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Opportunism as a Firm and Managerial Trait: Predicting Insider Trading Profits and Misconduct (Presentation Slides)

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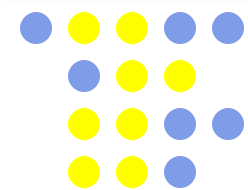
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Opportunism as a Firm and Managerial Trait: Predicting Insider Trading Profits and Misconduct

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OPPORTUNISTIC INSIDER TRADING: OVERVIEW

Using Insider Trades to Predict Returns

- Insider trades are a window into opportunism, and into private information of managers
- But it's hard to extract information from insider trades because of uninformative motivations for trading
 - Diversification, consumption needs...
- A natural way to get at opportunism, private information:
 - Past profitability of insider trades
- But very noisy, because
 - Unpredictable news affects profits
 - Don't know at what time horizon insider hopes to profit
 - Weeks? Years?

Extracting Information from Pre-QEA Trades

- We hypothesize that insiders who make high profits *on their pre-QEA trades* are opportunistic.
 - Valuable information used opportunistically
 - Trades designed to profit from concrete short-term information
 - The kind of opportunism that can most reliably be detected

Main Results: Return Predictability

- Long-short trading strategy constructed using trades of opportunistic insiders
 - Monthly alpha
 - Value-weighted 1.12%
 - Equal-weighted 1.59%
 - Much greater than trading based on general insiders
 - Even on *short* side, alpha substantial & significant
 - Unlike previous general-sample studies
 - Predicts returns up to 4-6 month horizon

Main Results: Other Malfeasance

- Opportunistic insider trading predicts other opportunistic behaviors/consequences
 - Earnings management
 - Restatements
 - SEC enforcement actions
 - Shareholder litigation
 - Excess executive compensation
- More powerful method for detecting firm & managerial opportunism useful for boards, security holders, investors & regulators



FURTHER MOTIVATION

Extracting Information about Opportunism from Insider Trades

- Can we use insider trading to predict returns more powerfully?
- In previous research, insider buys positively predict abnormal returns.
- But hard to detect an insider selling effect
 - Except in specialized samples

Other Importance of Identifying Opportunistic Insiders

- A measure of adverse/favorable private information signals for predicting returns
- Insight into whether firm, manager opportunism crosses domains
 - E.g., earnings management, reporting violations, options backdating, excess managerial compensation?
 - Are some managers “bad apples”?
 - Bad firms?
 - Bad leadership, culture?

A More Precise Measure of Insider Opportunism

- We hypothesize that *insiders who make high profits on their pre-QEA trades are opportunistic.*
 - Trades occurring during the 21 trading days before the QEA (excluding two days just before)
 - Valuable information used opportunistically
 - Strong enough to compensate for risk of regulatory scrutiny
- What about *general* pre-QEA trades?
 - Not conditioned on profitability
 - No reason exists to think opportunistic or especially well-informed

A More Precise Profitability-Based Measure

Insider returns around QEA dates—*5-day window*
—on trades initiated up to 21 trading days before
QEA

- $R(t - 2, t + 2)$
- QEAs the most important, frequent material information release
- Opportunistic insider trading always so short-term?
 - No
- This kind of opportunism much easier to detect?
 - Yes

Well-defined trading profit horizon

- *Well-defined trading profit horizon* sharply identifies exploitation of inside information
- If insider makes opportunistic long-term trade without clear timing of resolution/closure
 - Greater financial risk for insider
 - But likely safer from regulator scrutiny
 - Hard for researcher to detect the opportunism
- Also, likely less severe scrutiny of insider trades before QEAs than before discretionary corporate transactions
 - Acquisitions, financing...

What we know about insider trading, return predictability, and effects of manager traits

- Large literature on ability of insider trades, aggregated at firm level, to predict stock returns
 - E.g., Lorie & Niederhoffer (1968), Jaffe (1974), Seyhun (1986), Rozeff & Zaman (1988), Lin & Howe (1990), Lakonishok & Lee (2001)
 - Only a few identify an effect on the sell side, typically with specialized samples
 - Cohen, Malloy & Pomorski (2012) identify opportunistic insider traders by stripping away routine traders.
- Many studies:
 - Managerial traits, manager life experiences affect firm decisions, outcomes
 - Here, opportunism as firm & managerial trait

Contributions

- Powerful new methodology to uncover opportunistic insider trading
- Construct very broad sample of opportunistic vs. non-opportunistic firms & insiders
 - Including CEOs
- Opportunistic insider trades predicts returns
 - Equal/value weighted
 - 4-factor alphas
 - Sells as well as Buys
 - Up to 4-6 month horizon

Cont.

Contributions

- Signal much stronger than, dominates, non-routine insider trading measure
 - Cohen, Malloy & Pomorski (2012)
- Verify that misconduct domain general
 - By opportunistic managers on their own account
 - By their firms



METHOD, DATA, AND SUMMARY STATISTICS

The Insider Data

- Insiders must report trades to the SEC.
- Main data on insider trades from Thomson Reuters Insider Filing Data Feed
 - All trades by corporate insiders reported on SEC Form 4; 1/1986 – 6/2014
- Names/positions of insiders
- Transaction dates
- Transaction prices/quantities
- Dates filings received

Other Data

- CRSP & COMPUSTAT common stocks listed on NYSE, NYSE MKT, NASDAQ
- Corporate misconduct tests:
 - CEO & Top-5 executive compensation data from Execucomp
 - Mainly S&P 1500 firms
- Restatement data from Audit Analytics
- SEC enforcement action data from AAER database
- Executive option grants from Thomson Reuters Insider Filing Data Feed

Pre-QEA Trading over Time

- Surprisingly high fraction of all insider trading
- Even at end of sample, fraction of pre-QEA trades substantial
 - About 14%
- Value fraction similar

Pre-QEA Insider Trades

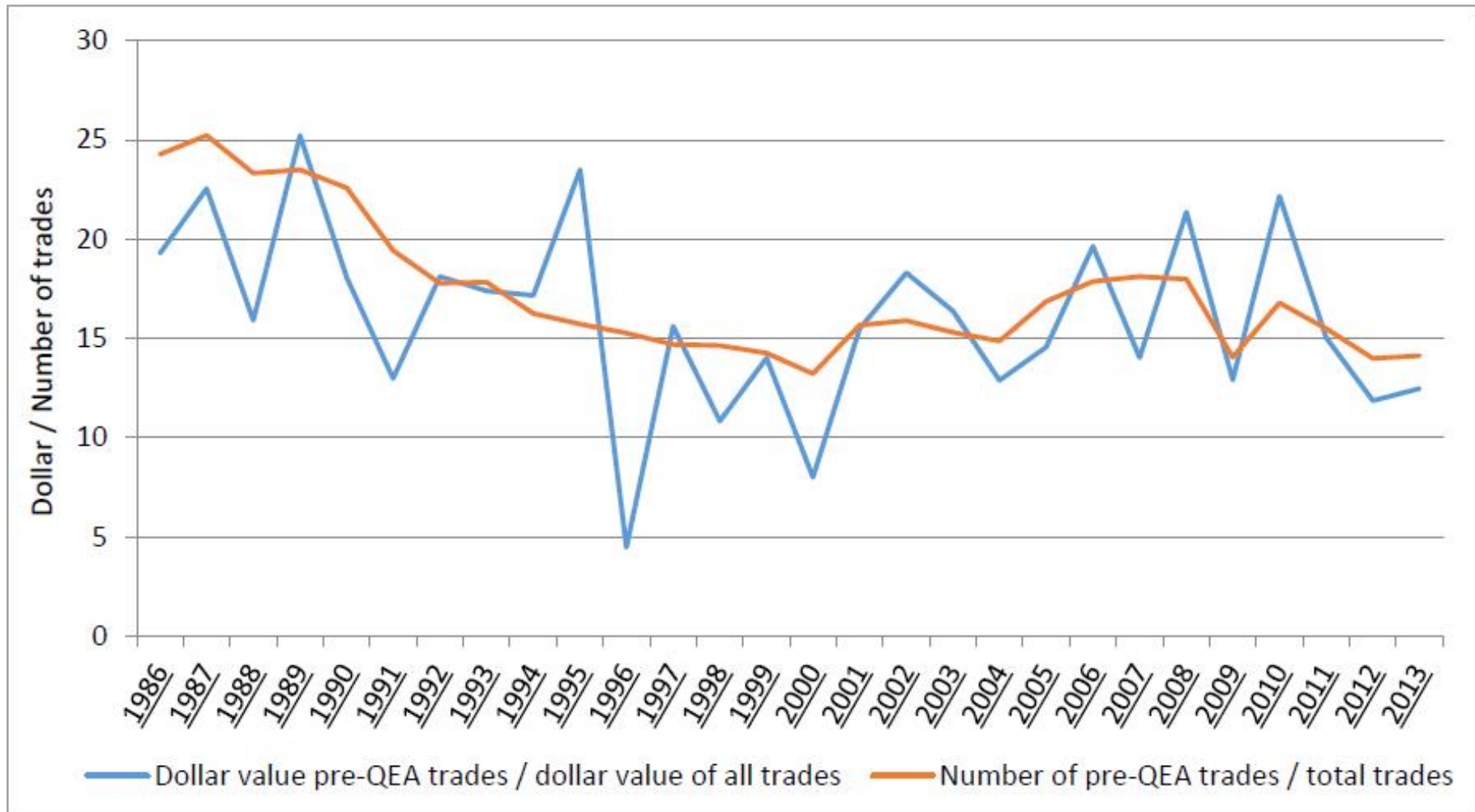
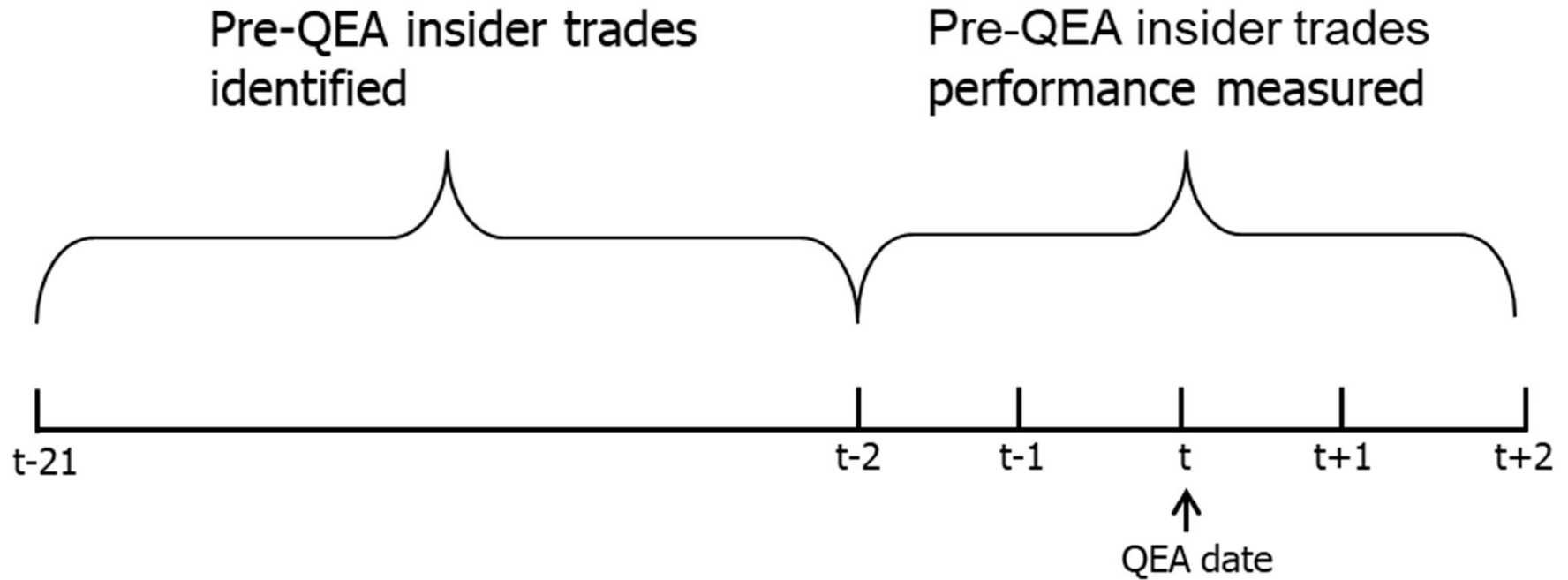


Fig. 1. Pre-quarterly earnings announcement (QEA) trading. This figure shows insider trading in pre-QEA periods

Timeline of Trading, Profit In Classification Period



Pre-QEA Trading Profits

Profit on a trade:

- Average of its returns over the 5-day QEA Window

$$Profit = \sum_{j=-2}^{j=2} (r_{i,t+j} - r_{m,t+j}) / 5$$

Average profit for an insider for a given year:

- Average over all previous years of Profit for insider's pre-QEA trades

$$Average Profit = (\sum^B Profit_{buy} - \sum^S Profit_{sell}) / (B + S),$$

where B = Total # of Buy pre-QEA trades

S = Total # of Sell pre-QEA trades

Ranking Insiders

- Each year, rank insiders into quintiles based on *Average Profit*
- Do later trades of opportunistic insiders (Q5) predict abnormal stock returns?
 - Later trades at any time
 - Not just pre-QEA trades

Firm, Insider Characteristics

- Many pre-QEA insiders
 - About 15,000 unique insiders per profit quintile
- Ranked universe (insider has at least one pre-QEA trade) substantial fraction of all insiders
 - About 1/3 of all insiders
- Average pre-QEA traders per insider:
 - 2.13
- Median pre-QEA trades per insider:
 - 1
- But still large, informative sample

Insider Characteristics Table 1

Panel A: Insider characteristics

Rank	Number of unique insiders	Number of buys	Number of sells	Number of buys / number of sells	Number of trades
1	15,114	20,965	83,522	0.25	
2	15,343	29,143	82,670	0.35	
3	15,124	38,175	82,323	0.46	
4	15,418	31,283	71,964	0.43	
5	14,604	26,984	65,714	0.41	
TR universe	170,141	394,574	934,800	0.42	
Ranked universe	56,980	146,550	386,193	0.38	
Ranked universe / TR universe	0.33	0.37	0.41		
Average number of pre-QEA trades per ranked insider					2.13
Median number of pre-QEA trades per ranked insider					1

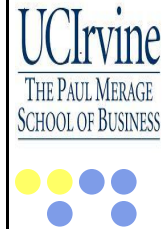
TR = Thompson-Reuters

Pre-QEA Profitability and Firm Characteristics

- Q5 insiders' past pre-QEA trades highly profitable
 - On average, earn $> 10\%$ over the market during 5-day QEA window
- Q1 insiders lose money on their past pre-QEA trades

Pre-QEA Profitability and Firm Characteristics

Table 1 Panel B



Panel B: Pre-QEA profitability and firm characteristics

Rank	Average pre-QEA profitability		Book-to-market		Size		Volatility		Number of unique firms
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	
1	-1.87%	-1.47%	0.58	0.41	3554	403	13.4%	11.6%	4,981
2	-0.47%	-0.45%	0.60	0.44	4464	504	11.7%	10.0%	5,050
3	0.03%	0.03%	0.60	0.45	4956	538	11.2%	9.3%	4,910
4	0.54%	0.52%	0.61	0.45	4631	446	11.8%	9.9%	4,930
5	2.16%	1.64%	0.62	0.42	3190	331	13.7%	11.8%	4,952
TR universe			0.72	0.51	2809	211	13.3%	11.0%	11,441
Ranked universe			0.65	0.47	3407	295	12.7%	10.7%	8,742



THE PORTFOLIO STRATEGY

Forming Portfolios

- Constructed over 1/1989 – 6/2014
- End of each month, for each past-profitability quintile, two portfolios
- The long (or short) portfolio
 - Stocks that had at least one insider buy (sell) by an insider in the particular quintile in the previous month.
- E.g., Q5 long portfolio
 - All stocks with at least one buy by a Quintile 5 insider during the month
- Multiple trades by an insider in same month
 - Classify trades jointly as one buy (sell) trade if # of shares bought > (<) # of shares sold by the insider during the month

Portfolio Trading Strategy

- Benchmark: the overall insider trading long-short portfolio (“All Insider”)
 - Based on the trades of all insiders
 - Similarly long/short stocks based on trades in last month
- Stocks held in the portfolios for one month
 - Rebalanced at end of each month based on new insider trades



Trading Strategies Implementable

- Lags of a few days in reporting trades to SEC

Very conservative approach to address:

- Form portfolios at close of 10th day in month $t + 1$ after transaction month
- Hold until the 10th day of month $t + 2$



RESULTS

A Key Result

Q5 portfolio generates greater long-short profits

- Equal-weighted 4-factor alpha
 - 1.59% per month
 - $p < 0.01$
 - Q5 – Q1: 0.75% per month
 - $p < 0.01$
 - All Insiders (benchmark): 0.88% per month
 - Need not have ever made pre-QEA trade

A Key Result (cont.)

- Value-weighted 4-factor alpha
 - 1.12% per month
 - $p < 0.01$
 - Q5 – Q1: 0.94% per month
 - $p < 0.05$
 - Only Q4, Q5 alphas significant
 - All Insiders (benchmark): 0.50% per month

Long-Short Portfolio Returns

Table 2, Panel A

Panel A: Long-short portfolios

Rank	Equal-weighted			Value-weighted		
	Long-short return	Three-factor alpha	Four-factor alpha	Long-short return	Three-factor alpha	Four-factor alpha
Quintile 1	0.68*** (2.76)	0.66*** (2.85)	0.83*** (3.60)	0.27 (0.89)	0.00 (0.00)	0.18 (0.68)
Quintile 2	0.81*** (4.38)	0.71*** (4.27)	0.85*** (5.39)	0.52** (2.02)	0.28 (1.09)	0.46* (1.84)
Quintile 3	0.83*** (5.02)	0.80*** (4.89)	0.96*** (5.62)	0.22 (0.83)	0.06 (0.22)	0.28 (1.09)
Quintile 4	1.02*** (5.68)	0.98*** (5.66)	1.15*** (6.71)	0.56** (2.12)	0.39 (1.48)	0.56** (2.09)
Quintile 5	1.47*** (6.15)	1.40*** (6.02)	1.59*** (6.88)	1.33*** (3.94)	1.03*** (3.26)	1.12*** (3.38)
Quintile 5 – Quintile 1	0.80*** (3.14)	0.74*** (2.75)	0.75*** (2.66)	1.06*** (2.78)	1.03*** (2.71)	0.94** (2.39)
All insiders	0.74*** (5.88)	0.73*** (7.21)	0.88*** (9.69)	0.48*** (3.70)	0.37*** (3.09)	0.50*** (4.20)

Investor Limited Attention

- Market does not fully impound information from history of managerial opportunism
 - Past insider trading pre-QEA profitability
- Consistent with past evidence that investors underweight information that requires cognitive & statistical processing
 - E.g., Cohen, Diether & Malloy (2013)
 - Hirshleifer, Hsu & Li (2013)

Extending Long-Short Portfolio Return Horizon

EW

- + alpha up to 6 months out

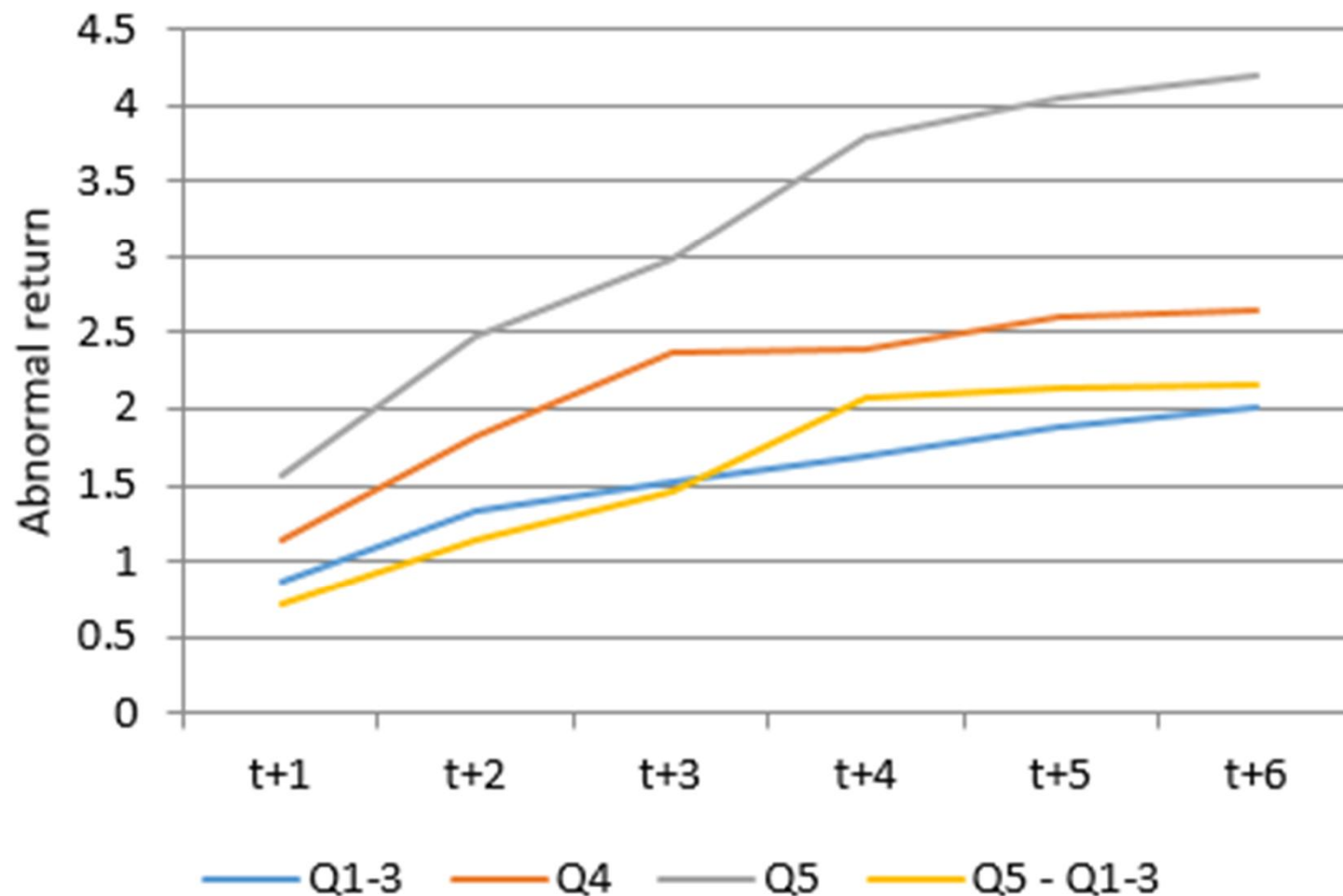
VW

- + alpha up to 4 months out

Extending Long-Short Portfolio Return Horizon, EW

Figure 2, Panel A

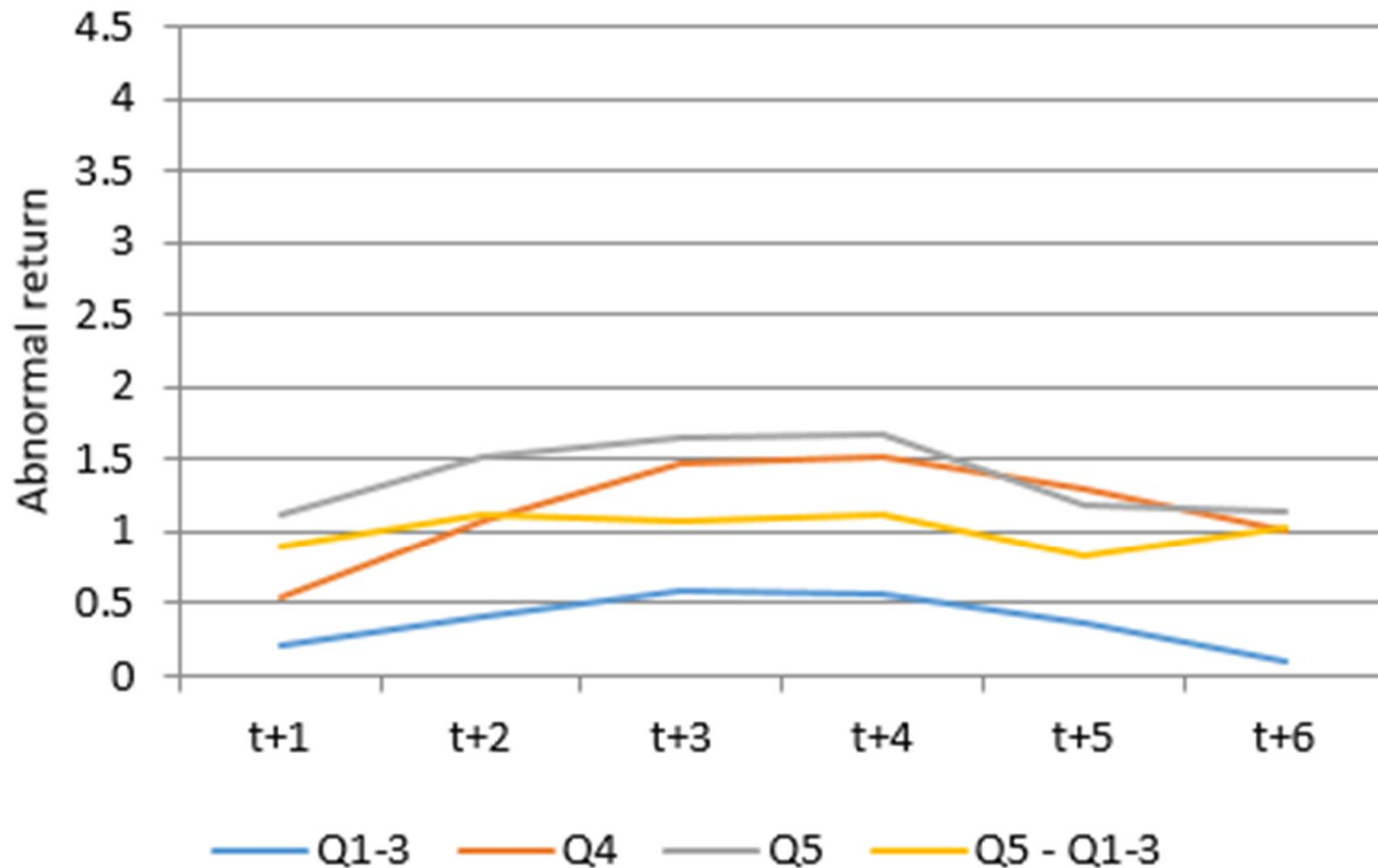
Panel A: Equal-weighted portfolios



Extending Long-Short Portfolio Return Horizon, VW

Figure 2, Panel B

Panel B: Value-weighted portfolios



Separate Long, Short Portfolios Returns (Equal-Weighted)

- Both long & short Q5 portfolios generate substantial, significant abnormal returns
 - vs. most previous studies
 - Where predictability limited to long side
- Long EW: (all $p < 0.01$)
 - Q5 alpha, 1.24%
 - Q5 – Q1, 0.51%
 - All Insiders 0.84
- Short EW:
 - Q5 alpha, -0.34% ($p < 0.01$)
 - Q5 – Q1, -0.25% ($p < 0.10$)
 - All Insiders -0.03%

Separate Long, Short Portfolios Returns (Equal-Weighted)

Table 2, Panel B

Rank	Long			Short		
	Excess return	Three-factor alpha	Four-factor alpha	Excess return	Three-factor alpha	Four-factor alpha
Equal-weighted						
Quintile 1	1.40*** (4.33)	0.63*** (3.02)	0.73*** (3.62)	0.72** (2.01)	-0.03 (-0.38)	-0.09 (-1.08)
Quintile 2	1.53*** (5.30)	0.74*** (5.06)	0.81*** (5.67)	0.72** (2.53)	0.03 (0.28)	-0.04 (-0.37)
Quintile 3	1.56*** (5.74)	0.83*** (5.86)	0.93*** (6.65)	0.73*** (2.69)	0.03 (0.27)	-0.04 (-0.35)
Quintile 4	1.70*** (5.97)	0.95*** (6.56)	1.03*** (7.23)	0.68** (2.37)	-0.03 (-0.25)	-0.11 (-1.06)
Quintile 5	1.96*** (5.84)	1.12*** (6.30)	1.24*** (7.16)	0.49 (1.42)	-0.28** (-2.24)	-0.34*** (-2.62)
Quintile 5 – Quintile 1	0.56*** (3.07)	0.49*** (2.72)	0.51*** (2.68)	-0.17 (-1.63)	-0.18* (-1.69)	-0.25* (-1.73)
All insiders	1.48*** (5.64)	0.74*** (8.07)	0.84*** (10.08)	0.74*** (2.49)	0.01 (0.12)	-0.03 (-0.64)

Separate Long, Short Portfolios Returns (Value-Weighted)

- Long VW:
 - Q5 alpha, 0.59% ($p < 0.05$)
 - Q5 – Q1, 0.46 (insignificant but not small)
 - All Insiders 0.40
- Short VW:
 - Q5 alpha, -0.53% ($p < 0.01$)
 - Q5 – Q1, -0.48 ($p < 0.05$)
 - All Insiders -0.10

Separate Long, Short Portfolios Returns (Value-Weighted)

Table 2, Panel B

Rank	Long			Short		
	Excess return	Three-factor alpha	Four-factor alpha	Excess return	Three-factor alpha	Four-factor alpha
Value-weighted						
Quintile 1	0.87** (2.37)	0.01 (0.05)	0.13 (0.53)	0.60** (1.98)	0.01 (0.08)	-0.05 (-0.37)
Quintile 2	0.97*** (2.94)	0.18 (0.82)	0.24 (1.09)	0.45* (1.66)	-0.10 (-0.75)	-0.21 (-1.53)
Quintile 3	0.77** (2.51)	0.05 (0.25)	0.14 (0.63)	0.55* (1.93)	-0.01 (-0.03)	-0.14 (-1.00)
Quintile 4	1.05*** (3.23)	0.30 (1.30)	0.39* (1.65)	0.48* (1.76)	-0.09 (-0.67)	-0.17 (-1.20)
Quintile 5	1.51*** (3.64)	0.58** (2.07)	0.59** (2.00)	0.18 (0.55)	-0.45** (-2.50)	-0.53*** (-2.99)
Quintile 5 – Quintile 1	0.64* (1.81)	0.57* (1.89)	0.46 (1.51)	-0.43** (-2.21)	-0.46** (-2.34)	-0.48** (-2.21)
All insiders	1.03*** (3.90)	0.34*** (3.39)	0.40*** (4.03)	0.55** (2.16)	-0.03 (-0.53)	-0.10 (-1.57)

Fama-MacBeth Regressions

- Regress 1-month returns on Buy/Sell indicators

Columns 1-3:

- *Buy (Sell)*
= 1 if any ranked insider buys (sells) the firm in preceding month
- *Quintile 5 Buy (Quintile 5 Sell)*
= 1 if any Q5 insider buys (sells) the firm in preceding month

Fama-MacBeth Regression: Comparisons with Unranked Insiders



- Column 4
 - Compare Q5 insider trades with trades of insiders without pre-QEA trades (prior to ranking year)
 - Include trades by unranked insiders & Q5 insiders, but not Q1-4 insiders
 - *Buy (Sell)* = 1 if any of these insiders buys (sells) the firm in preceding month
- Column 5
 - Compare Q5 insider trades with trades by all insiders.
 - *Buy (Sell)* = 1 if any insider buys (sells) the firm in preceding month

Fama-MacBeth Regressions

Variable	(1)	(2)	(3)	(4)	(5)
<i>Quintile 5 Buy</i>		1.25*** (8.04)	0.58*** (3.53)	0.52*** (3.30)	0.56*** (3.55)
<i>Quintile 5 Sell</i>		-0.32*** (-2.88)	-0.28** (-2.44)	-0.24** (-2.16)	-0.26** (-2.42)
<i>Buy</i>	0.80*** (10.35)		0.69*** (8.43)	0.78*** (11.08)	0.76*** (11.81)
<i>Sell</i>	-0.11* (-1.94)		-0.05 (-0.82)	-0.10* (-1.92)	-0.08* (-1.74)
<i>Book-to-Market</i>	0.20** (2.11)	0.20** (2.14)	0.20** (2.11)	0.19** (2.03)	0.19** (2.01)
<i>Ret(t-1)</i>	-1.51*** (-3.16)	-1.52*** (-3.17)	-1.51*** (-3.15)	-1.49*** (-3.12)	-1.49*** (-3.12)
<i>Ret(t-12,t-2)</i>	0.51*** (3.19)	0.51*** (3.18)	0.51*** (3.20)	0.51*** (3.20)	0.52*** (3.22)
<i>Size</i>	0.02 (0.59)	0.02 (0.58)	0.02 (0.60)	0.02 (0.67)	0.02 (0.66)
Average adjusted R^2	3.2	3.2	3.3	3.3	3.3
Average number of observations per month	3,442	3,442	3,442	3,442	3,442

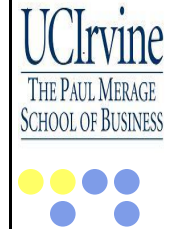
ROBUSTNESS TESTS

Pre-QEA Profitability Opportunism Measure Dominates Non-Routineness Measure

- Non-routineness
 - Cohen, Malloy & Pomorski (2012)
- After controlling for general insider trades & pre-QEA trading profitability
 - Non-routineness measure does not predict returns
- Also, with pre-QEA profitability measure, insider selling predicts returns
 - With non-routineness measure, does not

Routine vs. Non-routine Insider Trading

Table 5



Variable	(1)	(2)	(3)
<i>Quintile 5 Buy</i>		0.51*** (3.07)	0.55*** (3.52)
<i>Quintile 5 Sell</i>		-0.23** (-2.01)	-0.25** (-2.37)
<i>Buy</i>		1.03*** (13.74)	0.80*** (12.52)
<i>Sell</i>		-0.02 (-0.28)	-0.09* (-1.69)
<i>Nonroutine Buy</i>	0.98*** (7.34)	0.03 (0.29)	-0.03 (-0.24)
<i>Nonroutine Sell</i>	0.08 (0.98)	0.09 (1.26)	-0.06 (-0.79)
<i>Routine Buy</i>	0.46*** (3.68)	-0.45*** (-3.78)	-0.27** (-2.31)
<i>Routine Sell</i>	0.21** (2.28)	0.24*** (2.75)	0.12 (1.27)
Average adjusted R^2	2.8	2.8	3.3
Average number of observations per month	4,672	4,672	3,442

Alternative Measures of the Profitability of Pre-QEA Trades

- Measure profitability of each pre-QEA trade as CAR from the day after trade through 2 days after QEA date
 - Fama-Macbeth results slightly stronger
 - Portfolio return results slightly stronger (untabulated)
 - 4-factor alphas 1.77% (EQ), 1.12% (VW)
- Rank insiders only by buy-trades, or only by sell-trades
 - Results fairly similar
- Include trades < \$5,000
 - Results basically identical

Omitted Variables and Differences in Firm Characteristics

- Are Q5 insiders just profiting from trading based on recent earnings surprises? (PEAD)
 - Control for last earnings surprise
 - No difference
- Are Q5 insiders profiting only among large, or small firms?
 - Perform tests among large or small firms only
 - Results similar

Are Q5 Insiders Just Trading More Exploitable Firms?

- Are Q5 insiders trading in those firms in which trading by all insiders is more profitable?
- E.g., firms with opaque information environments, more inside information?
 - No. Effects present when compare across insiders at *same firm in the same year*
 - Results not coming from firm characteristics
 - Opportunism is, at least in part, a *managerial* trait
- Simplest Method:
 - Use only “overlap” stocks traded by both Q5 insiders and by at least one non-Q5 insider that year.
 - Quintile 5 Buy (Sell), and Buy (Sell) variables have usual definitions, but applied only to overlap stocks

Omitted Variables and Differences in Firm Characteristics

Table 6A Pt2



Panel A

	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Control for Earnings Surprise	Control for Earnings Surprise	Large Stocks	Large Stocks	Small Stocks	Small Stocks	Same Set of Stocks	Same Set of Stocks
Quintile 5 Buy	1.20*** (7.20)	0.53*** (3.13)	1.06*** (4.30)	0.71*** (2.85)	1.33*** (6.99)	0.51*** (2.65)	1.34*** (8.36)	0.45** (2.49)
Quintile 5 Sell	-0.46*** (-4.04)	-0.31*** (-2.80)	-0.35** (-2.45)	-0.29** (-2.10)	-0.34** (-2.42)	-0.29** (-2.01)	-0.29** (-2.55)	-0.59*** (-4.72)
Buy		0.74*** (11.51)		0.36*** (5.13)		0.89*** (12.23)		0.87*** (7.89)
Sell		-0.19*** (-3.05)		-0.09* (-1.80)		-0.07* (-1.14)		0.26*** (3.17)
Avg. # of Obs. Per Month	2,807	2,807	942	942	2,500	2,500	3,442	3,442

Domain-General Opportunism

- Maybe we are just identifying managers with better information rather than greater opportunism
 - Rule this out?
- Criminology, psychology & economics literatures suggest:
 - Proneness to misbehavior a domain-general trait
 - Economics test: positive association between unpaid parking tickets by UN diplomats in NYC, in their home countries
 - Fisman & Miguel (2007)
- We hypothesize that opportunism will be manifested across diverse decision domains
- So opportunistic insider trading can identify other very different forms of firm, managerial opportunism

Reporting Malfeasance

- Restatements, SEC investigations, Lawsuits for financial misconduct, Earnings management (absolute discretionary accruals)
- Profitable pre-QEA trading is positively associated with all four, after controls
- E.g., a one standard deviation increase in fraction of opportunistic insiders is associated with increase of
 - 9.9% in $\Pr(\text{Investigated by the SEC})$ relative to the unconditional probability
 - 7.5% in $\Pr(\text{Shareholders sue for accounting malpractice})$

Earnings Management and Financial Misreporting

Table 9



Variable	<i>Restatement Indicator</i> (1)	<i>SEC AAER Indicator</i> (2)	<i>Lawsuit Indicator</i> (3)	<i>Discretionary Accruals</i> (4)	<i>M-score</i> (5)
<i>Fraction of Quintile 5 Insiders</i>	0.321** (2.07)	1.412** (2.49)	1.11*** (2.64)	0.005** (2.42)	0.088** (2.36)
<i>Fraction of pre-QEA Insiders</i>	0.038 (0.35)	-0.297 (-0.80)	-0.117 (-0.46)	-0.01 (-0.72)	-0.006 (-0.30)
<i>Aggregate Insider Trading</i>	-0.234 (-0.40)	-0.793 (-0.54)	-0.362 (-0.28)	0.021*** (3.12)	-0.255* (-1.95)
<i>Pre-QEA Trading</i>	0.001 (0.89)	-0.003 (-0.85)	0.002 (0.71)	0.000 (0.19)	-0.000 (-0.11)
Controls ¹	Yes	Yes	Yes	Yes	Yes
Number of observations	38,652	27,596	34,305	38,451	32,912
Fixed effects	Year, industry	Year, industry	Year, industry	Year, industry	Year, industry

Controls include Book-to-Market, Size, Leverage, Profitability, Volatility of Profitability, Loss Indicator, Big 4, Governance Index, Firm Age, and Analyst Coverage

Excess Compensation and Option Backdating

- Some relatively weak evidence that profitable pre-QEA trading is associated with option backdating
- Do firms with more opportunistic managers have higher excess compensation?
- Yes—stronger evidence
- Firm-level opportunism positively predicts both CEO compensation, top-5 executives' compensation
 - After controls

Executive Compensation Table 12

Variable	<i>Log (CEO compensation)</i> (1)	<i>Log (Top-five executives' compensation)</i> (2)
<i>Fraction of Quintile 5 Insiders</i>	0.202** (2.51)	0.131** (2.12)
<i>Fraction of Pre-QEA Insiders</i>	-0.027 (-0.56)	-0.016 (-0.40)
<i>Average Earnings Surprise</i>	4.271*** (6.36)	3.675*** (7.12)
<i>Aggregate Insider Trading</i>	0.877*** (3.47)	1.108*** (5.53)
<i>Pre-QEA Trading</i>	-0.000 (-0.24)	-0.000 (-0.80)
Controls ³	Yes	Yes
Number of observations	25,931	25,931
Fixed effects	Year, industry	Year, industry
Adj. R^2	0.52	0.63

Controls include Book-to-Market, Size, Past Year Return, Second Last Year Return, Return Volatility, Profitability, Lagged Profitability, CEO Tenure, Governance Index, Firm Age

Conclusion, I

- Opportunistic insider traders can be identified through the profitability of their trades prior to QEAs
- Subsequent general trades of opportunistic insiders (those with high past pre-QEA profits) substantially more profitable than those of other insiders
- Value-weighted trading strategy based on trades of opportunistic insiders
 - Not limited to pre-QEA trades
 - Monthly 4-factor alphas $> 1\%$
 - Much higher than in past insider trading literature
 - Substantial/significant even on short side

Conclusion, II

- Opportunistic trading associated with various other kinds of managerial, firm misconduct
- Past insider trading pre-QEA profitability can be a general-purpose tool to screen for managerial opportunism.
- Useful, e.g., for
 - Boards
 - Shareholders, bondholders
 - Regulators