Internet Appendix for "Digesting Anomalies: An Investment Approach"

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Abstract

We report supplementary results for Hou, Xue, and Zhang (2014, "Digesting anomalies: An investment approach" to appear at *Review of Financial Studies*).

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1 Defining the Broad Cross Section

As we explain in Section 4.1.1 of the manuscript, we use NYSE breakpoints and value-weighted portfolio returns, denoted "NYSE-VW," as the benchmark procedure in portfolio construction. This procedure is consistent with the construction of the q-factors as well as SMB, HML, and UMD.

Table A.1 shows why we use NYSE-VW as the benchmark procedure. The table reports portfolio weights (in percent) allocated to microcaps for the extreme deciles formed on each anomaly variable. The extreme deciles from the benchmark procedure of NYSE-VW invest a modest amount in microcaps, while those from an alternative procedure with NYSE-Amex-NASDAQ breakpoints and equal-weighted portfolio returns, denoted "All-EW," invest a disproportionately large amount.

Specifically, Panel A shows that across the ten momentum anomalies, the loser deciles allocate on average 10.85% of the portfolio weight to microcaps under NYSE-VW. In contrast, the portfolio weight is 63.58% under All-EW. For the winner decile, the comparison is between 5.17% and 52.50%. The differences are largely similar for all the other categories except for trading frictions. For this category, the low deciles have on average 18.59% allocated to microcaps with NYSE-VW but 60.75% with All-EW. The comparison for the high deciles is between 21.07% and 64.17%. In addition, some strategies in this category are extreme in terms of portfolio weights in microcaps. For instance, the low Dvol decile, the high 1/P decile, and the high Illiq decile all allocate more than 99% of their portfolio weights to microcaps under ALL-EW.

2 Supplementary Results for the Broad Cross Section

2.1 The Ivol Deciles

Consistent with Ang, Hodrick, Xing, and Zhang (2006), Table A.2 shows that high Ivol stocks earn lower average returns than low Ivol stocks. The high-minus-low decile earns an average return of −0.54% per month, which is, however, insignificant ($t = -1.56$). More important, traditional factor loadings often go in the wrong direction in fitting the Ivol anomaly, giving rise to alphas that are higher in magnitude than that of the average return. The high-minus-low alpha is −0.97% in the CAPM, −0.92% in the Fama-French model, and −0.59% in the Carhart model, all of which are highly significant. Finally, all three models are strongly rejected by the GRS test.

The q-factor model reduces the high-minus-low alpha to a tiny −0.08% per month ($t = -0.39$). The average magnitude of the alphas across the deciles drops to 0.10% from 0.15% in the Carhart model and 0.18% in the Fama-French model. None of the ten Ivol deciles have significant q-alphas. In contrast, four out of ten deciles have significant Carhart alphas and Fama-French alphas. Although the market and size factor loadings go in the wrong direction, the investment and ROE factor loadings both go in the right direction in fitting the Ivol anomaly. The high-minus-low decile has loadings of -0.94 and -0.94 on the investment and ROE factors, respectively. Both are more than five standard errors from zero. However, the q-factor model is still rejected by the GRS test.

2.2 Ten Industry Portfolios

Lewellen, Nagel, and Shanken (2010) argue that asset pricing tests are often misleading because apparently strong explanatory power (such as high R^2) provides only weak support for a model. Our tests are (relatively) immune to this critique because we focus on high-minus-low alphas and mean absolute alphas across a given set of deciles from factor regressions as the yardsticks for evaluating factor models. We also evaluate the q-factor model with a wide array of testing portfolios. In Table A.3, we explore the q-factor model further with ten industry portfolios.

At the end of June of each year t, we assign stocks to ten industry portfolios based on their four-digit SIC codes, using industry classifications from Kenneth French's Web site. We use Compustat SIC codes for the fiscal year ending in calendar year $t-1$. If Compustat SIC codes are unavailable, we use CRSP SIC codes for June of year t. We exclude financial firms from the last industry portfolio ("Other"). Monthly value-weighted returns are computed from July of year t to June of $t+1$, and the industry portfolios are rebalanced in June of year $t+1$.

Table A.3 shows that the q-factor model's performance is largely comparable with that of the Fama-French model and the Carhart model. The Fama-French model produces an average magnitude of alphas of 0.20%, and the Carhart model reduces it slightly to 0.18%. The average magnitude of alphas from the q-factor model is somewhat higher, 0.22%. Three out of ten industries have significant alphas in all three factor models, and all the models are rejected by the GRS test.

2.3 The Financial Distress (FP) Deciles

As shown in Table 4 of the manuscript, the high-minus-low FP decile earns an average return of -0.67% per month ($t=-1.98$). The Fama-French alpha is -1.44% ($t=-6.44$), and the Carhart alpha is -0.67% ($t=-3.79$). As such, controlling for traditional factor exposures exacerbates the distress anomaly. In fact, all three factor loadings in the Fama-French model go in the wrong direction in fitting the distress anomaly. The high-minus-low decile has a market beta of 0.60, an SMB loading of 0.96, and an HML loading of 0.47 (untabulated). The q-factor model reduces the alpha to -0.17% ($t = -0.57$). The average magnitude of the alphas across the deciles is 0.13% in the q-factor model, which is smaller than 0.23% in the Fama-French model but comparable with 0.12% in the Carhart model. All three models are rejected by the GRS test.

Panel A of Table A.4 shows that moving from the low FP decile to the high FP decile, the ROE factor loadings decrease monotonically from 0.36 to -1.25. Correspondingly, the ROE characteristic falls from 4.74% per quarter to -4.00%. Intuitively, more distressed firms are less profitable than less distressed firms. The ROE factor loading of the high-minus-low decile is enough to overcome the significantly positive loadings on the market and size factors that go in the wrong direction in fitting the distress anomaly. The investment factor loadings are largely flat across the FP deciles.

2.4 The Net Stock Issues (NSI) Deciles

The high-minus-low NSI decile earns an average return of -0.68% ($t = -4.13$, Table 4 in the manuscript). The Fama-French and Carhart alphas are -0.64% and -0.54%, respectively, both of which are more than 3.5 standard errors from zero. The q-factor model reduces the alpha to -0.26% ($t = -1.75$). The average magnitude of the alphas across the deciles also drops from 0.18% in the Fama-French model and 0.15% in the Carhart model to 0.11% in the q-factor model. However, the q-factor model is still rejected by the GRS test.

Both the investment and ROE factors help fit the NSI anomaly. Panel B of Table A.4 shows that moving from the low NSI decile to the high NSI decile, the investment factor loadings fall from 0.37 to -0.31, and the ROE factor loadings from 0.15 to -0.17. Correspondingly, investment-to-assets rises from 3.08% per annum to 30.13%, and ROE falls from 3.41% per quarter to 1.69%. The evidence suggests that high NSI firms invest more but are less profitable than low NSI firms.[1]

2.5 Factor Regressions Using the q-factor model Augmented with the Pastor-Stambaugh (2003) Liquidity Factor

To what extent does liquidity drive our empirical results? To provide a quantitative answer to this question, we perform factor regressions by augmenting the q-factor model with the Pastor-Stambaugh (2003) liquidity factor, LIQ. The liquidity factor data are from Robert Stambaugh's

[1]Loughran and Ritter (1995) show that new equity issuers invest more but are more profitable than matching nonissuers. Because net stock issues are equity issues net of share repurchases, our evidence is consistent with Lie (2005), who shows that share repurchasing firms exhibit superior operating performance relative to industry peers.

Web site. From January 1972 to December 2012, the liquidity factor earns an average return of 0.46% per month ($t = 2.79$). In contrast to HML and UMD, the liquidity factor is largely orthogonal to the q-factors. Its correlations with MKT, size, investment, and ROE factors are $-0.03, -0.03, 0.02$, and -0.08, respectively, none of which are significant at the 5% level. Regressing the liquidity factor on the q-factor model yields an alpha of 0.57% ($t = 2.98$).

Table A.5 reports the regression results for each high-minus-low decile. The evidence shows that liquidity plays essentially no role in the broad cross section. First, only four out of the 35 high-minus-low deciles have liquidity factor loadings that are significant at the 5% level. Second, as noted in Section 4.1.3 of the manuscript, the average magnitude of the q-alphas is 0.20% per month across the 35 high-minus-low deciles formed on significant anomalies. Adding the liquidity factor reduces the average magnitude of alphas only slightly to 0.19%. While only five out of 35 high-minus-low deciles have significant q-alphas, adding the liquidity factor increases the number of significant alphas to six. In addition, the mean absolute value of alphas averaged across all 35 sets of deciles remains at 0.11% after adding the liquidity factor. Finally, the GRS test fails to reject the q-factor model in 15 sets of deciles. Adding the liquidity factor increases this number to 17.

3 Empirical Results with NYSE-Amex-NASDAQ Breakpoints and Equal-weighted Results (All-EW)

For completeness, we document the empirical results for all the high-minus-low deciles with All-EW. A comparison between these results and those in the broad cross section (NYSE-VW) illustrates the danger of ignoring the impact of microcaps in the anomalies literature.

3.1 Insignificant Anomalies with All-EW

Even formed with NYSE-Amex-NASDAQ breakpoints and equal-weighted returns, the high-minus-low deciles for 17 anomaly variables earn average returns that are insignificant at the 5% level. Table A.6 reports the results. In particular, the Piotroski (2000) F-score earns an average return of 0.27% per month ($t = 1.15$). The corporate governance measure from Gompers, Ishii, and Metrick (2003) earns a negative average return of -0.21%, which is within one standard error of zero. The Frazzini and Pedersen (2013) β measure earns on average -0.26% ($t = -0.68$). The Francis, Lafond, Olsson, and Schipper (2005) accrual quality measure earns an average return of 0.05% ($t = 0.16$).

The Ang, Hodrick, Xing, and Zhang (2006) Ivol and Tvol measures earn only 0.11% and 0.10%

per month, respectively, both of which are within one standard error of zero. In untabulated results, we verify that with NYSE-Amex-NASDAQ breakpoints but value-weighted returns, the high-minus-low Ivol decile earns an average return of -1.27% ($t = -2.99$), and the high-minus-low Tvol decile earns -1.28% ($t = -2.80$). It seems that the empirical relation between idiosyncratic volatility and average returns is sensitive to weighting schemes (see Bali and Cakici (2008)).

3.2 Significant Anomalies with All-EW

Table A.7 reports the results for the 56 anomalies that are significant at the 5% level constructed with NYSE-Amex-NASDAQ breakpoints and equal-weighted returns. For each anomaly variable, we report the average return and alphas from factor regressions for the high-minus-low decile as well as the mean absolute value of alphas across the deciles and the p-value for the GRS test.

Three main takeaways emerge from Table A.7. First, the average returns with All-EW are substantially larger than those with NYSE-VW. In particular, Table 4 of the manuscript shows that the nine significant NYSE-VW anomalies in the momentum category average about 0.64% per month for their high-minus-low deciles. In contrast, the same nine high-minus-low deciles constructed with All-EW earn on average 1.18% per month. The high-minus-low R6-1 decile with NYSE-VW earns an insignificant average return of 0.48% ($t = 1.43$) (Table 3 of the manuscript), but earns 1.65% ($t = 6.30$) with All-EW. Most tellingly, Table 4 of the manuscript shows that only one out of 13 anomalies in the trading frictions category is significant with NYSE-VW. In contrast, Table A.7 shows that nine out of 13 are significant with All-EW. In particular, the Jegadeesh (1990) short-term reversal earns a whopping -3.11% ($t = -9.60$), and the Amihud (2002) illiquidity strategy earns 1.28% ($t = 3.95$). Not surprisingly, trading frictions matter the most for microcaps.

Second, all factor models fail to fit the vast majority of the anomalies with All-EW. The crux is that the common factors, constructed with the NYSE-VW benchmark procedure, are not designed to capture anomalies that largely reside in microcaps. Again using the nine significant NYSE-VW anomalies in the momentum category as an example, Table 4 of the manuscript shows that the average magnitude of the high-minus-low alphas is 0.29% in the Carhart model and 0.19% in the q-factor model. In contrast, Table A.7 shows that the average magnitude of the high-minus-low alphas with All-EW is 0.81% in the Carhart model and 0.71% in the q-factor model.

Third, somewhat surprisingly, the Pastor-Stambaugh (2003) liquidity factor adds relatively little to capture the All-EW anomalies. In particular, only one of the 56 high-minus-low deciles has a significant liquidity factor loading. Again using the nine significant NYSE-VW anomalies in the momentum category as an example, the average magnitude of the high-minus-low alphas with All-EW remains at 0.70% per month in the q-factor model augmented with the liquidity factor.

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Table A.1 : Portfolio Weights (in Percent) Allocated to Microcaps

Microcaps are stocks with market capitalization below the 20th NYSE percentile. For each anomaly variable in each category, w_L and w_H are the portfolio weights allocated to microcaps in the low decile and the high decile, respectively, based on NYSE breakpoints and value-weighted decile returns. $w_L^\star$ and $w_H^\star$ are the portfolio weights allocated to microcaps in the low decile and the high decile, respectively, based on NYSE-Amex-NASDAQ breakpoints and equal-weighted decile returns. In each panel, the column denoted "Mean" reports the average portfolio weights across all the anomalies in a given category. Appendix A of the manuscript details variable definition and portfolio construction.

Panel A: Momentum

	SUE-1	SUE-6	Abr-1	Abr-6	RE-1	RE-6	R6-6	R11-1	I-Mom	R6-1	Mean
w_L	2.62	2.57	8.16	7.94	15.05	14.60	15.46	17.80	8.58	15.75	10.85
w_H	1.58	1.54	6.86	6.70	3.93	3.75	7.24	6.59	6.04	7.41	5.17
$w_L^\star$	53.91	53.76	70.98	70.83	73.65	73.32	60.50	60.43	58.82	59.60	63.58
$w_H^\star$	42.86	42.23	66.96	66.63	48.94	47.90	52.39	50.39	53.88	52.82	52.50

Panel B: Value versus growth

	B/M	E/P	CF/P	NO/P	Dur	A/ME	Rev	EF/P	D/P	O/P	SG	LTG	Mean
w_L	2.23	3.98	3.82	8.41	12.19	2.32	18.22	3.58	2.13	4.11	6.60	0.74	5.69
w_H	14.06	8.33	6.95	3.33	5.93	9.79	2.79	3.78	1.65	2.88	1.77	5.25	5.54
$w_L^\star$	54.33	59.73	58.41	67.65	79.64	50.69	87.45	42.08	28.59	56.90	74.12	20.53	56.68
$w_H^\star$	85.97	71.68	70.16	52.58	78.04	77.62	37.43	53.22	39.63	52.57	37.99	48.92	58.82

Panel C: Investment

	I/A	NOA	△PI/A	IG	NSI	CEI	IvG	IvC	OA	PTA	POA	ACI	NXF	TA	Mean
w_L	12.85	4.34	8.85	13.62	3.67	1.88	6.14	9.80	4.98	7.14	5.62	8.98	2.34	8.47	7.05
w_H	4.74	4.84	4.42	9.42	5.27	5.07	5.01	6.87	9.40	7.67	11.36	5.64	8.70	4.97	6.67
$w_L^\star$	85.43	71.77	77.78	84.67	55.02	44.55	74.06	80.45	74.65	68.05	66.44	73.25	57.40	80.69	71.02
$w_H^\star$	58.89	58.45	58.90	74.56	61.99	62.52	62.89	68.96	72.90	65.86	77.39	61.79	68.87	58.74	65.19

Panel D: Profitability

	ROE	ROA	GP/A	NEI	FP	RNA	PM	ATO	CTO	F	TES	TI/BI	RS	O	Mean
w_L	16.16	16.12	4.94	3.97	1.21	17.99	21.44	2.55	2.96	17.11	6.00	6.34	4.73	0.72	8.73
w_H	1.68	1.53	3.11	0.77	33.23	1.52	0.83	4.97	5.98	2.42	3.81	2.49	0.81	29.95	6.65
$w_L^\star$	83.88	84.05	70.15	61.20	33.81	88.17	87.58	55.38	61.72	78.49	69.46	70.08	65.22	33.87	67.36
$w_H^\star$	44.54	40.81	63.42	26.17	91.88	42.14	30.00	62.09	63.34	54.76	60.33	54.17	29.89	91.87	53.96

Panel E: Intangibles and other firm characteristics

	OC/A	Ad/M	RD/M	OL	BC/A	RD/S	RC/A	H/N	G	AccQ	Mean
w_L	2.57	3.39	2.09	3.41	4.66	2.09	1.79	8.18	0.51	0.46	2.92
w_H	9.26	17.57	8.71	6.67	2.70	3.66	4.11	5.56	0.34	8.05	6.66
$w_L^\star$	48.32	57.51	47.55	53.83	62.98	54.68	53.81	78.92	20.67	19.44	49.77
$w_H^\star$	83.41	79.51	85.87	69.81	61.39	77.63	83.59	61.52	7.87	78.71	68.93

Panel F: Trading frictions

	Svol	ME	Ivol	Tvol	MDR	β	D-β	S-Rev	Disp	Turn	1/P	Dvol	Illiq	Mean
w_L	9.08	97.35	0.89	1.82	2.16	9.40	13.13	12.42	0.77	15.53	0.05	79.05	0.00	18.59
w_H	11.24	0.00	30.99	28.21	23.28	6.34	8.48	9.21	6.03	3.76	66.17	0.00	80.23	21.07
$w_L^\star$	83.51	99.99	40.40	45.92	53.68	84.73	87.02	82.55	24.27	83.16	4.94	99.47	0.16	60.75
$w_H^\star$	82.56	0.02	94.34	93.31	90.46	53.58	70.16	72.53	41.62	36.09	99.55	0.08	99.84	64.17

Table A.2 : Ivol Deciles

Following Ang, Hodrick, Xing, and Zhang (2006), we measure a stock's idiosyncratic volatility (Ivol) as the standard deviation of the residuals from regressing the stock's returns on the Fama-French three factors. At the beginning of each month t, we use NYSE breakpoints to sort stocks into deciles based on the Ivol estimated using daily returns over the previous month (15 daily returns minimum). Monthly value-weighted decile returns are calculated for the current month t, and the deciles are rebalanced at the beginning of $t+1$. For each individual decile, $m, \alpha, \alpha_{FF}, \alpha_C$, and α_q are the average excess return, the CAPM alpha, the Fama-French alpha, the Carhart alpha, and the q-alpha, and t_m, t, t_{FF}, t_C, and t_q are their t-statistics, respectively. $\beta_{\text{MKT}}, \beta_{\text{ME}}, \beta_{\text{I/A}}$, and β_{ROE} are the loadings on the market, size, investment, and ROE factors in the q-factor model, and $t_{\beta_{\text{MKT}}}, t_{\beta_{\text{ME}}}, t_{\beta_{\text{I/A}}}$, and $t_{\beta_{\text{ROE}}}$ are their t-statistics, respectively. All t-statistics are adjusted for heteroscedasticity and autocorrelations. ME is the average market capitalization (in billions of dollars) across all the firms in a given decile. I/A (in percent) is the sum of changes in assets across all the firms in a given decile divided by the sum of their one-year-lagged assets. ROE (in percent) is the sum of the most recently announced quarterly earnings across all the firms in a given decile divided by the sum of their one-quarter-lagged book equity. The last column reports the average magnitude of the alphas, $\overline{|\alpha|}$, from a given model across the deciles as well as their p-values (in parentheses) from the GRS test.

	Low	2	3	4	5	6	7	8	9	High	H−L	$\overline{\|\alpha\|}$ (p)
m	0.47	0.65	0.63	0.64	0.57	0.58	0.64	0.60	0.60	−0.08	−0.54	
α	0.15	0.27	0.21	0.17	0.07	0.05	0.07	−0.01	−0.08	−0.82	−0.97	0.19 (0.00)
α_{FF}	0.09	0.26	0.20	0.16	0.05	0.01	0.10	−0.02	−0.05	−0.83	−0.92	0.18 (0.00)
α_C	0.03	0.20	0.15	0.13	0.08	0.03	0.19	0.06	0.09	−0.56	−0.59	0.15 (0.00)
t_m	2.72	3.40	3.10	2.82	2.31	2.21	2.28	1.91	1.63	−0.18	−1.56	
t	1.61	3.32	2.69	2.39	0.72	0.51	0.76	−0.12	−0.54	−4.05	−3.62	
t_{FF}	1.20	3.43	2.64	1.95	0.56	0.08	1.15	−0.24	−0.43	−5.47	−4.66	
t_C	0.42	2.57	1.77	1.60	0.97	0.30	2.12	0.64	0.67	−3.26	−2.75	
						Q-factor model regressions						
α_q	−0.14	0.06	0.00	0.02	−0.01	−0.01	0.22	0.11	0.23	−0.22	−0.08	0.10 (0.01)
β_{MKT}	0.77	0.89	0.96	1.05	1.08	1.11	1.15	1.20	1.26	1.29	0.52	
β_{ME}	−0.14	−0.12	−0.08	−0.11	0.02	0.11	0.13	0.31	0.51	0.73	0.87	
$\beta_{\text{I/A}}$	0.39	0.22	0.18	0.14	0.07	0.00	−0.28	−0.18	−0.46	−0.56	−0.94	
β_{ROE}	0.20	0.19	0.21	0.17	0.06	0.05	−0.06	−0.15	−0.30	−0.75	−0.94	
t_q	−1.52	0.65	−0.04	0.20	−0.13	−0.08	1.91	0.98	1.69	−1.42	−0.39	
$t_{\beta_{\text{MKT}}}$	38.64	45.53	48.65	44.94	46.56	43.89	39.30	44.76	39.75	27.56	8.96	
$t_{\beta_{\text{ME}}}$	−3.89	−3.60	−2.65	−2.09	0.33	1.73	2.55	5.05	9.38	11.21	10.03	
$t_{\beta_{\text{I/A}}}$	4.31	2.64	2.43	1.79	1.00	0.01	−2.88	−2.15	−5.11	−4.45	−5.23	
$t_{\beta_{\text{ROE}}}$	3.12	3.94	3.73	3.59	1.34	1.03	−0.90	−2.63	−3.80	−6.31	−5.98	
						Characteristics in the q-factor model						$t_{\text{H−L}}$
ME	5.50	4.80	3.73	2.83	2.09	1.58	1.11	0.75	0.49	0.19	−5.31	−8.99
I/A	8.13	8.78	8.72	8.60	9.03	9.46	10.18	10.15	10.97	9.57	1.44	1.98
ROE	3.35	3.30	3.22	3.09	2.94	2.75	2.36	2.02	1.30	−1.31	−4.66	−14.98

Table A.3 : Ten Industry Portfolios

We assign NYSE, Amex, and NASDAQ stocks to ten industry portfolio at the end of June of year t based on their SIC codes, using industry classifications from Kenneth French's Web site. We use Compustat SIC codes for the fiscal year ending in calendar year $t-1$. If Compustat SIC codes are unavailable, we use CRSP SIC codes for June of year t. Monthly value-weighted returns are computed from July of year t to June of $t+1$. We exclude financial firms from the last industry portfolio ("Other"). For each industry portfolio, $m, \alpha, \alpha_{FF}, \alpha_C$, and α_q are the average excess return, the CAPM alpha, the Fama-French alpha, the Carhart alpha, and the q-alpha, and t_m, t, t_{FF}, t_C, and t_q are their t-statistics, respectively. $\beta_{\text{MKT}}, \beta_{\text{ME}}, \beta_{\text{I/A}}$, and β_{ROE} are the loadings on the market, size, investment, and ROE factors in the q-factor model, and $t_{\beta_{\text{MKT}}}, t_{\beta_{\text{ME}}}, t_{\beta_{\text{I/A}}}$, and $t_{\beta_{\text{ROE}}}$ are their t-statistics, respectively. All t-statistics are adjusted for heteroscedasticity and autocorrelations. ME is the average market capitalization (in billions of dollars) across all the firms in a given decile. I/A (in percent) is the sum of changes in assets across all the firms in a given decile divided by the sum of their one-year-lagged assets. ROE (in percent) is the sum of the most recently announced quarterly earnings across all the firms in a given decile divided by the sum of their one-quarter-lagged book equity. The last column reports the average magnitude of the alphas, $\overline{|\alpha|}$, from a given model across the industry portfolios and their p-values (in parentheses) from the GRS test.

	NoDur	Durbl	Manuf	Enrgy	HiTec	Telcm	Shops	Hlth	Utils	Other	$\overline{\lvert\alpha\rvert}$ (p)
m	0.67	0.42	0.55	0.72	0.50	0.54	0.54	0.56	0.49	0.30	
α	0.30	−0.12	0.06	0.34	−0.10	0.17	0.07	0.18	0.25	−0.23	0.18 (0.01)
α_{FF}	0.23	−0.43	−0.03	0.24	0.18	0.17	0.03	0.37	0.04	−0.32	0.20 (0.00)
α_C	0.23	−0.17	−0.01	0.10	0.29	0.24	0.10	0.32	−0.03	−0.29	0.18 (0.00)
t_m	3.15	1.30	2.30	2.95	1.54	2.37	2.06	2.53	2.59	1.12	
t	2.29	−0.66	0.70	1.82	−0.66	1.13	0.53	1.24	1.60	−2.58	
t_{FF}	1.82	−2.91	−0.33	1.30	1.34	1.09	0.20	2.76	0.30	−3.85	
t_C	1.78	−1.07	−0.10	0.53	2.20	1.43	0.71	2.18	−0.20	−3.40	
					Q-factor model regressions						
α_q	−0.09	−0.28	−0.15	0.07	0.56	0.43	−0.14	−0.03	−0.08	−0.38	0.22 (0.00)
β_{MKT}	0.86	1.18	1.09	0.91	1.09	0.80	0.99	0.88	0.62	1.11	
β_{ME}	0.01	0.14	0.03	−0.20	0.08	−0.32	0.19	−0.16	−0.12	0.22	
$\beta_{\text{I/A}}$	0.36	0.59	0.25	0.42	−0.93	0.09	0.04	−0.03	0.59	0.13	
β_{ROE}	0.31	−0.28	0.13	0.15	−0.31	−0.37	0.25	0.42	0.07	0.05	
t_q	−0.67	−1.39	−1.68	0.36	3.56	2.52	−0.97	−0.21	−0.45	−4.38	
$t_{\beta_{\text{MKT}}}$	24.64	20.18	48.01	17.57	25.28	20.77	21.83	17.82	17.64	46.37	
$t_{\beta_{\text{ME}}}$	0.25	1.28	0.58	−2.49	1.18	−5.65	2.18	−2.31	−1.96	3.81	
$t_{\beta_{\text{I/A}}}$	4.04	3.46	3.20	3.21	−7.77	0.90	0.40	−0.23	4.96	2.10	
$t_{\beta_{\text{ROE}}}$	4.00	−1.94	2.11	1.43	−3.45	−4.07	2.96	4.72	0.84	1.34	
					Characteristics in the q-factor model						
ME	1.65	0.93	1.28	2.70	1.21	3.51	1.13	1.35	2.04	0.94	
I/A	8.10	9.29	8.11	9.12	10.76	7.89	10.77	13.60	7.74	10.04	
ROE	3.87	2.56	3.04	3.11	2.76	1.95	3.10	4.16	2.29	2.02	

Table A.4 : Failure Probability (FP) Deciles and Net Stock Issues (NSI) Deciles

$m, \alpha, \alpha_{FF}, \alpha_C$, and α_q are the average excess return, the CAPM alpha, the Fama-French alpha, the Carhart alpha, and the q-alpha, and t_m, t, t_{FF}, t_C, and t_q are their t-statistics, respectively. $\beta_{\text{MKT}}, \beta_{\text{ME}}, \beta_{\text{I/A}}$, and β_{ROE} are the loadings on the market, size, investment, and ROE factors in the q-factor model, and $t_{\beta_{\text{MKT}}}, t_{\beta_{\text{ME}}}, t_{\beta_{\text{I/A}}}$, and $t_{\beta_{\text{ROE}}}$ are their t-statistics, respectively. ME is the average market equity (in billions of dollars) across all the firms in a given decile. I/A (in percent) is the sum of changes in assets across all the firms in a given decile divided by the sum of their one-year-lagged assets. ROE (in percent) is the sum of the most recently announced quarterly earnings across all the firms in a given decile divided by the sum of their one-quarter-lagged book equity. The t-statistics are adjusted for heteroscedasticity and autocorrelations.

	Panel A: FP										Panel B: NSI									
	Low	2	3	4	5	6	7	8	9	High	Low	2	3	4	5	6	7	8	9	High
m	0.81	0.61	0.63	0.62	0.58	0.59	0.61	0.65	0.62	0.14	0.89	0.64	0.50	0.45	0.57	0.57	0.65	0.60	0.29	0.20
α	0.27	0.09	0.11	0.07	0.03	0.01	0.00	−0.03	−0.16	−0.78	0.45	0.24	0.06	0.05	0.13	0.11	0.15	0.09	−0.22	−0.33
α_{FF}	0.39	0.14	0.12	0.08	0.02	−0.02	−0.08	−0.14	−0.31	−1.05	0.33	0.14	0.13	0.02	0.13	0.15	0.22	0.18	−0.15	−0.31
α_C	0.18	0.01	0.04	0.05	0.06	0.10	0.12	0.13	0.02	−0.49	0.27	0.10	0.21	−0.03	0.14	0.10	0.15	0.17	−0.06	−0.28
t_m	3.53	2.88	3.01	2.89	2.71	2.61	2.43	2.25	1.84	0.31	4.11	3.14	2.39	2.25	2.64	2.55	2.66	2.34	1.11	0.76
t	2.94	1.26	1.73	1.20	0.48	0.19	−0.02	−0.30	−1.22	−3.34	4.14	2.41	0.83	0.60	1.40	1.46	1.89	0.99	−2.15	−3.52
t_{FF}	4.52	2.18	1.99	1.35	0.25	−0.35	−1.20	−1.48	−2.91	−5.92	3.22	1.67	1.70	0.24	1.45	1.83	2.80	2.07	−1.51	−3.45
t_C	2.32	0.15	0.77	0.93	0.94	1.92	2.04	1.71	0.21	−3.43	2.52	1.20	2.45	−0.35	1.48	1.16	1.90	1.82	−0.62	−2.96
	The q-factor model regressions										The q-factor model regressions									
α_q	0.14	−0.12	−0.09	−0.01	0.04	0.13	0.18	0.29	0.28	−0.03	0.15	−0.04	0.10	−0.16	0.00	0.01	0.15	0.23	0.14	−0.11
β_{MKT}	0.91	0.96	0.98	0.99	0.97	1.00	1.04	1.12	1.21	1.35	0.97	0.94	0.97	0.90	0.97	0.98	1.04	1.03	1.00	1.01
β_{ME}	0.13	−0.03	−0.07	−0.10	−0.07	−0.07	−0.05	0.04	0.25	0.55	0.08	−0.03	−0.21	0.03	−0.03	−0.03	0.07	0.04	0.03	0.25
$\beta_{\text{I/A}}$	−0.29	0.06	0.15	0.08	0.10	0.05	0.09	0.02	−0.08	−0.12	0.37	0.40	0.04	0.17	0.04	0.00	−0.17	−0.28	−0.47	−0.31
β_{ROE}	0.36	0.27	0.21	0.10	−0.07	−0.18	−0.31	−0.51	−0.68	−1.25	0.15	0.13	−0.01	0.17	0.17	0.17	0.12	0.00	−0.21	−0.17
t_q	1.14	−1.65	−1.60	−0.15	0.72	2.05	2.10	2.67	2.45	−0.13	1.39	−0.52	1.00	−1.91	0.04	0.10	1.77	2.21	1.49	−1.25
$t_{\beta_{\text{MKT}}}$	33.56	40.59	60.65	58.24	56.54	58.64	41.03	41.60	44.44	26.54	32.04	38.46	49.23	44.98	37.57	42.33	48.42	35.18	41.16	45.22
$t_{\beta_{\text{ME}}}$	1.98	−0.83	−2.55	−3.20	−2.86	−2.31	−1.27	0.56	3.25	4.67	1.43	−0.60	−5.38	0.85	−0.73	−0.96	2.31	0.97	0.91	6.85
$t_{\beta_{\text{I/A}}}$	−2.95	1.05	3.57	1.74	2.48	1.13	1.44	0.25	−0.78	−0.61	4.39	5.49	0.49	2.52	0.73	0.05	−3.30	−3.56	−7.21	−6.23
$t_{\beta_{\text{ROE}}}$	6.34	7.88	8.10	3.21	−2.35	−5.24	−5.82	−7.38	−10.63	−9.12	2.17	2.19	−0.16	3.46	3.12	4.99	2.89	−0.06	−4.18	−5.77
	Characteristics in the q-factor model										Characteristics in the q-factor model									
ME	3.27	3.88	3.28	2.83	2.23	1.80	1.40	1.03	0.53	0.19	2.18	3.44	3.08	1.94	1.56	1.47	1.31	1.17	1.11	0.81
I/A	11.35	9.94	9.06	9.38	8.60	8.80	8.32	9.45	8.59	7.44	3.08	7.42	6.37	7.37	7.90	7.81	7.79	8.67	11.11	30.13
ROE	4.74	4.21	3.69	3.19	2.83	2.51	2.13	1.56	0.45	−4.00	3.41	3.51	3.23	2.78	2.91	2.74	2.62	2.64	2.31	1.69

Table A.5 : The Q-factor model Augmented with the Pastor-Stambaugh (2003) Liquidity Factor

For the high-minus-low decile formed on each anomaly variable, α_L^q is the alpha from augmenting the q-factor model with the Pastor-Stambaugh liquidity factor, and t_L^q is its t-statistic. β_{LIQ} is the liquidity factor loading, and $t_{\beta_{\text{LIQ}}}$ is its t-statistic. The t-statistics are adjusted for heteroscedasticity and autocorrelations. $\overline{|\alpha_L^q|}$ is the average magnitude of the alphas across the deciles formed on a given anomaly variable, and p_L^q is the p-value of the GRS test. Appendix A of the manuscript details variable definition and portfolio construction.

	SUE-1	SUE-6	Abr-1	Abr-6	RE-1	RE-6	R6-6	R11-1	I-Mom	B/M	E/P	CF/P	NO/P	Dur	I/A	NOA	△PI/A	IG
α_L^q	0.15	0.02	0.65	0.25	0.13	0.00	0.20	0.25	−0.03	0.22	0.09	0.15	0.32	−0.21	0.10	−0.37	−0.27	0.06
t_L^q	1.01	0.12	3.98	2.03	0.49	−0.01	0.57	0.55	−0.12	1.23	0.40	0.72	2.11	−1.04	0.72	−1.79	−1.78	0.45
β_{LIQ}	0.02	0.01	−0.02	0.02	−0.02	0.06	0.07	−0.02	0.07	−0.01	0.15	0.13	0.07	−0.11	0.07	−0.01	0.02	−0.01
$t_{\beta_{\text{LIQ}}}$	0.52	0.38	−0.39	0.66	−0.26	0.99	0.92	−0.19	0.85	−0.23	1.69	1.62	1.26	−1.50	1.80	−0.30	0.48	−0.45
$\overline{\vert\alpha_L^q\vert}$	0.06	0.08	0.13	0.06	0.09	0.09	0.09	0.13	0.14	0.08	0.08	0.13	0.11	0.06	0.09	0.11	0.13	0.09
p_L^q	0.51	0.04	0.00	0.03	0.62	0.16	0.00	0.01	0.02	0.26	0.29	0.08	0.00	0.89	0.01	0.01	0.01	0.01

	NSI	CEI	IvG	IvC	OA	POA	PTA	ROE	ROA	GP/A	NEI	FP	OC/A	Ad/M	RD/M	OL	Svol
α_L^q	−0.23	−0.18	0.01	−0.34	−0.51	−0.06	−0.10	0.08	0.10	0.09	0.20	−0.13	0.09	0.06	0.60	−0.12	−0.38
t_L^q	−1.50	−1.21	0.04	−2.29	−3.48	−0.41	−0.62	0.59	0.86	0.55	1.84	−0.44	0.67	0.21	2.41	−0.63	−1.45
β_{LIQ}	−0.06	−0.07	−0.06	0.10	−0.09	−0.11	−0.01	−0.06	−0.03	0.04	−0.04	−0.06	0.00	0.08	0.00	0.12	0.01
$t_{\beta_{\text{LIQ}}}$	−1.26	−1.55	−1.45	2.34	−2.10	−3.10	−0.17	−1.67	−0.67	0.95	−1.33	−1.09	−0.03	0.83	0.03	2.05	0.24
$\overline{\vert\alpha_L^q\vert}$	0.10	0.11	0.11	0.09	0.14	0.12	0.08	0.08	0.07	0.11	0.10	0.14	0.11	0.11	0.28	0.11	0.12
p_L^q	0.05	0.03	0.11	0.43	0.00	0.00	0.11	0.07	0.69	0.44	0.06	0.00	0.04	0.09	0.00	0.16	0.17

Table A.6 : Insignificant Anomalies with All-EW

For each anomaly variable, we report the average return (m) of the high-minus-low decile and its t-statistic (t_m) adjusted for heteroscedasticity and autocorrelations. We form deciles with NYSE-Amex-NASDAQ breakpoints (except for F and G) and calculate equal-weighted portfolio returns. Appendix A of the manuscript details variable definition and portfolio construction.

	D/P	LTG	FP	RNA	PM	ATO	CTO	F	TI/BI
m	0.19	−0.52	−0.47	−0.25	−0.07	0.17	0.08	0.27	−0.02
t_m	0.89	−1.22	−1.33	−0.87	−0.20	1.01	0.33	1.15	−0.14
	O	RD/S	AccQ	G	Ivol	Tvol	MDR	β	
m	0.21	0.09	0.05	−0.21	0.11	0.10	−0.50	−0.26	
t_m	0.71	0.23	0.16	−0.82	0.28	0.24	−1.41	−0.68	

Table A.7 : Significant Anomalies with All-EW

$m, \alpha, \alpha_{FF}, \alpha_C, \alpha_q$, and α_L^q are the average return, the CAPM alpha, the Fama-French alpha, the Carhart alpha, the q-alpha, and the alpha from the q-factor model augmented with the Pastor-Stambaugh liquidity factor, and t_m, t, t_{FF}, t_C, t_q, and t_L^q are their t-statistics, respectively. All t-statistics are adjusted for heteroscedasticity and autocorrelations. $\overline{|\alpha|}$, $\overline{|\alpha_{FF}|}$, $\overline{|\alpha_C|}$, $\overline{|\alpha_q|}$, and $\overline{|\alpha_L^q|}$ are the average magnitude of alphas, and p, p_{FF}, p_C, p_q, and p_L^q are the GRS p-values testing that the alphas are jointly zero across deciles. Appendix A of the manuscript details variable definition and portfolio construction.

	SUE-1	SUE-6	Abr-1	Abr-6	RE-1	RE-6	R6-1	R6-6	R11-1	I-Mom	B/M	A/ME	Rev	E/P
m	1.41	0.69	1.54	0.82	1.44	0.79	1.65	1.31	1.75	0.84	1.63	1.32	−1.43	0.80
α	1.44	0.72	1.56	0.84	1.47	0.82	1.73	1.35	1.77	0.86	1.82	1.47	−1.44	0.92
α_{FF}	1.55	0.83	1.58	0.86	1.63	0.97	1.88	1.49	2.00	0.89	1.19	0.73	−0.99	0.54
α_C	1.23	0.56	1.38	0.64	1.19	0.58	0.87	0.56	0.87	0.29	1.15	0.73	−1.08	0.50
α_q	1.01	0.31	1.27	0.56	0.92	0.29	1.03	0.61	1.06	0.35	1.15	0.66	−1.50	0.49
α_L^q	1.02	0.32	1.26	0.56	0.86	0.25	1.02	0.61	1.08	0.32	1.09	0.64	−1.49	0.47
t_m	11.39	6.20	14.55	10.21	6.74	4.08	6.30	5.93	6.27	4.60	6.66	4.74	−4.70	4.57
t	12.62	7.07	15.25	11.10	7.67	4.60	6.78	6.45	6.63	4.72	7.45	5.26	−4.83	5.47
t_{FF}	13.05	8.20	14.95	11.19	9.33	6.18	7.66	6.93	7.57	4.75	8.13	4.39	−3.79	4.56
t_C	9.69	5.15	11.53	6.64	6.31	3.52	4.86	4.23	6.64	1.91	6.59	3.71	−3.89	4.19
t_q	7.93	2.66	8.04	4.13	4.66	1.58	2.85	1.78	2.79	1.41	5.15	2.41	−5.22	3.07
t_L^q	7.60	2.67	8.06	4.20	4.10	1.25	2.73	1.75	2.74	1.26	4.73	2.25	−5.24	2.93
β_{LIQ}	−0.01	−0.02	0.01	0.01	0.09	0.07	0.02	−0.01	−0.02	0.05	0.10	0.05	−0.01	0.04
$t_{\beta_{\text{LIQ}}}$	−0.39	−0.57	0.35	0.29	1.66	1.41	0.28	−0.10	−0.28	0.95	1.46	0.55	−0.09	0.69
$\overline{\lvert\alpha\rvert}$	0.50	0.38	0.39	0.29	0.31	0.18	0.35	0.32	0.41	0.31	0.50	0.47	0.47	0.37
$\overline{\lvert\alpha_{FF}\rvert}$	0.46	0.28	0.34	0.20	0.38	0.24	0.31	0.29	0.43	0.22	0.28	0.22	0.23	0.16
$\overline{\lvert\alpha_C\rvert}$	0.43	0.33	0.34	0.27	0.25	0.15	0.15	0.13	0.17	0.19	0.36	0.35	0.35	0.25
$\overline{\lvert\alpha_q\rvert}$	0.42	0.39	0.38	0.38	0.23	0.26	0.15	0.11	0.21	0.19	0.44	0.43	0.40	0.24
$\overline{\lvert\alpha_L^q\rvert}$	0.41	0.38	0.37	0.37	0.22	0.25	0.14	0.10	0.21	0.18	0.42	0.41	0.38	0.22
p	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p_{FF}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p_C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p_q	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p_L^q	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00

	EF/P	CF/P	O/P	NO/P	SG	Dur	ACI	I/A	NOA	$\triangle$PI/A	IG	NSI	CEI	NXF
m	0.74	0.93	0.60	0.71	−0.60	−0.63	−0.42	−1.52	−1.13	−1.20	−0.82	−1.07	−0.71	−0.96
α	0.89	1.08	0.76	0.90	−0.68	−0.81	−0.41	−1.57	−1.11	−1.25	−0.85	−1.23	−0.94	−1.11
α_{FF}	0.47	0.63	0.46	0.65	−0.39	−0.49	−0.35	−1.39	−1.29	−1.16	−0.74	−1.01	−0.81	−0.97
α_C	0.78	0.54	0.40	0.48	−0.40	−0.32	−0.31	−1.33	−1.23	−1.07	−0.64	−0.80	−0.61	−0.76
α_q	0.50	0.53	0.48	0.26	−0.42	−0.05	−0.32	−1.45	−1.40	−1.11	−0.65	−0.44	−0.26	−0.45
α_L^q	0.44	0.48	0.49	0.28	−0.44	0.00	−0.33	−1.47	−1.43	−1.16	−0.66	−0.42	−0.26	−0.45
t_m	2.69	4.78	3.35	3.52	−3.56	−2.34	−4.40	−7.24	−5.03	−7.81	−6.46	−5.46	−3.05	−5.41
t	3.26	5.82	4.85	5.26	−4.06	−3.37	−4.44	−7.55	−5.13	−8.14	−6.73	−6.87	−4.85	−7.10
t_{FF}	2.30	5.00	3.57	4.76	−2.78	−2.49	−3.77	−6.71	−5.72	−7.38	−5.63	−6.07	−5.33	−7.14
t_C	3.87	3.99	2.64	3.09	−2.59	−1.45	−3.02	−6.51	−5.98	−6.88	−4.97	−4.55	−3.63	−5.45
t_q	1.39	2.84	2.66	1.35	−2.46	−0.17	−2.73	−6.19	−4.85	−5.66	−4.34	−2.44	−1.27	−2.91
t_L^q	1.21	2.62	2.68	1.51	−2.54	−0.01	−2.82	−6.20	−5.00	−5.96	−4.48	−2.36	−1.34	−3.08
β_{LIQ}	0.11	0.08	−0.01	−0.04	0.04	−0.08	0.02	0.03	0.05	0.10	0.02	−0.03	0.01	0.01
$t_{\beta_{\text{LIQ}}}$	1.18	1.13	−0.23	−0.58	0.85	−0.80	0.48	0.54	0.82	2.37	0.70	−0.57	0.15	0.15
$\overline{\lvert\alpha\rvert}$	0.29	0.41	0.43	0.36	0.44	0.37	0.42	0.52	0.47	0.47	0.39	0.44	0.46	0.48
$\overline{\lvert\alpha_{FF}\rvert}$	0.13	0.19	0.20	0.20	0.21	0.18	0.19	0.35	0.33	0.32	0.22	0.28	0.26	0.32
$\overline{\lvert\alpha_C\rvert}$	0.21	0.26	0.31	0.30	0.34	0.34	0.33	0.43	0.43	0.43	0.35	0.36	0.35	0.38
$\overline{\lvert\alpha_q\rvert}$	0.14	0.26	0.28	0.36	0.35	0.43	0.33	0.48	0.49	0.49	0.43	0.40	0.35	0.40
$\overline{\lvert\alpha_L^q\rvert}$	0.13	0.24	0.27	0.35	0.34	0.42	0.31	0.47	0.48	0.49	0.42	0.39	0.34	0.38
p	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p_{FF}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p_C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p_q	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p_L^q	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	IvG	IvC	OA	TA	POA	PTA	ROE	ROA	GP/A	NEI	TES	RS	OC/A	BC/A
m	−0.91	−0.87	−0.56	−0.71	−0.62	−0.45	1.17	0.96	0.55	0.71	0.71	0.89	0.82	0.46
α	−0.95	−0.90	−0.53	−0.72	−0.67	−0.51	1.28	1.08	0.61	0.74	0.65	0.93	0.84	0.55
α_{FF}	−0.86	−0.82	−0.56	−0.61	−0.56	−0.38	1.36	1.15	0.50	0.91	0.74	1.15	0.90	0.45
α_C	−0.77	−0.78	−0.62	−0.64	−0.47	−0.33	0.86	0.68	0.38	0.61	0.57	0.88	0.84	0.48
α_q	−0.87	−0.87	−0.83	−0.93	−0.35	−0.28	0.04	−0.08	−0.16	0.17	0.34	0.41	1.06	0.34
α_L^q	−0.90	−0.91	−0.84	−0.93	−0.33	−0.24	0.06	−0.07	−0.21	0.19	0.36	0.42	1.03	0.30
t_m	−6.32	−6.37	−3.80	−3.79	−5.80	−5.25	3.91	3.21	2.47	4.65	6.95	5.05	5.01	2.59
t	−6.63	−6.64	−3.69	−3.94	−6.43	−6.29	4.59	3.82	2.73	5.05	6.44	5.64	5.15	3.10
t_{FF}	−5.71	−5.83	−3.83	−3.40	−6.22	−5.26	4.96	4.22	2.28	6.78	7.07	7.43	5.73	2.64
t_C	−5.47	−5.71	−3.82	−3.39	−4.83	−4.51	2.89	2.27	1.77	4.22	5.50	4.73	4.84	2.75
t_q	−5.00	−5.32	−5.25	−4.69	−3.05	−3.74	0.13	−0.25	−0.71	1.20	3.25	1.93	4.49	1.50
t_L^q	−5.00	−5.59	−5.24	−4.65	−2.92	−3.31	0.20	−0.25	−0.95	1.33	3.47	2.03	4.42	1.37
β_{LIQ}	0.04	0.07	0.02	0.00	−0.02	−0.06	−0.03	0.00	0.09	−0.03	−0.03	−0.01	0.05	0.06
$t_{\beta_{\text{LIQ}}}$	0.97	1.76	0.40	−0.02	−0.80	−1.76	−0.49	−0.03	1.25	−0.94	−1.26	−0.23	1.14	1.37
$\overline{\lvert\alpha\rvert}$	0.44	0.40	0.41	0.43	0.38	0.37	0.40	0.39	0.32	0.65	0.38	0.42	0.33	0.37
$\overline{\lvert\alpha_{FF}\rvert}$	0.25	0.21	0.23	0.23	0.22	0.19	0.35	0.34	0.19	0.53	0.23	0.31	0.24	0.14
$\overline{\lvert\alpha_C\rvert}$	0.35	0.34	0.37	0.36	0.35	0.34	0.29	0.26	0.31	0.56	0.28	0.38	0.33	0.35
$\overline{\lvert\alpha_q\rvert}$	0.37	0.37	0.43	0.44	0.43	0.43	0.39	0.36	0.43	0.51	0.35	0.40	0.43	0.47
$\overline{\lvert\alpha_L^q\rvert}$	0.36	0.36	0.42	0.42	0.41	0.42	0.38	0.35	0.42	0.50	0.34	0.39	0.41	0.46
p	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
p_{FF}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
p_C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
p_q	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p_L^q	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01

	Ad/M	RD/M	RC/A	H/N	OL	ME	Svol	D-β	S-Rev	Disp	Turn	1/P	Dvol	Illiq
m	1.15	2.04	1.00	−0.98	0.58	−1.56	−0.47	−0.46	−3.11	−0.71	−0.90	2.12	−1.45	1.28
α	1.31	1.96	0.76	−1.05	0.62	−1.60	−0.50	−0.68	−2.93	−0.94	−1.31	1.97	−1.57	1.27
α_{FF}	0.73	1.81	1.11	−0.84	0.51	−1.37	−0.47	−0.58	−2.85	−1.08	−0.91	1.65	−1.09	0.84
α_C	0.74	1.80	1.16	−0.75	0.56	−1.47	−0.54	−0.55	−3.40	−0.88	−0.90	2.47	−1.31	1.09
α_q	0.51	2.16	1.83	−0.76	0.30	−1.81	−0.43	−0.50	−3.61	−0.35	−0.77	2.93	−1.49	1.45
α_L^q	0.44	2.19	1.97	−0.80	0.29	−1.81	−0.44	−0.45	−3.56	−0.35	−0.70	2.94	−1.44	1.44
t_m	4.04	5.80	2.14	−6.34	2.85	−4.93	−3.03	−2.37	−9.60	−3.47	−3.30	4.60	−5.18	3.95
t	4.53	5.82	1.73	−6.72	3.01	−5.02	−3.19	−3.93	−9.43	−5.36	−5.17	4.62	−5.50	4.04
t_{FF}	3.54	5.91	2.98	−5.52	2.55	−5.34	−3.04	−3.43	−8.15	−6.88	−4.19	4.19	−4.59	3.41
t_C	3.50	5.91	3.35	−5.01	3.00	−5.18	−2.99	−2.81	−7.96	−5.45	−4.02	4.96	−5.08	3.99
t_q	1.87	5.71	3.62	−4.34	1.53	−5.62	−2.16	−2.65	−5.88	−2.88	−2.96	4.50	−5.02	4.44
t_L^q	1.53	5.90	4.00	−4.59	1.42	−5.56	−2.20	−2.31	−6.12	−2.86	−2.60	4.66	−4.80	4.37
β_{LIQ}	0.12	−0.05	−0.19	0.06	0.02	0.01	0.01	−0.10	−0.08	0.01	−0.12	−0.01	−0.08	0.02
$t_{\beta_{\text{LIQ}}}$	1.40	−0.52	−1.54	1.82	0.37	0.08	0.14	−1.54	−0.73	0.46	−1.67	−0.04	−0.83	0.19
$\overline{\lvert\alpha\rvert}$	0.44	0.47	0.30	0.45	0.32	0.28	0.20	0.29	0.45	0.21	0.36	0.34	0.28	0.22
$\overline{\lvert\alpha_{FF}\rvert}$	0.19	0.42	0.34	0.27	0.16	0.24	0.16	0.15	0.37	0.24	0.22	0.38	0.24	0.19
$\overline{\lvert\alpha_C\rvert}$	0.37	0.52	0.52	0.37	0.31	0.29	0.29	0.26	0.49	0.19	0.31	0.34	0.24	0.22
$\overline{\lvert\alpha_q\rvert}$	0.47	0.74	0.80	0.43	0.40	0.42	0.49	0.39	0.57	0.07	0.39	0.42	0.36	0.34
$\overline{\lvert\alpha_L^q\rvert}$	0.46	0.75	0.82	0.42	0.39	0.41	0.48	0.38	0.55	0.07	0.37	0.41	0.34	0.33
p	0.00	0.00	0.15	0.00	0.01	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p_{FF}	0.02	0.00	0.00	0.00	0.13	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p_C	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
p_q	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
p_L^q	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00