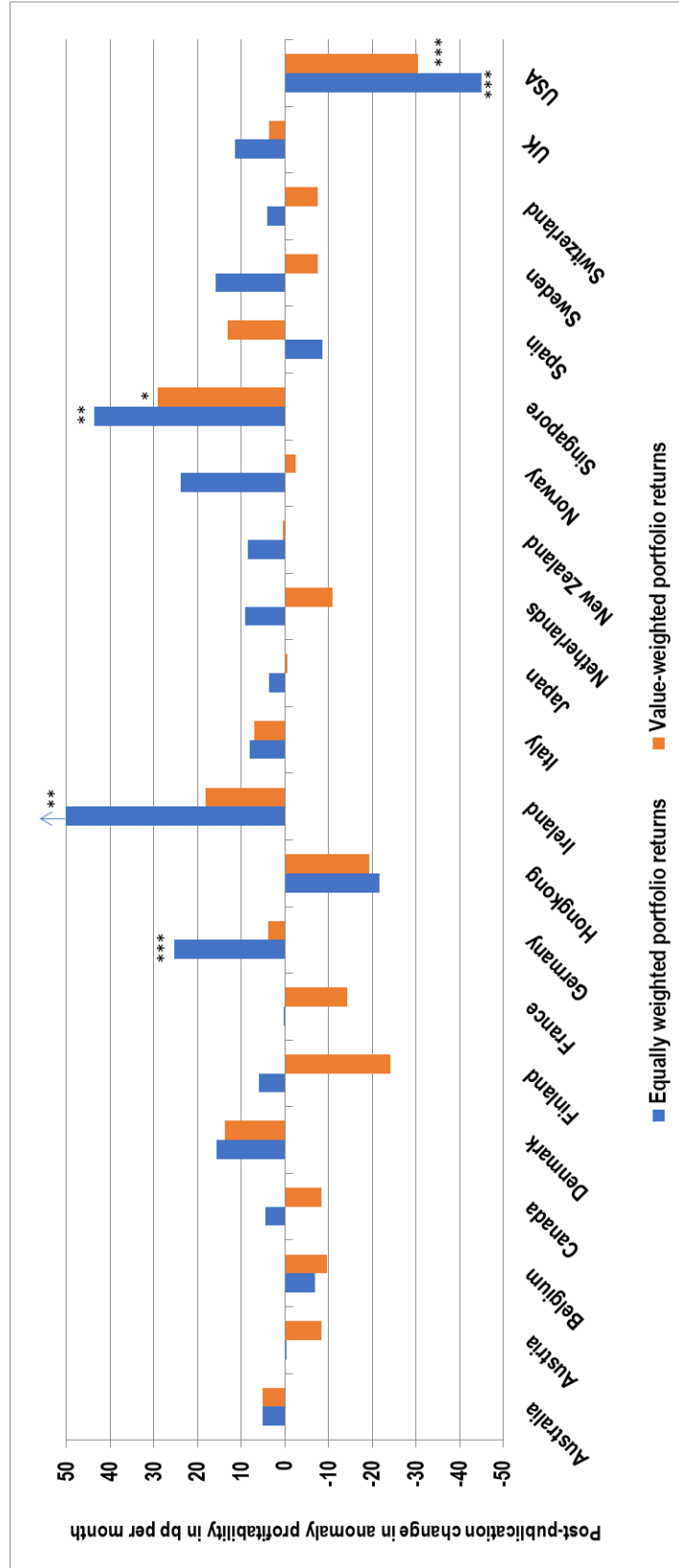
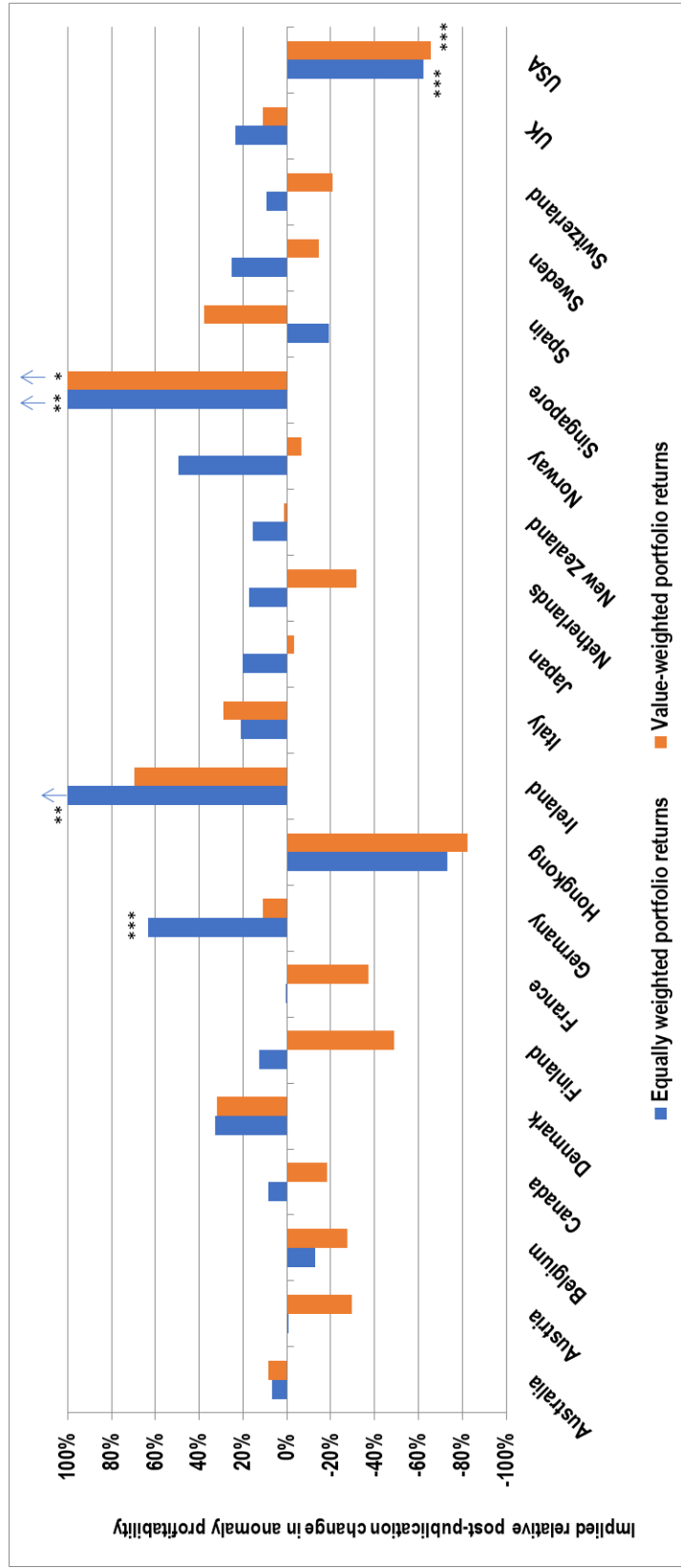


Figure 2: Implied relative post-publication change in anomaly profitability

This figure is based on Figure 1 of this Online Appendix as well as on Table 3 in the paper. However, it translates the regression coefficients of the post-publication dummy into relative changes in anomaly profitability with respect to the magnitude of the average in-sample anomaly return. Two-tailed statistical significance at the 10%, 5%, and 1% level is based on Figure 1 / Table 4 and indicated by *, **, and ***, respectively.



References

- Abarbanell, J. S., and B. J. Bushee, 1998, “Abnormal returns to a fundamental analysis strategy,” *Accounting Review*, 73, 19–45.
- Achour, D., C. R. Harvey, G. Hopkins, and C. Lang, 1998, “Stock selection in emerging markets: portfolio strategies for Malaysia, Mexico and South Africa,” *Emerging Markets Quarterly*, 2, 38–91.
- Ackert, L. F., and G. Athanassakos, 1997, “Prior uncertainty, analyst bias, and subsequent abnormal returns,” *Journal of Financial Research*, 20, 263–273.
- Ali, A., L.-S. Hwang, and M. A. Trombley, 2003, “Arbitrage risk and the book-to-market anomaly,” *Journal of Financial Economics*, 69, 355–373.
- Almeida, H., and M. Campello, 2007, “Financial constraints, asset tangibility, and corporate investment,” *Review of Financial Studies*, 20, 1429–1460.
- Alwathainani, A. M., 2009, “Consistency of firms’ past financial performance measures and future returns,” *British Accounting Review*, 41, 184–196.
- Amihud, Y., 2002, “Illiquidity and stock return: Cross-section and time-series effects,” *Journal of Financial Markets*, 5, 31–56.
- Anderson, A.-M., and E. A. Dyl, 2005, “Market structure and trading volume,” *Journal of Financial Research*, 28, 115–131.
- Anderson, C. W., and L. Garcia-Feijoo, 2006, “Empirical evidence on capital investment, growth options, and security returns,” *Journal of Finance*, 61, 171–194.
- Ang, A., J. Chen, and Y. Xing, 2006a, “Downside risk,” *Review of Financial Studies*, 19, 1191–1239.

- Ang, A., R. J. Hodrick, Y. Xing, and X. Zhang, 2006b, “The cross-section of volatility and expected returns,” *Journal of Finance*, 61, 259–299.
- , 2009, “High idiosyncratic volatility and low returns: International and further U.S. evidence,” *Journal of Financial Economics*, 91, 1–23.
- Asness, C., and A. Frazzini, 2013, “The devil in HMLs details,” *Journal of Portfolio Management*, 39, 49–68.
- Asness, C. S., 1997, “The interaction of value and momentum strategies,” *Financial Analysts Journal*, 53, 29–36.
- Avramov, D., T. Chordia, and A. Goyal, 2006, “Liquidity and autocorrelations in individual stock returns,” *Journal of Finance*, 61, 2365–2394.
- Balakrishnan, K., E. Bartov, and L. Faurel, 2010, “Post loss/profit announcement drift,” *Journal of Accounting and Economics*, 50, 20–41.
- Bali, T., L. Peng, Y. Shen, and Y. Tang, 2014, “Liquidity shocks and stock market reactions,” *Review of Financial Studies*, 27, 1434–1485.
- Bali, T. G., and N. Cakici, 2008, “Idiosyncratic volatility and the cross section of expected returns,” *Journal of Financial and Quantitative Analysis*, 43, 29–58.
- Bali, T. G., N. Cakici, and R. F. Whitelaw, 2011, “Maxing out: Stocks as lotteries and the cross-section of expected returns,” *Journal of Financial Economics*, 99, 427–446.
- Ball, R., J. Gerakos, J. Linnainmaa, and V. Nikolaev, 2015, “Deflating profitability,” *Journal of Financial Economics*, 117, 225–248.
- Barbee, W. C., S. Mukherji, and G. A. Raines, 1996, “Do sales-price and debt-equity explain stock returns better than book-market and firm size?,” *Financial Analysts Journal*, 52, 56–60.

- Barber, B., R. Lehavy, M. McNichols, and B. Trueman, 2001, "Can investors profit from the prophets? Security analyst recommendations and stock returns," *Journal of Finance*, 56, 531–563.
- Barry, C. B., and S. J. Brown, 1984, "Differential information and the small firm effect," *Journal of Financial Economics*, 13, 283–294.
- Barth, M. E., J. A. Elliot, and M. W. Finn, 1999, "Market rewards associated with patterns of increasing earnings," *Journal of Accounting Research*, 37, 387–413.
- Barth, M. E., and A. P. Hutton, 2004, "Analyst earnings forecast revisions and the pricing of accruals," *Review of Accounting Studies*, 9, 59–96.
- Bartov, E., and M. Kim, 2004, "Risk, mispricing, and value investing," *Review of Quantitative Finance and Accounting*, 23, 353–376.
- Belo, F., and X. Lin, 2012, "The inventory growth spread," *Review of Financial Studies*, 25, 278–313.
- Belo, F., X. Lin, and S. Bazdresch, 2014, "Labor hiring, investment, and stock return predictability in the cross section," *Journal of Political Economy*, 122, 129–177.
- Benartzi, S., R. Michaely, and R. Thaler, 1997, "Do changes in dividends signal the future or the past?," *Journal of Finance*, 52, 1007–1034.
- Bhandari, L. C., 1988, "Debt/equity ratio and expected common stock returns: Empirical evidence," *Journal of Finance*, 43, 507–528.
- Blitz, D., J. Huij, S. Lansdorp, and M. Verbeek, 2013, "Short-term residual reversal," *Journal of Financial Markets*, 16, 477–504.
- Blitz, D., J. Huij, and M. Martens, 2011, "Residual momentum," *Journal of Empirical Finance*, 18, 506–521.

- Boehme, R. D., and S. M. Sorescu, 2002, “The long-run performance following dividend initiations and resumptions: Underreaction or product of chance?,” *Journal of Finance*, 57, 871–900.
- Boudoukh, J., R. Michaely, M. Richardson, and M. R. Roberts, 2007, “On the importance of measuring payout yield: Implications for empirical asset pricing,” *Journal of Finance*, 76, 877–915.
- Boyer, B., T. Mitton, and K. Vorkink, 2010, “Expected idiosyncratic skewness,” *Review of Financial Studies*, 23, 169–202.
- Bradshaw, M. T., S. A. Richardson, and R. G. Sloan, 2006, “The relation between corporate financing activities, analysts’ forecasts and stock returns,” *Journal of Accounting and Economics*, 42, 53–85.
- Brennan, M. J., T. J. Chordia, and A. Subrahmanyam, 1998, “Alternative factor specifications, security characteristics, and the cross-section of expected stock returns,” *Journal of Financial Economics*, 49, 345–373.
- Bris, A., W. N. Goetzmann, and N. Zhu, 2007, “Efficiency and the bear: Short sales and markets around the world,” *Journal of Finance*, 62, 1029–1079.
- Campbell, J. Y., J. Hilscher, and J. Szilagyi, 2008, “In search of distress risk,” *Journal of Finance*, 63, 2899–2939.
- Chan, K., L. K. Chan, N. Jegadeesh, and J. Lakonishok, 2006, “Earnings quality and stock returns,” *Journal of Business*, 79, 1041–1082.
- Chan, K., and H. W. Kot, 2006, “Price reversal and momentum strategies,” *Journal of Investment Management*, 4, 70–89.

- Chan, L. K., N. Jegadeesh, and J. Lakonishok, 1996, “Momentum strategies,” *Journal of Finance*, 51, 1681–1713.
- Chan, L. K., J. Lakonishok, and T. Sougiannis, 2001, “The stock market valuation of research and development expenditures,” *Journal of Finance*, 56, 2431–2456.
- Chordia, T., A. Goyal, G. Sadka, R. Sadka, and L. Shivakumar, 2009, “Liquidity and the post-earnings-announcement drift,” *Financial Analysts Journal*, 65, 18–32.
- Chordia, T., A. Subrahmanyam, and V. R. Anshuman, 2001, “Trading activity and expected stock returns,” *Journal of Financial Economics*, 59, 3–32.
- Conrad, J., N. Kapadia, and Y. Xing, 2014, “Death and jackpot: Why do individual investors hold overpriced stocks?,” *Journal of Financial Economics*, 113, 455–475.
- Cooper, M. J., H. Gulen, and M. J. Schill, 2008, “Asset growth and the cross-section of stock returns,” *Journal of Finance*, 63, 1609–1651.
- Corwin, S. A., and P. Schultz, 2012, “A simple way to estimate bid-ask spreads from daily high and low prices,” *Journal of Finance*, 67, 719–759.
- Czajka, M.-G., P. Kaufmann, and H. Scholz, 2013, “Enhancing the profitability of earnings momentum strategies: The role of price Momentum, information diffusion and earnings uncertainty,” *Journal of Investment Strategies*, 2, 3–57.
- Da, Z., U. Gurun, and M. Warachka, 2014, “Frog in the pan: Continuous information and momentum,” *Review of Financial Studies*, 27, 2171–2218.
- Da, Z., and M. Warachka, 2011, “The disparity between long-term and short-term forecasted earnings growth,” *Journal of Financial Economics*, 100, 424–442.
- Daniel, K., and S. Titman, 2006, “Market reaction to tangible and intangible information,” *Journal of Finance*, 61, 1605–1643.

- Datar, V., N. Naik, and R. Radcliffe, 1998, "Liquidity and asset returns: An alternative test," *Journal of Financial Markets*, 1, 203–220.
- de Groot, W., J. Huij, and W. Zhou, 2012, "Another look at trading costs and short-term reversal profits," *Journal of Banking and Finance*, 36, 371–382.
- DeBondt, W. F. M., and R. Thaler, 1985, "Does the stock market overreact?," *Journal of Finance*, 40, 793–805.
- Dechow, P. M., R. G. Sloan, and M. T. Soliman, 2004, "Implied equity duration: A new measure of equity risk," *Review of Accounting Studies*, 9, 197–228.
- DellaVigna, S., and J. M. Pollet, 2009, "Investor inattention and friday earnings announcements," *Journal of Finance*, 64, 709–749.
- Desai, H., and P. C. Jain, 1997, "Long-run common stock returns following stock splits and reverse splits," *Journal of Business*, 70, 409–33.
- Desai, H., S. Rajgopal, and M. Venkatachalam, 2004, "Value-glamour and accruals mispricing: One anomaly or two," *Accounting Review*, 79, 355–385.
- Dichev, I. D., 1998, "Is the risk of bankruptcy a systematic risk?," *Journal of Finance*, 53, 1131–1147.
- Diether, K. B., C. J. Malloy, and A. Scherbina, 2002, "Differences of opinion and the cross section of stock returns," *Journal of Finance*, 57, 2113–2141.
- Dische, A., 2002, "Dispersion in analyst forecasts and the profitability of earnings momentum strategies," *European Financial Management*, 8, 211–228.
- Doyle, J. T., R. J. Lundholm, and M. T. Soliman, 2006, "The extreme future stock returns following I/B/E/S earnings surprises," *Journal of Accounting Research*, 44, 849–887.

- Eberhardt, A. C., W. F. Maxwell, and A. R. Siddique, 2004, “An examination of long-term abnormal stock returns and operating performance following R&D increases,” *Journal of Finance*, 59, 623–650.
- Eisfeldt, A. L., and D. Papanikolaou, 2003, “Organization capital and the cross-section of expected returns,” *Journal of Finance*, 68, 1365–1406.
- Elgers, P. T., M. H. Lo, and R. J. Pfeiffer, 2001, “Delayed security price adjustments to financial analysts forecasts of annual earnings,” *Accounting Review*, 76, 613–632.
- Fairfield, P. M., J. S. Whisenant, and T. L. Yohn, 2003, “Accrued earnings and growth: Implications for future profitability and market mispricing,” *Accounting Review*, 78, 353–371.
- Fama, E. F., and K. R. French, 1992, “The cross-section of expected stock returns,” *Journal of Finance*, 47, 427–465.
- , 2015, “A five-factor asset pricing model,” *Journal of Financial Economics*, 116, 1–22.
- Francis, J., R. LaFond, P. Olsson, and K. Schipper, 2004, “Costs of equity and earnings attributes,” *Accounting Review*, 79, 967–1010.
- , 2005, “The market pricing of accruals quality,” *Journal of Accounting and Economics*, 39, 295–327.
- Frankel, R., and C. M. Lee, 1998, “Accounting valuation, market expectation, and cross-sectional stock returns,” *Journal of Accounting and Economics*, 25, 283–319.
- Franzoni, F., and J. M. Marin, 2006, “Pension plan funding and stock market efficiency,” *Journal of Finance*, 61, 921–956.

- Gandhi, P., and H. Lustig, 2015, "Size anomalies in U.S. bank stock returns," *Journal of Finance*, 70, 733–768.
- George, T. J., and C.-Y. Hwang, 2004, "The 52-week high and momentum investing," *Journal of Finance*, 59, 2145–2176.
- Gleason, C. A., and C. M. C. Lee, 2003, "Analyst forecast revisions and market price discovery," *Accounting Review*, 78, 193–225.
- Green, J., J. R. Hand, and F. Zhang, 2017, "The characteristics that provide independent information about average U.S. monthly stock returns," *Review of Financial Studies*, 30, 4389–4436.
- Green, J., J. R. Hand, and X. F. Zhang, 2013, "The superview of return predictive signals," *Review of Accounting Studies*, 18, 692–730.
- Griffin, J. M., and M. L. Lemmon, 2002, "Book-to-market equity, distress risk, and stock returns," *Journal of Finance*, 57, 2317–2336.
- Grinblatt, M., and B. Han, 2005, "Prospect theory, mental accounting, and momentum," *Journal of Financial Economics*, 78, 311–339.
- Grinblatt, M., and T. M. Moskowitz, 2004, "Predicting stock price movements from past returns: the role of consistency and tax-loss selling," *Journal of Financial Economics*, 71, 541–579.
- Grundy, B. D., and J. S. Martin, 2001, "Understanding the nature of the risks and the source of the rewards to momentum investing," *Review of Financial Studies*, 14, 29–78.
- Guo, R.-J., B. Lev, and C. Shi, 2006, "Explaining the short- and long-term IPO anomalies in the US by R&D," *Journal of Business Finance and Accounting*, 33, 550–579.

- Gutierrez, R. C., and C. A. Pirinsky, 2007, “Momentum, reversal, and the trading behaviors of institutions,” *Journal of Financial Markets*, 10, 48–75.
- Hafzalla, N., R. Lundholm, and E. M. V. Winkle, 2011, “Percent accruals,” *Accounting Review*, 86, 209–236.
- Hahn, J., and H. Lee, 2009, “Financial constraints, debt capacity, and the cross-section of stock returns,” *Journal of Finance*, 64, 891–921.
- Hameed, A., and G. M. Mian, 2015, “Industries and stock return reversals,” *Journal of Financial and Quantitative Analysis*, 50, 89–117.
- Hartzmark, S. M., and D. Solomon, 2013, “The dividend month premium,” *Journal of Financial Economics*, 109, 640–660.
- Harvey, C. R., Y. Liu, and H. Zhu, 2016, “...and the cross-section of expected returns,” *Review of Financial Studies*, 29, 5–68.
- Harvey, C. R., and A. Siddique, 2000, “Conditional skewness in asset pricing tests,” *Journal of Finance*, 55, 1263–1295.
- Haugen, R. A., and N. L. Baker, 1996, “Commonality in the determinants of expected stock returns,” *Journal of Financial Economics*, 41, 401–439.
- Heston, S. L., and R. Sadka, 2008, “Seasonality in the cross-section of stock returns,” *Journal of Financial Economics*, 87, 418–445.
- Hirshleifer, D., K. Hou, S. H. Teoh, and Y. Zhang, 2004, “Do investors overvalue firms with bloated balance sheets?,” *Journal of Financial Economics*, 38, 297–331.
- Hirshleifer, D., S. Seongyeon, and S. H. Teoh, 2009, “Driven to distraction: Extraneous events and underreaction to earnings news,” *Journal of Finance*, 64, 2289–2325.

- Holthausen, R. W., and D. F. Larcker, 1992, “The prediction of stock returns using financial statement information,” *Journal of Accounting and Economics*, 15, 373–411.
- Hong, H., and M. Kacperczyk, 2009, “The price of sin: The effects of social norms on markets,” *Journal of Financial Economics*, 93, 15–36.
- Hong, H., W. Torous, and R. Valkanov, 2007, “Do industries lead stock markets?,” *Journal of Financial Economics*, 83, 367–396.
- Hong, H. G., T. Lim, and J. C. Stein, 2000, “Bad news travels slowly: Size, analyst coverage, and the profitability of momentum strategies,” *Journal of Finance*, 55, 265–295.
- Hou, K., 2007, “Industry information diffusion and the lead-lag effect in stock returns,” *Review of Financial Studies*, 20, 1113–1138.
- Hou, K., and T. Moskowitz, 2005, “Market frictions, price delay, and the cross-section of expected returns,” *Review of Financial Studies*, 18, 981–1020.
- Hou, K., and D. T. Robinson, 2006, “Industry concentration and average stock returns,” *Journal of Finance*, 61, 1927–1956.
- Hou, K., C. Xue, and L. Zhang, 2018, “Replicating anomalies,” *Unpublished working paper, Ohio State University, University of Cincinnati*.
- Huang, A. G., 2009, “The cross section of cashflow volatility and expected stock returns,” *Journal of Empirical Finance*, 16, 409–429.
- Ikenberry, D., J. Lakonishok, and T. Vermelean, 1995, “Market underreaction to open market share repurchases,” *Journal of Financial Economics*, 39, 181–208.
- Israel, R., and T. J. Moskowitz, 2013, “The role of shorting, firm size, and time on market anomalies,” *Journal of Financial Economics*, 108, 275–301.

- Jegadeesh, N., 1990, “Evidence of predictable behavior of security returns,” *Journal of Finance*, 45, 881–898.
- Jegadeesh, N., J. Kim, S. D. Krische, and C. M. Lee, 2004, “Analyzing the analysts: when do recommendations add value,” *Journal of Finance*, 59, 1083–1124.
- Jegadeesh, N., and J. Livnat, 2006, “Revenue surprises and stock returns,” *Journal of Accounting and Economics*, 41, 147–171.
- Jegadeesh, N., and S. Titman, 1993, “Returns to buying winners and selling losers: Implications for stock market efficiency,” *Journal of Finance*, 48, 65–91.
- Jiang, G., and C. M. Lee, 2005, “Information uncertainty and expected returns,” *Review of Accounting Studies*, 10, 185–221.
- Kelly, B., and H. Jiang, 2014, “Tail risk and asset prices,” *Review of Financial Studies*, 27, 2841–2871.
- Kumar, A., 2009, “Who gambles in the stock market?,” *Journal of Finance*, 64, 1889–1933.
- Lakonishok, J., A. Shleifer, and R. W. Vishny, 1994, “Contrarian investment, extrapolation, and risk,” *Journal of Finance*, 49, 1541–1578.
- Lamont, O., C. Polk, and J. Saa-Requejo, 2001, “Financial constraints and stock returns,” *Review of Financial Studies*, 14, 529–554.
- Lee, C. M. C., and B. Swaminathan, 2000, “Price momentum and trading volume,” *Journal of Finance*, 55, 2017–2069.
- Lesmond, D. A., M. J. Schill, and C. Zho, 2004, “The illusory nature of momentum profits,” *Journal of Financial Economics*, 71, 349–380.

- Lev, B., and D. Nissim, 2004, “Taxable income, future earnings, and equity values,” *Accounting Review*, 79, 1039–1074.
- Lewellen, J., 2002, “Momentum and autocorrelation in stock returns,” *Review of Financial Studies*, 15, 533–563.
- Li, D., 2011, “Financial constraints, R&D investment, and stock returns,” *Review of Financial Studies*, 24, 2975–3007.
- Lipson, M. L., S. Mortal, and M. J. Schill, 2011, “On the scope and drivers of the asset growth effect,” *Journal of Financial and Quantitative Analysis*, 46, 1651–1682.
- Liu, W., 2006, “A liquidity-augmented capital asset pricing model,” *Journal of Financial Economics*, 82, 631–671.
- Lockwood, L., and W. Prombutr, 2010, “Sustainable growth and stock returns,” *Journal of Financial Research*, 33, 519–538.
- Loughran, T., and B. McDonald, 2011, “When is a liability not a liability? Textual analysis, dictionaries, and 10-Ks,” *Journal of Finance*, 66, 35–65.
- Lu, H., K. Q. Wang, and X. Wang, 2014, “Price shocks, news disclosures, and asymmetric drifts,” *Accounting Review*, 89, 1805–1834.
- Lyandres, E., L. Sun, and L. Zhang, 2008, “The new issues puzzle: Testing the investment-based explanation,” *Review of Financial Studies*, 21, 2825–2855.
- McLean, R. D., 2010, “Idiosyncratic risk, long term reversal, and momentum,” *Journal of Financial and Quantitative Analysis*, 45, 883–906.
- McLean, R. D., and J. Pontiff, 2016, “Does academic research destroy stock return predictability?,” *Journal of Finance*, 71, 5–32.

- McLean, R. D., J. Pontiff, and A. Watanabe, 2009, “Share issuance and cross-sectional returns: International evidence,” *Journal of Financial Economics*, 94, 1–19.
- Mendenhall, R. R., 2004, “Arbitrage risk and the post-earnings-announcement drift,” *Journal of Business*, 77, 875–894.
- Menzly, L., and O. Ozbas, 2010, “Market segmentation and cross-predictability of returns,” *Journal of Finance*, 65, 1555–1580.
- Michaely, R., R. H. Thaler, and K. L. Womack, 1995, “Price reactions to dividend initiations and omissions: Overreaction or drift?,” *Journal of Finance*, 50, 573–608.
- Mohanram, P. S., 2005, “Separating winners from losers among low book-to-market stocks using financial statement analysis,” *Review of Accounting Studies*, 10, 133–170.
- Moskowitz, T., Y. H. Ooi, and L. H. Pedersen, 2012, “Time series momentum,” *Journal of Financial Economics*, 104, 228–250.
- Moskowitz, T. J., and M. Grinblatt, 1999, “Do industries explain momentum?,” *Journal of Finance*, 54, 1249–1290.
- Naranjo, A., M. Nimalendran, and M. Ryngaert, 1998, “Stock returns, dividend yields, and taxes,” *Journal of Finance*, 53, 2029–2057.
- Nguyen, G. X., and P. E. Swanson, 2009, “Firm characteristics, relative efficiency, and equity returns,” *Journal of Financial and Quantitative Analysis*, 44, 213–236.
- Novy-Marx, R., 2011, “Operating leverage,” *Review of Finance*, 15, 103–134.
- , 2012, “Is momentum really momentum?,” *Journal of Financial Economics*, 103, 429–453.
- , 2013, “The other side of value: The gross profitability premium,” *Journal of Financial Economics*, 108, 1–28.

- Nyberg, P., and S. Pöyry, 2014, “Firm expansion and stock price momentum,” *Review of Finance*, 18, 1465–1505.
- Ortiz-Molina, H., and G. M. Phillips, 2014, “Real asset liquidity and the cost of capital,” *Journal of Financial and Quantitative Analysis*, 49, 1–32.
- Ou, J. A., and S. H. Penman, 1989, “Financial statement analysis and the prediction of stock returns,” *Journal of Accounting and Economics*, 11, 295–329.
- Palazzo, B., 2012, “Cash holdings, risk, and expected returns,” *Journal of Financial Economics*, 104, 162–185.
- Penman, S. H., and S. A. Richardson, 2007, “The book-to-price effect in stock returns: Accounting for Leverage,” *Journal of Accounting Research*, 45, 427–467.
- Piotroski, J. D., 2000, “Value investing: The use of historical financial statement information to separate winners from losers,” *Journal of Accounting Research*, 38, 1–41.
- Polk, C., and P. Sapienza, 2009, “The stock market and corporate investment: A test of catering theory,” *Review of Financial Studies*, 22, 187–217.
- Pontiff, J., and A. Woodgate, 2008, “Share issuance and cross-sectional returns,” *Journal of Finance*, 63, 921–945.
- Porta, R. L., 1996, “Expectations and the cross-section of stock returns,” *Journal of Finance*, 51, 1715–1742.
- Pritamani, M., and V. Singal, 2001, “Return predictability following large price changes and information releases,” *Journal of Banking and Finance*, 25, 631–656.
- Rachev, S., T. Jasic, S. Stoyanov, and F. J. Fabozzi, 2007, “Momentum strategies based on reward-risk stock selection criteria,” *Journal of Banking and Finance*, 31, 2325–2346.

- Rao, R. K. S., H. Tang, and S. Chandrashekar, 2013, “Do corporate cash holdings predict stock returns?,” *Journal of Investing*, 22, 29–39.
- Richardson, S. A., R. G. Sloan, M. T. Soliman, and I. Tuna, 2005, “Accrual reliability, earnings persistence and stock prices,” *Journal of Accounting and Economics*, 39, 437–485.
- Sagi, J. S., and M. S. Seasholes, 2007, “Firm-specific attributes and the cross-section of momentum,” *Journal of Financial Economics*, 84, 389–434.
- Savor, P. G., 2012, “Stock returns after major price shocks: The impact of information,” *Journal of Financial Economics*, 106, 635–659.
- Scherbina, A., 2008, “Suppressed negative information and future underperformance,” *Accounting Review*, 12, 533–565.
- Shumway, T., 2001, “Forecasting bankruptcy more accurately: A simple hazard model,” *Journal of Business*, 74, 101–124.
- Sloan, R. G., 1996, “Do stock prices fully reflect information in accruals and cash flows about future earnings?,” *The Accounting Review*, 71, 289–315.
- So, E. C., and S. Wang, 2014, “News-driven return reversals: Liquidity provision ahead of earnings announcements,” *Journal of Financial Economics*, 114, 20–35.
- Soliman, M. T., 2008, “The use of DuPont analysis by market participants,” *Accounting Review*, 83, 823–853.
- Stickel, S. E., 1991, “Common stock returns surrounding earnings forecast revisions: More puzzling evidence,” *Accounting Review*, 66, 402–416.
- Teo, M., and S.-J. Woo, 2004, “Style effects in the cross-section of stock returns,” *Journal of Financial Economics*, 74, 367–398.

- Thomas, J. K., and F. X. Zhang, 2011, "Tax expense momentum," *Journal of Accounting Research*, 49, 791–821.
- Thomas, J. K., and H. Zhang, 2002, "Inventory changes and future returns," *Review of Accounting Studies*, 7, 163–187.
- Titman, S., K. J. Wei, and F. Xie, 2004, "Capital investments and stock returns," *Journal of Financial and Quantitative Analysis*, 39, 677–700.
- Tuzel, S., 2010, "Corporate real estate holdings and the cross-section of stock returns," *Review of Financial Studies*, 23, 2268–2302.
- Watkins, B., 2003, "Riding the wave of sentiment: An analysis of return consistency as a predictor of future returns," *Journal of Behavioral Finance*, 4, 191–200.
- White, H., 1980, "A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity," *Econometrica*, 48, 817–838.
- Xie, H., 2001, "The mispricing of abnormal accruals," *Accounting Review*, 76, 357–373.
- Zhang, X. F., 2006, "Information uncertainty and stock returns," *Journal of Finance*, 61, 105–136.