Insider Trading & Market Manipulation Literature Watch

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Each quarter, this newsletter summarizes newly published literature in the areas of Insider Trading and Market Manipulation. The authors' own abstracts are included below and are unedited. Links to the full paper are provided. The inclusion of an article in this newsletter does not signify that CRA or any of its experts agree or disagree with the content or conclusions therein.

Insider Trading

Fortunate Timing: Scheduled Insider Trades, Earnings News, and Spin

We find evidence that scheduled insider trades exhibit fortunate timing. In a sample of scheduled (10b5-1 transactions) routine sales by insiders that occur between 2015 and 2020, we find evidence of an increased incidence of favorable earnings-related news occurring in the weeks leading up to large sale transactions (greater than $1 million). We find that the market reacts more favorably to both positive and negative news that occur before a scheduled routine trade. We also find more positive earnings-related news around earnings announcements if the announcement is before or after an insider sale. The overall evidence is consistent with insiders strategically influencing the release of news and/or their scheduled sales.

Strong, Cuyler and Whidbee, David A., Fortunate Timing: Scheduled Insider Trades, Earnings News, and Spin (August 29, 2022). Available at SSRN: https://ssrn.com/abstract=4231415

Insider Trading Restrictions and Informed Trading in Peer Stocks

After insider trading regulations become stricter, insiders partially substitute trades in their own stocks with informed trades in peer stocks. Using a uniquely constructed dataset of trades by corporate insiders in all stocks, we find that insiders are 20% more likely to trade in peer stocks following the change and that such trades become more profitable. The increase in both the probability and profitability of peer-stock trades is driven by the insider's information that is fungible to industry peers. Finally, peer trading dampens improvements in liquidity and price informativeness, the intended benefits of the insider trading regulation.

Deuskar, Prachi and Khatri, Aditi and Sunder, Jayanthi, Insider Trading Restrictions and Informed Trading in Peer Stocks (September 5, 2022). Available at
SSRN: https://ssrn.com/abstract=4210203 or http://dx.doi.org/10.2139/ssrn.4210203

Insider Trading in the Clinical Trial Setting

Insider trading is always on the Securities and Exchange Commission's enforcement agenda. Every year these cases include charges of trading based on material nonpublic information regarding a clinical drug trial conducted to obtain approval to market a new drug. Almost half of those cases are accompanied by a criminal indictment, sometimes leading to incarceration. The time is ripe for a comprehensive analysis of how the law of insider trading applies to the important endeavor of clinical drug trials.

This Article presents the basic principles of insider trading, including cases involving information about trials of pharmaceuticals. It then describes how clinical trials are conducted and regulated and the ways in which nonpublic information material to the stock price of the sponsor of the trial may be used to trade or tip.

The analysis that follows identifies a number of situations where use or disclosure of material nonpublic information about a trial has been found to be or could, applying existing principles, be unlawful. Employees of sponsors of the trial, clinical investigators, and the subjects participating in a trial could run afoul of the prohibition on insider trading, such as when information has been used in breach of a confidentiality agreement or exchanged between an investigator and a trial participant, exchanged among trial participants, gleaned from attending medical conferences, and obtained in other settings specific to this industry. Presenting the full potential reach of the law facilitates conforming conduct to avoid violating the law.

Horwich, Allan and Brawley, Crista, Insider Trading in the Clinical Trial Setting (September 12, 2022). Northwestern Law & Econ Research Paper No. 22-12, Available at SSRN: https://ssrn.com/abstract=4217000

Insider Trading Based on Overconfidence of CEO and CFO

Through close interactions with their CEO and CFO, independent directors as well as subordinate executives can assess the overconfidence of their CEO and CFO. We show that independent directors and subordinate executives trade on this assessment, albeit differently. Independent directors of a firm with an overconfident CEO and CFO sell their stock holdings, whereas subordinate executives do not do so significantly. These trades are not driven by firm characteristics or earnings surprise, refuting an alternative explanation that insiders simply trade on private information about corporate performance. The volume of related trades increases with the length of tenure the independent directors and subordinate executives share with their CEO and CFO. Independent directors sell more in response to firm-level overconfidence if they share longer tenure with their CEO and CFO. In contrast, subordinate executives sell less in response to firm-level overconfidence if they share longer tenure with their CEO and CFO. Our findings suggest that, independent directors—and not subordinate executives—can curb overconfidence of their CEO or CFO.

Demirkan, Sebahattin and Felix, Robert and Muslu, Volkan, Insider Trading Based on Overconfidence of CEO and CFO (August 2, 2022). Available at SSRN: https://ssrn.com/abstract=4179835 or http://dx.doi.org/10.2139/ssrn.4179835

Insider Trading in Multinational Firms

We explore insider trading at multinational firms and find multinational firm insiders make larger trades followed by larger abnormal returns relative to those at domestic firms. Multinational firm insider trading profits are concentrated among top-level insiders (CEO, President and Chairman), and abnormal returns are higher when investor attention is low and when stocks are relatively inexpensive. Further, we find insider trading profits are highest at multinational firms make foreign sales to regions of high cultural and linguistic difference from the United States, suggesting information diffusion plays an important role in the trading differences between insiders at domestic and multinational firms.

Alldredge, Dallin and Blank II, Douglas Brian, Insider Trading in Multinational Firms (July 27, 2022). Available at SSRN: https://ssrn.com/abstract=4174541 or http://dx.doi.org/10.2139/ssrn.4174541

Is It Possible to Consistently and Accurately Time Stock Transactions without Using inside Information?: Some Select US Evidence

In 2012 the Stop Trading on Congressional Knowledge (STOCK) Act was signed into law by President Obama. It is designed to stop insider trading by U.S. Members of Congress who must now make public their stock transactions within 45 days of execution. The aim of this analysis is to evaluate the stock transactions of Josh Gottheimer, Democrat representing New Jersey's Fifth Congressional District in the northernmost part of the state, which includes parts of Bergen, Passaic, Sussex, and Warren counties. Why Gottheimer? He is the most prolific traders within the House of Representatives with close to 1,000 transactions spread over nearly 300 companies in a 27 month period. An approach that would, on the surface indicate inside help. Otherwise why invest in so many companies spread across so many industries. The analysis results are surprising as it would appear that Mr. Gottheimer’s purchases are ill-timed and he sells too early with both full and partial sales. He may be the most prolific trader but he may as well toss a coin to decide on his course of action as his timing is way off, showing no obvious evidence of trading on inside information. He certainly is not able to consistently and accurately time his transactions to maximum effect.

Johnson, Jackie, Is It Possible to Consistently and Accurately Time Stock Transactions without Using inside Information?: Some Select US Evidence (July 11, 2022). Available at
SSRN: https://ssrn.com/abstract=4159058 or http://dx.doi.org/10.2139/ssrn.4159058

How Common is Insider Trading? Evidence from the Options Market

Option traders are considered among the most informed investors because their trades strongly predict future stock returns. We identify the source of their information edge using a quasi-exogenous shock to insider trading enforcement. With the arrest of Raj Rajaratnam, prosecutors launched an unprecedented campaign against insider trading making such trading much riskier. Before the arrest, the put-call ratio that aggregates information content of option trades earned a 0.24% weekly alpha among S&P 500 stocks. But this striking predictability suddenly disappeared shortly after Raj’s arrest, as option investors refrained from trading on insider information. These results suggest that trading on insider information used to be prevalent in the options market and explain why option trades used to predict stock returns.

Bondarenko, Oleg and Muravyev, Dmitriy, How Common is Insider Trading? Evidence from the Options Market (June 30, 2022). Available at
SSRN: https://ssrn.com/abstract=4150768 or http://dx.doi.org/10.2139/ssrn.4150768

Audit process, private information, and insider trading

While the shareholder benefits of audits are well documented, evidence on whether audits can facilitate opportunistic behavior by corporate insiders is scarce. In this paper, we examine whether the audit process facilitates one particular form of opportunism: informed trading by corporate insiders. We focus our analysis on insider trading around the audit report date. We find an increase in trading around the audit report date and that the increase is abnormally large for firms that subsequently report modified opinions. The abnormal increase in trading is concentrated among officers and non-audit committee independent directors, and most pronounced in first-time modified opinions and modified opinions in years where financial results are subsequently restated. These trades are highly opportunistic: they predict restatements, and as a consequence, we show they avoid significant losses. Collectively, our findings provide novel evidence that insiders appear to exploit private information about the audit process—a process ostensibly designed to protect shareholders—for opportunistic gain.

Arif, S., Kepler, J.D., Schroeder, J. et al. Audit process, private information, and insider trading. Rev Account Stud 27, 1125–1156 (2022). https://doi.org/10.1007/s11142-022-09689-x

Informed options strategies before corporate events

We analyze how informed investors trade in the options market ahead of corporate news when they receive private, but noisy, information about the timing and impact of these announcements on stock prices. We propose a framework that ranks options trading strategies (option type, maturity, and strike price) based on their maximum attainable leverage when price-taking investors face market frictions. We exploit the heterogeneity in announcement characteristics across twelve categories of corporate events to support that event-specific information signals are informative for announcement returns and that they impact the optimal choice of option moneyness and tenor.

Patrick Augustin, Menachem Brenner, Gunnar Grass, Piotr Orłowski, Marti G. Subrahmanyam, Informed options strategies before corporate events, Journal of Financial Markets, 2022, 100766, ISSN 1386-4181, https://doi.org/10.1016/j.finmar.2022.100766.
(https://www.sciencedirect.com/science/article/pii/S1386418122000568)

Geographic connections to China and insider trading at the start of the COVID-19 pandemic

The sudden and exogenous nature of the COVID-19 crash provides a unique identification opportunity to study insiders' informational advantages. We find that the sales of insiders at firms with connections to China were significantly more profitable during the COVID-19 crisis than the sales of insiders at firms without connections to China. Consistent with greater attentiveness to public information about the COVID-19 pandemic, this result is driven by China connected insiders executing larger (smaller) sales in the early (late) COVID-19 period than non–China connected insiders. We find our results are driven by trades that are not preplanned under Rule 10b5–1 and are consistent with anticipation of the systematic market effects of COVID-19 on an insider's firm as opposed to firm-specific effects. Aggregate China connected insider trades also predict market returns during the COVID-19 period. Our study contributes to the insider trading literature by introducing geographic connection to market-wide information as a source of public information advantage and to regulatory efforts to investigate and understand corporate insider behavior related to the COVID-19 pandemic.

Henry, E., Plesko, G.A. & Rawson, C. Geographic connections to China and insider trading at the start of the COVID-19 pandemic. Rev Account Stud (2022). https://doi.org/10.1007/s11142-022-09715-y

Economic policy uncertainty and insider trading

In this article, we examine the effects of economic policy uncertainty (EPU) on insider trading. Two hypotheses predict that EPU is positively related to insider trading volume and profitability: (1) the private benefits hypothesis, which states that insiders exploit their information advantage to realize abnormal profits, and (2) the signaling hypothesis, which states that insiders trade to signal private information to stock market participants. We find that EPU is positively and significantly related to the profitability of insider purchases, and that insiders purchase more frequently during high-EPU periods. Additional analysis provides strong support for the signaling hypothesis but no support for the private benefits hypothesis.

El Ghoul, S., Guedhami, O., Nash, R., & Wang, H. (H.). (2022). Economic policy uncertainty and insider trading. Journal of Financial Research, 1– 38. https://doi.org/10.1111/jfir.12299

Market Manipulation

Manipulating Citadel: Strategies to Profit at the Expense of Retail Stock Traders' Market Makers

This Article considers whether securities market strategies designed to profit at the expense of so called "internalizers" should properly be considered illegal manipulation. An internalizer acquires from a brokerage firm the right to be the market maker for the broker's full order flow from its retail customers, promising in return to execute each order at a price slightly better than the best price available on any exchange ("price improvement") as well as to pay the broker a fee for each executed order ("payment for order flow"). Almost all retail trading – about 29% of the country's total share volume – is executed in this fashion, amounting in 2021 to about $41 trillion in transactions.

The internalizer can run a viable business while promising both price improvement and payment for order flow because retail traders rarely possess information not already reflected in price. This makes the buy and sell orders internalizers receive less dangerous to fill than the more varied order flow going to exchanges. The internalizer's business model, though, has a vulnerability: a trader can influence what is the best price available on the exchanges and then profit by sending an order to an internalizer that as a result executes at a price more favorable to her.

Using a framework that derives its key results from microstructure and financial economics, this Article seeks answers to four questions: (1) Exactly what actions in the market can traders take that would allow them to profit in this fashion? (2) What are the consequences to the various players in the market from traders undertaking such actions? (3) Would it be socially desirable to use legal prohibitions to try to prevent traders from profiting in this fashion? (4) How are such practices treated under existing law, and what reforms, if any, are desirable?

The usual rhetoric concerning the evils of manipulation usually stress its unfairness and its distortion of prices. This Article, however, concludes that strategies aimed at profiting off internalizers raise no serious fairness issues. Equally surprising, it concludes that if these strategies were freely occurring, they would probably indirectly marginally improve price accuracy. It is unlikely, however, that this effect would be more socially valuable than the practices' socially negative impact on liquidity. This is especially so when one adds to this accounting the resources consumed by traders engaging in these strategies and by internalizers to protect against them, resources that otherwise would have been available to produce valuable goods and services for society.

The status of these strategies under current case law is uncertain. If they were ultimately adjudicated to be legal, their use would expand greatly. The language of the Exchange Act Sections 9(a)(2) and 10(b) and SEC Rule 10b-5 leave room, however, for a coherent doctrine to develop that definitively extends the Act's prohibitions against manipulation to cover these strategies. The analysis is this Article gives the courts good reasons to do so.

Fox, Merritt B. and Glosten, Lawrence R. and Guan, Sue, Manipulating Citadel: Strategies to Profit at the Expense of Retail Stock Traders' Market Makers (August 30, 2022). Columbia Law and Economics Working Paper No. 663, Available at
SSRN: https://ssrn.com/abstract=4230605 or http://dx.doi.org/10.2139/ssrn.4230605

Muddy the Waters to Conceal Information? Evidence from Textual Analysis of Firms' Differential Responses to Institutional and Retail Investors

This paper investigates the differential responses by managers to institutional investors during site visits and to retail investors during online Q&As. We find that the gap in firms' responses to different types of investors increases the potential for comment letters to be sent to firms and leads to higher information asymmetry, consistent with the notion that this gap implies a lower quality of information disclosure. Additional tests show that managers are more likely to post differential responses when investors' questions have a more negative orientation.

Duan, Lini and Li, Lingyi and Park, Kyng-Hyu and Wu, Di, Muddy the Waters to Conceal Information? Evidence from Textual Analysis of Firms' Differential Responses to Institutional and Retail Investors. Available at SSRN: https://ssrn.com/abstract=4179730

Trade-Based Pump-and-Dump and Profitability

We use the Korea Stock Exchange's complete intraday order and trade data in a dataset that identifies individual accounts to examine whether trade-based pump-and-dump manipulators can trade profitably and whether other investors herd after the manipulation. The results show that other investors place more buy orders on stocks with higher manipulative buying volume and that more new investors buy such stocks. We also find that the trade-based pump-and-dump manipulation is profitable on average, both gross and net of transaction costs. Manipulators who have higher trading volume, more experience with manipulation, and less frequent transactions are likely to achieve larger profits.

lee, yu and Lee, Eun Jung and Kim, Ryumi, Trade-Based Pump-and-Dump and Profitability. Available at SSRN: https://ssrn.com/abstract=4173353

Information Leadership in Financial Market

We explore information leadership in the financial market. We first study an endogenous network formation model in which traders link with each other before financial tradings. We show the only stable outcome is a star network in which every trader links to the same person. The centre of this star network, as an information leader, communicates hard information to every participant of the network, causing excessive volatility in the financial market. We then study active information leadership by allowing the information leader to manipulate the information at a cost. Even rational traders rely on the manipulated public information to make trading decisions, so the market price partially reflects the information leader's preference. The exact influence of the information leader increases with the risk aversion but decreases with the private information accuracy and market noise accuracy.

Bo, Wang and Suli, Zheng, Information Leadership in Financial Market. Available at SSRN: https://ssrn.com/abstract=4153782 or http://dx.doi.org/10.2139/ssrn.4153782

AI trading and the limits of EU law enforcement in deterring market manipulation

As in many other sectors of EU economies, 'Artificial Intelligence' (AI) has entered the scene of the financial services industry as a game-changer. A growing number of investment firms have been adopting AI, and particularly 'Machine Learning' (ML) methods, within the ramification of algorithmic trading. While AI/ML trading is expected to deliver several efficiency gains for capital markets, it also brings unprecedented risks for their safety and integrity due to some of its technical specificities and related additional uncertainties. With a focus on new and emerging risks of AI-driven market manipulation, this study critically assesses the ability of the EU anti-manipulation law and enforcement regime to achieve credible deterrence. It argues that AI trading is currently left operating within a (quasi-)lawless market environment with the ultimate risk of jeopardising EU capital markets' integrity and stability. It shows how 'deterrence theory', as a normative framework, can allow us to think of innovative solutions to fix the many shortcomings of the EU legal framework in the fight against AI-driven market manipulation. In concluding, this study suggests improving the existing EU anti-manipulation law and enforcement regime with a number of policy proposals. Namely, (i) an improved, 'harm-centric' definition of manipulation; (ii) an improved, 'multi-layered' liability regime for AI-driven manipulation; and (iii) a novel, 'hybrid' public-private enforcement institutional architecture through the introduction of market manipulation 'bounty-hunters'.

Alessio Azzutti, AI trading and the limits of EU law enforcement in deterring market manipulation, Computer Law & Security Review, Volume 45, 2022, 105690, ISSN 0267-3649,
https://doi.org/10.1016/j.clsr.2022.105690.
(https://www.sciencedirect.com/science/article/pii/S0267364922000371)

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