Online Appendix for

"Idiosyncratic Volatility, Option-Based Measures of Informed Trading, and Investor Attention"

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1. FURTHER SUMMARY STATISTICS

Table A1 provides summary statistics and correlation coefficients for all relevant variables similar to Table 1 in the main paper. However, while we present pooled summary statistics in the main paper, this Online Appendix table shows time-series averages of weekly cross-sectional summary statistics.

Table A1. Cross-Sectional Summary Statistics and Correlation Coefficients
This table reports time-series averages of weekly cross-sectional sample mean, standard deviation, 0.05-quantile, median, 0.95-quantile, and correlation coefficients for our main variables for the sample period from January 1996 to April 2016 on a weekly basis. IVol is the stock's idiosyncratic return volatility. It is estimated over the previous week based on FFC-adjusted returns where factor loadings are estimated over the previous year skipping one month. VS_{CW} and VS_{BH} are the implied volatility spreads following Cremers and Weinbaum (2010) and Bali and Hovakimian (2009), respectively. The estimation of SMIRK follows Xing et al. (2010). MAX is the maximum daily return of the previous week. REV denotes the stock return of the previous week. MV is the market capitalization of the stock. BM refers to the stock's book-to-market-ratio. MOM is the momentum return measured over the previous year skipping one month. ILLIQ corresponds to the illiquidity measure of Amihud (2002) in billions estimated over the previous year. ASVI is the abnormal search volume index calculated as log Google search volume of the previous week minus the median log Google search volume of the preceding eight weeks. ASVI summary statistics refer to a truncated sample period from January 2005 to April 2016.

	IVol	VS_{CW}	VS_{BH}	SMIRK	MAX	REV	ln(MV)	BM	MOM	ILLIQ	ASVI
mean	0.320	-0.010	-0.010	-0.050	0.031	0.002	22.125	0.383	0.281	3.010	-0.003
SD	0.234	0.050	0.045	0.051	0.027	0.053	1.491	0.367	0.684	18.009	0.253
$q_{0.05}$	0.100	-0.081	-0.074	-0.134	0.004	-0.076	19.904	0.047	-0.354	0.053	-0.350
$q_{0.5}$	0.262	-0.007	-0.008	-0.042	0.024	0.000	22.007	0.300	0.148	0.679	-0.009
$q_{0.95}$	0.723	0.054	0.047	0.009	0.076	0.085	24.772	0.999	1.318	9.902	0.347

Correlation Coefficients

	IVol	VS_{CW}	VS_{BH}	SMIRK	MAX	REV	ln(MV)	BM	MOM	ILLIQ	ASVI
IVol	1.000										
VS_{CW}	-0.063	1.000									
VS_{BH}	-0.048	0.867	1.000								
SMIRK	-0.041	0.550	0.565	1.000							
MAX	0.703	-0.081	-0.065	-0.052	1.000						
REV	0.079	-0.096	-0.084	-0.056	0.558	1.000					
ln(MV)	-0.320	0.073	0.069	0.061	-0.214	0.019	1.000				
BM	-0.053	0.006	0.002	-0.030	-0.048	-0.026	-0.050	1.000			
MOM	0.101	-0.012	-0.007	0.038	0.064	-0.022	-0.032	-0.244	1.000		
ILLIQ	0.186	-0.059	-0.060	-0.051	0.128	0.007	-0.402	-0.030	0.233	1.000	
ASVI	0.122	-0.004	-0.002	-0.001	0.097	0.036	0.003	-0.010	0.009	0.007	1.000

2. Further Fama-MacBeth-Regressions

In this Section we provide further Fama-MacBeth-regressions to control for additional firm characteristics that might influence the relationships documented in the main paper. In Table A2, we show that the three sophisticated trading measures remain significant return predictors after controlling for model-free option-implied skewness (Bakshi et al., 2003).

Table A3 examines whether the return predictability associated with the sophisticated trading measures might be driven by their ability to proxy for option market illiquidity. High absolute implied volatility spreads might indicate violations of put-call-parity, market inefficiency, and illiquidity. We therefore include absolute values of VS_{CW} and VS_{BH} in our regression analyses. Table A3 shows that the previously documented findings remain qualitatively unchanged. Note that we do not run this analysis for SMIRK for two reasons. First, SMIRK also reflects the slope of the implied volatility curve and is therefore not linked to potential violations of put-call-parity. Second, SMIRK is negative for most observations of our sample such that the resulting high multicollinearity of SMIRK and abs(SMIRK) does not allow for reasonable regression analyses.

Battalio and Schultz (2006) argue that nonsynchroneity issues can arise if stock and option market closing time do not coincide perfectly. To address this microstructure concern, we also perform Fama-MacBeth-regressions where we skip the first overnight return when measuring subsequent returns (Table A4). This procedure rules out that the subsequent return measurement begins before option closing prices are available.

In Table A5, we examine the negative relationship between IVol and sophisticated trading measures in Fama-MacBeth-regressions. The negative relationship is highly significant even after controlling for analyst forecast dispersion (sourced from the Institutional Brokers

Estimate System, I/B/E/S). This finding mitigates potential concerns that the documented

negative relation is merely due to IVol's ability to reflect investor disagreement. Finally,

Table A5 documents that IVol also negatively predicts the level of the sophisticated trading

measures after controlling for all the other control variables introduced in the main paper.

Table A2. Fama-MacBeth-Regressions and MFIS
The table reports Fama-MacBeth-regression estimates for the sample period from January 1996 to April 2016 based on weekly data. The dependent variable is the stock return of the subsequent week. The explanatory variables are given in the first column. IVol is the stock's idiosyncratic volatility. It is estimated over the previous week based on FFC-adjusted returns where factor loadings are estimated over the previous year skipping one month. VS_{CW} and VS_{BH} are the implied volatility spreads following Cremers and Weinbaum (2010) and Bali and Hovakimian (2009), respectively. The estimation of SMIRK follows Xing et al. (2010). MAX is the maximum daily return of the previous week. REV denotes the stock return of the previous week. MV is the market capitalization of the stock. BM refers to the stock's book-to-market-ratio. MOM is the momentum return measured over the previous year skipping one month. ILLIQ corresponds to the illiquidity measure of Amihud (2002) in billions estimated over the previous year. The model-free option-implied skewness, MFIS, following Bakshi et al. (2003) is applied as additional control variable. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags.

	(1)	(2)	(3)	(4)	(5)	(6)
intercept	0.0047	0.0030	0.0030	0.0036	0.0047	0.0060
	(5.45)	(2.80)	(2.85)	(3.53)	(5.59)	(1.61)
IVol	-0.0047				-0.0041	-0.0044
	(-4.41)				(-3.90)	(-4.74)
VS_{CW}		0.0338			0.0135	0.0118
		(10.97)			(3.07)	(2.81)
VS_{BH}			0.0371		0.0185	0.0210
			(11.06)		(3.76)	(4.59)
SMIRK				0.0259	0.0078	0.0072
				(7.82)	(2.22)	(2.59)
MAX						0.0027
						(0.23)
REV						-0.0106
						(-2.15)
ln(MV)						-0.0001
						(-0.68)
BM						0.0003
						(0.41)
MOM						0.0006
						(0.94)
ILLIQ						0.0000
						(0.17)
MFIS	0.0023	0.0010	0.0011	0.0007	0.0011	0.0007
	(6.48)	(2.57)	(2.74)	(1.68)	(2.85)	(2.37)

Table A3. Fama-MacBeth-Regressions and Absolute Implied Volatility Spreads

The table reports Fama-MacBeth-regression estimates for the sample period from January 1996 to April 2016 based on weekly data. The dependent variable is the stock return of the subsequent week. The explanatory variables are given in the first column. IVol is the stock's idiosyncratic volatility. It is estimated over the previous week based on FFC-adjusted returns where factor loadings are estimated over the previous year skipping one month. VS_{CW} and VS_{BH} are the implied volatility spreads following Cremers and Weinbaum (2010) and Bali and Hovakimian (2009), respectively. The estimation of SMIRK follows Xing et al. (2010). MAX is the maximum daily return of the previous week. REV denotes the stock return of the previous week. MV is the market capitalization of the stock. BM refers to the stock's book-to-market-ratio. MOM is the momentum return measured over the previous year skipping one month. ILLIQ corresponds to the illiquidity measure of Amihud (2002) in billions estimated over the previous year. The model-free option-implied skewness, MFIS, following Bakshi et al. (2003) is applied as additional control variable. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags.

	(1)	(2)	(3)	(4)	(5)	(6)
intercept	0.0036	0.0024	0.0024	0.0034	0.0039	0.0066
	(4.91)	(2.76)	(2.78)	(3.95)	(5.34)	(1.75)
IVol	-0.0036				-0.0037	-0.0044
	(-3.34)				(-3.52)	(-4.67)
VS_{CW}		0.0369			0.0135	0.0120
		(10.54)			(2.71)	(2.40)
VS_{BH}			0.0417		0.0223	0.0251
			(10.39)		(3.74)	(4.39)
SMIRK				0.0260	0.0115	0.0096
				(8.41)	(3.50)	(3.64)
MAX						0.0035
						(0.30)
REV						-0.0109
						(-2.22)
ln(MV)						-0.0001
						(-0.99)
BM						0.0003
						(0.43)
MOM						0.0005
						(0.92)
ILLIQ						0.0000
						(0.22)
abs(VS_{CW})	-0.0024	0.0045	-0.0061	-0.0040	0.0096	0.0069
	(-0.43)	(0.67)	(-0.97)	(-0.64)	(1.49)	(1.10)
abs(VS_{BH})	-0.0118	-0.0049	0.0073	-0.0048	-0.0007	0.0012
	(-2.01)	(-0.80)	(1.14)	(-0.80)	(-0.11)	(0.18)

Table A4. Fama-MacBeth-Regressions – Open-to-Close-Returns

The table reports Fama-MacBeth-regression estimates for the sample period from January 1996 to April 2016 based on weekly data. The dependent variable is the stock return of the subsequent week. Return measurement starts with the open price of the next trading day after portfolio formation. The explanatory variables are given in the first column. IVol is the stock's idiosyncratic volatility. It is estimated over the previous week based on FFC-adjusted returns where factor loadings are estimated over the previous year skipping one month. VS_{CW} and VS_{BH} are the implied volatility spreads following Cremers and Weinbaum (2010) and Bali and Hovakimian (2009), respectively. The estimation of SMIRK follows Xing et al. (2010). MAX is the maximum daily return of the previous week. REV denotes the stock return of the previous week. MV is the market capitalization of the stock. BM refers to the stock's book-to-market-ratio. MOM is the momentum return measured over the previous year skipping one month. ILLIQ corresponds to the illiquidity measure of Amihud (2002) in billions estimated over the previous year. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags.

	(1)	(2)	(3)	(4)	(5)	(6)
intercept	0.0033	0.0016	0.0016	0.0022	0.0038	0.0044
	(4.43)	(1.74)	(1.77)	(2.48)	(5.05)	(1.15)
IVol	-0.0059				-0.0055	-0.0059
	(-5.42)				(-5.16)	(-6.23)
VS_{CW}		0.0218			0.0068	0.0047
		(8.05)			(1.61)	(1.19)
VS_{BH}			0.0240		0.0108	0.0131
			(8.20)		(2.29)	(3.01)
SMIRK				0.0189	0.0088	0.0079
				(6.77)	(2.78)	(3.08)
MAX						0.0036
						(0.30)
REV						-0.0127
						(-2.68)
ln(MV)						-0.0001
						(-0.35)
BM						0.0004
						(0.68)
MOM						0.0001
						(0.13)
ILLIQ						0.0000
						(0.47)

Table A5. Measures of Informed Trading, Idiosyncratic Volatility, and Analyst Forecast Dispersion

The table provides weekly Fama-MacBeth-regression estimates. The dependent variable is one of the three sophisticated trading measures: VS_{CW} and VS_{BH} are the implied volatility spreads following Cremers and Weinbaum (2010) and Bali and Hovakimian (2009), respectively; the estimation of SMIRK follows Xing et al. (2010). The independent variables are as follows: IVol is the stock's idiosyncratic volatility. It is estimated over the previous week based on FFC-adjusted returns where factor loadings are estimated over the previous year skipping one month. Analyst forecast dispersion (DISP) data are sourced from the Institutional Brokers Estimate System (I/B/E/S) detail file using a forecast period of one year. For each firm-week, we measure the analyst dispersion as the standard deviation of all earnings per share forecasts, divided by the current stock price. MAX is the maximum daily return of the previous week. REV denotes the stock return of the previous week. MV is the market capitalization of the stock. BM refers to the stock's book-to-market-ratio. MOM is the momentum return measured over the previous year skipping one month. ILLIQ corresponds to the illiquidity measure of Amihud (2002) in billions estimated over the previous year. The sample period covers January 1996 to April 2016. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags.

	VS_{CW}	VS_{BH}	SMIRK	VS_{CW}	VS_{BH}	SMIRK	VS_{CW}	VS_{BH}	SMIRK
intercept	-0.0056	-0.0072	-0.0469	-0.0058	-0.0074	-0.0468	-0.0406	-0.0363	-0.0657
	(-9.77)	(-15.10)	(-56.00)	(-9.77)	(-15.12)	(-55.84)	(-12.88)	(-11.81)	(-15.80)
IVol	-0.0154	-0.0111	-0.0105	-0.0113	-0.0073	-0.0059	-0.0113	-0.0078	-0.0056
	(-13.40)	(-11.45)	(-11.47)	(-11.76)	(-9.18)	(-7.49)	(-7.97)	(-6.29)	(-5.15)
DISP				-0.1457	-0.1254	-0.3326	-0.1426	-0.1052	-0.2656
				(-5.95)	(-5.92)	(-11.40)	(-5.61)	(-4.37)	(-9.05)
MAX							0.0885	0.0841	0.0463
							(6.92)	(7.29)	(4.16)
REV							-0.1207	-0.1044	-0.0730
							(-21.72)	(-20.22)	(-16.04)
ln(MV)							0.0015	0.0012	0.0008
							(11.32)	(9.63)	(4.70)
BM							0.0023	0.0018	-0.0007
							(5.27)	(4.24)	(-1.25)
MOM							0.0002	0.0005	0.0035
							(0.65)	(1.71)	(9.46)
ILLIQ							-0.0003	-0.0003	-0.0004
							(-5.21)	(-6.34)	(-6.46)

3. Portfolio Sorts Based on Unadjusted and Value-Weighted Returns

This section comprises all portfolio analyses from the original article for unadjusted and value-weighted returns (Tables A6 to A15).

Table A6. Conditional Double Sorts on Measures of Informed Trading and Idiosyncratic Volatility – Unadjusted Returns

The table reports equally-weighted portfolio raw returns for the week after portfolio formation. First, each stock is allocated to one tercile (columns) based on the implied volatility spread following Cremers and Weinbaum (2010), VS_{CW}, the implied volatility spread following Bali and Hovakimian (2009), VS_{BH}, or SMIRK based on Xing et al. (2010). Second, within each tercile, every stock is assigned to an IVol tercile (rows) based on its idiosyncratic volatility. The sample period covers January 1996 to April 2016. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags. Subsequent returns are stated in %.

	first sorting criterion VS_{CW}					first sorting criterion VS_{BH}					first sorting criterion SMIRK				
IVol	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)
low	0.10	0.21	0.42	0.31	(9.03)	0.11	0.23	0.41	0.30	(9.54)	0.15	0.25	0.34	0.20	(6.97)
2	0.04	0.24	0.40	0.35	(8.91)	0.04	0.21	0.40	0.36	(9.68)	0.11	0.21	0.36	0.25	(5.76)
high	-0.12	0.16	0.28	0.40	(7.72)	-0.14	0.14	0.33	0.47	(8.48)	-0.12	0.14	0.27	0.39	(6.77)
3-1	-0.22	-0.05	-0.14			-0.25	-0.09	-0.08			-0.26	-0.11	-0.07		
t(3-1)	(-2.70)	(-0.70)	(-1.61)			(-3.02)	(-1.26)	(-0.96)			(-3.11)	(-1.42)	(-0.86)		

Table A7. Conditional Double Sort on Private Investor Attention and Idiosyncratic Volatility – Unadjusted Returns

The table reports equally-weighted portfolio raw returns for the week after portfolio formation from January 2005 to April 2016. First, each stock is allocated to one tercile (columns) based on the stock's abnormal search volume index (ASVI). ASVI is calculated as the log-difference between the Google Search Volume of one week and the median Google Search Volume of the previous eight weeks. Second, within each tercile, every stock is assigned to an IVol tercile (rows) based on its idiosyncratic volatility. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags. Subsequent raw returns are stated in %.

	Private Investor Attention		
IVol	low	2	high
low	0.21	0.23	0.24
2	0.22	0.22	0.24
high	0.17	0.17	0.13
3-1	-0.04	-0.06	-0.11
t(3-1)	(-0.63)	(-0.99)	(-1.91)

Table A8. Conditional Triple Sorts on Private Investor Attention, Measures of Informed Trading, and Idiosyncratic Volatility – Unadjusted Returns

This table reports equally-weighted portfolio raw returns for the week after portfolio formation from January 2005 to April 2016. First, each stock is allocated to a tercile portfolio based on investor attention (abnormal search volume index based on Google Trends data). Second, within each tercile, every stock is allocated to one tercile (columns) based on the implied volatility spread following Cremers and Weinbaum (2010), VS_{CW}, the implied volatility spread following Bali and Hovakimian (2009), VS_{BH}, or SMIRK based on Xing et al. (2010). Third, within each tercile, every stock is assigned to an IVol tercile (rows) based on its idiosyncratic volatility. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags. The subsequent raw returns are stated in %.

Panel A: High Private Investor Attention

	VS_{CW}					VS_{BH}					SMIRK				
IVol	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)
low	0.13	0.23	0.35	0.22	(4.06)	0.17	0.22	0.34	0.17	(3.39)	0.18	0.24	0.32	0.14	(2.62)
2	0.19	0.23	0.33	0.15	(2.44)	0.17	0.23	0.30	0.13	(2.18)	0.17	0.24	0.30	0.13	(1.76)
high	-0.03	0.20	0.22	0.25	(3.18)	-0.02	0.18	0.26	0.28	(3.47)	-0.04	0.17	0.25	0.29	(3.27)
3-1	-0.16	-0.03	-0.13			-0.19	-0.04	-0.08			-0.22	-0.07	-0.06		
t(3-1)	(-1.95)	(-0.47)	(-1.93)			(-2.27)	(-0.55)	(-1.12)			(-2.68)	(-1.02)	(-0.81)		

Panel B: Low Private Investor Attention

	VS_{CW}					VS_{BH}					SMIRK				
IVol	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)
low	0.18	0.18	0.27	0.10	(1.86)	0.13	0.20	0.30	0.18	(3.58)	0.22	0.14	0.29	0.07	(1.52)
2	0.17	0.15	0.32	0.14	(2.52)	0.19	0.15	0.30	0.11	(1.89)	0.20	0.21	0.25	0.05	(0.68)
high	0.08	0.20	0.23	0.15	(1.85)	0.06	0.18	0.27	0.22	(2.72)	0.09	0.16	0.22	0.13	(1.53)
3-1	-0.10	0.02	-0.05			-0.07	-0.02	-0.03			-0.13	0.02	-0.07		
t(3-1)	(-1.08)	(0.27)	(-0.57)			(-0.76)	(-0.27)	(-0.33)			(-1.31)	(0.32)	(-0.84)		

Table A9. Conditional Triple Sorts on Market Frictions, Measures of Informed Trading, and Idiosyncratic Volatility – Unadjusted Returns

This table reports equally-weighted portfolio raw returns for the week after portfolio formation from January 1996 to April 2016. First, each stock is allocated to a tercile portfolio based on Amihud illiquidity (Panels A and B), residual institutional ownership (Panels C and D), the stock's average bid-ask-spread over the previous year (Panels E and F), and option-implied volatility (Panels G and H). The table shows top and bottom tercile only. Second, within each portfolio, every stock is allocated to one tercile (columns) based on the implied volatility spread following Cremers and Weinbaum (2010), VS_{CW}, the implied volatility spread following Bali and Hovakimian (2009), VS_{BH}, or SMIRK based on Xing et al. (2010). Third, within each tercile, every stock is assigned to an IVol tercile (rows) based on its idiosyncratic volatility. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags. The subsequent raw returns are stated in %.

Panel A: High Amihud Illiquidity

IVol	VS_{CW} low	2	high	VS_{BH} low	2	high	SMIRK low	2	high
low	-0.00	0.17	0.46	0.01	0.18	0.47	0.04	0.20	0.38
2	-0.00	0.14	0.39	-0.09	0.15	0.45	0.06	0.12	0.37
high	-0.21	0.07	0.29	-0.25	0.05	0.35	-0.23	0.05	0.33
3-1	-0.21	-0.10	-0.17	-0.26	-0.13	-0.12	-0.27	-0.15	-0.06
t(3-1)	(-2.26)	(-1.15)	(-1.98)	(-2.85)	(-1.43)	(-1.52)	(-2.97)	(-1.72)	(-0.68)

Panel B: Low Amihud Illiquidity

IVol	VS_{CW} low	2	high	VS_{BH} low	2	high	SMIRK low	2	high
low	0.14	0.21	0.36	0.17	0.21	0.34	0.17	0.24	0.31
2	0.06	0.25	0.39	0.07	0.24	0.39	0.17	0.21	0.36
high	-0.02	0.16	0.33	-0.01	0.17	0.29	-0.01	0.18	0.25
3-1	-0.16	-0.06	-0.04	-0.18	-0.05	-0.05	-0.18	-0.07	-0.06
t(3-1)	(-2.00)	(-0.75)	(-0.44)	(-2.22)	(-0.63)	(-0.59)	(-2.26)	(-0.88)	(-0.78)

Panel C: Low Residual Inst. Ownership

IVol	VS_{CW} low	2	high	VS_{BH} low	2	high	SMIRK low	2	high
low	0.09	0.20	0.45	0.07	0.22	0.45	0.13	0.22	0.35
2	0.03	0.21	0.37	0.00	0.19	0.41	0.09	0.24	0.35
high	-0.19	0.06	0.24	-0.22	0.09	0.26	-0.20	0.12	0.17
3-1	-0.28	-0.14	-0.22	-0.29	-0.13	-0.18	-0.33	-0.10	-0.18
t(3-1)	(-2.65)	(-1.48)	(-2.14)	(-2.79)	(-1.36)	(-1.77)	(-3.17)	(-0.99)	(-1.78)

Panel D: High Residual Inst. Ownership

IVol	VS_{CW} low	2	high	VS_{BH} low	2	high	SMIRK low	2	high
low	0.12	0.21	0.39	0.14	0.22	0.34	0.15	0.23	0.32
2	0.05	0.22	0.34	0.05	0.21	0.37	0.13	0.23	0.31
high	-0.16	0.17	0.28	-0.17	0.16	0.29	-0.11	0.08	0.28
3-1	-0.28	-0.04	-0.11	-0.31	-0.06	-0.05	-0.26	-0.15	-0.04
t(3-1)	(-3.59)	(-0.52)	(-1.30)	(-3.85)	(-0.83)	(-0.58)	(-3.17)	(-2.02)	(-0.49)

Panel E: High Bid-Ask-Spread

IVol	VS_{CW} low	2	high	VS_{BH} low	2	high	SMIRK low	2	high
low	0.03	0.18	0.50	0.05	0.18	0.49	0.08	0.24	0.40
2	-0.04	0.20	0.40	-0.08	0.20	0.42	0.08	0.11	0.35
high	-0.14	0.09	0.31	-0.20	0.14	0.32	-0.18	0.16	0.29
3-1	-0.17	-0.09	-0.19	-0.25	-0.04	-0.17	-0.27	-0.08	-0.12
t(3-1)	(-2.06)	(-1.25)	(-2.34)	(-3.05)	(-0.54)	(-2.07)	(-3.09)	(-1.10)	(-1.42)

Panel F: Low Bid-Ask-Spread

IVol	VS_{CW} low	2	high	VS_{BH} low	2	high	SMIRK low	2	high
low	0.13	0.19	0.36	0.13	0.22	0.35	0.15	0.23	0.29
2	0.14	0.24	0.37	0.12	0.21	0.41	0.12	0.23	0.36
high	-0.01	0.14	0.28	-0.00	0.16	0.25	0.01	0.17	0.26
3-1	-0.14	-0.05	-0.07	-0.13	-0.06	-0.10	-0.14	-0.07	-0.03
t(3-1)	(-1.64)	(-0.64)	(-0.82)	(-1.52)	(-0.73)	(-1.11)	(-1.63)	(-0.87)	(-0.37)

Panel G: High Option-Implied Volatility

IVol	VS_{CW} low	2	high	VS_{BH} low	2	high	SMIRK low	2	high
low	0.00	0.16	0.46	-0.06	0.19	0.49	0.05	0.19	0.46
2	-0.07	0.19	0.40	-0.02	0.17	0.41	-0.01	0.17	0.34
high	-0.30	-0.06	0.20	-0.35	-0.05	0.21	-0.36	-0.02	0.19
3-1	-0.30	-0.22	-0.26	-0.28	-0.24	-0.28	-0.41	-0.20	-0.28
t(3-1)	(-3.50)	(-2.88)	(-3.12)	(-3.21)	(-3.17)	(-3.32)	(-4.80)	(-2.45)	(-3.26)

Panel H: Low Option-Implied Volatility

IVol	VS_{CW} low	2	high	VS_{BH} low	2	high	SMIRK low	2	high
low	0.14	0.21	0.33	0.14	0.24	0.32	0.18	0.26	0.26
2	0.16	0.24	0.37	0.17	0.24	0.35	0.19	0.23	0.32
high	0.09	0.18	0.30	0.08	0.18	0.31	0.13	0.16	0.28
3-1	-0.05	-0.04	-0.03	-0.07	-0.06	-0.01	-0.05	-0.10	0.02
t(3-1)	(-1.60)	(-1.14)	(-0.88)	(-1.94)	(-1.78)	(-0.22)	(-1.55)	(-3.21)	(0.60)

Table A10. Conditional Triple Sorts on Market Frictions, Private Investor Attention, and Idiosyncratic Volatility – Unadjusted Returns

This table reports equally-weighted portfolio raw returns for the week after portfolio formation from January 2005 to April 2016. First, each stock is allocated to a tercile portfolio based on Amihud illiquidity (Panels A and B), residual institutional ownership (Panels C and D), the stock's average bid-ask-spread over the previous year (Panels E and F), and option-implied volatility (Panels G and H). The table shows top and bottom tercile only. Second, each observation is allocated to one tercile (columns) based on investor attention. For investor attention, the allocation depends on the stock's abnormal search volume index (ASVI). ASVI is calculated as the log-difference between the Google Search Volume of one week and the median Google Search Volume of the previous eight weeks. Third, within each tercile, every stock is assigned to an IVol tercile (rows) based on its idiosyncratic volatility. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags. Subsequent raw returns are stated in %.

	Panel A: High Amihud Illiquidity			Panel B: Low Amihud Illiquidity		
	Private Investor Attention			Private Investor Attention		
IVol	low	2	high	low	2	high
low	0.17	0.24	0.28	0.19	0.23	0.17
2	0.21	0.23	0.27	0.20	0.20	0.21
high	0.19	0.13	0.14	0.19	0.19	0.05
3-1	0.02	-0.11	-0.14	0.00	-0.04	-0.12
t(3-1)	(0.20)	(-1.41)	(-1.69)	(0.00)	(-0.67)	(-1.67)

	Panel C: Low Residual Inst. Ownership			Panel D: High Residual Inst. Ownership		
	Private Investor Attention			Private Investor Attention		
IVol	low	2	high	low	2	high
low	0.19	0.23	0.28	0.21	0.22	0.21
2	0.26	0.21	0.18	0.16	0.17	0.23
high	0.11	0.18	0.09	0.12	0.12	0.08
3-1	-0.08	-0.05	-0.19	-0.10	-0.10	-0.12
t(3-1)	(-0.88)	(-0.67)	(-2.28)	(-1.24)	(-1.51)	(-1.91)

	Panel E: High Bid-Ask-Spread			Panel F: Low Bid-Ask-Spread		
	Private Investor Attention			Private Investor Attention		
IVol	low	2	high	low	2	high
low	0.20	0.25	0.29	0.25	0.25	0.20
2	0.18	0.21	0.19	0.20	0.21	0.23
high	0.21	0.18	0.10	0.16	0.14	0.15
3-1	0.01	-0.06	-0.19	-0.08	-0.11	-0.06
t(3-1)	(0.11)	(-0.83)	(-2.18)	(-1.35)	(-1.87)	(-0.97)

	Panel G: High Option-Implied Volatility			Panel H: Low Option-Implied Volatility		
	Private Investor Attention			Private Investor Attention		
IVol	low	2	high	low	2	high
low	0.21	0.29	0.28	0.20	0.22	0.24
2	0.21	0.22	0.21	0.21	0.23	0.23
high	0.12	0.12	0.05	0.17	0.20	0.17
3-1	-0.09	-0.17	-0.22	-0.02	-0.02	-0.07
t(3-1)	(-0.91)	(-2.10)	(-2.45)	(-0.54)	(-0.64)	(-2.16)

Table A11. Conditional Double Sorts on Measures of Informed Trading and Idiosyncratic Volatility – Value-Weighted Returns

This table reports value-weighted FFC-adjusted portfolio returns for the week after portfolio formation. First, each stock is allocated to one tercile (columns) based on the implied volatility spread following Cremers and Weinbaum (2010), VS_{CW}, the implied volatility spread following Bali and Hovakimian (2009), VS_{BH}, or SMIRK based on Xing et al. (2010). Second, within each tercile, every stock is assigned to an IVol tercile (rows) based on its idiosyncratic volatility. The sample period covers January 1996 to April 2016. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags. Subsequent FFC-adjusted returns are stated in %.

	first sorting criterion VS_{CW}					first sorting criterion VS_{BH}					first sorting criterion SMIRK				
IVol	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)
low	-0.14	0.01	0.22	0.36	(7.41)	-0.10	0.01	0.21	0.31	(6.75)	-0.05	0.04	0.15	0.19	(4.82)
2	-0.19	-0.03	0.17	0.36	(6.16)	-0.20	-0.04	0.19	0.39	(6.22)	-0.09	0.01	0.10	0.19	(3.09)
high	-0.35	-0.02	0.08	0.43	(5.64)	-0.32	-0.07	0.09	0.41	(5.28)	-0.26	-0.04	0.00	0.26	(3.52)
3-1	-0.21	-0.03	-0.14			-0.22	-0.08	-0.12			-0.21	-0.08	-0.15		
t(3-1)	(-3.05)	(-0.55)	(-1.94)			(-3.32)	(-1.46)	(-1.72)			(-3.19)	(-1.44)	(-2.11)		

Table A12. Conditional Double Sort on Private Investor Attention and Idiosyncratic Volatility – Value-Weighted Returns

This table reports value-weighted FFC-adjusted portfolio returns for the week after portfolio formation from January 2005 to April 2016. First, each stock is allocated to one tercile (columns) based on the stock's abnormal search volume index (ASVI). ASVI is calculated as the log-difference between the Google Search Volume of one week and the median Google Search Volume of the previous eight weeks. Second, within each tercile, every stock is assigned to an IVol tercile (rows) based on its idiosyncratic volatility. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags. Subsequent FFC-adjusted returns are stated in %.

	Private Investor Attention		
IVol	low	2	high
low	0.02	0.02	0.02
2	0.01	-0.01	-0.06
high	-0.02	-0.05	-0.15
3-1	-0.04	-0.07	-0.17
t(3-1)	(-0.65)	(-1.18)	(-2.92)

Table A13. Conditional Triple Sorts on Private Investor Attention, Measures of Informed Trading, and Idiosyncratic Volatility – Value-Weighted Returns

This table reports value-weighted FFC-adjusted portfolio returns for the week after portfolio formation from January 2005 to April 2016. First, each stock is allocated to a tercile portfolio based on investor attention (abnormal search volume index based on Google Trends data). Second, within each tercile, every stock is allocated to one tercile (columns) based on the implied volatility spread following Cremers and Weinbaum (2010), VS_{CW}, the implied volatility spread following Bali and Hovakimian (2009), VS_{BH}, or SMIRK based on Xing et al. (2010). Third, within each tercile, every stock is assigned to an IVol tercile (rows) based on its idiosyncratic volatility. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags. The subsequent FFC-adjusted returns are stated in %.

Panel A: High Private Investor Attention

IVol	VS_{CW}					VS_{BH}					SMIRK				
	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)
low	-0.09	-0.01	0.20	0.29	(3.82)	-0.05	-0.01	0.12	0.17	(2.24)	-0.01	-0.05	0.15	0.15	(2.67)
2	-0.05	-0.04	-0.03	0.02	(0.19)	-0.03	-0.01	-0.02	0.02	(0.21)	-0.02	-0.04	0.01	0.03	(0.38)
high	-0.38	-0.08	0.00	0.38	(3.37)	-0.30	-0.13	-0.04	0.26	(2.26)	-0.38	-0.08	0.01	0.39	(3.02)
3-1	-0.28	-0.07	-0.20			-0.25	-0.13	-0.16			-0.37	-0.03	-0.14		
t(3-1)	(-3.03)	(-0.89)	(-2.38)			(-2.88)	(-1.63)	(-1.75)			(-4.14)	(-0.39)	(-1.44)		

Panel B: Low Private Investor Attention

IVol	VS_{CW}					VS_{BH}					SMIRK				
	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)
low	-0.07	0.00	0.08	0.14	(2.27)	-0.07	-0.00	0.14	0.21	(3.97)	0.04	-0.05	0.10	0.06	(0.93)
2	-0.03	-0.04	0.17	0.20	(2.01)	-0.05	-0.07	0.20	0.25	(2.77)	0.07	0.02	0.04	-0.03	(-0.29)
high	-0.11	-0.03	0.07	0.18	(1.89)	-0.08	-0.03	0.07	0.15	(1.37)	-0.09	0.02	0.03	0.12	(1.19)
3-1	-0.05	-0.03	-0.01			-0.00	-0.03	-0.07			-0.13	0.07	-0.07		
t(3-1)	(-0.49)	(-0.43)	(-0.07)			(-0.05)	(-0.39)	(-0.82)			(-1.26)	(0.97)	(-0.78)		

Table A14. Conditional Triple Sorts on Market Frictions, Measures of Informed Trading, and Idiosyncratic Volatility – Value-Weighted Returns

This table reports value-weighted FFC-adjusted portfolio returns for the week after portfolio formation from January 1996 to April 2016. First, each stock is allocated to a tercile portfolio based on Amihud illiquidity (Panels A and B), residual institutional ownership (Panels C and D), the stock's average bid-ask-spread over the previous year (Panels E and F), and option-implied volatility (Panels G and H). The table shows top and bottom tercile only. Second, within each portfolio, every stock is allocated to one tercile (columns) based on the implied volatility spread following Cremers and Weinbaum (2010), VS_{CW}, the implied volatility spread following Bali and Hovakimian (2009), VS_{BH}, or SMIRK based on Xing et al. (2010). Third, within each tercile, every stock is assigned to an IVol tercile (rows) based on its idiosyncratic volatility. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags. The subsequent FFC-adjusted returns are stated in %.

	Panel A: High Amihud Illiquidity									Panel B: Low Amihud Illiquidity								
	VS_{CW}			VS_{BH}			SMIRK			VS_{CW}			VS_{BH}			SMIRK		
IVol	low	2	high	low	2	high	low	2	high	low	2	high	low	2	high	low	2	high
low	-0.20	-0.06	0.22	-0.20	-0.01	0.22	-0.17	-0.04	0.17	-0.09	0.05	0.21	-0.06	0.03	0.19	-0.04	0.03	0.15
2	-0.27	-0.03	0.15	-0.32	-0.03	0.17	-0.17	-0.13	0.15	-0.21	-0.01	0.19	-0.24	-0.00	0.20	-0.10	0.02	0.15
high	-0.38	-0.20	0.01	-0.42	-0.25	0.06	-0.42	-0.20	0.03	-0.18	-0.05	0.15	-0.19	-0.05	0.13	-0.13	-0.01	0.04
3-1	-0.18	-0.14	-0.21	-0.22	-0.23	-0.15	-0.24	-0.16	-0.14	-0.09	-0.10	-0.06	-0.13	-0.08	-0.06	-0.09	-0.04	-0.11
t(3-1)	(-2.11)	(-1.69)	(-2.53)	(-2.64)	(-2.65)	(-1.85)	(-2.79)	(-1.96)	(-1.64)	(-1.46)	(-1.91)	(-0.86)	(-2.03)	(-1.41)	(-0.94)	(-1.41)	(-0.81)	(-1.68)

	Panel C: Low Residual Inst. Ownership									Panel D: High Residual Inst. Ownership								
	VS_{CW}			VS_{BH}			SMIRK			VS_{CW}			VS_{BH}			SMIRK		
IVol	low	2	high	low	2	high	low	2	high	low	2	high	low	2	high	low	2	high
low	-0.20	0.03	0.22	-0.17	-0.01	0.27	-0.05	0.04	0.13	-0.09	0.01	0.22	-0.09	0.02	0.18	-0.05	0.07	0.16
2	-0.19	-0.08	0.15	-0.23	-0.08	0.11	-0.01	-0.02	0.01	-0.16	-0.09	0.14	-0.24	-0.06	0.19	-0.05	-0.08	0.10
high	-0.32	-0.20	0.01	-0.37	-0.07	0.01	-0.21	-0.09	-0.12	-0.38	0.04	0.11	-0.37	-0.01	0.13	-0.27	-0.07	0.09
3-1	-0.12	-0.22	-0.21	-0.21	-0.07	-0.26	-0.16	-0.13	-0.26	-0.29	0.02	-0.11	-0.28	-0.04	-0.04	-0.22	-0.15	-0.06
t(3-1)	(-1.14)	(-2.52)	(-2.24)	(-1.97)	(-0.77)	(-2.58)	(-1.57)	(-1.41)	(-2.65)	(-3.03)	(0.30)	(-1.23)	(-3.07)	(-0.50)	(-0.46)	(-2.55)	(-1.85)	(-0.76)

	Panel E: High Bid-Ask-Spread									Panel F: Low Bid-Ask-Spread								
	VS_{CW}			VS_{BH}			SMIRK			VS_{CW}			VS_{BH}			SMIRK		
IVol	low	2	high	low	2	high	low	2	high	low	2	high	low	2	high	low	2	high
low	-0.17	-0.09	0.30	-0.11	-0.06	0.25	-0.05	-0.02	0.17	-0.14	-0.00	0.22	-0.12	-0.02	0.22	-0.09	0.01	0.16
2	-0.30	-0.05	0.11	-0.32	0.04	0.07	-0.12	-0.09	0.11	-0.22	-0.01	0.10	-0.13	-0.05	0.14	-0.12	-0.04	0.12
high	-0.40	-0.10	0.10	-0.51	0.02	0.07	-0.29	-0.09	0.01	-0.19	-0.06	0.09	-0.20	-0.04	0.06	-0.13	-0.02	0.04
3-1	-0.24	-0.01	-0.19	-0.40	0.07	-0.18	-0.24	-0.06	-0.16	-0.05	-0.06	-0.13	-0.08	-0.01	-0.16	-0.04	-0.03	-0.13
t(3-1)	(-2.41)	(-0.15)	(-1.92)	(-4.17)	(0.82)	(-1.81)	(-2.54)	(-0.73)	(-1.72)	(-0.57)	(-0.72)	(-1.29)	(-1.02)	(-0.18)	(-1.63)	(-0.48)	(-0.32)	(-1.41)

	Panel G: High Option-Implied Volatility									Panel H: Low Option-Implied Volatility								
	VS_{CW}			VS_{BH}			SMIRK			VS_{CW}			VS_{BH}			SMIRK		
IVol	low	2	high	low	2	high	low	2	high	low	2	high	low	2	high	low	2	high
low	-0.21	-0.03	0.33	-0.27	-0.00	0.31	-0.17	-0.03	0.37	-0.07	0.02	0.14	-0.04	0.02	0.12	0.01	0.04	0.09
2	-0.29	-0.01	0.16	-0.28	-0.07	0.13	-0.31	0.00	0.08	-0.08	-0.01	0.24	-0.11	0.02	0.20	-0.03	0.03	0.16
high	-0.39	-0.30	0.12	-0.46	-0.17	0.03	-0.43	-0.14	-0.06	-0.13	-0.03	0.10	-0.17	-0.04	0.13	-0.07	-0.05	0.13
3-1	-0.18	-0.27	-0.22	-0.18	-0.16	-0.29	-0.26	-0.11	-0.43	-0.06	-0.04	-0.04	-0.13	-0.06	0.02	-0.07	-0.09	0.03
t(3-1)	(-1.60)	(-2.34)	(-1.62)	(-1.65)	(-1.50)	(-2.16)	(-2.29)	(-0.90)	(-3.24)	(-1.22)	(-0.97)	(-0.73)	(-2.49)	(-1.25)	(0.30)	(-1.53)	(-1.89)	(0.55)

14

Table A15. Conditional Triple Sorts on Market Frictions, Private Investor Attention, and Idiosyncratic Volatility – Value-Weighted Returns

This table reports value-weighted FFC-adjusted portfolio returns for the week after portfolio formation from January 2005 to April 2016. First, each stock is allocated to a tercile portfolio based on Amihud illiquidity (Panels A and B), residual institutional ownership (Panels C and D), the stock's average bid-ask-spread over the previous year (Panels E and F), and option-implied volatility (Panels G and H). The table shows top and bottom tercile only. Second, each observation is allocated to one tercile (columns) based on investor attention. For investor attention, the allocation depends on the stock's abnormal search volume index (ASVI). ASVI is calculated as the log-difference between the Google Search Volume of one week and the median Google Search Volume of the previous eight weeks. Third, within each tercile, every stock is assigned to an IVol tercile (rows) based on its idiosyncratic volatility. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags. Subsequent FFC-adjusted returns are stated in %.

	Panel A: High Amihud Illiquidity			Panel B: Low Amihud Illiquidity		
	Private Investor Attention			Private Investor Attention		
IVol	low	2	high	low	2	high
low	0.00	0.03	0.09	-0.00	0.06	-0.04
2	0.03	0.04	0.05	0.01	-0.05	0.02
high	-0.07	-0.13	-0.05	0.08	-0.00	-0.20
3-1	-0.07	-0.17	-0.14	0.08	-0.06	-0.17
t(3-1)	(-0.83)	(-2.00)	(-1.55)	(1.21)	(-1.03)	(-2.65)

	Panel C: Low Residual Inst. Ownership			Panel D: High Residual Inst. Ownership		
	Private Investor Attention			Private Investor Attention		
IVol	low	2	high	low	2	high
low	-0.00	0.08	0.01	0.06	0.03	-0.02
2	-0.01	-0.04	-0.06	0.02	-0.03	-0.05
high	-0.05	-0.12	-0.11	-0.02	-0.04	-0.24
3-1	-0.05	-0.21	-0.11	-0.07	-0.07	-0.22
t(3-1)	(-0.44)	(-2.37)	(-1.22)	(-0.77)	(-0.94)	(-2.46)

	Panel E: High Bid-Ask-Spread			Panel F: Low Bid-Ask-Spread		
	Private Investor Attention			Private Investor Attention		
IVol	low	2	high	low	2	high
low	-0.01	0.00	0.09	0.03	0.06	0.01
2	0.06	0.05	-0.02	0.02	-0.02	-0.05
high	-0.09	-0.08	-0.21	-0.02	-0.05	-0.09
3-1	-0.08	-0.08	-0.30	-0.05	-0.11	-0.10
t(3-1)	(-0.84)	(-0.78)	(-2.54)	(-0.85)	(-1.81)	(-1.66)

	Panel G: High Option-Implied Volatility			Panel H: Low Option-Implied Volatility		
	Private Investor Attention			Private Investor Attention		
IVol	low	2	high	low	2	high
low	-0.04	0.00	0.03	0.02	0.07	0.01
2	0.11	0.01	-0.09	0.03	0.02	-0.02
high	-0.14	-0.06	-0.15	-0.02	0.03	-0.07
3-1	-0.10	-0.06	-0.19	-0.04	-0.04	-0.09
t(3-1)	(-0.83)	(-0.45)	(-1.37)	(-0.85)	(-0.82)	(-1.88)

4. FURTHER PORTFOLIO SORTS

This section depicts additional portfolio sorts. First, Table A16 provides a single sort on IVol. It confirms the significantly negative relationship between IVol and sophisticated trading measures. Moreover, it supports the previous literature with respect to the asymmetry in subsequent return patterns: the IVol puzzle is largely driven by overvalued high-IVol stocks rather than undervalued low-IVol stocks.

Table A17 depicts portfolio double sorts similar to Table 3 in the main paper showing the average IVol-level for each portfolio. The table suggests that the IVol-differences between high- and low-IVol tercile are very similar across VS_{CW}, VS_{BH}, and SMIRK terciles. This finding mitigates potential concerns that differences in the IVol puzzle's magnitude stem from differences in IVol-differences. Further, we provide additional double sorts to demonstrate that the sorting criterion order does not affect the results in Table 3 of the main paper. In this context, Table A18 sorts first on IVol and second on the measures of informed trading. In Table Table A19, we apply unconditional sorts.

Table A20 shows that the portfolio double sorts on the measures of informed trading and idiosyncratic volatility generate larger return spreads around earnings announcements. This supports the hypothesis that mispricing is more likely to be corrected when fundamental news is released.

Finally, Table A21 presents similar portfolio double sorts to Table 3 in the main paper but controls for the mispricing measure of Stambaugh et al. (2015).[1] Their mispricing score is based on eleven anomaly characteristics and takes on higher values for comparably overvalued stocks. Indeed, the mispricing score is negatively correlated with the three

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[1] The stock-specific mispricing scores are obtained from Robert F. Stambaugh's homepage `http://finance.wharton.upenn.edu/~stambaug/`.

measures of sophisticated option trading (the corresponding correlation coefficients range from -5.91% to -4.07%), that is, stocks that are identified as overvalued by the sophisticated trading measures also tend to be overvalued according to the proposed mispricing score of Stambaugh et al. (2015). To rule out that our findings are subsumed by the mispricing score, we orthogonalize each of the three sophisticated trading measures with respect to the mispricing score. The conditional double sorts in Table A21 are based on these orthogonalized versions. The empirical findings remain virtually identical compared to the baseline analysis.

Table A16. Portfolio Sorts based on Idiosyncratic Volatility
The table reports equally-weighted weekly quintile portfolio sorts based on idiosyncratic volatility IVol for the sample period from January 1996 to April 2016. IVol is the stock's idiosyncratic volatility. It is estimated over the previous week based on FFC-adjusted returns where factor loadings are estimated over the previous year skipping one month. Corresponding portfolio averages are provided in the first column. The second column shows FFC-adjusted portfolio returns of the subsequent week. VS_{CW} and VS_{BH} are the implied volatility spreads following Cremers and Weinbaum (2010) and Bali and Hovakimian (2009), respectively. The estimation of SMIRK follows Xing et al. (2010). MAX is the maximum daily return of the previous week. REV denotes the stock return of the previous week. MV is the market capitalization of the stock. BM refers to the stock's book-to-market-ratio. MOM is the momentum return measured over the previous year skipping one month. ILLIQ corresponds to the illiquidity measure of Amihud (2002) in billions estimated over the previous year. ASVI is the abnormal search volume index calculated as log Google search volume of the previous week minus the median log Google search volume of the preceding eight weeks. ASVI portfolio characteristics refer to a truncated sample period from January 2005 to April 2016. The t-statistics in parentheses refer to the difference portfolio and are based on standard errors following Newey and West (1987) using five lags. Subsequent FFC-adjusted returns, VS_{CW}, VS_{BH}, SMIRK, MAX and REV are stated in %.

	IVol	α_{FFC}	VS_{CW}	VS_{BH}	SMIRK	MAX	REV	ln(MV)	BM	MOM	ILLIQ	ASVI
low	0.12	0.06	-0.73	-0.91	-4.90	1.53	0.04	22.92	0.40	0.17	1.07	-0.01
2	0.19	0.06	-0.79	-0.89	-4.87	2.01	0.01	22.51	0.39	0.20	1.57	-0.01
3	0.26	0.02	-0.86	-0.90	-4.89	2.54	-0.01	22.13	0.38	0.25	2.69	-0.01
4	0.36	-0.03	-0.98	-0.98	-4.91	3.34	0.11	21.76	0.37	0.32	4.01	-0.01
high	0.66	-0.17	-1.52	-1.40	-5.34	5.87	0.80	21.32	0.36	0.47	5.71	0.03
5-1	0.54	-0.23	-0.79	-0.50	-0.44	4.34	0.76	-1.60	-0.04	0.30	4.63	0.04
t(5-1)		(-4.15)	(-13.02)	(-9.81)	(-7.53)	(36.01)	(7.03)	(-76.69)	(-4.58)	(8.83)	(14.75)	(20.13)

Table A17. Conditional Double Sorts on Measures of Informed Trading and Idiosyncratic Volatility

The table reports average IVol characteristics for each portfolio resulting from weekly conditional double sorts. First, each stock is allocated to one tercile (columns) based on the implied volatility spread following Cremers and Weinbaum (2010), VS_{CW}, the implied volatility spread following Bali and Hovakimian (2009), VS_{BH}, or SMIRK based on Xing et al. (2010). Second, within each tercile, every stock is assigned to an IVol tercile (rows) based on its idiosyncratic volatility. The sample period covers January 1996 to April 2016.

	first sorting criterion VS_{CW}				first sorting criterion VS_{BH}				first sorting criterion SMIRK			
IVol	low	2	hig	3-1	low	2	high	3-1	low	2	high	3-1
low	15.48	13.15	14.93	-0.54	14.87	13.56	14.93	0.06	14.72	13.60	15.03	0.31
2	28.75	23.67	27.50	-1.25	27.77	24.49	27.51	-0.26	27.48	24.55	27.71	0.23
high	59.79	48.04	56.34	-3.45	58.28	49.82	56.40	-1.88	58.04	49.98	56.53	-1.52
3-1	44.31	34.88	41.40		43.41	36.25	41.47		43.32	36.39	41.49	

Table A18. Conditional Double Sorts on Idiosyncratic Volatility and Measures of Informed Trading

The table reports equally-weighted FFC-adjusted portfolio returns for the week after portfolio formation. First, each stock is allocated to one tercile (rows) based on its idiosyncratic volatility IVol. Second, within each tercile, every stock is assigned to a tercile portfolio (columns) based on the implied volatility spread following Cremers and Weinbaum (2010), VS_{CW}, the implied volatility spread following Bali and Hovakimian (2009), VS_{BH}, or SMIRK based on Xing et al. (2010). The sample period covers January 1996 to April 2016. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags. Subsequent FFC-adjusted returns are stated in %.

	second sorting criterion VS_{CW}					second sorting criterion VS_{BH}					second sorting criterion SMIRK				
IVol	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)
low	-0.08	0.04	0.22	0.31	(9.58)	-0.08	0.05	0.21	0.29	(9.59)	-0.03	0.06	0.15	0.19	(7.17)
2	-0.13	0.00	0.21	0.34	(9.07)	-0.14	0.01	0.21	0.36	(9.34)	-0.09	0.01	0.16	0.24	(6.22)
high	-0.35	-0.12	0.10	0.45	(8.78)	-0.36	-0.13	0.12	0.48	(9.04)	-0.30	-0.14	0.07	0.37	(7.36)
3-1	-0.27	-0.16	-0.12			-0.28	-0.17	-0.09			-0.27	-0.20	-0.08		
t(3-1)	(-5.02)	(-3.00)	(-2.31)			(-5.18)	(-3.36)	(-1.68)			(-4.80)	(-3.96)	(-1.48)		

Table A19. Unconditional Double Sorts on Idiosyncratic Volatility and Measures of Informed Trading

The table reports equally-weighted FFC-adjusted portfolio returns for the week after portfolio formation. Each stock is independently allocated to one tercile (rows) based on its idiosyncratic volatility and one tercile (columns) based on the implied volatility spread following Cremers and Weinbaum (2010), VS_{CW}, the implied volatility spread following Bali and Hovakimian (2009), VS_{BH}, or SMIRK based on Xing et al. (2010). The sample period covers January 1996 to April 2016. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags. Subsequent FFC-adjusted returns are stated in %.

	VS_{CW}					VS_{BH}					SMIRK				
IVol	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)	low	2	high	3	t(3-1)
low	-0.10	0.04	0.23	0.33	(9.41)	-0.09	0.05	0.22	0.31	(9.71)	-0.03	0.06	0.16	0.19	(6.90)
2	-0.13	0.01	0.21	0.34	(8.77)	-0.14	-0.00	0.22	0.36	(9.40)	-0.08	0.01	0.15	0.23	(6.11)
high	-0.32	-0.09	0.07	0.40	(8.33)	-0.35	-0.11	0.11	0.45	(8.84)	-0.31	-0.11	0.05	0.36	(7.14)
3-1	-0.22	-0.13	-0.15			-0.26	-0.15	-0.12			-0.27	-0.16	-0.10		
t(3-1)	(-4.23)	(-2.41)	(-2.84)			(-4.83)	(-2.87)	(-2.09)			(-4.90)	(-3.29)	(-1.90)		

Table A20. Conditional Double Sorts on Measures of Informed Trading and Idiosyncratic Volatility – Earnings Announcements

The table reports equally-weighted FFC-adjusted portfolio returns for the week after portfolio formation from January 1996 to April 2016. The sample contains only those firms that report quarterly earnings in the subsequent week. First, each stock is allocated to one tercile (columns) based on the implied volatility spread following Cremers and Weinbaum (2010), VS_{CW}, the implied volatility spread following Bali and Hovakimian (2009), VS_{BH}, or SMIRK based on Xing et al. (2010). Second, within each tercile, every stock is assigned to an IVol tercile (rows) based on its idiosyncratic volatility. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags. Subsequent FFC-adjusted returns are stated in %.

	first sorting criterion VS_{CW}					first sorting criterion VS_{BH}					first sorting criterion SMIRK				
IVol	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)
low	0.39	0.50	0.99	0.60	(2.31)	0.33	0.70	0.87	0.54	(1.97)	0.66	0.66	0.70	0.05	(0.19)
2	0.49	0.81	0.94	0.45	(1.62)	0.25	0.61	1.06	0.82	(3.07)	0.37	0.80	0.82	0.45	(1.56)
high	-0.49	0.65	0.14	0.63	(1.87)	-0.45	0.46	0.59	1.04	(2.98)	-0.28	0.42	0.49	0.77	(2.24)
3-1	-0.88	0.15	-0.84			-0.78	-0.24	-0.29			-0.94	-0.24	-0.22		
t(3-1)	(-3.09)	(0.58)	(-2.71)			(-2.72)	(-0.89)	(-0.87)			(-2.84)	(-0.87)	(-0.72)		

Table A21. Conditional Double Sorts on Measures of Informed Trading and Idiosyncratic Volatility – Controlling for Mispricing Score

The table reports equally-weighted FFC-adjusted portfolio returns for the week after portfolio formation from January 1996 to April 2016. For each week, the implied volatility spread following Cremers and Weinbaum (2010), VS_{CW}, the implied volatility spread following Bali and Hovakimian (2009), VS_{BH}, and SMIRK based on Xing et al. (2010) are regressed on the mispricing score as proposed by Stambaugh et al. (2015). Since the mispricing score is provided on an end-of-month basis, the same score is used for all weeks that end in the subsequent month. The resulting regression residuals are used to allocate each stock to a corresponding tercile portfolio (columns). Next, within each tercile, every stock is assigned to an IVol tercile (rows) based on its idiosyncratic volatility. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags. Subsequent FFC-adjusted returns are stated in %.

| IVol | first sorting criterion VS_{CW} | | | | | first sorting criterion VS_{BH} | | | | | first sorting criterion SMIRK | | | | |
	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)
low	-0.08	0.03	0.22	0.30	(9.50)	-0.07	0.05	0.22	0.30	(10.08)	-0.03	0.07	0.15	0.19	(6.86)
2	-0.14	0.02	0.20	0.34	(8.76)	-0.14	-0.00	0.19	0.33	(8.70)	-0.07	0.01	0.13	0.20	(5.24)
high	-0.33	-0.05	0.06	0.39	(7.89)	-0.34	-0.07	0.10	0.45	(8.66)	-0.30	-0.07	0.05	0.35	(6.63)
3-1	-0.25	-0.08	-0.16			-0.27	-0.11	-0.12			-0.26	-0.15	-0.10		
t(3-1)	(-4.66)	(-1.58)	(-2.94)			(-4.99)	(-2.42)	(-2.20)			(-4.76)	(-3.20)	(-1.91)		

5. Market-Wide Sentiment

In this section we rerun our analyses using the market-wide investor sentiment index of Baker and Wurgler (2006) as an alternative variable to measure the impact of sentiment-driven private investors. Monthly data from January 1996 to September 2015 are sourced from Jeffrey Wurgler's page http://people.stern.nyu.edu/jwurgler/. Baker and Wurgler (2006) argue that the index captures systematic waves of sentiment that influence the cross-section of stock returns. To merge sentiment data with our original data set, we adapt the sample period and assume that sentiment levels remain constant during the weeks of a month. Since the sentiment index refers to the entire market, it cannot identify those stocks that are particularly influenced by the sentiment waves. Consequently, the analyses in Tables A22 and A23 do not apply cross-sectional sorts with respect to investor sentiment but show analyses for subperiods of low, medium, or high investor sentiment instead. The two tables support the hypothesis that that the mispricing associated with IVol is stronger in periods of high investor sentiment.

Table A22. Conditional Double Sorts based on Market Sentiment
The table reports equally-weighted FFC-adjusted portfolio returns for the week after portfolio formation. Each week is first classified as high-, medium-, or low-sentiment week (columns). The terciles are constructed using the monthly market-wide investor sentiment index of Baker/Wurgler (2006). Second, every stock is assigned to a tercile (rows) based on idiosyncratic volatility IVol. The sample period covers January 1996 to September 2015. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags. Subsequent FFC-adjusted returns are stated in %.

	Investor Sentiment		
IVol	low	2	high
low	0.03	0.05	0.08
2	0.02	0.03	0.06
high	-0.09	-0.04	-0.15
3-1	-0.12	-0.06	-0.24
t(3-1)	(-1.88)	(-0.97)	(-2.62)

Table A23. Triple Sorts based on Market Sentiment, Measures of Informed Trading, and Idiosyncratic Volatility

The table shows equally-weighted FFC-adjusted portfolio returns of weekly conditional triple sorts. First, each week is allocated to one tercile based on the monthly investor sentiment index of Baker and Wurgler (2006). Panel A shows high- and Panel B low-sentiment weeks. Second, for each week, every stock is allocated to one tercile (columns) based on the implied volatility spread following Cremers and Weinbaum (2010), VS_{CW}, the implied volatility spread following Bali and Hovakimian (2009), VS_{BH}, or SMIRK based on Xing et al. (2010). Third, within each tercile, every stock is assigned to an IVol tercile (rows) based on its idiosyncratic volatility. The sample period covers January 1996 to September 2015. The t-statistics in parentheses are based on standard errors following Newey and West (1987) using five lags. The subsequent FFC-adjusted returns are stated in %.

Panel A: High Investor Sentiment

	VS_{CW}					VS_{BH}					SMIRK				
IVol	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)
low	-0.15	0.03	0.35	0.50	(7.64)	-0.15	0.08	0.35	0.50	(8.64)	-0.11	0.11	0.24	0.35	(7.02)
2	-0.30	0.08	0.36	0.67	(8.16)	-0.31	-0.02	0.40	0.71	(9.63)	-0.17	0.05	0.27	0.44	(5.12)
high	-0.44	-0.10	0.15	0.59	(5.49)	-0.53	-0.07	0.22	0.75	(6.23)	-0.46	-0.05	0.11	0.58	(4.79)
3-1	-0.29	-0.13	-0.20			-0.38	-0.15	-0.13			-0.35	-0.16	-0.13		
t(3-1)	(-2.41)	(-1.30)	(-1.81)			(-3.21)	(-1.63)	(-1.09)			(-2.90)	(-1.57)	(-1.29)		

Panel B: Low Investor Sentiment

	VS_{CW}					VS_{BH}					SMIRK				
IVol	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)	low	2	high	3-1	t(3-1)
low	-0.08	0.00	0.15	0.22	(4.52)	-0.07	0.03	0.15	0.22	(4.81)	0.00	0.01	0.07	0.07	(1.74)
2	-0.06	-0.01	0.13	0.19	(3.83)	-0.06	-0.03	0.11	0.17	(3.74)	-0.00	-0.03	0.08	0.08	(1.59)
high	-0.28	-0.03	0.06	0.34	(5.69)	-0.25	-0.06	0.06	0.32	(5.54)	-0.19	-0.05	-0.01	0.18	(2.84)
3-1	-0.20	-0.03	-0.09			-0.18	-0.08	-0.09			-0.19	-0.06	-0.08		
t(3-1)	(-2.91)	(-0.54)	(-1.06)			(-2.64)	(-1.16)	(-1.13)			(-2.66)	(-0.96)	(-0.98)		

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