



Insider Trading & Market Manipulation Literature Watch

CRA Charles River Associates

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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 a paper in this newsletter does not signify that CRA or any of its experts agree or disagree with the content or conclusions therein.

Insider Trading

Cross-Border Activities as a Source of Information: Evidence from Insider Trading during the COVID-19 Crisis

Insider trading during the early months of the COVID-19 pandemic provides a unique opportunity to study how corporate insiders benefit from information flows in their network of business contacts. I find that insiders at firms with activities in China sell more shares of their companies than other insiders and do so earlier. Consistent with an information channel, I show that firms with supply-chain relationships and subsidiaries in China, more local assets and employees, and insiders overseeing global operations drive these effects. Insiders' private information seems to have been forward-looking, which allowed them to avoid significant losses during the period.

Sanz, Leandro, Cross-Border Activities as a Source of Information: Evidence from Insider Trading during the COVID-19 Crisis (December 10, 2021). *Fisher College of Business Working Paper No. 2021-03-020*, Charles A. Dice Working Paper No. 2021-20. Available at SSRN: <https://ssrn.com/abstract=3987237> or <http://dx.doi.org/10.2139/ssrn.3987237>

Money, Power, and Radical Honesty: A Look At Members of Congress' Use of Information for Financial Gain

Cleared of wrongdoing due to lack of evidence, Senators Kelley Loeffler and David Perdue continued their bids for re-election, and control of the Senate, in the Georgia run-off. Both Senators Loeffler and Perdue traded stocks in the run-up to the COVID-19 crisis after receiving classified briefings. These are just two of many instances of members of Congress profiting after receiving classified information. While the American public remained uninformed as to the true crisis looming as COVID-19 spread, members of Congress received private briefings and quietly sold securities such as travel and hotel related interests, and purchased other securities, such as remote-work software and medical equipment related interests.

Many members of Congress also profit from federal money earmarked to increase the value of their personal land deals, from access to IPOs, and from corporate board seats. While corporate executives, members of the executive branch, and ordinary citizens are subject to strict insider trading laws, members of Congress sail through loopholes and exceptions that are hand-crafted for their benefit. This article reviews proposals for fixing the problem before proposing a comprehensive solution focused on limiting the financial opportunities for members of Congress and strict reporting requirements.

While many proposals to address this problem exist, none come close to preventing members of Congress from profiting in these often-nefarious ways. To ensure that members of Congress work on behalf of the American Public—and not their own pocketbooks—the comprehensive and drastic reform articulated in this article is required.

Schneider, Spencer, Money, Power, and Radical Honesty: A Look At Members of Congress' Use of Information for Financial Gain (October 27, 2021). Money, Power, and Radical Honesty: A Look At Members of Congress' Use of Information for Financial Gain, *Pepperdine Journal of Business, Entrepreneurship & The Law* Vol. XIV, 296 (2021). Available at SSRN: <https://ssrn.com/abstract=3951560> or <http://dx.doi.org/10.2139/ssrn.3951560>

Fractional Trading

Fractional Trading (FT)—the ability to trade less than a full share—allows low-budget retail investors to trade high-priced stocks. Since FT's introduction in late 2019, high-priced stocks have evidenced a sharp increase in retail ownership and trading. We exploit the staggered introduction of FT and distribution of stimulus checks for identification. While fractional trades are small individually, they can work collectively to generate price pressures and reversals if coordinated through attention-inducing events (such as being featured in Robinhood's Top Mover list or stock split announcements). Although arguably less necessary, stock splits post-FT generate positive but transitory price pressure and facilitate insider selling.

Da, Zhi and Fang, Vivian W. and Lin, Wenwei, Fractional Trading (November 18, 2021). Available at SSRN: <https://ssrn.com/abstract=3949697> or <http://dx.doi.org/10.2139/ssrn.3949697>

Flying below the radar: Insider trading by executives below the top

To enforce insider trading laws, financial regulators require top executives in listed companies to make their own-company trades public. One implication of this regulatory focus is that many executives below the top fly under the radar. In this study, we use administrative register data from Norway to examine whether executives below the top in listed companies earn abnormal returns on purchases in own-company stock. We show evidence of positive abnormal returns of own-company purchases using several alternative benchmarks, including own-company sells, purchases and sells of stocks of other companies, and purchases prior to joining the company. The estimates are economically large: about 100 basis points on a 1-month horizon. Our findings suggest the need for a debate on whether executives who are currently flying below the radar should be required to disclose their own-company stock trades.

Hvide, Hans and Nielsen, Kasper Meisner, Flying below the radar: Insider trading by executives below the top (November 2021). Available at SSRN: <https://ssrn.com/abstract=3957199> or <http://dx.doi.org/10.2139/ssrn.3957199>

Regulating via Social Media: Deterrence Effects of the SEC's Use of Twitter

This paper presents the first evidence of the effect of financial regulators' social media use on corporate and individual behavior. Using the staggered launch of U.S. Securities and Exchange Commission (SEC) regional offices' Twitter accounts, I find that financial regulators' presence on social media reduces opportunistic insider trading, customer complaints against investment advisers, and financial misreporting. Additional tests suggest that the salience and dissemination of regional offices' enforcement activities via Twitter play a role. The deterrence effect of SEC regional offices' Twitter use is concentrated among offices with more followers, firms with more retail investors, and advisers with more retail clients. I also show that investors react more strongly to enforcement actions after the enforced firm's regional office initiates Twitter use. Taken together, the results suggest that financial regulators' use of social media helps deter misconduct.

Lin, Jinjie, Regulating via Social Media: Deterrence Effects of the SEC's Use of Twitter (November 1, 2021). Available at SSRN: <https://ssrn.com/abstract=3952904>

Expressive Trading, Hypermateriality, and Insider Trading

The phenomenon of social-media-driven trading (SMD trading) entered the public consciousness earlier this year when GameStop's stock price was driven up two orders of magnitude by a "hivemind" of individual investors coordinating their actions via social media. Some believe that GameStop's price is artificially high and is destined to fall. Yet the stock prices of GameStop and other prominent SMD trading targets like AMC Entertainment continue to remain well above historical levels.

Much recent SMD trading is driven by profit motives. But a meaningful part of the rise has been a result of expressive trading—a subset of SMD trading—in which investors buy or sell for non-profit-seeking reasons like social or political activism, or for aesthetic reasons like a nostalgia play. To date, expressive trading has only benefited issuers by raising their stock prices. There is nothing, however, to prevent these traders from employing similar methods for driving a target's stock price down (e.g., to influence or extort certain behaviors from issuers).

At least for now, stock prices raised by SMD trading have been sticky and appear at least moderately sustainable. The expressive aspect, which unites the traders under a common banner, is likely a reason that dramatic price increases resulting from profit-seeking SMD trading have persisted. Without a nonfinancial motivation to hold the group together, its members would be expected to defect and take profits.

Given that SMD trading appears to be more than a passing fad, issuers and their compliance departments ought to be prepared to respond when targeted by SMD trading. A question that might arise is whether and when SMD-trading-targeted issuers, and their insiders, may trade in their firms' shares without running afoul of insider trading laws.

This Article proceeds as follows: Part I summarizes the current state of insider trading law, with special focus on the elements of materiality and publicity. Part II opens with a brief summary of the filing, disclosure, and other (non-insider-trading-related) requirements issuers and their insiders may face when trading in their own company's shares under any circumstance. The remainder of this Part analyzes the insider trading-related legal implications of three different scenarios in which issuers and their insiders trade in their own company's shares in response to SMD trading. The

analysis reveals that although the issuer's and insiders' nonpublic internal information may be material (and therefore preclude their legal trading) prior to and just after the onset of third-party SMD trading in the company's stock, subsequent SMD price changes (if sufficiently dramatic) may diminish the importance of the company's nonpublic information, rendering it immaterial. If the issuer's and insiders' nonpublic information about the firm is immaterial, then they may trade while in possession of it without violating the anti-fraud provisions of the federal securities laws.

Anderson, John P. and Kidd, Jeremy and Mocsary, George A., Expressive Trading, Hypermateriality, and Insider Trading (October 15, 2021). Available at SSRN: <https://ssrn.com/abstract=3943396> or <http://dx.doi.org/10.2139/ssrn.3943396>

Say on Pay Laws and Insider Trading

We examine whether mandatory adoption of say-on-pay increases executives' incentives to engage in insider trading to offset the regulatory-induced increase in compensation risk. Our empirical design exploits the staggered adoption of say-on-pay laws across fourteen countries over the 2000-2015 period. We find that mandatory adoption of say-on-pay is associated with a material increase in insider trading profitability, especially in firms with excess pay and weaker governance. The increase in insider trading profits is mostly driven by more frequent and larger insider sales, consistent with executives' desire to reduce their exposure to firm-specific risk and rebalance their portfolio. We also find some evidence that after the adoption of say-on-pay insider sales become more predictive of future returns and are more likely timed during information-sensitive windows. Overall, our results highlight the importance of considering potential effects on insider trading incentives when designing compensation reforms and when assessing their impact on executives' incentives.

Bourveau, Thomas and Brochet, Francois and Ferri, Fabrizio and Sun, Chengzhu, Say on Pay Laws and Insider Trading (October 8, 2021). *European Corporate Governance Institute – Finance Working Paper No. 792/2021*, *Boston University Questrom School of Business Research Paper No. 3938891*. Available at SSRN: <https://ssrn.com/abstract=3938891> or <http://dx.doi.org/10.2139/ssrn.3938891>

Covid, Work-from-Home, and Securities Misconduct

We consider whether traders are more likely to commit securities violations when trading at home, a new form of working induced by the Covid pandemic. We examine data pre- and post-Covid, when some traders were unexpectedly forced to work at home. The data indicate the presence of both a treatment and a selection effect, such that those working at home exhibit fewer misconduct cases. Work at home is associated with fewer cases of trading misconduct, although no difference in communications misconduct. The economic significance of working from home on trading misconduct is large for both the treatment and selection effects.

Cumming, Douglas J. and Firth, Chris and Gathergood, John and Stewart, Neil, Covid, Work-from-Home, and Securities Misconduct (October 4, 2021). Available at SSRN: <https://ssrn.com/abstract=3936059> or <http://dx.doi.org/10.2139/ssrn.3936059>

Does target firm insider trading signal the target's synergy potential in mergers and acquisitions?

We find that the acquirer's (1) abnormal returns at merger and acquisition (M&A) announcements and (2) long-term abnormal returns after acquisitions increase with target firm insiders' net purchase ratios. Further, acquisition synergies, measured as the (1) acquirer-target combined cumulative abnormal returns at M&A announcements and (2) changes in three-year operating performance after acquisitions, increase with target insider net purchase ratios. Notwithstanding, targets with higher insider net purchase ratios receive higher takeover premiums. Overall, our findings suggest that, even under the SEC's "short-swing rule," target insider trading prior to the M&A announcement serves as a credible signal for acquisition outcomes.

Inho Suk, Mengmeng Wang, Does target firm insider trading signal the target's synergy potential in mergers and acquisitions?, *Journal of Financial Economics*, Volume 142, Issue 3, 2021, Pages 1155–1185. Available at ISSN 0304-405X, <https://doi.org/10.1016/j.jfineco.2021.05.038>.
(<https://www.sciencedirect.com/science/article/pii/S0304405X21002312>)

News media and insider trading profitability: An emerging country perspective

We test news media's disciplining by dissemination role and predictive power in insider trading related issues with a large and novel dataset on Chinese firms between 2008 and 2017. We find that more media coverage is associated with significantly lower level of insider trading profitability, which confirms the disciplining by dissemination role of media documented in the developed market. However, as a new evidence to the media and insider trading literature, we also find that media's negative tone has a positive correlation with future insider trading profitability, which is consistent with the media predictive power argument. In addition, we find that media's predictive power is amplified by a firm's good governance structure and low level of information asymmetry. Our study shows news media's effectiveness in predicting opportunistic insider trading in China.

Fangcheng Sun, Shantanu Dutta, Hui Huang, Pengcheng Zhu, News media and insider trading profitability: An emerging country perspective, *Emerging Markets Review*, Volume 49, 2021, 100795, ISSN 1566-0141. Available at <https://doi.org/10.1016/j.ememar.2021.100795>.
(<https://www.sciencedirect.com/science/article/pii/S1566014121000030>)

Short sellers and insider trading profitability: A natural experiment

We examine the impact of short sellers on insider trading profitability using a natural experiment of a pilot program which relaxed short-selling constraints for randomly selected pilot stocks. We find that pilot firms experienced a significant decrease in insider trading profitability during the pilot program. The results are more pronounced for the pilot firms with poor information quality, and for the pilot firms without corporate restrictions on insider trading. Our evidence suggests that short sellers serve an important market disciplinary role by reducing insider trading profitability.

Xia Chen, Qiang Cheng, Ting Luo, Heng Yue, Short sellers and insider trading profitability: A natural experiment, *Journal of Accounting and Public Policy*, 2021, 106936, ISSN 0278-4254. Available at <https://doi.org/10.1016/j.jaccpubpol.2021.106936>.
(<https://www.sciencedirect.com/science/article/pii/S0278425421001198>)

Insider trading and the algorithmic trading environment

We examine how algorithmic trading (AT) changes the trading environment for corporate insiders, specifically in terms of motivation to trade and timing of trade. Using SEC Form 4 insider filings and AT computed from the limit order book, we find that AT affects insiders' decisions to buy or sell, depending on whether the trades are information driven, resulting in changes in trading returns. AT reduces returns associated with routine insider sales by 0.9% of a change in AT. However being sophisticated and informed traders, insiders are able to trade strategically, leaving their purchase returns unaffected by AT. The results also show that while AT reduces information acquisition efforts in the pre-earnings announcement period, insider trades counteract this effect by releasing information to the market. Our findings reinforce the important role of insider trading in providing fundamental information and aiding price discovery, especially in an era of computerized financial markets.

Chang, M., Gould, J., Huang, Y., Treepongkaruna, S., & Yang, J. W. (2021). Insider trading and the algorithmic trading environment. *International Review of Finance*, 1–26. Available at <https://doi.org/10.1111/irfi.12367>

Price momentum anomalies from three sigma corporate events – a financial event study across 16 markets

This paper investigates the relationship of price runups before significant corporate events cross-sectionally between 16 markets. Its main contribution is to compare eight corrupt markets with eight non-corrupt markets to test whether the difference in perceived corruption explains the drift anomalies in the runups. This event study defines an event when there is a three-sigma return in either direction by also controlling for market risk. Data collection for this study is taken between 2010-2020.

After identifying over 4600 events, the returns for the 30 days prior were analyzed. The results show significant results in differences in drifts between positive and negative events for six markets. Out of which five of these markets were labelled corrupt. A common feature for the markets that showed a significant drift runup was that the runup started 13-15 days before the event.

All the events were systematically created in the same way across all markets.

Miglans, Elvijs, Price momentum anomalies from three sigma corporate events – a financial event study across 16 markets (October 2, 2021). Available at SSRN: <https://ssrn.com/abstract=3934868> or <http://dx.doi.org/10.2139/ssrn.3934868>

Who trades and who provides liquidity around unscheduled corporate announcements?

We provide novel evidence on trading patterns around unscheduled corporate announcements in a modern algorithmic market. Using order and trade level data from the National Stock Exchange (NSE) of India that allows the identification of the orders from high-frequency traders (HFT), agency algorithmic traders (AAT), non-algorithmic institutional traders, non-algorithmic proprietary traders and retail traders, we find that sophisticated traders such as HFT, AAT and non-algorithmic institutions are not informed about the unscheduled announcements. Instead, retail traders and, to an extent, non-algorithmic proprietary traders trade in the correct direction ahead of the

announcements. We also find HFT to decrease their net liquidity demand in the post-announcement period and more so after announcements that contain significant news. The later finding contributes to the debate on the quality of liquidity supplied by HFTs in modern markets.

Nawn, Samarpan and Banerjee, Ashok, Who trades and who provides liquidity around unscheduled corporate announcements? (October 6, 2021). Available at SSRN: <https://ssrn.com/abstract=3937240> or <http://dx.doi.org/10.2139/ssrn.3937240>

Market Manipulation

Public Information Manipulation in the Financial Market

Where does sentiment come from? We answer this question by introducing information manipulation into the financial market. In our model, an insider inflates the fundamental to boost the equilibrium market price. Because the manipulation cost is private information, the speculators treat the manipulation as a noisy signal or sentiment. The manipulation turns out to be a linear combination of fundamental and manipulation cost. The equilibrium level of manipulation decreases with market supply elasticity and transparency.

Bo, Wang and Suli, Zheng, Public Information Manipulation in the Financial Market. Available at SSRN: <https://ssrn.com/abstract=3952423>

Share Buybacks and Market Manipulation

Share buybacks are in many respects a socially desirable financial technique, and the tremendous majority of these operations is surrounded by adequate safeguards preventing any risk of improper implementation. Yet share buybacks may, in some circumstances, reflect market manipulation practices, increase macroeconomic risk and/or be poorly implemented. This paper focuses on the risk of market manipulation and classifies share buybacks into four categories depending on their purpose: redistributive buybacks (which aim to give back part of the company's benefits to the shareholders), signaling buybacks (which seek to push the share price up when managers consider it as undervalued), event-driven buybacks (implemented for a standalone purpose) and manipulative buybacks (which inflate or otherwise artificially influence the share price). This paper discusses the application of market manipulation rules to these various categories of buybacks and shows that only redistributive buybacks should benefit from the so-called 'safe harbour regime' provided for by European and American laws, and thus be shielded against prosecution.

Oudin, Paul and Adler, Arthur, Share Buybacks and Market Manipulation (October 18, 2021). Available at SSRN: <https://ssrn.com/abstract=3945770> or <http://dx.doi.org/10.2139/ssrn.3945770>

Alternative Trading System Effects on Exchange Market Efficiency and Real Efficiency

We develop a model featuring managerial learning from exchange market to analyze how alternative trading systems (ATS) affect exchange market efficiency and real efficiency. An informed investor chooses the exchange market with positive probability when firm fundamentals are good but trades surely on the ATS otherwise. Such trading asymmetry is associated with asymmetric firm investments and leads to asymmetric limits to arbitrage. Measuring exchange

market efficiency by mutual information (because of endogenous firm value), we identify cases where ATS increases both exchange market efficiency and real efficiency and cases where it harms exchange market efficiency but surprisingly increases real efficiency.

Huang, Chong and Xu, Xiaoqi, Alternative Trading System Effects on Exchange Market Efficiency and Real Efficiency (December 13, 2021). Available at SSRN: <https://ssrn.com/abstract=3984413> or <http://dx.doi.org/10.2139/ssrn.3984413>

Information, Liquidity, and Dynamic Limit Order Markets

We solve analytically a dynamic limit order book model with asymmetric information and discrete prices. We find an increase in adverse selection erodes uninformed traders' profits and induces them to switch to more aggressive limit and market orders to avoid pooling with informed investors. Informed investors follow suit and use more aggressive orders to find camouflage. As the book fills up, competition for liquidity provision moves to inside quotes. We draw empirical predictions on spread, depth, information content of orders and price discovery that are consistent with recent empirical evidence. Order-flow imbalances can be used to proxy for past order-flow information.

Riccò, Roberto and Rindi, Barbara and Seppi, Duane J., Information, Liquidity, and Dynamic Limit Order Markets (December 28, 2021). Available at SSRN: <https://ssrn.com/abstract=3032074> or <http://dx.doi.org/10.2139/ssrn.3032074>

Spoofing and its Regulation

Nearly a century after the United States enacted its first securities laws, urgent questions remain as to the scope of manipulation law: whether manipulation is possible in principle, and if so, how the law should respond in practice. Sharp disagreement among courts, economists, and legal scholars as to whether trading or quoting activity constitutes illegal manipulation has led to a legal framework that lacks precision and cogency. Moreover, the poorly articulated normative basis for court rulings has resulted in enforcement that is both under-inclusive and over-inclusive in ways that do a poor job of discouraging socially harmful transactions and enabling socially beneficial ones.

This Article seeks to clarify this confusion. Drawing on microstructure and financial economics, this Article offers a new understanding of a common kind of quote-driven manipulation, often referred to as “spoofing.” By employing an analytical and normative framework developed previously by two of the authors in assessing another major form of manipulation, trade-driven manipulation, this Article assesses the impact of spoofing on what occurs in the securities markets and carefully evaluates its effects on social welfare and economic efficiency. The result is a new understanding of quote-based manipulation that helps resolve essential questions in manipulation law and provides guidance for future regulation and enforcement.

Fox, Merritt B. and Glosten, Lawrence R. and Guan, Sue, Spoofing and its Regulation (November 1, 2021). *Columbia Business Law Review*, Forthcoming, *Columbia Law and Economics Working Paper* Forthcoming, *European Corporate Governance Institute – Law Working Paper* Forthcoming. Available at SSRN: <https://ssrn.com/abstract=4002696>

Stock markets play ‘whack a mole’ with Pump and Dump schemes

The surge, and then fall, in the price of shares in GameStop Corporation in early 2021 generated renewed attention to ‘pump and dump’ stock market manipulation schemes. Known for centuries, the perpetrators of pump and dump schemes profit by artificially inflating the price of a security and then selling before the security returns to a price which more closely reflects its underlying value.

In the GameStop saga, unlike other types of fraud, those investors caught by the scheme appear to have garnered little sympathy from the public. It seems that this is because investors who purchase shares subject to pump and dump schemes frequently make purchasing decisions based on rumours or perhaps hope to ride the wave of the ‘pump’ and thereby ‘get rich quick’.

Yet regardless of ones’ view on the blamelessness or otherwise of investors in such schemes, a renewed focus by regulators and stock markets on pump and dump schemes is necessary. Pump and dump schemes continue to be a scourge on stock markets around the world, and particularly on small cap markets which cater for listings of small to medium enterprises. The proliferation of pump and dump schemes in those markets impacts upon market integrity, discouraging investment and listings. Less investment in such enterprises can adversely impact both job creation and economic growth.

This article examines the problem of pump and dump schemes and their detrimental impact on the integrity of small cap markets. It then considers the challenges in eliminating pump and dump schemes from these markets before considering possible solutions to this problem.

Austin, Janet, Stock markets play ‘whack a mole’ with Pump and Dump schemes (November 26, 2021). Available at SSRN: <https://ssrn.com/abstract=3972431> or <http://dx.doi.org/10.2139/ssrn.3972431>

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