

Online Appendix to “Security Analysts and Capital Market Anomalies”
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Table A1: Analyst consensus recommendations one quarter before the construction of anomaly portfolios

This table reports the average level (Column “Rec”) and change (Column “ΔRec”) of consensus recommendations for quintile portfolios sorted by the anomaly variables. Reported are analyst recommendations available one quarter before the construction of the anomaly variable. We classify 11 anomalies into two clusters following Stambaugh and Yuan (2017). MGMT (PERF) stands for the composite mispricing measure of the first (second) cluster. Panel A (Panel B) reports the results of Cluster 1 (Cluster 2) anomalies. The *t*-statistics in parentheses are based on Newey-West standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. The sample period is from 1993 to 2014.

Panel A: Cluster 1								
	MGMT		NSI		CEI		Accrual	
	Rec	ΔRec	Rec	ΔRec	Rec	ΔRec	Rec	ΔRec
Long	3.50	-0.05	3.59	-0.09	3.51	-0.06	3.67	-0.04
2	3.62	-0.04	3.62	-0.04	3.58	-0.07	3.64	-0.05
3	3.75	-0.04	3.71	-0.03	3.71	-0.11	3.75	-0.03
4	3.89	-0.03	3.86	-0.01	3.87	-0.04	3.88	0.00
Short	4.08	-0.01	4.01	0.00	4.00	0.02	4.05	-0.02
Long – Short	-0.57***	-0.03***	-0.42***	-0.09***	-0.49***	-0.09***	-0.38***	-0.03*
(<i>t</i> -stat)	(-13.07)	(-2.93)	(-12.38)	(-6.78)	(-11.21)	(-8.08)	(-8.79)	(-1.78)
	NOA		AG		IA			
	Rec	ΔRec	Rec	ΔRec	Rec	ΔRec		
Long	3.70	-0.03	3.59	-0.03	3.67	0.02		
2	3.70	-0.03	3.60	-0.04	3.73	-0.03		
3	3.69	-0.03	3.72	-0.05	3.76	-0.05		
4	3.76	-0.04	3.87	-0.04	3.85	-0.05		
Short	3.99	-0.05	4.06	-0.02	3.98	-0.05		
Long – Short	-0.28***	0.02***	-0.47***	-0.01	-0.31***	0.07***		
(<i>t</i> -stat)	(-10.85)	(6.48)	(-9.79)	(-0.74)	(-6.69)	(4.54)		
Panel B: Cluster 2								
	PERF		Distress		O-score		MOM	
	Rec	ΔRec	Rec	ΔRec	Rec	ΔRec	Rec	ΔRec
Long	3.89	0.03	3.81	-0.01	3.85	-0.05	3.91	0.09
2	3.83	0.00	3.81	-0.01	3.79	-0.01	3.76	0.01
3	3.75	-0.03	3.79	-0.02	3.75	-0.02	3.71	-0.01
4	3.67	-0.06	3.70	-0.04	3.75	-0.03	3.68	-0.08
Short	3.68	-0.11	3.60	-0.09	3.84	-0.03	3.71	-0.20
Long – Short	0.21***	0.14***	0.21***	0.08***	0.02	-0.02	0.20***	0.29***
(<i>t</i> -stat)	(7.34)	(5.76)	(12.33)	(3.53)	(0.40)	(-1.42)	(6.36)	(9.75)
	GP		ROA					
	Rec	ΔRec	Rec	ΔRec				
Long	3.82	-0.03	3.92	0.02				
2	3.82	-0.03	3.82	-0.01				
3	3.81	-0.03	3.74	-0.03				
4	3.72	-0.03	3.61	-0.07				
Short	3.67	-0.05	3.79	-0.09				
Long – Short	0.15***	0.02**	0.13***	0.11***				
(<i>t</i> -stat)	(6.81)	(2.19)	(2.78)	(3.95)				

Table A2: Price run-up of anomaly portfolios during the formation period conditional on analyst recommendations at the end of June of year t

This table reports the buy-and-hold cumulative abnormal returns (CARs) of anomaly portfolios during the entire portfolio formation window (July of year $t-1$ to June of year t). At the end of each June, we sort stocks into three groups based on the level of analyst consensus recommendations available at the end of June of year t and independently into quintiles based on anomaly characteristics at the end of June of year t . The CAR is calculated as the individual stock buy-and-hold cumulative return minus the cumulative value-weighted market index return, and then averaged to portfolio level. Up (Middle, Down) refers to stocks in the top (middle, bottom) tercile based on analyst consensus recommendations. Long (Short) refers to stocks in the most undervalued (overvalued) quintile based on anomaly characteristics. Long \times RecUp – Long \times RecDown (Short \times RecUp – Short \times RecDown) reports the difference in the CARs between stocks with the most favorable and most unfavorable consensus recommendations for the long-leg portfolio (short-leg portfolio). Panel A (Panel B) reports the results of Cluster 1 (Cluster 2) anomalies. The Newey-West adjusted t-statistics are shown in parentheses. The sample period is from 1993 to 2014.

Panel A: Cluster 1													
	MGMT			NSI			CEI			Accrual			
	Up	Middle	Down	Up	Middle	Down	Up	Middle	Down	Up	Middle	Down	
Long	30.07%	12.89%	1.32%	18.27%	7.46%	-1.97%	18.37%	9.81%	1.60%	28.96%	12.53%	-1.44%	
	(4.55)	(3.60)	(0.44)	(3.78)	(2.41)	(-0.52)	(4.67)	(2.57)	(0.43)	(4.42)	(3.52)	(-0.40)	
Short	23.60%	8.64%	-10.90%	28.80%	10.61%	-6.96%	25.01%	13.56%	-5.14%	30.07%	13.93%	-8.13%	
	(6.22)	(4.18)	(-1.79)	(8.62)	(4.86)	(-1.45)	(5.18)	(5.82)	(-1.54)	(7.78)	(4.60)	(-1.24)	
Long \times RecUp – Long \times RecDown		28.76%			20.24%			16.77%			30.41%		
		(6.08)			(4.76)			(5.92)			(5.04)		
Short \times RecUp – Short \times RecDown		34.50%			35.76%			30.15%			38.20%		
		(5.20)			(6.45)			(4.95)			(5.01)		
	NOA			AG			IA						
	Up	Middle	Down	Up	Middle	Down	Up	Middle	Down				
Long	30.31%	14.39%	1.23%	32.88%	13.06%	0.00%	34.90%	18.43%	3.34%				
	(5.97)	(4.16)	(0.42)	(5.45)	(3.38)	(0.00)	(6.17)	(5.57)	(0.94)				
Short	19.78%	4.01%	-11.43%	25.95%	9.59%	-9.69%	21.40%	6.14%	-10.96%				
	(6.44)	(1.65)	(-2.28)	(9.06)	(4.65)	(-1.74)	(5.56)	(2.77)	(-1.96)				
Long \times RecUp – Long \times RecDown		29.08%			32.89%			31.56%					
		(20.40)			(7.28)			(7.15)					
Short \times RecUp – Short \times RecDown		31.22%			35.63%			32.36%					
		(6.34)			(5.65)			(4.91)					

Table A2 (Continued): Price run-up of anomaly portfolios during the formation period conditional on analyst recommendations at the end of June of year t

Panel B: Cluster 2												
	PERF			Distress			O-score			MOM		
	Up	Middle	Down	Up	Middle	Down	Up	Middle	Down	Up	Middle	Down
Long	48.63%	32.64%	23.50%	21.08%	12.71%	5.90%	23.41%	9.77%	-4.16%	78.10%	67.50%	58.25%
	(7.36)	(7.53)	(6.41)	(5.50)	(4.31)	(2.14)	(4.72)	(3.83)	(-0.91)	(8.65)	(9.96)	(14.13)
Short	3.74%	-12.64%	-20.39%	3.93%	-3.91%	-9.12%	34.08%	19.34%	-3.34%	-35.23%	-38.51%	-41.73%
	(1.14)	(-4.28)	(-7.28)	(1.22)	(-1.23)	(-2.92)	(6.20)	(4.17)	(-0.85)	(-11.01)	(-12.04)	(-11.95)
Long×RecUp – Long×RecDown		25.13%			15.17%			27.57%			19.84%	
		(3.70)			(5.07)			(3.92)			(2.78)	
Short×RecUp – Short×RecDown		24.12%			13.05%			37.42%			6.51%	
		(26.40)			(6.37)			(8.34)			(7.62)	
	GP			ROA								
	Up	Middle	Down	Up	Middle	Down						
Long	33.03%	12.68%	-3.13%	41.77%	22.60%	13.06%						
	(5.54)	(3.97)	(-0.71)	(7.01)	(6.11)	(3.44)						
Short	18.33%	8.31%	0.00%	20.53%	3.88%	-15.44%						
	(4.89)	(2.21)	(0.00)	(5.84)	(1.20)	(-4.26)						
Long×RecUp – Long×RecDown		36.15%			28.71%							
		(5.69)			(4.88)							
Short×RecUp – Short×RecDown		18.33%			35.96%							
		(17.81)			(7.95)							

Table A3: Mutual fund net buys in anomaly portfolios conditional on analyst recommendations one quarter ago

This table reports the change of stock ownership by mutual funds (mutual fund net buys) over the period from the end of March to the end of June of year t . We sort stocks into three groups based on the level of analyst consensus recommendations available at the end of March of year t and independently into quintiles based on anomaly characteristics at the end of June of year t . Up (Middle, Down) refers to stocks in the top (middle, bottom) tercile based on analyst consensus recommendations. Long (Short) refers to stocks in the most undervalued (overvalued) quintile based on anomaly characteristics. Long \times RecUp – Long \times RecDown (Short \times RecUp – Short \times RecDown) reports the differences in mutual fund net buys between stocks with the most favorable and most unfavorable consensus recommendations for the long-leg portfolio (short-leg portfolio). Panel A (Panel B) reports the results of Cluster 1 (Cluster 2) anomalies. The Newey-West adjusted t-statistics are shown in parentheses. The sample period is from 1993 to 2014.

Panel A: Cluster 1												
	MGMT			NSI			CEI			Accrual		
	Up	Middle	Down	Up	Middle	Down	Up	Middle	Down	Up	Middle	Down
Long	0.48%	0.22%	0.15%	0.32%	0.16%	0.17%	0.22%	0.13%	0.14%	0.65%	0.37%	0.19%
	(8.08)	(4.14)	(4.26)	(9.48)	(3.98)	(4.31)	(2.66)	(5.40)	(3.19)	(13.17)	(3.98)	(2.90)
Short	0.84%	0.61%	0.28%	0.94%	0.59%	0.26%	0.80%	0.60%	0.41%	0.74%	0.58%	0.13%
	(14.28)	(6.26)	(2.24)	(11.17)	(9.24)	(2.89)	(11.92)	(7.32)	(4.25)	(8.01)	(4.45)	(0.92)
Long \times RecUp – Long \times RecDown		0.33%			0.15%			0.07%			0.46%	
		(5.48)			(2.90)			(1.03)			(10.12)	
Short \times RecUp – Short \times RecDown		0.55%			0.68%			0.39%			0.62%	
		(4.84)			(7.06)			(5.03)			(5.15)	
	NOA			AG			IA					
	Up	Middle	Down	Up	Middle	Down	Up	Middle	Down			
Long	0.80%	0.39%	0.17%	0.55%	0.36%	0.16%	0.57%	0.29%	0.21%			
	(11.23)	(5.04)	(2.98)	(6.71)	(4.65)	(3.13)	(21.77)	(3.86)	(4.34)			
Short	0.59%	0.36%	0.17%	0.90%	0.64%	0.30%	0.72%	0.49%	0.18%			
	(11.20)	(5.70)	(1.70)	(10.08)	(6.46)	(2.11)	(14.89)	(4.67)	(1.53)			
Long \times RecUp – Long \times RecDown		0.63%			0.39%			0.36%				
		(13.07)			(5.43)			(6.22)				
Short \times RecUp – Short \times RecDown		0.42%			0.60%			0.54%				
		(3.74)			(4.90)			(5.15)				

Table A3 (continued): Mutual fund net buys in anomaly portfolios conditional on analyst recommendations one quarter ago

Panel B: Cluster 2												
	PERF			Distress			O-score			MOM		
	Up	Middle	Down	Up	Middle	Down	Up	Middle	Down	Up	Middle	Down
Long	0.74%	0.49%	0.29%	0.47%	0.31%	0.22%	0.58%	0.33%	0.18%	0.88%	0.66%	0.39%
	(51.38)	(10.78)	(4.71)	(12.29)	(6.86)	(6.53)	(6.68)	(3.54)	(1.85)	(11.56)	(8.41)	(6.49)
Short	0.53%	0.23%	0.08%	0.42%	0.15%	0.23%	0.63%	0.51%	0.05%	0.19%	-0.07%	-0.04%
	(4.96)	(2.81)	(1.21)	(5.62)	(1.64)	(2.19)	(5.36)	(4.27)	(0.57)	(1.18)	(-0.45)	(-0.43)
Long×RecUp – Long×RecDown		0.45%			0.24%			0.40%			0.49%	
		(6.66)			(3.67)			(4.75)			(5.30)	
Short×RecUp – Short×RecDown		0.45%			0.19%			0.58%			0.23%	
		(5.14)			(1.91)			(5.16)			(2.60)	
	GP			ROA								
	Up	Middle	Down	Up	Middle	Down						
Long	0.65%	0.40%	0.20%	0.72%	0.42%	0.26%						
	(9.66)	(6.01)	(2.85)	(20.75)	(7.21)	(4.52)						
Short	0.70%	0.33%	0.18%	0.81%	0.42%	0.10%						
	(8.80)	(4.30)	(2.78)	(8.18)	(3.57)	(1.40)						
Long×RecUp – Long×RecDown		0.45%			0.46%							
		(7.17)			(5.98)							
Short×RecUp – Short×RecDown		0.52%			0.71%							
		(8.67)			(8.81)							

Table A4: The market efficiency implications of skilled analysts

This table reports the Fama and MacBeth (1973) regressions of stock returns on the anomaly characteristics interacted with “*Coverage_skill*”. The dependent variable is the monthly stock returns (in percentage). For each analyst at the end of each year, we calculate the rank correlation between stocks’ recommendation values and the composite mispricing score PERF using all recommendations issued by this analyst in the past three years. We then sort all analysts into 10 deciles according to the correlation measure and define skilled analysts as those in the top decile. Then for each stock-month, we construct a measure “*Coverage_skill*”, defined as the natural logarithm of the number of skilled analysts scaled by the total number of analysts following the stock as follows:

$$Coverage_skill = Ln[(1 + \# \text{ of skilled analysts}) / (1 + \# \text{ of total analysts})].$$

We then run the Fama-MacBeth regression of stock returns on the anomaly, *Coverage_skill*, and the interaction between *Coverage_skill* and the anomaly. We multiply the anomaly variable by -1 for Momentum, Gross Profitability, and ROA, so that a higher value of an anomaly always indicates more overpricing. We control for firm size and stock turnover, and their interactions with the anomaly. The Newey-West adjusted *t*-statistics are shown in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Cluster 1							
	MGMT	NSI	CEI	Accrual	NOA	AG	IA
Coverage_skill×Anomaly	0.02*** (4.84)	0.78*** (2.78)	0.85*** (3.06)	0.68*** (2.92)	-0.12 (-1.38)	0.20** (2.56)	0.11 (0.40)
Anomaly	-0.20*** (-8.70)	-8.64*** (-7.11)	-10.74*** (-4.36)	-8.62*** (-5.97)	-0.10 (-0.12)	-2.73*** (-7.18)	-4.70** (-2.52)
Coverage_skill	0.71*** (3.53)	1.46*** (10.00)	1.31*** (10.18)	1.75*** (10.37)	1.68*** (11.32)	1.54*** (10.42)	1.70*** (10.61)
Ln(Size)×Anomaly	0.02*** (8.79)	0.76*** (6.89)	0.92*** (4.23)	0.77*** (6.02)	-0.00 (-0.00)	0.24*** (6.82)	0.38** (2.39)
Turnover×Anomaly	-0.06*** (-2.87)	-5.80*** (-2.70)	-0.70 (-0.21)	-1.52 (-1.46)	-0.87* (-1.95)	-0.25 (-0.40)	-2.79** (-2.59)
Ln(Size)	0.23** (2.47)	1.01*** (11.64)	0.92*** (10.90)	1.19*** (12.54)	1.09*** (13.35)	1.04*** (11.85)	1.14*** (12.01)
Turnover	3.31 (1.53)	-0.22 (-0.17)	-0.77 (-0.53)	-0.48 (-0.38)	-0.05 (-0.04)	-0.47 (-0.37)	0.09 (0.07)
Intercept	-0.73 (-0.59)	-9.60*** (-8.60)	-8.64*** (-7.71)	-11.55*** (-9.35)	-10.42*** (-10.01)	-9.99*** (-8.86)	-11.07*** (-8.96)
Observations	668,865	650,129	605,441	513,929	667,793	669,836	575,196
Adjusted R ²	0.053	0.048	0.050	0.052	0.050	0.050	0.049

Table A4 (continued): The market efficiency implications of skilled analysts

Panel B: Cluster 2						
	PERF	Distress	O-score	MOM	GP	ROA
Coverage_skill×Anomaly	0.01*** (2.63)	0.11 (0.97)	0.17*** (7.40)	-0.10 (-0.55)	-0.21 (-0.92)	5.43*** (3.70)
Anomaly	-0.19*** (-9.10)	-5.46*** (-6.38)	-2.57*** (-13.69)	-1.01 (-0.82)	-1.59 (-1.09)	-105.40*** (-11.31)
Coverage_skill	1.09*** (5.86)	2.20** (2.44)	2.38*** (11.92)	1.26*** (9.97)	1.56*** (8.91)	1.65*** (10.77)
Ln(Size)×Anomaly	0.02*** (8.03)	0.47*** (6.20)	0.23*** (14.01)	0.06 (0.52)	0.06 (0.46)	8.90*** (10.67)
Turnover×Anomaly	-0.10*** (-4.11)	-4.12*** (-2.67)	-0.75*** (-5.30)	0.75 (0.88)	-5.05*** (-3.34)	-15.56** (-1.98)
Ln(Size)	0.30*** (2.62)	4.89*** (7.59)	2.11*** (15.56)	0.86*** (10.91)	1.13*** (11.94)	1.23*** (13.43)
Turnover	3.51** (2.49)	-35.59*** (-2.70)	-3.20** (-2.29)	-1.65 (-1.23)	-2.75* (-1.73)	-0.85 (-0.65)
Intercept	-0.85 (-0.61)	-54.80*** (-7.64)	-21.88*** (-12.99)	-8.23*** (-7.87)	-11.24*** (-9.90)	-12.11*** (-10.55)
Observations	661,412	359,496	522,326	616,331	673,591	691,037
Adjusted R ²	0.056	0.058	0.057	0.062	0.052	0.053

Table A5: Subsample tests based on trading costs (daily percentage quoted spreads)

This table reports the results for subsamples based on trading costs. We divide stocks equally into the high and low trading cost groups each month, where the trading cost is measured by the daily percentage quoted spread following Chung and Zhang (2014). Panel A reports the average level and change of analyst consensus recommendations for quintile portfolios sorted by the two composite mispricing measures MGMT or PERF. Column “Rec” reports the average level of consensus recommendations and Column “ΔRec” reports the average change of consensus recommendations. Panel B reports the monthly Fama-French three-factor alphas of portfolios sorted independently by anomaly characteristics and the level of analyst consensus recommendations. At the end of each June, we sort stocks into three groups based on the level of analyst consensus recommendations, and independently into quintiles based on the composite mispricing measures. Up (Down) refers to stocks in the top (bottom) tercile based on analyst consensus recommendations. Long (Short) refers to stocks in the most undervalued (overvalued) quintile based on anomaly characteristics. Consistent (Inconsistent) refers to the long-short portfolio where analyst recommendations are in congruent with (contradictory to) the anomaly prescriptions. Diff is the difference in alphas between Inconsistent and Consistent portfolios. The *t*-statistics in parentheses are based on Newey-West standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. The sample period is from 1993 to 2014.

	High Trading Cost				Low Trading Cost			
Panel A: Recommendation level or change								
	MGMT		PERF		MGMT		PERF	
	Rec	ΔRec	Rec	ΔRec	Rec	ΔRec	Rec	ΔRec
Long	3.57	-0.06	4.02	0.07	3.49	-0.07	3.86	0.04
2	3.67	-0.06	3.91	0.01	3.60	-0.05	3.80	0.01
3	3.81	-0.03	3.79	-0.04	3.73	-0.02	3.74	-0.02
4	3.94	-0.03	3.71	-0.09	3.87	-0.02	3.67	-0.05
Short	4.11	-0.01	3.71	-0.13	4.04	0.03	3.67	-0.10
Long – Short	-0.54***	-0.06***	0.30***	0.20***	-0.55***	-0.09***	0.19***	0.13***
(<i>t</i> -stat)	(-20.38)	(-3.35)	(11.73)	(9.39)	(-14.13)	(-7.33)	(6.23)	(4.75)
Panel B: Double sorts (Fama-French three-factor alphas)								
	MGMT		PERF		MGMT		PERF	
	Up	Down	Up	Down	Up	Down	Up	Down
Long	0.50%	0.20%	0.58%	0.77%	0.28%	0.14%	0.30%	0.43%
	(2.39)	(1.32)	(3.75)	(5.51)	(2.33)	(1.25)	(2.23)	(3.52)
Short	-0.65%	-0.61%	-1.21%	-0.77%	-0.83%	-0.44%	-0.95%	-0.37%
	(-3.42)	(-4.23)	(-4.57)	(-4.30)	(-4.16)	(-2.61)	(-4.14)	(-2.52)
Consistent	1.11%		1.35%		0.72%		0.67%	
	(4.55)		(6.58)		(3.76)		(2.96)	
Inconsistent	0.85%		1.98%		0.97%		1.38%	
	(3.39)		(7.69)		(3.72)		(4.44)	
Diff: Incon – Con	-0.26%		0.62%		0.25%		0.71%	
	(-1.05)		(2.41)		(0.96)		(2.45)	

Table A6: Subsample tests based on ownership by dedicated institutional investors

This table reports the results for subsamples based on dedicated institutional investor ownership. We divide stocks into the high and low institutional ownership groups according to the median ownership by dedicated institutions in the last quarter following the classification of Bushee (1998) and Bushee and Noe (2000). Panel A reports the average level and change of analyst consensus recommendations for quintile portfolios sorted by the two composite mispricing scores MGMT or PERF. Column “Rec” reports the average level of consensus recommendations and Column “ΔRec” reports the average change of consensus recommendations. Panel B reports the monthly Fama-French three-factor alphas of portfolios sorted independently by anomaly characteristics and the level of analyst consensus recommendations. At the end of each June, we sort stocks into three groups based on the level of analyst consensus recommendations, and independently into quintiles based on the composite mispricing measures. Up (Down) refers to stocks in the top (bottom) tercile based on analyst consensus recommendations. Long (Short) refers to stocks in the most undervalued (overvalued) quintile based on anomaly characteristics. Consistent (Inconsistent) refers to the long-short portfolio where analyst recommendations are in congruent with (contradictory to) the anomaly prescriptions. Diff is the difference in alphas between Inconsistent and Consistent portfolios. The *t*-statistics in parentheses are based on Newey-West standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. The sample period is from 1993 to 2014.

	Low Dedicated Institutional Ownership				High Dedicated Institutional Ownership			
Panel A: Recommendation level or change								
	MGMT		PERF		MGMT		PERF	
	Rec	ΔRec	Rec	ΔRec	Rec	ΔRec	Rec	ΔRec
Long	3.52	-0.06	3.91	0.05	3.53	-0.07	3.87	0.03
2	3.63	-0.04	3.84	0.02	3.64	-0.06	3.83	0.00
3	3.76	-0.01	3.74	-0.03	3.77	-0.03	3.77	-0.03
4	3.90	-0.01	3.67	-0.06	3.89	-0.03	3.71	-0.06
Short	4.07	0.01	3.71	-0.10	4.06	0.02	3.71	-0.12
Long – Short	-0.55***	-0.07***	0.20***	0.15***	-0.53***	-0.09***	0.16***	0.15***
(<i>t</i> -stat)	(-18.85)	(-4.37)	(5.73)	(7.23)	(-15.38)	(-8.91)	(5.52)	(5.47)
Panel B: Double sorts (Fama-French three-factor alphas)								
	MGMT		PERF		MGMT		PERF	
	Up	Down	Up	Down	Up	Down	Up	Down
Long	0.54%	0.27%	0.36%	0.41%	0.19%	0.04%	0.36%	0.46%
	(3.57)	(1.93)	(3.20)	(3.49)	(1.60)	(0.35)	(2.79)	(3.06)
Short	-0.96%	-0.66%	-1.11%	-0.59%	-0.73%	-0.16%	-0.98%	-0.42%
	(-4.57)	(-3.40)	(-4.31)	(-3.88)	(-4.42)	(-0.75)	(-4.60)	(-2.67)
Consistent	1.21%		0.95%		0.35%		0.77%	
	(4.33)		(4.96)		(1.53)		(3.71)	
Inconsistent	1.23%		1.53%		0.77%		1.45%	
	(4.76)		(5.08)		(4.07)		(5.70)	
Diff: Incon – Con	0.02%		0.57%		0.42%		0.67%	
	(0.10)		(1.87)		(1.74)		(2.66)	

Table A7: Informativeness of six alternative anomalies

This table reports the average monthly returns and Fama-French three-factor alphas for the long-short portfolios of the six alternative anomalies, including idiosyncratic volatility (IVOL), maximum daily return in the last month (MaxReturn), past 12-month average turnover (Turnover), cash flow duration (Duration), long-run reversal (LMW), and market beta (Beta). Panel A reports the raw returns and Panel B reports the Fama-French three-factor alphas. The t -statistics in parentheses are based on Newey-West standard errors. The sample period is from 1993 to 2014.

	IVOL	MaxReturn	Turnover	Duration	LMW	Beta
Panel A: Raw returns						
Long	0.94%	0.95%	1.04%	1.08%	1.39%	0.65%
	(3.62)	(3.38)	(2.62)	(2.45)	(2.33)	(2.34)
Short	0.35%	0.70%	0.59%	0.88%	0.67%	1.23%
	(0.64)	(1.03)	(1.07)	(1.31)	(1.62)	(1.80)
Long – Short	0.59%	0.25%	0.45%	0.20%	0.72%	-0.58%
(t -stat)	(1.35)	(0.48)	(1.37)	(0.52)	(2.05)	(-1.08)
Panel B: Fama-French three-factor alphas						
Long	0.34%	0.36%	0.37%	0.17%	0.30%	0.08%
	(0.20)	(0.23)	(0.48)	(0.60)	(1.05)	(0.39)
Short	-0.72%	-0.46%	-0.53%	-0.25%	-0.19%	-0.05%
	(-1.15)	(-1.21)	(-0.87)	(-1.16)	(-0.51)	(-1.12)
Long – Short	1.06%	0.82%	0.90%	0.42%	0.49%	0.12%
(t -stat)	(5.65)	(3.08)	(4.28)	(1.85)	(1.66)	(0.37)

Table A8: Analyst consensus recommendations for six alternative anomalies

This table reports the average level and change of consensus recommendations for quintile portfolios sorted by the six alternative anomalies, including idiosyncratic volatility (IVOL), maximum daily return in the last month (MaxReturn), past 12-month average turnover (Turnover), cash flow duration (Duration), long-run reversal (LMW), and market beta (Beta). Column “Rec” reports the average level of consensus recommendations and Column “ΔRec” reports the average change of consensus recommendations. The *t*-statistics in parentheses are based on Newey-West standard errors. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. The sample period is from 1993 to 2014.

	IVOL		MaxReturn		Turnover		Duration	
	Rec	ΔRec	Rec	ΔRec	Rec	ΔRec	Rec	ΔRec
Long	3.59	-0.03	3.65	-0.04	3.70	-0.05	3.68	-0.09
2	3.73	-0.02	3.74	-0.04	3.74	-0.06	3.71	-0.06
3	3.82	-0.03	3.80	-0.04	3.75	-0.05	3.78	-0.03
4	3.88	-0.02	3.84	-0.05	3.79	-0.05	3.84	-0.01
Short	3.92	-0.05	3.80	-0.12	3.81	-0.06	3.81	-0.10
Long – Short	-0.33***	0.01	-0.15***	0.08**	-0.11	0.01	-0.13***	0.01
(<i>t</i> -stat)	(-10.38)	(0.43)	(-5.33)	(2.39)	(-1.56)	(0.58)	(-6.35)	(0.62)
	LMW		Beta					
	Rec	ΔRec	Rec	ΔRec				
Long	3.50	-0.14	3.63	-0.05				
2	3.60	-0.07	3.67	-0.04				
3	3.67	-0.03	3.74	-0.03				
4	3.78	-0.01	3.79	-0.05				
Short	4.00	0.05	3.80	-0.06				
Long – Short	-0.49***	-0.19***	-0.17***	0.00				
(<i>t</i> -stat)	(-10.65)	(-8.09)	(-6.14)	(0.10)				

Table A9: Abnormal returns of alternative anomaly portfolios conditional on analyst recommendations

This table reports the monthly Fama-French three-factor alphas of portfolios sorted independently by the six alternative anomalies and the level of analyst consensus recommendations. At the end of each June, we sort stocks into three groups based on the level of analyst consensus recommendations, and independently into quintiles based on anomaly characteristics. The six anomalies are idiosyncratic volatility (IVOL), maximum daily return in the last month (MaxReturn), past 12-month average turnover (Turnover), cash flow duration (Duration), long-run reversal (LMW), and market beta (Beta). Up (Middle, Down) refers to stocks in the top (middle, bottom) tercile based on analyst consensus recommendations. Long (Short) refers to stocks in the most undervalued (overvalued) quintile based on anomaly characteristics. Consistent (Inconsistent) refers to the long-short portfolio where analyst recommendations are in congruent with (contradictory to) the anomaly prescriptions. Diff is the difference in alphas between Inconsistent and Consistent portfolios. The t -statistics in parentheses are based on Newey-West standard errors. The sample period is from 1993 to 2014.

	IVOL			MaxReturn			Turnover			Duration		
	Up	Middle	Down	Up	Middle	Down	Up	Middle	Down	Up	Middle	Down
Long	0.42%	0.33%	0.35%	0.42%	0.35%	0.36%	0.04%	0.12%	0.39%	-0.02%	0.16%	0.32%
	(2.96)	(2.94)	(3.58)	(2.73)	(2.52)	(3.00)	(0.18)	(0.53)	(3.72)	(-0.11)	(0.66)	(1.90)
Short	-0.94%	-0.56%	-0.45%	-0.90%	-0.31%	-0.08%	-0.77%	-0.33%	-0.47%	-0.65%	0.00%	0.02%
	(-6.65)	(-3.75)	(-2.85)	(-3.56)	(-1.28)	(-0.29)	(-4.73)	(-2.04)	(-1.94)	(-2.27)	(0.01)	(0.06)
Consistent		0.87%			0.50%			0.51%			-0.05%	
		(3.63)			(1.60)			(1.79)			(-0.15)	
Inconsistent		1.29%			1.26%			1.16%			0.97%	
		(6.82)			(4.84)			(5.88)			(3.98)	
Diff: Incon – Con		0.42%			0.76%			0.64%			1.02%	
		(1.98)			(3.56)			(2.48)			(3.81)	
	LMW			Beta								
	Up	Middle	Down	Up	Middle	Down						
Long	0.23%	0.22%	0.30%	0.11%	0.15%	0.00%						
	(1.55)	(0.76)	(0.90)	(0.76)	(1.14)	(-0.01)						
Short	-0.28%	-0.08%	-0.12%	-0.44%	0.03%	0.23%						
	(-1.87)	(-0.46)	(-0.50)	(-1.65)	(0.10)	(0.63)						
Consistent		0.34%			-0.11%							
		(0.98)			(-0.28)							
Inconsistent		0.58%			0.44%							
		(1.89)			(1.53)							
Diff: Incon – Con		0.24%			0.55%							
		(1.14)			(2.00)							

Table A10: Unconditional return predictability of analyst consensus recommendations

This table reports the monthly raw returns and Fama-French three-factor alphas of quintile portfolios sorted by the level and change of analyst consensus recommendations. At the beginning of every quarter (month), we sort stocks into quintiles based on the level or change of recommendations observed at the end of last quarter (month) and re-balance the portfolio quarterly (monthly). Panel A (B) reports the raw returns for the quarterly (monthly) re-balanced portfolios. Panel C (D) reports the Fama-French three-factor alphas for quarterly (monthly) re-balanced portfolios. The t -statistics in parentheses are based on Newey-West standard errors.

Panel A: Quarterly rebalanced portfolios (Raw returns)								
	1993 - 2000		2001 - 2007		2008 - 2014		1993 - 2014	
	Rec	Δ Rec	Rec	Δ Rec	Rec	Δ Rec	Rec	Δ Rec
Short	0.46%	0.60%	1.00%	0.74%	0.94%	1.10%	0.80%	0.82%
2	0.76%	1.10%	0.83%	0.99%	1.06%	0.94%	0.88%	1.01%
3	0.88%	0.91%	1.04%	0.80%	1.09%	1.02%	1.00%	0.91%
4	0.40%	0.94%	0.55%	0.83%	0.92%	1.05%	0.62%	0.94%
Long	0.31%	1.02%	0.56%	0.85%	0.82%	1.07%	0.56%	0.98%
Long – Short	-0.14%	0.43%	-0.44%	0.11%	-0.12%	-0.03%	-0.23%	0.16%
(t -stat)	(-0.44)	(2.23)	(-1.30)	(0.47)	(-0.61)	(-0.14)	(-1.23)	(1.11)

Panel B: Monthly rebalanced portfolios (Raw returns)								
	1993 - 2000		2001 - 2007		2008 - 2014		1993 - 2014	
	Rec	Δ Rec	Rec	Δ Rec	Rec	Δ Rec	Rec	Δ Rec
Short	0.46%	0.48%	1.01%	0.74%	0.93%	1.01%	0.80%	0.76%
2	0.68%	1.00%	0.71%	0.92%	1.03%	0.95%	0.81%	0.96%
3	0.90%	0.96%	1.13%	0.80%	1.08%	1.03%	1.03%	0.93%
4	0.46%	0.79%	0.58%	0.83%	0.96%	1.04%	0.66%	0.89%
Long	0.52%	1.17%	0.64%	0.87%	0.86%	1.18%	0.67%	1.07%
Long – Short	0.06%	0.69%	-0.37%	0.13%	-0.06%	0.16%	-0.13%	0.31%
(t -stat)	(0.18)	(3.15)	(-1.10)	(0.53)	(-0.31)	(0.89)	(-0.65)	(2.46)

Table A10 (continued): Unconditional return predictability of analyst consensus recommendations

Panel C: Quarterly rebalanced portfolios (Fama-French three-factor alphas)								
	1993-2000		2001 - 2007		2008 - 2014		1993 - 2014	
	Rec	Δ Rec	Rec	Δ Rec	Rec	Δ Rec	Rec	Δ Rec
Short	-0.50%	-0.59%	0.32%	0.07%	0.04%	0.10%	-0.08%	-0.14%
2	-0.36%	-0.24%	0.10%	0.36%	0.09%	0.02%	-0.06%	0.08%
3	-0.14%	-0.49%	0.35%	0.13%	0.05%	0.06%	0.12%	-0.04%
4	-0.55%	-0.34%	0.08%	0.20%	-0.12%	0.00%	-0.23%	-0.01%
Long	-0.76%	-0.26%	-0.06%	0.20%	-0.27%	0.04%	-0.30%	0.06%
Long – Short	-0.25%	0.33%	-0.38%	0.13%	-0.31%	-0.06%	-0.22%	0.20%
(<i>t</i> -stat)	(-1.61)	(3.09)	(-1.42)	(0.54)	(-1.50)	(-0.30)	(-1.90)	(1.98)

Panel D: Monthly rebalanced portfolios (Fama-French three-factor alphas)								
	1993-2000		2001 - 2007		2008 - 2014		1993 - 2014	
	Rec	Δ Rec	Rec	Δ Rec	Rec	Δ Rec	Rec	Δ Rec
Short	-0.51%	-0.85%	0.31%	0.08%	0.03%	0.01%	-0.09%	-0.23%
2	-0.44%	-0.32%	0.01%	0.31%	0.07%	0.02%	-0.13%	0.02%
3	-0.13%	-0.43%	0.43%	0.12%	0.02%	0.07%	0.14%	-0.03%
4	-0.51%	-0.43%	0.11%	0.20%	-0.07%	0.00%	-0.18%	-0.05%
Long	-0.58%	-0.17%	0.02%	0.22%	-0.22%	0.13%	-0.20%	0.14%
Long – Short	-0.07%	0.68%	-0.29%	0.15%	-0.25%	0.12%	-0.11%	0.37%
(<i>t</i> -stat)	(-0.41)	(3.25)	(-1.04)	(0.58)	(-1.17)	(0.80)	(-0.92)	(3.49)