

LEGAL COUNTERMEASURE FOR THE INEVITABILITY OF INFORMATION ASSYMETRY IN CURRENT CAPITAL MARKETS

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“ALL THE LIGHT YOU SEE FROM THE PAST.” It is a phrase of a sign installed in several places around the world, including the waterfront in Georgetown, Washington, D.C., United States. This means that by the time it reaches people’s eyes, everything they are seeing is technically already in the past. From the perspective of life or art, the phrase is indeed a beautiful and profound expression, but if you put it into the capital market, it illustrates that “the capital markets are not fair.” This is because, in current capital markets, there is information asymmetry between fast traders and slow traders, and ordinary investors are always exposed to adverse selection when new information flows into the markets. Unfortunately, when fair disclosure was introduced, several facts, such as different trading conditions between investors the discrepancy “timing” of accessing the information, the different “speeds” of a network, and the varying “distances” to information sources or order book (server), couldn’t be considered due to the social and market environment. Accordingly, instead of enforcing issued corporations to disclose material nonpublic information to all investors simultaneously, the securities regulation system must allow a chance to avoid information asymmetry by allowing corporations to sell their information in advance of fair disclosure. However, this work is not easy because the fair disclosure system and insider trading regulation require simultaneous dissemination of information, and this principle is treated as a “Sacred Tenet.” Therefore, to level the playing field in a substantive meaning, not only those factors must be considered, but also a plan for harmonizing the current legal systems and new legal systems for protecting ordinary investors would necessarily be prepared. From this background, the author introduces factors generating information asymmetry, discusses the necessity of a new legal system, and, based on a new insider trading theory “Discretion of Corporation Theory,” examines a plan for rebuilding rules treating information asymmetry to level the playing field in substantive meaning.

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I INTRODUCTION

“ALL THE LIGHT YOU SEE FROM THE PAST.” It is a phrase of a sign installed in several places around the world, including the Senator Charles H. Percy Plaza, Washington, D.C., United States.¹ This means that light takes time to travel, so, everything people are seeing is technically already in the past by the time it reaches our eyes.² From the perspective of life or art, the phrase is indeed a beautiful and profound expression, but in light of the capital market, it becomes just an uncomfortable phrase saying, “the capital markets are not fair.” This is because unlike fifty years ago when it took roughly thirty days for the market to reflect the information,³ current capital markets were fully digitalized,⁴ latency got close to physical limits,⁵ and the information is reflected in the market price in a very short time.⁶ Then its value disappears.⁷ The problem is that when new information flows into the market, some fast traders earn huge profits⁸ without taking any risks⁹ at

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¹ When some letters in the sign turn off, this phrase changes to “ALL YOU SEE IS PAST.” Note Alicia Eggert, *All the Light You See 2017 - 2019* (<https://aliciaeggert.com/pages/allthelight.html>) (Dec. 10, 2022).

² *Id.*

³ SEC v. Texas Gulf Sulphur Co., 258 F.Supp. 262, fn. 12 (1966).

⁴ Larry Harris, *Trading and Exchanges: Market Microstructure for Practitioners*, Oxford Univ. Press (2002), at 34. (“Now, at many exchanges, traders meet only via electronic communications networks.”); Adam D. Clark-Joseph, *Exploratory Trading*, Job Market Paper (Jan. 13, 2013) (“Over the past three decades, information technology has reshaped major financial exchanges worldwide. Physical trading venues have increasingly given way to electronic ones, and trading responsibilities that once fell on human agents have increasingly been delegated to computer algorithms. Automation now pervades financial markets.”).

⁵ Thierry Foucault & Sophie Moinas, *Is Trading Fast Dangerous? (Global Algorithmic Capital Markets, Edited by Walter Mattli)*, Oxford Univ. Press (2019), at 10.

⁶ Grace X. Hu et al., *Early Peek Advantage? Efficient Price Discovery with Tiered Information Disclosure*, 126 J. Fin. Econ. 399, 410-11 (2017).

⁷ Hu et al., *Id.*, at 410-11; Rosenblum v. Thomson Reuters (Markets) LLC, 984 F.Supp.2d 141, 143 (S.D.N.Y. 2013); Kevin Haeberle & Todd Henderson, *Information-Dissemination Law: The Regulation of How Market-Moving Information Is Revealed*, 101 Cornell L. Rev. 1373, 1412-13 (2016); Michael Rothfeld et al., *Traders Pay for an Early Peek at Key Data*, Wall St. J. (June 12, 2013).

⁸ Harris, *supra* note 4, at 231; Matteo Aquilina et al., *Quantifying the High-Frequency Trading “Arms Race”*, Becker Friedman Institute, Working Paper No. 2020-86 (2021), at 55; Alexander Osipovich, *Ultrafast Trading Costs Stock Investors Nearly \$5 Billion a Year, Study Says*, Wall St. J. (Jan. 27, 2020); Michael Sheetz, *High-Speed Traders Cost Regular Investors Almost \$5 Billion a Year, Study Says*, CNBC (Jan. 27, 2020).

⁹ Harris, *Id.*, at 401; Maureen O’Hara, *Market Microstructure Theory*, Blackwell (1995), at 54, 57; Khaldoun Khashanah et al., *White Paper: On the Impact and Future of HFT*, IRRIC Institute, Technical

expense of slow investors in a very short time,¹⁰ the same as insiders benefitting at expense of outsiders in insider trading cases.¹¹ At this point, we can call the informational gap between fast traders and slows “information asymmetry.”

While the problem of informational asymmetry is traditionally limited to insider trading problems and a matter of different abilities to access material inside information between outsiders and insiders,¹² based on the viewpoint of market microstructure theory, the different speeds of investors can generate informational asymmetry as well.¹³ Considering that fast traders are using lots of methods to improve their trading conditions related to factors generating information asymmetry and that those manners are cost-prohibitive to ordinary investors to retail investors as well as in terms of technical abilities,¹⁴ ordinary investors are always exposed to the risk of adverse selection when the market price reflects new information. From this background, one expert expressed “by the time the ordinary investor sees a quote, it’s like looking at a star that burned out 50,000 years ago.”¹⁵

Report (Oct. 2014), at 13; Jonathan Macey & David Swensen, *Recovering the Promise of the Orderly and Fair Stock Exchange*, 42 J. Corp. L. 777, 781-83 (2017); Kevin Haeberle, *Information Asymmetry and the Protection of Ordinary Investors*, 53 U.C. Davis L. Rev. 145, 168, 173-34 (2019); Eurex, *Whitepaper: Eurex Passive Liquidity Protection*, Eurex (July 2021), at 3; Sviatoslav Rosov, *Predatory HFT Strategies: Is “Information Transmission Zoning” the Solution?*, CFA Institute, Mkt. Structure (Sep. 26, 2014).

¹⁰ Macey & Swensen, *Id.*, at 781, 782, 787, 788-9; Nathaniel Popper, *Stock Exchange Prices Grow So Convolved Even Traders Are Confused, Study Finds*, N.Y. Times (Mar. 1, 2016); Khashanah et al., *Id.*, at 13; Haeberle, *Id.*, at 168, 173-74; N.Y. St. Off. Att’y Gen., *A.G. Schneiderman Announces Marketwired Agreement to End Sales of News Feeds to High-Frequency Traders*, N.Y. St. Off. Att’y Gen., Press Release (Mar. 19, 2014); Foucault & Moinas, *supra* note 5, at 16; Rosov, *Id.*

¹¹ Nicholas L. Georgakopoulos, *Insider Trading as a Transactional Cost: A Market Microstructure Justification and Optimization of Insider Trading Regulation*, 26 Conn. L. Rev. 1, 17 (1993). (“Insiders gain at the expense of outsiders because they take advantage of price movements. The result is that their profits take the form of a transaction cost burdening outsiders. The cost to the group of outsiders is equal to the total profits of insiders.”).

¹² Victor Brudney, *Insiders, Outsiders, and Informational Advantages Under the Federal Securities Laws*, 93 Harv. L. Rev. 322, 322 (1979) (“That rule was first invoked in interpreting rule 10b-5 in the context of insiders or the corporation itself trading on inside information about corporate assets or prospects.”); Georgakopoulos, *Id.*, at 10-11, 14-15 (1993); *Dirks v. SEC*, 463 U.S. 646, 657 (1983). (“Because the disclose-or-refrain duty is extraordinary, it attaches only when a party has legal obligations other than a mere duty to comply with the general antifraud proscriptions in the federal securities laws.”).

¹³ See Foucault & Moinas, *supra* note 5, at 17. (“This source of adverse selection (known as ‘picking off’, ‘sniping’, or ‘free option’ risk) is due to differentials in speeds of reaction to news.”); Tommi A. Vuoremaa, *The Good, the Bad, and the Ugly of Automated High-Frequency Trading*, Valo Research and Trading (2012), at 11. (“The techniques to do it are now different, however, and rely much on technology, speed in particular.”).

¹⁴ *City of Providence, Rhode Island v. Bats Global Markets, Inc.*, 878 F.3d 36, 45 (2nd Cir. 2017); James Angel & Douglas M. McCabe, *Fairness in Financial Markets: The Case of High Frequency Trading*, SSRN (2010), at 21; Kristin N. Johnson, *Regulating Innovation: High Frequency Trading in Dark Pools*, 42 J. Corp. L. 833, 861-62 (2017); Yesha Yadav, *Algorithmic Trading and Market Regulation (Global Algorithmic Capital Markets, Edited by Walter Mattli)*, Oxford Univ. Press (2019), at 252, 253-54; Wan Suk, Suh, *Study of the Fair Disclosure System*, 22 KCLA 167, 186 (2022) (<https://www.kci.go.kr/kciportal/ci/sereArticleSearch/ciSereArtiView.kci?sereArticleSearchBean.artiId=ART000899808>) (Dec. 25, 2022).

¹⁵ Jerry Adler, *Raging Bulls: How Wall Street Got Addicted to Light-Speed Trading*, *Wired* (Aug. 3, 2012).

This description most accurately explains the inherent flaw of the modern capital market.¹⁶

Accordingly, instead of enforcing issued corporations to disclose material nonpublic information to all investors simultaneously, the securities regulation system must allow all market participants a chance to avoid information asymmetry. This opportunity can be provided by allowing corporations to sell their information in advance of fair disclosure and enforcing information sellers to disclose the fact that information transactions will happen. If listed companies can sell their all information, informed traders must purchase the information to benefit from selective disclosure. But if the fact of information selling is disclosed before the information is handed over, all investors can predict when information asymmetry occurs. From this new legal circumstance, slow investors can withdraw their orders and quotes or keep out of the market when information asymmetry is supposed to generate. In my view, the imposition of new obligations in exchange for allowing information selling before fair disclosure is more suitable for protecting ordinary investors than sticking to current legislation in modern capital markets.

Unfortunately, setting this new structure is not easy because the current market structural defect originates from the electrification of the market system and the current legal system. In other words, at the time of the introduction of the fair disclosure system and insider trading regulation, the social and market environment didn't allow legislators to consider the different trading conditions between investors such as the discrepancy "timing" of accessing the information, the different "speeds" of a network, and the varying "distances" to information sources or order book (server), so, as a "Sacred Tenet," the current legal system requires equal access to information or simultaneous dissemination of information.¹⁷ Ironically, the generation of information asymmetry is the inevitable current capital market from these circumstances.¹⁸ Therefore, in this article, I

¹⁶ Eric Budish et al., *The High-Frequency Trading Arms Race: Frequent Batch Auctions as a Market Design Response*, 130 Q.J. Econ. 1547, 1549, 1554, 1555, 1586-91 (2015).

¹⁷ 17 C.F.R. 243.100(a); Regulation (EU) No 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse, Article 17(8); The Market Abuse (Amendment) (EU Exit) Regulations 2019 No. 310 (18th Feb. 2019), Article 17(8); 金融商品取引法(昭和二十三年法律第二十五号) 第二十七条の三十六; FSICAM § 392; Haeberle & Henderson, *supra* note 7, at 1376, 1439; Marisa Papenfuss, *Inflated Private Offering: Regulating Corporate Insiders and Market-Moving Disclosures on Social Media*, 73 Vand. L. Rev. 311, 318-9 (2020); SEC, *Selective Disclosure and Insider Trading*, 64 FR 72590, 72591-99 (Dec. 28, 1999); SEC, *Selective Disclosure and Insider Trading*, 65 FR 51716, 51716 (Aug. 24, 2000); Marco Ventoruzzo, *Comparing Insider Trading in the United States and in the European Union: History and Recent Developments*, ECGI, Law Working Paper No. 257/2014 (2014), at 15; Ana Taleska, *European Insider Trading Theory Revisited: The Limits of the Parity-of-Information Theory and the Application of the Property Rights in Information Theory to Activist Investment Strategies*, 17 Eur. Co. and Fin. L. Rev. 559, 582 (2020); Yesha Yadav, *Insider Trading and Market Structure*, 63 UCLA L. Rev. 968, 1015-16 (2016).

¹⁸ U.S. v. O'Hagan, 521 U.S. 642, 658 (1997) ("Although informational disparity is inevitable in the

introduce factors generating information asymmetry, discuss the necessity of a new legal system, and, based on a new insider trading theory “Discretion of Corporation Theory,” examine a plan for rebuilding rules treating information asymmetry to level the playing field in substantive meaning.

II CAUSES OF INFORMATION ASSYMETRY IN THE MICRO WORLD: ONE SIMPLE PHYSICS PRINCIPLE

All market participants have different conditions in the context of the distance between their location and information source, the speed (or velocity) of the network for sending orders or quotes, and the timing of accessing information. Then, “time” is the value of dividing “distance” by “speed” and each element form the functional relationship.¹⁹ Although it is not a mathematically accurate description, if we put this principle into the capital market, a car race can be a good example, and the key is to cross the finish line first.²⁰ But the problem is that, unlike car racing, where only qualified racers join and are all placed at the starting line and start together at the same starting line and same timing, in capital markets, all participants are joining and there is no uniform starting line and the participants may start the race whenever they reach the line. So, referees don’t care when, where, and how you start. This is the key to the racing game in the capital market.

Meanwhile, investors who want to take advantage of the very short moment of time are equipped with technological advantages such as algorithms, extreme processing speed, etc.²¹ It is hard to deny that using algorithms is one of the factors that inevitably cause information asymmetry during the time it takes for slow investors to decide whether to buy or sell securities, even if ordinary investors access information at the same time as investors who set a high technical basis.²² Of course, it can be argued that there is a need to manage this discrepancy.

However, the concept of algorithm is very broad and obscure. If we must

securities markets, investors likely would hesitate to venture their capital in a market where trading based on misappropriated nonpublic information is unchecked by law.”); Taleska, *Id.*, at 568; Abraham C. Bloomenstiel, *Proprietary Data Feed and Colocation-Enabled High Frequency Trading: Troubling Paradoxes and Difficult Truths*, 45 Securities Reg. L. J. Art 1, 21 (2017); James J. Angel & Douglas M. McCabe, *Insider Trading 2.0? The Ethics of Information Sales*, 147 J. Bus. Ethics 747, 757 (2018); Macey & Swensen, *supra* note 9, at 783; Themis Trading LLC, *Let’s Talk Locked and Crossed – Lock Stock and Two Smoking Barrels*, Themis Trading LLC (Dec. 9, 2013) (<https://blog.themistrading.com/2013/12/lets-talk-locked-and-crossed-lock-stock-and-two-smoking-barrels/>) (Dec. 29, 2022) (“if the SEC is to “let a thousand flowers bloom”, and embrace the fragmentation of sixty-plus trading destinations, then they need to insure that these destinations, all operating at different speeds, clearly understand what they need to do when a locked or crossed condition occurs.” ... “The SEC did not account for how much of the trading is actually inspired by race conditions to get exchange and dark-pool proffered rebates.”).

¹⁹ Khashanah et al., *supra* note 9, at 14.

²⁰ Rosov, *supra* note 9.

²¹ Yesha Yadav, *The Failed Regulation of U.S. Treasury Markets*, 121 Colum. L. Rev. 1173, 1208-9 (2021).

²² Yadav, *supra* note 14, at 252.

clarify the scope of the undesirable technique, it is better to ask ourselves whether human society's pure desire for creativity must be treated as pure evil. In my opinion, high technology has been created based on nature and the legal person's instinct. In other words, regardless of the direction, ceaselessly pursuing something is the driving force that keeps society moving and this is the nature of human society.²³ Therefore, far-advanced technology shall not be seen negatively.²⁴ From this viewpoint, I will not discuss the matter of regulation for algorithms.

A Timing (Time)

Timing refers to the time when a series of procedures from collecting information to submitting orders begins. Technically, "timing" is a separate concept of "time," and it cannot be discussed in relation to distance and speed. However, if the concept of time is discussed from the perspective of information asymmetry, it is related to the case where different traders traveled the same distance at the same speed, and in turn, it took the same time, but someone arrived earlier than others.²⁵ In other words, certain market participants who sent orders through the same distance at the same speed but accessed exchanges' order books earlier than others eventually enjoy information asymmetry. At this time, the principle, that it took a shorter time even though distance and speed elements were the same as others, is because someone got started on the process of making an investment decision earlier than others and this manner is discriminatory or difficult to utilize for the ordinary investors. From this basis, timing can be said as one of the factors generating information asymmetry.²⁶ Accordingly, apart from the physics correctness, regarding the problem of information asymmetry, the element of 'timing' will be used instead of 'time'. Elements related to timing factors include different access timing to disclosure information and market information (external information) and differences in information disclosure timing among data retrieval and transfer systems.

1 Disclosure Information

Disclosure information refers to information produced and disclosed by the issuer in accordance with legal obligations. Since this information must be distributed

²³ Jeremy Rifkin, *Entropy: A New World View*, Mass Market Paperback (1981), at 25.

²⁴ In the same context, Mary Jo White, former Chair of SEC, also recommends not banning algorithm trading. See Mary Jo White, *Enhancing Our Equity Market Structure*, SEC (June 5, 2014). ("The SEC should not roll back the technology clock or prohibit algorithmic trading").

²⁵ Indeed, the recent latency that fast traders are enjoying is close to the physical limits, so it is very common for them to try to benefit from the timing factors. See Foucault & Moinas, *supra* note 5, at 10.

²⁶ Maureen O'Hara, *High Frequency Market Microstructure*, 116 J. Fin. Eco. 257, 263 (2015). (This is because the time dimension that affects high speed trading also affects market makers.").

simultaneously in most countries around the world under the fair disclosure system,²⁷ there seems to be no room for information asymmetry from the disclosure information. However, the timing of accessing information and fast traders' ability to collect, analyze, and judge information cannot be compared to that of other slow investors.²⁸ In the price discovery process, therefore, it can be fair to say that information asymmetry occurs based on the disclosed information. Furthermore, given that disclosure information significantly impacts the market price,²⁹ information disclosed based on the fair disclosure system generates information asymmetry among market participants.

2 Market Information (External Information)

Market information is generally referred to data not related to the inside affairs of the issuer, and all data like analyzing and predicting the stock price outlook of a specific stock or industry are included in it.³⁰ In modern markets, market information also significantly impacts the prices of stock and derivatives,³¹ so it can be said to be a source of information asymmetry. Indeed, high-frequency traders who have mainly given rise to the problem of fraudulent transaction strategies, such

²⁷ 17 C.F.R. Part 243 - REGULATION FD; EU MAR Article § 17(1); KOSPI Market Disclosure Regulation Section 3 (file:///C:/Users/andre/Desktop/KOSPI+Market+Disclosure+Regulation+(20211124).pdf) (Dec. 6, 2022); 金融商品取引法 第二十七条の三十六.

²⁸ See *supra* note 14.

²⁹ Taleska, *supra* note 17, at 575.

³⁰ It can also be said to be "external information" in that it is not created by the issuer. See Ventiv Technology, *What's the Difference Between Internal and External Data?* (<https://www.ventivtech.com/blog/whats-the-difference-between-internal-and-external-data>) (Dec. 6, 2022); CFQ, *Sourcing and Managing External Data* (<https://www.cdq.com/events-insights/research/sourcing-and-managing-external-data>) (Dec. 6, 2022).

³¹ Yadav, *supra* note 14, at 252-53; The most representative case of information asymmetry based on market information is the case of early access to the consumer sentiment index. This case is that an exclusive distributor (Thomson Reuters) of the consumer index which had been researched by the University of Michigan sold it two seconds in advance of opening to the public to only a few subscribers who paid for it. From this privilege, a certain group of high-frequency traders and the world's most influential capitalists could profit from information asymmetry for 2 seconds. This practice was prohibited by NYAG in 2013. For more detailed clues regarding the consumer sentiment index case, note 984 F.Supp.2d 141, *supra* note 7; Hu et al., *Id.*, at 400; CNBC, *No More Release of Early Information* (<https://www.cnbc.com/video/2013/06/21/no-more-release-of-early-information.html>) (Jan. 8, 2023); Peter Lattman, *Thomson Reuters to Suspend Early Peeks at Key Index*, N.Y. Times (Jul. 7, 2013); Eamon Javers, *Thomson Reuters Gives Elite Traders Early Advantage*, CNBC (June 12, 2013); CNBC, *Thomson Reuters Suspends Early Distribution of Consumer Data*, CNBC (July 8, 2013); N.Y. St. Off. Att'y Gen., *Remarks by Attorney General Eric T. Schneiderman to the 2013 Bloomberg Markets 50 Summit*, N.Y. St. Off. Att'y Gen., Press Release (Sep. 23, 2013); Regarding the consumer sentiment index itself, note University of Michigan, *Surveys of Consumers* (<http://www.sca.isr.umich.edu/>) (Jan. 8, 2023); Sydney C. Ludvigson, *Consumer Confidence and Consumer Spending*, 18 J. of Econ. Perspectives 29, 30 (2004); Angel & McCabe, *supra* note 3, at 748-50; Donald C. Langevoort, *Selling Hope, Selling Risk: Corporations, Wall Street and the Dilemmas of Investor Protection*, Oxford Univ. Press (2016), at 82-84; Haeberle & Henderson, *supra* note 7, at 1390.

as predatory trading,³² focus on external information. Further, in the case of market information, unless the trading before disclosure, that is, selective disclosure, of this information was prohibited through “insider trading 2.0”³³ in New York State, it can be traded at tangible and intangible costs in other States, so investors who do not have the financial ability or intention to participate in this information transaction are exposed to unilateral information asymmetry. Therefore, although the degree of information asymmetry may be weaker than the disclosure information, it can be evaluated that it has a clearer relationship with the cause of information asymmetry.

3 Different Disclosing Timing among Disclosure Platforms

Regardless of the obligation to distribute disclosure information simultaneously and the ability to manage information of fast traders,³⁴ the information distributing timing varies depending on the disclosure platforms. Indeed, there was an issue that the timing of accessing and downloading the information through a specific type of download server (FTP server)³⁵ of EDGAR public dissemination service (“PDS”)³⁶ was more than 1 minute (intermediate value of 10 to 11 seconds) ahead of the time when public information was exposed to the website immediately after

³² Note Frank J. Fabozzi et al., *High-Frequency Trading: Methodologies and Market Impact*, 19 Rev. Futures Mkts. (Special Edition) 7, 29-32 (2011); Vuorenmaa, *supra* note 13, at 10-14; Tradepro Academy, *supra* note 61; Rosov, *supra* note 9; Lazaro I. Vazquez, *High Frequency Trading: Is Regulation the Answer?*, 17 Wake Forest J. Bus. & Intell. Prop. L. 151, 175 (2017); Clark-Joseph, *supra* note 4, at 2-4.

³³ “Insider Transaction 2.0” is the first regulation method devised by New York Attorney General in 2013 and is a plan to prohibit the market information pre-trading practices providing market information to specific people in advance by applying the Martin Act of New York State. See NEW YORK STATE SECURITIES FRAUD & THE MARTIN ACT: NY GEN. Bu. LAW 352 & 352-C (https://ag.ny.gov/sites/default/files/pdfs/bureaus/investor_protection/library/NY%20Gen%20Bus%20Law%20Article%2023-A.pdf) (Dec. 1, 2022); Jeremy Saland, *Marin Act, Saland Law* (<https://www.new-york-lawyers.org/martin-act.html>) (Dec. 1, 2022); EID Climate, *The Martin Act: New York State’s Most Notorious Business Law*, EID Climate Oct. 18, 2019 (<https://eidclimate.org/the-martin-act-explained/>) (Dec. 1, 2022); People ex rel. Schneiderman v. Barclays Cap. Inc., 47 Misc. 3d 862 (N.Y. Sup. Ct. 2015); In the Matter of Barclays Capital Inc., SEC Administrative Proceeding File No. 3-17077 (Jan. 31, 2016); NYAG, *A.G. Schneiderman Announces Landmark Resolutions with Barclays and Credit Suisse for Fraudulent Operation Of Dark Pools; Combined Penalties And Disgorgement To State Of New York And Sec Of Over \$154 Million*, NYAG, Press Release (Feb. 1, 2016); NYAG, *A.G. Schneiderman Announces Record \$42 Million Settlement with Bank of America Merrill Lynch Over Fraudulent “Masking” Scheme in Electronic Trading Division*, NYAG, Press Release (Mar. 23, 2018); SEC, *Barclays, Credit Suisse Charged with DarkPool Violations*, SEC, Press Release 2016-16 (2016); Rupert Neate, *Barclays and Credit Suisse Pay Biggest Ever Fines for Dark Pool Trading*, The Guardian (Jan. 31, 2016).

³⁴ See *supra* note 14, 17, 26.

³⁵ ATTAIN, *EDGAR® Public Dissemination Service – New Subscriber Document*, ATTAIN (Mar. 29, 2019), at 9.

³⁶ SEC, *EDGAR Public Dissemination Service (PDS) System* (<https://www.sec.gov/oit/announcement/public-dissemination-service-system-contact.html>) (Dec. 6, 2022).

data was registered in EDGAR.³⁷ More fundamentally, considering the reality that the information learning process of fast traders takes place in a very short period of time these days, there will be a difference in the timing of information disclosure between information dissemination systems unless the exposure time is precisely adjusted in units of minimum discrete time.³⁸ Accordingly, if there is a time difference in the distribution system, investors using a slow disclosure platform are temporarily exposed to information asymmetry, and there is always a possibility that it will cause time discrepancy unless slow investors learn all data feeds in real time. Even if it is technically possible to match the timing of information dissemination among SIPs,³⁹ as fully discussed below, there is bound to be a difference in distance between each source and investor, and a gap in the network speed of each investor. So, it is hard to match all investors' information access timing.

B Distance

The distance element means the distance between the source or the exchange and the investor, and this factor is considered crucially important for fast traders.⁴⁰ If someone's starting point is closer to the information source than others, this different distance becomes a component of information asymmetry because that person can gain a piece of information earlier than others who are in a further place. As elements belonging to distance factors, (1) service of co-location, proprietary

³⁷ Robert J. Jackson, Jr. & Joshua R. Mitts, *How the SEC Helps Speedy Traders*, Columbia L. Sch., Working Paper Series, No. 501 (2014), at 1-2; Jonathan L. Rogers et al., *Run EDGAR Run: SEC Dissemination in a High-Frequency World*, Fama-Miller Center for Research in Finance, Chicago Booth Paper No. 14-36 (2017), at 2; Ryan Tracy & Scott Patterson, *Fast Traders Are Getting Data from SEC Seconds Early*, Wall St. J. (Oct. 29, 2014).

³⁸ In nature, "time" is a continuous line concept, but the operation of electronic devices is technically "discontinuous," and electronic devices and software such as PCs, routers, and matching engines operate based on this discrete time. In other words, contrary to natural human perception, electronic devices can recognize and distinguish time in discontinuous discrete-time cycles with an increment of 0.3ns in the realm of nature. See Eric Budish, *A Market Design Approach to the HFT Debate: The Case for Frequent Batch Auctions*, ECMI, 2014 ECMI Annual Conference (The five years ahead: A New Action Plan for Europe's financial market?) (Oct. 29, 2014), at 4-10; Cosmina Amariei & Diego Valiante, *Report on the 2014 Annual Conference of ECMI*, ECMI, 2014 ECMI Annual Conference (The five years ahead: A New Action Plan for Europe's financial market?), at 5; Based on this principle, some experts suggested a way to level the inclined-playing field. See Budish et al., *supra* note 16, at 1549, fn. 2; Sviatoslav Rosov, *Are Frequent Batch Auctions a Solution to HFT Latency Arbitrage?*, CFA Institute, Mkt. Integrity Insights (Nov. 10, 2014); ECMI, *2014 ECMI AC: The Five Years Ahead - A New Action Plan for Europe's Financial Markets?* (<https://www.ecmi.eu/events/annual-conferences/2014-ecmi-ac-five-years-ahead-new-action-plan-europe%E2%80%99s-financial-markets>) (Dec. 6, 2022).

³⁹ White, *supra* note 24; Scott Patterson, *SEC Plans to Fix Flaw in Electronic Distribution System*, Wall St. J. (Dec. 26, 2014).

⁴⁰ Yadav, *supra* note 17, at 996 ("The ability of traders to physically place their computer servers next to those of an exchange constitutes a critically important means of facilitating HFT." ... "If a firm's orders must travel long or looping distances to reach an exchange, it faces a problem vis-à-vis competitors situated closer to the market.").

data feeds, and direct market access (“DMA”), (2) payment for order flow (“PFOF”), and (3) LEO-Satellite Constellations Network Services can be introduced. All of these are factors that cause information asymmetry as a result of shortening the communication path.

1 Co-location, Proprietary Data Feed, and DMA

(a) Co-location Service

Co-location is a service provided by exchanges and financial institutions by renting their space, and it allows market participants to put their servers in a place that is physically adjacent to the matching engine of exchange and financial institutions.⁴¹ Because of the physical proximity, this service minimizes delays in communication between the exchange and the server of market participants, allowing them to react to market fluctuations before other market participants detect the market change.⁴² Most of the service users are High-Frequent Traders, and they are paying huge fees for it.⁴³

However, the co-location service needs to be understood as part of the exchanges’ strategic effort to secure their competitiveness and pursue profits, rather than a concept used only about a scheme creating information asymmetry. Until the trading strategy using information asymmetry, such as predatory trading,⁴⁴

⁴¹ ASIC, *Review of High-Frequency Trading and Dark Liquidity*, ASIC, Report 452 (2015), at 77; Geoffrey Rogow, *Colocation: The Root of All High-Frequency Trading Evil?*, Wall St. J. (Sept. 20, 2012), Yadav, *Id.*, at 996.

⁴² Rogow, *Id.*; SEC, *Concept Release on Equity Market Structure*, Release No. 34-61358 (Jan. 21, 2010), at 16, 58; Haerberle & Henderson, *supra* note 7, at 1376; Macey & Swensen, *supra* note 9, at 786; Peter Gomber et al., *High-Frequency Trading*, 5 Business & Information Systems Engineering Goethe Universität (2011), at 15; Jacob Adrian, *Informational Inequality: How High Frequency Traders Use Premier Access to Information to Prey on Institutional Investors*, 14 Duke L. & Tech. Rev. 256, 267 (2016); Rosov, *supra* note 9; Yadav, *supra* note 17, at 996.

⁴³ SEC, *Id.*, at 16, 56-61; Angel & McCabe, *supra* note 18, at 749.

⁴⁴ Predatory trading does not have a fixed legal concept, but this strategy usually refers to a transaction method in which high-frequency traders enter the secondary market only when the market fluctuates and realize profits at the expense of investors who are financially and technically inferior in information ability. Note 17 C.F.R. § 242.602(a); 17 C.F.R. § 242.603(a) to (b); *Oversight of the SEC’s Agenda, Operations and FY 2015 Budget Request: Hearing Before the H. Comm. On Fin. Services*, 113th Cong. 17 (2014) (testimony of Mary Jo White, Chairperson, Securities and Exchange Commission) (<https://www.scribd.com/document/321744072/HOUSE-HEARING-113TH-CONGRESS-OVERSIGHT-OF-THE-SEC-S-AGENDA-OPERATIONS-AND-FY-2015-BUDGET-REQUEST>) (Dec. 6, 2022); Bloemenstiel, *supra* note 18, at 2, 17; Adrian, *supra* note 42, at 270; Vuorenmaa, *supra* note 9, at 11; Caroline Le Moign & Kheira Benhami, *Effect of Speed Bumps: Analysis of the Impact of the Implementation of Eurex’s Passive Liquidity Protection on French Equity Options*, AMF (2021), at 5; Gomber et al., *supra* note 42, at 29-30; Michael J. McGowan, *The Rise of Computerized High Frequency Trading: Use and Controversy*, 9 Duke L. & Tech. Rev. 1, 6 (2010); Clark-Joseph, *supra* note 4, at 3 (“However, the private information about price-impact generated by an HFT’s small aggressive orders enables that HFT to trade ahead of predictable demand at only those times when it is profitable to do so.”); 國枝繁樹, *金融危機後の金融関連税制: アップデート*, 全国銀行協会

received social attention, exchanges such as ICE and BATS have been generating profits not only through transaction fees but also through favorable methods to high-frequency traders, of which the representative was the Co-location service fee.⁴⁵

(b) *Proprietary Data Feeds Service*

As the opposite service of consolidated data feeds,⁴⁶ proprietary data feeds⁴⁷ are known to have been provided since 2007 along with the co-location service, and high-frequency traders are paying huge amounts of money to use the service.⁴⁸ This service has been a subject of considerable criticism in that it causes latency delays between investors until recently.⁴⁹ In addition, exchanges are allowed to treat the data they accumulate as exclusive property and sell it at various conditions and prices, so fast traders are legally using this faster information-feeding service.⁵⁰ This time difference is so subtle that natural human cognition cannot detect it, but it is enough time for fast traders (or predatory traders) to exploit the information asymmetry and, in particular, to exacerbate the trading strategy of short-term investments.⁵¹ It is also explained that just enjoying this small latency advantage leads to the highest advantage that can be enjoyed in nature.⁵²

平成27年度 金融調査研究会 (2016), 47頁.

⁴⁵ Macey & Swensen, *supra* note 9, at 786; Jonathan Macey & David Swensen, *Parasitic Trading and Frenzied Lobbying: Why the Heroes of 'Flash Boys' Must Win Their Battle with the Establishment*, *Bus. Insider* (Apr. 22, 2016); Thomas H. McInish & James Upson, *The Quote Exception Rule: Giving High Frequency Traders an Unintended Advantage*, 42 *Fin. Mgmt.* 481, 491 (2013).

⁴⁶ In consolidated data feeds all data related to the price and volume of securities exchanges and alternative trading venues. Since this data has a large range to be collected and takes a long time to work for it, it is inevitably slower than proprietary services that provide only the necessary information for each user. See Evan Akutagawa, *Exploring the Differences Between U.S. Stock Market Data Feeds*, *Automation Generation* (Dec. 20, 2018).

⁴⁷ This term is also referred to a direct data feed and direct exchange feed. See Nasdaq, *Nasdaq Market Data Feeds* (<https://www.nasdaq.com/solutions/nasdaq-market-data-feeds>) (Dec. 6, 2022); Refinitiv, *Real-Time – Direct* (<https://www.refinitiv.com/en/market-data/data-feeds/direct-feeds>) (Dec. 6, 2022).

⁴⁸ Bloomenstiel, *supra* note 18, at 5.

⁴⁹ *Id.*, at 1; Steven McNamara, *The Law and Ethics of High-Frequency Trading*, 17 *Minn. J.L. Sci. & Tech.* 71, 103, fn. 190 (2016); In the Matter of N.Y. Stock Exch. LLC, & NYSE Euronext, Respondents., Exchange Act Release No. 67857 (Sept. 14, 2012); According to the SEC's Concept Release in 2010, the delay when going through consolidated SIP is approximately 5 ms, while another study in 2014 found that the delay of SIP that BATS provided was not more than 2.5 ms. See SEC, *supra* note 42, at 28-30; Shengwei Ding et al., *How Slow Is the NBBO? A Comparison with Direct Exchange Feeds*, 49 *Financ. Rev.* 313, 320 (2014); It can be understood that receiving data directly from the BATS is approximately 2 ms faster than through the consolidated SIP. See Angel & McCabe, *supra* note 18, at 756.

⁵⁰ Angel & McCabe, *Id.*, at 756.

⁵¹ Macey & Swensen, *supra* note 9, at 786; Ding et al., *supra* note 49, at 315, 323; Khashanah et al., *supra* note 9, at 17.

⁵² Khashanah et al., *Id.*, at 18.

(c) *DMA Service*

Direct market access refers to access to the exchanges' or trading venues' order books.⁵³ The advantage of transmitting orders through DMA is that it allows traders to bypass brokerage,⁵⁴ but if we take note of the network route and the location of the DMA service provider's server, it can be said that the nature of the DMA service's principle is to reduce the physical distance between traders and exchanges' servers.⁵⁵ In this circumstance, mostly algorithmic traders or high-frequency traders are using the DMA service.⁵⁶ In 2014, scalpers in South Korea conducted predatory trading by using DMA services.⁵⁷ From this fact, it can be found that DMA service can be understood as one factor generating information asymmetry.

2 *Payment for Order Flow (PFOF)*

Payment for order flow is a rebate that small broker-dealers get in return for routing orders their customers sent to them to big broker-dealers (trading venues).⁵⁸ While this is for making venues more attractive,⁵⁹ this practice has a problem of conflict of interest regarding the duty of best execution or order execution quality and is pointed out as a serious factor that hinders the fairness of the securities market.⁶⁰ Regarding the matter of information asymmetry, as the first damage, small investors are exposed to the risk of adverse selection because orders of retail investors who are using a small broker-dealer can be routed to traders who are faster and have superior information.⁶¹⁶² From the micro viewpoint, the quality of information is

⁵³ CFI Team, *Direct Market Access (DMA)*, CFI (Oct. 23, 2022); James Chen, *Direct Market Access (DMA): Definition, Uses, and Benefits*, Investopedia (June 2, 2022); London Stock Exchange, *Direct Market Access* (<https://www.londonstockexchange.com/personal-investing/tools/direct-market-access>) (Dec. 10, 2022).

⁵⁴ London Stock Exchange, *supra* note 40. ("Direct Market Access (DMA), which allows you to place your orders directly on our order books in the same way that institutional investors do.").

⁵⁵ Day Trade The World, *Direct Market Access vs. Retail Trading – What's the Difference?* (https://www.daytradetheworld.com/trading-blog/dma-vs-retail-trading/#What_is_Direct_Market_Access) (Dec. 10, 2022) ("their orders are implemented directly through their preferred gateway.").

⁵⁶ CFI Team, *supra* note 52.

⁵⁷ Korean Supreme Court judgment, 2013Do4064, Jan. 16, 2014.

⁵⁸ CFA Institute, *Regulation NMS: Review and Recommendations*, CFA Institute (2017), at 6; Macey & Swensen, *supra* note 9, at 789.

⁵⁹ Dan Marcus & Miles Kellerman, *The FX Race to Zero: Electronification and Market Structural Issues in Foreign Exchange Trading (Global Algorithmic Capital Markets, Edited by Walter Matli)*, Oxford Univ. Press (2019), at 76.

⁶⁰ *Id.*, at 76; Macey & Swensen, *supra* note 9, at 789-90; Jonathan Macey & Maureen O'Hara, *The Law and Economics of Best Execution*, 6 J. Fin. Intermediation 188, 212 (1996); Robert Battalio et al., *Can Brokers Have It All? On the Relation between Make-Take Fees and Limit Order Execution Quality*, 71 J. Fin. 2193, 2193, 2231 (2016); Popper, *supra* note 10.

⁶¹ Macey & Swensen, *Id.*, at 781.

⁶² Regarding predatory trading, it occurs when retail orders are matched with more informed traders'

decided not only by the quantity and quality of information but also by distance, timing, and speed. In turn, PFOF forces retail customers into information asymmetry.

In the matter of the predatory transaction, if predatory traders only detect orders sent to large broker-dealers closely related to NYSE, Nasdaq, and BATS, they don't need to detect other prey orders in a vast market, and if their network routes between them and certain trading venues are shorter than other traders', that PFOF can be included in the distance factor in that it allows fast traders to be set in a higher position in the order book after detecting the order due to the shorter route. Then, predatory trading occurs when retail orders that did not reflect the new information are exposed to faster traders' orders.

When it comes to the second loss, while broker-dealers receive kickbacks in return for routing retail investors' orders to high-frequency traders, it is hard for small investors to expect that their orders will be executed at the best price.⁶³ Against these problems, the US began discussions on the prohibition of PFOF,⁶⁴ and in the EU, there has been a growing awareness of the problem with this practice in recent years.⁶⁵

3 LEO-Satellite Constellations Network Services

Optical fiber is the most widely used in the long-distance network today.⁶⁶ Meanwhile, the closer the light is to the vacuum, the faster it becomes.⁶⁷ That's why wireless communication that transmits light through the air is about 40 percent faster than fiber-optic communication.⁶⁸ However, wireless communication has the disadvantage of being prone to loss of radio waves and lack of data transmission capacity due to atmospheric interference such as "Rain Fade."⁶⁹ Therefore, it is

orders.

⁶³ Macey & Swensen, *supra* note 9, at 790.

⁶⁴ Avi Salzman, *SEC Chairman Says Banning Payment for Order Flow Is 'On the Table'*, Barron's (Aug. 30, 2021); Mark Kolakowski, *SEC Considers Banning Payment for Order Flow*, Investopedia (Oct. 22, 2021).

⁶⁵ ESMA, *ESMA Warns Firms and Investors About Risks Arising from Payment for Order Flow and From Certain Practices by "Zero-Commission Brokers"*, ESMA, Public Statement (13, July 2021).

⁶⁶ Andriy Shkilko & Konstantin Sokolov, *Every Cloud Has a Silver Lining: Fast Trading, Microwave Connectivity, and Trading Costs*, 75 *The J. of Fin.* 2899, 2903 (2020).

⁶⁷ Orest, *How Does Data Travel on the Internet?*, Networking Guides (<https://networkingguides.com/how-does-data-travel-over-the-internet/>) (Dec. 10, 2022) ("Because packets can move even faster in the air. Without interference, they can reach speeds of up to 99.7% the speed of light, or 299 100 km/s.").

⁶⁸ Quincy-Data, *2023 Quincy Extreme Data Fees* (<https://www.quincy-data.com/product-page/#latencies>) (Dec. 10, 2022).

⁶⁹ Shkilko & Sokolov, *supra* note 66, at 2904, fn. 6; Mark Handley, *Delay is Not an Option: Low Latency Routing in Space*, In Proceedings of the 17th ACM Workshop on Hot Topics in Networks (HotNets '18). Association for Computing Machinery, New York, NY, USA, 85–91, 86 (Nov. 2018); Bliley Technologies, *How to Prevent Rain Fade in Satellite Communications*, Bliley Technologies (Oct. 3, 2017); Satcom Guru, *Rain Fade* (<https://www.satcom.guru/2015/02/rain-fade.html>) (Dec. 10, 2022).

self-evident that space or low-Earth orbit is the most advantageous communication environment in terms of speed and interference. Indeed, it has been found that laser communication in space is about 47% faster than Corning's⁷⁰ submarine optical fiber cable.⁷¹

From this background, low-Earth orbit satellite constellation network projects such as Starlink are being built and are providing network services. The ease of long-distance communication is also an important advantage, but the most notable advantage in the area of high-frequency transactions is that it provides "low-latency" wide-broadband network service in long-distance communication without atmospheric interference and geological limitations in long-distance communication.⁷² Indeed, one examination conducted in 2018 showed that Starlink can trump an optical fiber network in communication between continents.⁷³ Thus, the distance discrepancy between investors located on different continents can generate information asymmetry and form a condition enabling continental predatory trading.⁷⁴

(a) *Starlink of SpaceX*

SpaceX was qualified by the Federal Communications Commission ("FCC") in 2018 to construct, deploy, and operate a non-geostationary orbit (NGSO) satellite system,⁷⁵ and Starlink is the project being pursued under that qualification. It is well known for recycling rockets,⁷⁶ and in the low-Earth Orbit,⁷⁷ SpaceX operates over 3,000 satellites as of November 2022.⁷⁸ After the beginning of the beta test in

⁷⁰ Corning (<https://www.corning.com/worldwide/en/corning-is-here.html>) (Dec. 10, 2022); Yahoofinance (<https://finance.yahoo.com/quote/GLW/profile?p=GLW>) (Dec. 10, 2022).

⁷¹ Handley, *supra* note 69, at 85, 86.

⁷² *Id.*, at 86.

⁷³ *Id.*, at 88; Youtube, *Starlink Revisions, Nov 2018* (<https://www.youtube.com/watch?v=QEIUdMiCoIU>) (Dec. 28, 2022).

⁷⁴ Debopam Bhattacharjee et al., *Gearing Up for the 21st Century Space Race*, HotNets '18: Proceedings of the 17th ACM Workshop on Hot Topics in Networks (Nov. 15-6, 2018), at 115, 116; Suk Jin, Oh, *A Legal Regulatory Possibility for the Predatory Securities Trading: Focusing on Discussions in the U.S.* (Jan. 7, 2022) (Unpublished Ph.D. dissertation, Gachon University), at 51-52. (Available at: <http://www.riss.kr/link?id=T16083242>).

⁷⁵ FCC, *Space Exploration Holdings, LLC, Application for Approval for Orbital Deployment and Operating Authority for the SpaceX NGSO Satellite System*, 33 FCC Red 3391 (Mar 29, 2018), at 2.

⁷⁶ Kate E. Lee, *Colonizing the Final Frontier: Why Space Exploration Beyond Low-Earth Orbit Is Central to U.S. Foreign Policy, and the Legal Challenges It May Pose*, 27 S. Cal. Interdisc. L.J. 231, 239 (2017); Mike Wall, *Wow! SpaceX Lands Orbital Rocket Successfully in Historic First*, Space.com (Dec. 22, 2015); Loren Grush, *Why You Shouldn't Compare Blue Origin's Rocket Landing to SpaceX*, The Verge (Nov. 24, 2015); SpaceX, *Dragon* (<https://www.spacex.com/vehicles/dragon/>) (Dec. 10, 2022).

⁷⁷ Low Earth orbit refers to the orbit of a satellite located at an altitude of 1,200 miles from the earth's lowest surface. See Andrew May, *Low Earth Orbit: Definition, Theory and Facts*, Space.com (May 30, 2022).

⁷⁸ Handley, *supra* note 69, at 85; Jennifer Duggan, *Bringing Internet Everywhere: SpaceX Starlink*, TIME (Nov. 10, 2022); Shannon Hall, *After SpaceX Starlink Launch, a Fear of Satellites That Outnumber All Visible Stars*, N.Y. Times (June 1, 2019); Kristin Cooke, *When Will Starlink Internet Be Available?*,

2020,⁷⁹ Starlink is now in the early stages of commercialization,⁸⁰ and the network speed is expected to allow subscribers to access the internet with ultra-low latency of 50ms.⁸¹ High-frequency traders are paying keen attention to intercontinental communication, as it is expected to show superior latency than land and sea communication networks.⁸² This latency gap between Starlink and other network services implies the possibility of information asymmetry occurrence between countries or continents.⁸³

(b) *Project Kuiper of Amazon*

Amazon has launched the Project Kuiper team, which will provide a high-speed and low-latency broadband service since 2019,⁸⁴ In 2020, the FCC approved a project to operate 3,236 satellites,⁸⁵ and in 2021, Amazon announced plans to load satellites in nine rockets (Atlas V) owned by Boeing and Lockheed Martin's joint venture, the United Launch Alliance (ULA), and launch the rockets.⁸⁶ In order to maintain the qualification from FCC, it is preparing to put half of its target on low-Earth orbit in 2026.⁸⁷

Satelliteinternet (May 17, 2021).

⁷⁹ Starlink, *Order Starlink* (<https://www.starlink.com/>) (Dec. 10, 2022); Cooke, *Id.*; Darrel Etherington, *Elon Musk Says Starlink Internet Private Beta to Begin in Roughly Three Months, Public Beta in Six*, Yahoofinance (Apr. 23, 2020).

⁸⁰ Reuters, *Elon Musk's Starlink Registers Business in India, Targets Rural Districts*, BusinessToday.In (Nov. 1, 2021); Shailaja Pai, *Starlink to Start Its Commercial Offering in Chile*, Developing Telecoms (22 Oct. 2021); In 2021, SpaceX announced that they realized to gather one million subscribers of Starlink service. See Tweeter.com, @SpaceX (<https://twitter.com/SpaceX/status/1604872936976154624>) (Dec. 25, 2022) ("Starlink now has more than 1,000,000 active subscribers.").

⁸¹ FCC, *Application for Approval for Orbital Deployment and Operating Authority for the SpaceX Gen2 NGSO Satellite System* (May 26, 2020), at 5.

⁸² Bhattacharjee et al., *supra* note 74; Alexander Osipovich, *High-Frequency Traders Eye Satellites for Ultimate Speed Boost*, Wall St. J. (Apr. 1, 2021); Sviatoslav Rosov, *SpaceX Is Opening Up the Next Frontier for HFT*, CFA Institute, Financial Reporting (June 25, 2019); Brian Wang, *SpaceX Low Latency Starlink Satellite Network Will Be Massively Profitable*, Nextbigfuture (Nov. 7, 2018).

⁸³ Bhattacharjee et al., *Id.*, at 115, 116.

⁸⁴ Amazon Staff, *Amazon Makes Historic Launch Investment to Advance Project Kuiper*, Amazon, (Apr. 5, 2022); Magdalena Petrova, *Amazon Has Bold Ambitions to Take on SpaceX in the Satellite Internet Business*, CNBC (May 1, 2022); Michael Koziol, *Amazon's Project Kuiper is More Than the Company's Response to SpaceX*, IEEE Spectrum (Aug. 17, 2020); Alan Boyle, *Amazon to Offer Broadband Access from Orbit with 3,236-Satellite 'Project Kuiper' Constellation*, GeekWire (Apr. 4, 2019).

⁸⁵ FCC, *FCC Authorizes Kuiper Satellite Constellation*, 35 FCC Rcd 8324 (Jul. 30, 2020); Amazon, *Amazon Receives FCC Approval for Project Kuiper Satellite Constellation*, Amazon (July 30, 2020).

⁸⁶ Motley Fool, *Amazon Pushes Project Kuiper Into 2023. Should Investors Worry?*, The Globe and Mail (Dec. 4, 2022); Amazon, *Amazon Secures United Launch Alliance Atlas V Rockets for Project Kuiper*, Amazon (Apr. 19, 2021).

⁸⁷ Amazon Staff, *Project Kuiper Announces Plans and Launch Provider for Prototype Satellites*, Amazon (Nov. 2, 2021); Katherine Anne Long, *Amazon Internet Program Project Kuiper will Launch First Satellites with Boeing Joint Venture*, The Seattle Times (Apr. 19, 2021); Alan Boyle, *Amazon's Project Kuiper Reveals Details on Customer Terminals for Satellite Internet*, GeekWire (Dec. 16, 2020); Alan Boyle, *Amazon Vows to Invest \$10B in Kuiper Satellites After Getting FCC's Go-Ahead*, GeekWire (July

(c) Other Projects

Viasat also had pushed a plan for launching the next generation of satellites (ViaSat-3) in early 2022,⁸⁸ but this plan has been delayed until 2023.⁸⁹ OneWeb is currently operating a satellite constellation against the backdrop of investments by Softbank and the British government, despite suffering from financial difficulties caused by COVID-19.⁹⁰ With extensive experience in the satellite business, Telesat started the project in 2024 with the aim of full global coverage.⁹¹ In addition, LeoSat is promoting projects specialized in the capital market with full worldwide service in 2022.⁹²

C Speed

Speed as a component generating information asymmetry literally means “fast” or “velocity” that can send information to a certain location within a certain period of time. In particular, low latency enables high-frequency transactions and is an essential factor in maximizing its profits, and basically, if some orders show the same bid or ask prices, the first come has a higher priority on the exchange’s order book.⁹³ In this background, fast traders are engaging in a fierce arms race to shorten their latency.⁹⁴ So, information and communication technologies that determine delays are included in the speed factor.⁹⁵ Meanwhile, if someone has a higher priority on the exchange’s order book by using specific order types though the same, or even the lower, speed was recorded, it can be said that the specific type of orders made certain participants dominant in speed. When certain orders can be matched faster than other typical orders on the premise that the distance and timing are the

20, 2020).

⁸⁸ Rachel Jewet, *Viasat Pushes ViaSat-3 Satellite Launch to 2022*, Via Satellite (Feb. 4, 2021).

⁸⁹ Rachel Jewett, *Viasat Revises 2023 Financial Target as ViaSat-3 Launch Pushed to 2023*, Via Satellite (Nov. 10, 2022).

⁹⁰ Jeff Foust, *OneWeb Raises \$400 Million*, Spacenews (Jan. 15, 2021); Reuters, *supra* note 74; Wikipedia, *OneWeb* (https://en.wikipedia.org/wiki/OneWeb_satellite_constellation) (Dec. 9, 2022); OneWeb is recently undergoing merger procedures with Eutelsat. See Jason Rainbow, *Eutelsat’s Board Approves OneWeb Merger*, Space News (Nov. 15, 2022).

⁹¹ Christopher Mims, *Elon Musk and Amazon Are Battling to Put Satellite Internet in Your Backyard*, Wall St. J. (Mar. 20, 2021).

⁹² Robert Wall, *Satellite Startup LeoSat Secures Customer for High-Speed Trading*, Wall St. J. (Sept. 6, 2016); LeoSat, *Finance* (<https://www.leosat.com/to/media/1115/leosat-finance.pdf>) (Dec. 9, 2022); LeoSat, *A New Satellite Architecture for Data* (<https://www.leosat.com/to/solution/>) (Dec. 9, 2022).

⁹³ Harris, *supra* note 4, at 137; Marcus & Kellerman, *supra* note 59, at 68; Macey & O’Hara, *supra* note 60, at 213, fn. 54; Scott Patterson & Jenny Strasburg, *How ‘Hide Not Slide’ Orders Work*, Wall St. J. (Sept. 18, 2012).

⁹⁴ Budish et al., *supra* note 16, at 1555; Eric Budish et al., *A Theory of Stock Exchange Competition and Innovation: Will the Market Fix the Market?*, Becker Friedman Inst. for Econ. Uni. of Chi., Working Paper No. 2019-72 (2020), at 1; Moign & Benhami, *supra* note 44, at 5.

⁹⁵ Robert Iati et al., *High Frequency Trading Technology: A TABB Anthology*, TABB Group (Aug. 10, 2009).

same, this will surely be an element related to the speed factor.⁹⁶

1 Advanced Information and Communication Technology for Capital Markets

The speed of information communication in the capital market, which records a tremendous speed, is one normal case of market development history, like the use or development of Carrier Pigeons,⁹⁷ Stock Flickers,⁹⁸ or Stock Tickers and Telegraphs.⁹⁹ Just as new technologies were quickly adopted to improve market participants' interest, many people have been speeding up information transmission by putting their lives and souls into inventing new technologies.¹⁰⁰

The starting point of modern information and communication technology is the submarine cable between the New York-London for their bond markets, which was established in 1866 and began its mission for latency arbitrage between continents.¹⁰¹ Subsequently, information and communication infrastructure in the capital market began to be built in the 1980s on a full scale. Nonetheless, existing fiber-optic cables connecting Chicago and New York were not optimized for high-speed transactions on communication because of geographical limitations. Then in 2010, Spread Networks first cut the latency between Chicago and New York by 6.5 ms, by ways that penetrate a mountain, etc.¹⁰² Soon after, in 2011, wireless communication was operated for the first time on the same route, and shorter latencies were recorded.¹⁰³

More recently, more advanced technology has led to a 4.005ms latency between the Chicago Mercantile Exchange (CME) data center in Aurora, Illinois, to Secaucus, New Jersey, where systems on major stock exchanges are located.¹⁰⁴

⁹⁶ In similar context, one expert distinguished the matching speed and informational speed. See Foucault & Moinas, *supra* note 5, at 14.

⁹⁷ Christopher Steiner, *Wall Street's Speed War*, Forbes (Sep. 9, 2010); Gregory Laughlin et al., *Information Transmission between Financial Markets in Chicago and New York*, 49 Fin. Rev. 283, 284 (2014); Jason Zweig, *Wall Street, 1889: The Telegraph Ramps Up Trading Speed*, Wall St. J. (July 7, 2014); Wikipedia, *Paul Reuter* (https://en.wikipedia.org/wiki/Paul_Reuter) (Dec. 9, 2022); Wikipedia, *Joseph Abraham Stargardt* (https://en.wikipedia.org/wiki/Joseph_Abraham_Stargardt) (Dec. 9, 2022); Wikipedia, *Revolutions of 1848* (https://en.wikipedia.org/wiki/Revolutions_of_1848) (Dec. 9, 2022).

⁹⁸ William A. Swanberg, *Jim Fisk: The Career of an Improbable Rascal*, Charles Scribner's Sons (1959); Laughlin et al., *Id.*, at 284; Wikipedia, *James Fisk (financier)* ([https://en.wikipedia.org/wiki/James_Fisk_\(financier\)](https://en.wikipedia.org/wiki/James_Fisk_(financier))) (Dec. 10, 2022).

⁹⁹ Laughlin et al., *Id.*, at 284; Zweig, *supra* note 97; National Museum of American History, *Stock Ticker* (https://americanhistory.si.edu/collections/search/object/nmah_703474) (Dec. 10, 2022).

¹⁰⁰ Foucault & Moinas, *supra* note 5, at 14-15; Bob Pisani, *Plundered by Harpies: An Early History of High Speed Trading*, Financial History (2014); David Easley et al., *The Volume Clock: Insights into the High-Frequency Paradigm*, 39 J. Portfolio Mgmt. 19 (2012).

¹⁰¹ Kenneth D. Garbade & William L. Silber, *Technology, Communication and the Performance of Financial Markets: 1840-1975*, 33 J. Fin. 819, 819, 820-21 (1978).

¹⁰² Steiner, *supra* note 97; Adler, *supra* note 15; Shkilko & Sokolov, *supra* note 66, at 2903-4.

¹⁰³ Shkilko & Sokolov, *Id.*, at 2904-5; Laughlin et al., *supra* note 97, at 286.

¹⁰⁴ SEC, *Self-Regulatory Organizations; Cboe EDGA Exchange, Inc.; Notice of Filing of a Proposed Rule Change to Introduce a Liquidity Provider Protection on EDGA*, SEC, Release No. 34-86168 (June 26, 2019), at 30284; Alexander Osipovich, *New 'Speed Bump' Planned for U.S. Stock Market*, Wall St. J.

This extremely short latency is used as a key factor in generating information asymmetry and carrying out ultra-fast predatory transactions.

2 Complex Order Types

A representative order type establishing predatory transactions is “Hide Not Slide,” which Direct Edge first introduced.¹⁰⁵ This order was created to take advantage of the fact that it is possible to trade again when the purchase price falls to the lane purchase price in the locked market. To be more specific, this order allows orders of high-frequency traders not to be displayed (Hide) from the order book instead of making the traders slide a price lower (Not Slide). If a higher (lower) buy order (sell order) than the current price of sell orders comes into markets in the locked situation, the hidden orders are not prohibited to be matched anymore, it is possible to generate profits by displaying the order to the order books. As a result, investors, mostly high-frequency traders, have a higher priority than the usual investors who submit typical buy orders.¹⁰⁶ This result means that the basic principle of the market, in which the order that was submitted first at the best price was broken.¹⁰⁷

In the US, until the complex order types multiply, transactions were made in very simple orders, based on simple instructions of “market,” “limit,” and “stop.”¹⁰⁸ But over the past few years, high-frequency traders as well as exchanges have not been satisfied with the traditional order types and have been trying to get approval from the SEC for unique and complex order types.¹⁰⁹ Thus, environments are criticized in terms of this ordering method, which has no choice but to take the upper hand in the order speed, is literally being.¹¹⁰ As of 2012, there were more than 2,000 types of orders in the U.S. capital market, and the largest and most influential traders in the U.S. market used them to gain a higher position on the exchange’s order books.¹¹¹ Especially alternative exchanges, each exchange provides various order types with different transaction closing standards. Those types are criticized as the main factor that makes the capital market complicated too much and reduces the predictability of mass transactions.¹¹²

In 2014, SEC Chairman Mary Jo White explained that many of the

(Aug. 31, 2018).

¹⁰⁵ The Trade, *Direct Edge Launches Hide Not Slide Order*, The Trade (May 28, 2009).

¹⁰⁶ Macey & Swensen, *supra* note 9, at 787-88; Patterson & Strasburg, *supra* note 93.

¹⁰⁷ Macey & O’Hara, *supra* note 46, at 213.

¹⁰⁸ Harris, *supra* note 4, at 71-87; Herbert Lash, *Analysis: Complaints Rise over Complex U.S. Stock Orders*, Reuters (Oct. 19, 2012); Charles Schwab & Co., *3 Order Types: Market, Limit and Stop Orders*, Charles Schwab & Co. (Mar. 5, 2021).

¹⁰⁹ Macey & Swensen, *supra* note 9, at 787; Scott Patterson, *Dark Pools: The Rise of the Machine Traders and the Rigging of the U.S. Stock Market*, Crown Business (2013), at 204-5.

¹¹⁰ Lash, *supra* note 108.

¹¹¹ *Id.*

¹¹² Popper, *supra* note 10.

increasing order types were designed to comply with SEC rules regarding rebates and locking quotations.¹¹³ But given that the complex order types used by high-frequency traders affect various factors related to orders, from trading practices to pricing and sequencing in a way that even investment experts can't understand, and that those types form a market environment in favor of high-frequency traders at the expense of long-term investors,¹¹⁴ it is more appropriate to say that complicated orders are to generate profits at the expense of ordinary investors.¹¹⁵ Against this background, some argue the circumstances that the US markets are facing.¹¹⁶

III THE NECESSITY OF A NEW SYSTEM TO LEVEL PLAYING FIELD

A Results of Information Asymmetry

1 Cost of Information Asymmetry: Adverse Selection

In the price discovery process, information asymmetry always exists in the market, so one of the trading parties must be in an inferior position in the manner of information. The cost incurred from this is the cost of information asymmetry, and the investment decision that causes unfavorable results due to the limitation of available information is "adverse selection."¹¹⁷ Most market participants are working hard to avoid adverse selection,¹¹⁸ and the cost of information asymmetry paid by slow investors is also the most worrying factor for regulators in the issue of ordinary investor protection.¹¹⁹ Because the transaction costs that investors pay for fast traders are also clearly information asymmetry costs, it is necessary to examine the dynamic structure in which the information asymmetry cost increased by investors who have an information advantage is passed on to ordinary investors.

2 The Process of Passing along Information Costs to Ordinary Investors

In order to examine the process in which the adverse selection cost by informed investors is passed on to ordinary investors, it is necessary to view the market microstructure theory that explains the dynamics of price discovery.¹²⁰ From the

¹¹³ White, *supra* note 24.

¹¹⁴ Macey & Swensen, *supra* note 9, at 788-9; Popper, *supra* note 10.

¹¹⁵ Macey & Swensen, *Id.*, at 787.

¹¹⁶ *Id.*, at 787, 788; Lash, *supra* note 108.

¹¹⁷ Steven Nickolas & Róbert C. Kelly, *Understanding the Difference Between Moral Hazard and Adverse Selection*, Investopedia (June 29, 2021).

¹¹⁸ George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 *Q. J. Econ.* 488 (1970).

¹¹⁹ Haeblerle & Henderson, *supra* note 7, at 1376-7, fn. 4.

¹²⁰ Regarding the general notion of the price discovery process, see Harris, *supra* note 4, at 4-5, 222-393; O'Hara, *supra* note 9, at 1, 53-7, 89-127; Merrit B. Fox et al., *Informed Trading and Its Regulation*, 43 *J. Corp. L.* 817, 825 (2018); Walter Bagehot, *The Only Game in Town*, 27 *Fin. Anl. J.* 12 (1971).

perspective of this theory, investors can be classified into (1) informed traders,¹²¹ (2) uninformed traders,¹²² (3) portfolio traders,¹²³ (4) noise traders,¹²⁴ and (5) professional liquidity-providing traders,¹²⁵ based on their investment motivation.

According to this classification, informed traders and professional liquidity providers are both professional traders who have a reduced need for protection by securities law,¹²⁶ but liquidity suppliers are generally inferior in information ability than informed traders in the manner of their trading strategy.¹²⁷ Therefore, securities laws don't provide much attention to the transaction relationship between informed traders and liquidity suppliers. However, in securities transactions, one counterparty in any transaction always has a superior assessment of the stock's value, and as a liquidity provider, it is virtually impossible to distinguish who has the information advantage. Additionally, informed investors buy (sell) only when they believe the value of the stock is higher (lower) than the price that liquidity providers submitted, while at the same time, liquidity providers are unable to specify the timing of the transaction and identify the counterparty in

¹²¹ It refers to an investor who trades based on information that can more accurately evaluate a company's intrinsic value but is not reflected in the market price. As an example of such information, internal value information, undisclosed internal information, external information, and presentation information can be introduced. See Harris, *Id.*, at 177, 194, 223; Bagehot, *Id.*, at 13; Haerberle, *supra* note 9, at 158; Georgakopoulos, *supra* note 11, at 14.

¹²² It refers to an investor who trades at various motives without being based on various information. See Harris, *Id.*, at 177; Georgakopoulos, *Id.*, at 14-16, fn. 42-4; Merrit B. Fox et al., *Naked Open-Market Manipulation and Its Effects (Global Algorithmic Capital Markets, Edited by Walter Mattli)*, Oxford Univ. Press (2019), at 210.

¹²³ As a type that accounts for a significant portion of the total number of transactions in the current market, it refers to investors who buy, hold, and sell distributed asset groups. See Haerberle & Henderson, *supra* note 7, at 1402; Board of Governors of the Federal Reserve System, *Changes in U.S. Family Finances from 2016 to 2019: Evidence from the Survey of Consumer Finances*, Federal Reserve, Federal Reserve Bulletin Vol. 106 No. 5 (Sep. 2020), at 19; Teresa Ghilarducci, *Most Americans Don't Have a Real Stake in the Stock Market*, Forbes (Aug. 31, 2020); Justin McCarthy, *Little Change in Percentage of Americans Who Own Stocks*, Gallup (Apr. 22, 2015); Gallup, *Stock Market* (<https://news.gallup.com/poll/1711/stock-market.aspx>) (Dec. 10, 2022)].

¹²⁴ It refers to a person who invests based on stale and inaccurate information contrary to one's belief. See Fox et al., *supra* note 122, at 210; Fischer Black, *Noise*, 41 J. Fin 529, 534 (1986); J. Bradford De Long et al., *Noise Trader Risk in Financial Markets*, 98 J. Pol. Eco. 703, 706-7 (1990); Lee S. Redding, *Noise Traders and Herding Behavior*, IMF, IMF Working Paper Vol. 96 Issue 104 (1996), at 5; Gordon Scott, *Noise Trader*, Investopedia (Jul. 27, 2021).

¹²⁵ A trader who participates in the market as a counterparty who can, and is willing to, and ready to trade with other investors at a firm bid and ask price quotes, not for their own directional trading account. Market makers, liquidity providers, and specialists are representative examples of them. See Fox et al., *supra* note 120, at 827-28; Haerberle & Henderson, *supra* note 7, at 1405; Kevin Haerberle, *Stock-Market Law and the Accuracy of Public Companies' Stock Prices*, 2015 Colum. Bus. L. Rev. 121, 142 (2015); Akhilesh Ganti, *Directional Trading*, Investopedia (Aug. 28, 2021); Lucas Downey, *Firm Quote*, Investopedia (Aug. 17, 2021); Papenfuss, *supra* note 17, at 341-42; Bruno Biais et al., *Who Supplies Liquidity, How and When?*, BIS, BIS Working Paper No. 563 (2016); Will Kenton, *Core Liquidity Provider*, Investopedia (Apr. 22, 2020).

¹²⁶ SEC, *Accredited Investor* (<https://www.sec.gov/education/capitalraising/building-blocks/accredited-investor>) (Dec. 9, 2022); Adam Hayes, *Accredited Investor Defined: Understand the Requirements*, Investopedia (Jul. 12, 2022).

¹²⁷ Haerberle & Henderson, *supra* note 7, at 1405; Harris, *supra* note 4, at 277.

the markets.¹²⁸ To sum up, liquidity providers are exposed to adverse selection risk when their orders are matched with orders of informed traders.¹²⁹

From this background, liquidity providers are therefore extremely vulnerable to informed investors when submitting firm offers to the market,¹³⁰ and predatory transaction strategy incurs incidental liquidity supply costs.¹³¹ Of course, by getting rid of the anonymity of the market¹³² or reducing liquidity,¹³³ professional liquidity providers may avoid adverse selection, but instead of these complex and lesser profitable manners, however, they usually use a simple defense mechanism that recoups the cost of adverse selection by broadening the bid-ask spread.¹³⁴ What is important here is that market valuations and liquidity providers' spreads are the main factors determining market quality.¹³⁵ In other words, the expected return of investors varies depending on the degree of the gap between the spread of liquidity providers and market valuation.¹³⁶ So, it can be inferred that the market quality that all investors can enjoy when they trade against liquidity providers is inversely proportional to the information asymmetry costs paid by liquidity providers.¹³⁷

In addition to the liquidity providers' defense mechanism, portfolio investors also have their own defense mechanisms, such as choosing the timing of the position changing, but it is hard to expect them to predict when the market fluctuates earlier and respond faster than fast traders.¹³⁸ Noise traders also pay for information asymmetry costs in the process of trading with not only liquidity providers but fast traders because they are financially and technically inferior and lack expertise.¹³⁹ In short, through each cost-transfer process, the liquidity

¹²⁸ Fox et al., *supra* note 122, at 212-13; O'Hara, *supra* note 9, at 54; Angel & McCabe, *supra* note 18, at 749; Foucault & Moinas, *supra* note 5, at 16.

¹²⁹ Haoming Chen et al., *The Value of a Millisecond: Harnessing Information in Fast, Fragmented Markets* (Nov. 18, 2017) Available at SSRN: <https://ssrn.com/abstract=2860359> or <http://dx.doi.org/10.2139/ssrn.2860359>, at 14; Foucault & Moinas, *supra* note 5, at 17.

¹³⁰ O'Hara, *supra* note 9, at 54; Haerberle, *supra* note 125, at 153-54; Lawrence R. Glosten & Paul R. Milgrom, *Bid, Ask and Transaction Prices in a Specialist Market with Heterogeneously Informed Traders*, 14 J. Fin. Econ. 71, 88-89 (1985).

¹³¹ Budish et al., *supra* note 16, at 1554; Aquilina et al., *supra* note 8, at 5; Moign & Benhami, *supra* note 44, at 5.

¹³² Mark J. Loewenstein & William K.S. Wang, *The Corporation as Insider Trader*, 30 Del. J. Corp. L. 45, 67-69 (2005).

¹³³ Chen et al., *supra* note 129, at 14; Foucault & Moinas, *supra* note 5, at 17.

¹³⁴ Biais et al., *supra* note 125, at 2; Fox et al., *supra* note 122, at 214-15, fn. 38; O'Hara, *supra* note 9, at 54, 57; Glosten & Milgrom, *supra* note 130; Budish et al., *supra* note 16, at 1554; Eurex, *supra* note 7, at 3; Albert S. Kyle, *Continuous Auctions and Insider Trading*, 53 *Econometrica* 1315, 1320-22 (1985); Amariei & Valiante, *supra* note 38, at 5.

¹³⁵ Harris, *Id.*, at 394.

¹³⁶ Haerberle & Henderson, *supra* note 7, at 1406-7, fn. 93.

¹³⁷ *Id.*, at 1409-10, fn. 103-4.

¹³⁸ *Id.*, at 1419-22; Haerberle & Henderson, *supra* note 7, at fn. 80.

¹³⁹ Haerberle & Henderson, *Id.*, at 1404-5, 1427, 1429, fn. 88; Kyle, *supra* note 134, at 1321; Fox et al., *supra* note 122, at 211, 215-22.

providers' defense mechanism is nothing more than passing on information asymmetry costs to ordinary investors. Therefore, the direct and indirect end victim of the information asymmetry is ordinary investors who do not have the ability, opportunity, or willingness to finally make up for adverse selection.

B Paradox of the Duty to Disclose or Abstain

As the most important value of securities regulation is to protect market integrity,¹⁴⁰ allowing the transaction of nonpublic information on the premise of the obligation to disclose information transactions contributes to improving the integrity of capital markets in the US. Insider trading regulation is theoretically based on the principle of simultaneous distribution of information (or equal access to information) that can never be achieved in an electronic market environment after capital markets were digitalized.¹⁴¹ This electrification of markets creates a contradiction that causes information asymmetry. This built-in flaw of market structure can be fixed by the new disclosure mechanism.

However, because this plan to level the playing field and duty to disclose or abstain run counter to each other, the reason for changing insider trading regulation must be found before putting the new plan into practice. Fortunately, even though the main purpose of the duty to disclose or abstain is not to realize simultaneous dissemination, it cannot be said this obligation contributes to generating information asymmetry. To be more specific, when we look at the duty to disclose or abstain through a microscope which is the name of market microstructure theory, the obvious rationale for changing insider trading regulation can be found. In other words, because the duty to disclose or abstain is a criterion for determining whether insider trading regulations are violated,¹⁴² a person subject

¹⁴⁰ Janet Austin, *What Exactly is Market Integrity? An Analysis of One of the Core Objectives of Securities Regulation*, 8 William & Mary Bus. L. Rev. 215, 218, 219, 221-2 (2017); Werner Erhard & Michael C. Jensen, *Putting Integrity into Finance: A Purely Positive Approach*, Harvard Business School NOM Unit Working Paper No. 12-074 (2015), at 3, 4, 8; Oliver Wyman & WFE, *Market Infrastructures and Market Integrity: A Post-Crisis Journey and a Vision for the Future*, Oliver Wyman & WFE (2018), at 3; G20, *The G20 Seoul Summit Leaders' Declaration*, G20 Research Group (Nov. 11–12, 2010) (<http://www.g20.utoronto.ca/2010/g20seoul.html>) (Dec. 10, 2022); ESMA, *Market Abuse* (<https://www.esma.europa.eu/regulation/trading/market-abuse>) (Dec. 10, 2022); SEC, Investor Protection, Capital Formation and Market Integrity Are Top Priorities in SEC Budget Request, SEC, Press Release 2018-14 (Feb. 12, 2018); SEC, *What We Do* (<https://www.sec.gov/about/what-we-do>) (Dec. 10, 2022); Securities Act, R.S.O. 1990, c. S.5 §1.1(a)-(c); Securities Act, R.S.O. 1990, c. S.5, § 1.1 (<https://www.ontario.ca/laws/statute/90s05>) (Dec. 10, 2022); OSC, *About Us* (<https://www.osc.ca/en/about-us>) (Dec. 10, 2022); FSS, *What We Do* (<https://www.fss.or.kr/eng/main/contents.do?menuNo=400023>) (Dec. 10, 2022).

¹⁴¹ Regarding the history of digitalization and automation of exchanges, see Pankaj K. Jain, *Financial Market Design*, 60 J. Fin 2955, 2965 (2005).

¹⁴² Thomas L. Hazen, *The Law of Securities Regulation (8th ed.)*, West Academic Publishing (2018), at 518, fn. 516 (<https://subscription-westacademic-com.proxywcl.wrlc.org/book/Preview?chapterUri=%2Fdata%2Fbooks%2F27241%2Fdocbook%2Fsec>

to insider trading regulations faces a matter of choice between disclosing or abstaining to avoid punishment.¹⁴³ Paradoxically, whatever corporation or directors decide between disclosing or abstaining, all decisions play a role in harming ordinary investors and market integrity contrary to its original goal.

1 *Disclose*

In the case of insider disclosed information, as fully discussed below, this choice creates information asymmetry with the same principle as the fair disclosure system intensifies information. This means that the current regulation cannot protect investors from information asymmetry. Putting this into the circumstance before the introduction of insider trading regulation was settled, the disclosure of information leads to a contradictory conclusion that investors are going to be “damned” same as time when insider trading regulation doesn’t exist.¹⁴⁴ Contrary to efforts to achieve the goal of investor protection and market integrity based on information simultaneous distribution, investors are forced out to an unlevelled playing ground due to the principle of equal access to information that can never be achieved in the modern capital market. Consequently, it can be said the result of following the anti-regulation of insider trading and the result of sticking to the obligation of simultaneous dissemination are the same.

2 *Abstain*

The main purpose of the duty to disclose or abstain is not to require disclosure of all kinds of premature information, but to prohibit securities transactions on undisclosed important information,¹⁴⁵ and in most cases of choosing between disclosing or abstaining, the former is generally not an option.¹⁴⁶ However, in the context of information asymmetry, the problem is that this option is merely delaying the timing of the occurrence of information asymmetry until disclosure. In addition to the problem that this duty compresses and amplifies information asymmetry

tion19.xml# Toc53493593); *Abrams v. Prudential Securities, Inc.*, No. 99 C 3884, 2000 WL 390494, 3 (N.D. Ill. Mar. 21, 2000).

¹⁴³ *Hazen, Id.*, at 518 (“they must either abstain from trading or disclose the information prior to trading.”).

¹⁴⁴ Compared to the US market situation before the introduction of insider trading regulations, William L. Cary the former chairman of the SEC, described the market environment of that time as “we have come a long way from the attitude of “the public be damned.” Given that insider trading and predatory trading are using information asymmetry, the non-existence of regulation against information asymmetry means that the current legal system makes ordinary investors the “damned.” See James Farmer et al., *Insider Trading in Stocks*, 21 Bus. Lwyr. 1009, 1010 (1966).

¹⁴⁵ *Basic, Inc. v. Levinson*, 485 U.S. 224, 235 (1988); Jae-yeon, Lim, *Capital Markets and Unfair Trading* (3rd ed.), Youngsa Park (2021), at 216, fn. 213 (<https://www.pybook.co.kr/mall/book/pys?goodsno=2020&ssort=&ppt=&page=&query=%EC%9E%90%EB%B3%B8%EC%8B%9C%EC%9E%A5%EA%B3%BC%20%EB%B6%88%EA%B3%B5%EC%A0%95%EA%B1%B0%EB%9E%98>) (Dec. 25, 2022).

¹⁴⁶ *Hazen, supra* note 142, at 518; *Taleska, supra* note 17, at 568.

when it is disclosed, we can criticize the regulatory contradiction that this duty is against the purpose of securities law, which is to provide information.¹⁴⁷ Furthermore, it is well established that market efficiency is strengthened through the initiative to find and analyze information.¹⁴⁸ So, the dominant phenomenon of choosing “abstain” undermines the company’s motivation to develop information and this result accompanies the diminution of shareholder’s welfare.¹⁴⁹ Also, “abstain” makes information less timely,¹⁵⁰ so, the quantity of disclosure is decreased. Additionally, because of the choice of abstaining, the material inside information is not reflected in the market until public disclosure is conducted. this option cannot be said as desirable for all market participants.

Going one step forward, the decrement in disclosure quantity accompanies the chilling effect, and as a result, it renders the efficient market hypothesis¹⁵¹ meaningless.¹⁵² Incidentally, this result hinders, directly and indirectly, the well-being of issuers and shareholders through not only restraining the inflow of potential investors but also increasing agent costs by interfering with the replacement of incompetent management.¹⁵³ In this context, the paradox of the duty to disclose or abstain exposed in the electronic market environment should never be taken lightly.

3 Result: All Leads to Information Asymmetry

Whatever insiders choose the result leads to the problem of “outbreaking of information asymmetry” compressed in a short time by the equal access principle. This current market’s inherent defect provides a chance of predatory trading for fast traders and being picked off for slow investors. Therefore, investors cannot be

¹⁴⁷ D. Casey Kobi, *Wall Street v. Main Street: The Sec’s New Regulation FD and Its Impact on Market Participants*, 77 Ind. L.J. 551, 587-92 (2002).

¹⁴⁸ 463 U.S. 646, *supra* note 12, at fn. 17 (1983); In re Raymond L. Dirks, S.E.C. Release No. 17480 (1981), at 6; Brudney, *supra* note 12, at 341; Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 Va. L. Rev. 549, 583 (1984).

¹⁴⁹ Jonathan Macey, *From Fairness to Contract: The New Direction of the Rules Against Insider Trading*, 13 Hofstra L. Rev. 9, fn. 98 (1984); Taleska, *supra* note 17, at 566. (“Such a sweeping disclosure obligation, however, may easily trigger issuer liability for an improper disclosure or non-disclosure”)

¹⁵⁰ James J. Park, *Insider Trading and the Integrity of Mandatory Disclosure*, UCLA School of Law, Law-Econ Res. Paper No. 18-12 (2018), at 103. (“Moreover, an equal access rule might actually reduce the amount of information communicated to markets if it prevents managers from voluntarily disclosing information to select analysts and investors.”).

¹⁵¹ Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. Fin. 383 (1970).

¹⁵² SEC, *supra* note 17, at 51718; Jon Jordan, *Corporate Issuers Beware: Schering-Plough and Recent SEC Enforcement Actions Signal Vigorous Enforcement of Regulation FD*, 58 Univ. Miami L. Rev. 751, 764-68, fn. 40 (2004).

¹⁵³ Frank H. Easterbrook & Daniel R. Fischel, *The Proper Role of a Target’s Management in Responding to a Tender Offer*, 94 Harv. L. Rev. 1161, 1178-79 (1981); Gregg A. Jarrell & Michael Bradley, *The Economic Effects of Federal and State Regulations of Cash Tender Offers*, 23 J.L. & Econ. 371, 398-403 (1980).

protected unless the factor creating information asymmetry is regulated in the micro viewpoint, and it can be said that diverging from the simultaneous distribution becomes a necessary condition for leveling the playing ground in a real sense. In my opinion, to protect ordinary investors from the asymmetry, it is necessary to change the approach of regulating insider trading in a way that provides the vulnerable with the opportunity to avoid information asymmetry.

C Analyzing the Information Asymmetry Based on Market Microstructure Theory

Especially in the case of the consumer sentiment index, when the information producer is not a disclosure obligator, and when the information makes the market volatile, it can be concluded that the contradiction between the means and results of the disclosure system is extreme. The cycle, speed, and volume at which information is produced are already beyond natural humans' ability to manage it.¹⁵⁴ In this manner, it is worth examining the nature of information asymmetry that occurs when new material information is disclosed. For to do this, it is needed to compare the nature of information asymmetry in the fair disclosure system and the selective disclosure system in which in-advance access is allowed.¹⁵⁵

1 Characteristics of Information Asymmetry in Simultaneous Disclosure System

Immediately after the new information is disclosed to all investors at the same time, fast traders immediately collect, learn the information, and engage in transactions based on it. Therefore, as in the case of the consumer sentiment index, the value of new information that can be machine-learned in today's digitalized capital market evaporates in seconds.¹⁵⁶ Behind this phenomenon, investors who cannot use state-of-the-art technology and various services requiring a large fee, even though the law declares simultaneous dissemination,¹⁵⁷ will be inferior to information for a certain period immediately after the disclosure.

Of course, information that requires more resources to process will take longer to assess its materiality, in today's marketplace, fast traders are risking their lives to shorten the time from accessing information to submitting orders. Because of this practice, massive information asymmetry is compressed in less than a second immediately after disclosure under the fair disclosure system.¹⁵⁸

¹⁵⁴ Jackson, Jr. & Mitts, *supra* note 37, at 4, 25-26.

¹⁵⁵ Haerberle & Henderson, *supra* note 7, at 1411.

¹⁵⁶ *Id.*, at 1412-13; 984 F.Supp.2d 141, *supra* note 7, at 143; Hu et al., *supra* note 6, at 410-11; Rothfeld et al., *supra* note 7; Regarding the consumer sentiment index case, *see supra* note 31.

¹⁵⁷ Park, *supra* note 150, at 103; Joel Seligman, *The Reformulation of Federal Securities Law Concerning Nonpublic Information*, 73 GEO. L.J. 1083, 1103-15 (1995).

¹⁵⁸ Haerberle & Henderson, *Id.*, at 1413.

2 Characteristics of Information Asymmetry in Selective Disclosure System

In an environment where prior access to information is allowed, naturally, information asymmetry exists, but the crucial noteworthy point is that information asymmetry under a selective disclosure environment occurs and alleviates differently from the system allowing only simultaneous dissemination. To be more specific, in a legal system where prior access to information is allowed, certain traders will buy undervalued items based on information superiority or sell overvalued ones.¹⁵⁹ What is important is that certain traders with information advantages look forward to making a profit before the information is distributed to the market, but at the same time, they have incentives to engage in transactions over a relatively long period of time to minimize the price shocks.¹⁶⁰ As a result, information advantages in a selective disclosure system take more time than in a fair disclosure system for the purpose of accumulating positions with stealthy steps but steady transactions.¹⁶¹ Indeed, in the EDGAR case, it was observed that traders having an information advantage had distributed their transactions throughout the time of information advantage lasts to minimize market signals.¹⁶²

Even though the level of information asymmetry under the selective disclosure system is more severe than in a simultaneous access environment immediately after initial disclosure, this is only the observation result immediately after the disclosure. In other words, under the former system, concerns about the loss of information advantage are not dominant as under the later system. So, it is possible to derive a basis for introducing an “information asymmetry mitigation period” that can occur and be eased gently over weeks or minutes until the scheduled legal disclosure due date. This is the most crucial point that the difference between both systems is showing. Of course, the exact period of deepening information asymmetry between the pre-information approach and subsequent disclosures will vary depending on several factors, such as the gap between the timing of prior access and the timing of fair disclosure.¹⁶³

3 Comparison Analysis

Combining the above discussions, two major points can be derived. The first one is that, under the current disclosure system, where the obligation to distribute information simultaneously exists, a significant level of information asymmetry

¹⁵⁹ Harris, *supra* note 4, at 223.

¹⁶⁰ *Id.*, at 225-6; Haerberle & Henderson, *supra* note 7, at 1414; O’Hara, *supra* note 9, at 54, 57.

¹⁶¹ Haerberle & Henderson, *Id.*, at 1414; René Caldenteu & Ennio Stacchetti, *Insider Trading with a Random Deadline*, 78 *Econometrica* 245, 245-48 (2010); Mohammadreza Bolandnazar et al., *Trading Against the Random Expiration of Private Information: A Natural Experiment*, 75 *J. Fin.* 1, 39 (2019).

¹⁶² Jackson, Jr. & Mitts, *supra* note 37, at 4-5, 23-24.

¹⁶³ Haerberle & Henderson, *supra* note 7, at 1415.

occurs between informed traders and those who do not. The second one is that the circumstance that the fair disclosure system suppresses informed transactions by the time of fair disclosure causes a much higher level of information asymmetry immediately after fair disclosure. That is, although it is true that transactions based on nonpublic material information significantly abstained at the beginning of the introduction of the fair disclosure system,¹⁶⁴ the fair disclosure system reduces information asymmetry to a very insignificant degree over a long period of time until the time of fair disclosure but has had to pay a great price for compression and amplification of information asymmetry in the manner of time and magnitude respectively.¹⁶⁵ In my view, this result can be seen as a result that is extremely contradictory to the purpose of the fair disclosure system, which is to resolve information asymmetry.

If we apply these results to the cases of “Insider Trading 2.0” and EDGAR, we can find out that the prior approach enforced information traders, who knew that they could enjoy only 2 seconds, to engage in “Fast-and-Furious.” If the information that fast traders accessed in advance is material information that machine-learned is possible, the information would be reflected in the market within two seconds after it flew into the market. Thus, it can be said that NYAG’s approach is nothing more than a two-second delay in the extreme information asymmetry that occurs at 9:54:58.¹⁶⁶ In the same context, in the EDGAR case, rather than fundamentally resolving the information asymmetry problem, it can be said that SEC merely suspended the timing of the occurrence of information asymmetry a few minutes later.¹⁶⁷

From the viewpoint of the price discovery process, some experts argued that NYAG’s actions are harmful beyond useless,¹⁶⁸ the fair disclosure system does not have a positive effect on slow investors because it maximizes information asymmetry immediately after disclosure.¹⁶⁹ It is also criticized as being imprudent at best to make high-tech and slow investors compete.¹⁷⁰ In this light, it was necessary to have a cool-headed and objective review of whether the obligation to the principle of simultaneous dissemination under the existing disclosure system could be fully realized in the market reality and achieve its original purpose.¹⁷¹ To sum up the above examination, it is necessary to overcome the inherent flaw of the current legal system for the following reasons.

¹⁶⁴ *Id.*, at 1412-13.

¹⁶⁵ *Id.*, at 1417-18, 1418-19; Suh, *supra* note 14, at 186.

¹⁶⁶ Haerberle & Henderson, *Id.*, at 1418, 1423.

¹⁶⁷ *Id.*, at 1418-19, 1423.

¹⁶⁸ *Id.*, at 1430.

¹⁶⁹ *Id.*, at 1417, 1430; Suh, *supra* note 14, at 186.

¹⁷⁰ Haerberle & Henderson, *Id.*, at 1429.

¹⁷¹ *Id.*, at 1419-30; Suh, *supra* note 14, at 172, 195-96, 200-1.

First, the incentives for transactions such as the investment purpose and strategy of fast traders and slow traders are fundamentally different. Second, in this regard, even in terms of the size of capital, there are great barriers to the information capabilities of fast traders and slow investors in a series of transactions that lead to the collection and analysis of information, making an investment decision, and submitting orders or quotes.¹⁷² Third, therefore, ordinary investors cannot effectively be protected from information asymmetry through the principle of simultaneous dissemination.

4 *Solution: Ensuring Period for Information Asymmetry Mitigation through Information Transaction*

(a) *Necessity of the Period for Information Asymmetry Mitigation*

The key fact that can be derived from the different results between the systems is that the level of increase or decrease in information asymmetry was gentle when the timing of selective disclosure was appropriate. Indeed, traders who have secured information asymmetry based on the timing factors sufficiently earlier, such as in the EDGAR case, are likely to engage in transactions relatively slowly by the full disclosure than those secured only two seconds earlier, such as in the consumer sentiment index case.¹⁷³ This is also a typical and basic transaction strategy for informed investors,¹⁷⁴ and in this regard, it can be seen that information asymmetry between fast investors and slow investors intensifies immediately after disclosure rather than usual.¹⁷⁵ Empirical studies confirmed that investors who have been given more time to engage in transactions have completed their trading in several minutes, unlike investors who have been given less time.¹⁷⁶ Accordingly, among information asymmetry in the selective and simultaneous disclosure system, information asymmetry, which is more favorable to uninformed investors is the former case in which information inflow and price fluctuations are gradual and phased. From this viewpoint, it can be said that attempts to break away from simultaneous accessibility to allow differential access and to provide investors with opportunities for investment decisions in the event of market fluctuations by establishing an information asymmetry mitigation period are more suitable for the purpose of the Securities law.

¹⁷² See *supra* note 14, 17, 26.

¹⁷³ Haerberle & Henderson, *supra* note 7, at 1416, 1417; Harris, *supra* note 4, at 225-26; Regarding the consumer sentiment index case, see *supra* note 31.

¹⁷⁴ Harris, *Id.*, at 226.

¹⁷⁵ Haerberle & Henderson, *supra* note 7, at 1417.

¹⁷⁶ *Id.*, at fn. 111; Jackson, Jr. & Mitts, *supra* note 37, at 4-5, 22-26.

(b) Inevitability of Information Transactions by Fast Traders

If selling material nonpublic information before fair disclosure is allowed, fast traders have no choice but to purchase the information to benefit from information asymmetry due to timing factors, and when they engage in information transactions, mechanisms for detecting and avoiding information asymmetry such as (1) duty to disclose of information trading, (2) preliminary disclosure systems, and (3) setting due date for traded information disclosure will operate, as fully discussed below. As a result of this new disclosure mechanism, the time when information asymmetry can occur becomes widely known in the market. This means that a circumstance will be established in which all investors can make reasonable investment decisions prior to market fluctuations. Subsequently, through the period of information asymmetry mitigation, fast traders cannot obtain incentives for informed trading.

(c) Principle of Mitigating Information Asymmetry

It is worth noting that the unfairness inherent in information asymmetry is imposed on investors in the form of information asymmetry “cost.” The cost at this time can be understood as “Noise,”¹⁷⁷ which means the gap between fundamental value and market value, and “Noise” for fast traders is a profit based on information superiority, but for the victim, it is just a sacrifice due to their ignorance.¹⁷⁸ However, the cost of information asymmetry is always reflected in the market price, and the period is very short, and if the market reflects the information, the cost of information asymmetry no longer occurs.¹⁷⁹

For example, the reason why informed investors want to minimize price signals is to maximize their profits, and the opposite means that if the market reflects value well due to the signals, information-based investors cannot realize the profit based on the informational advantage.¹⁸⁰ At this time, the fact that the market reflected the value well means that the intrinsic value and the market value are almost close,¹⁸¹ and if the market price reflected intrinsic value, it can be said that most of the slow traders are trading against someone who doesn’t have significant information superiority.¹⁸² In this case, therefore, it can be understood that no party to the transaction pays for unfair information asymmetry.

In other words, when fast traders trade based on information that they

¹⁷⁷ Harris, *supra* note 4, at 223; Black, *supra* note 124, at 529.

¹⁷⁸ Black, *Id.*, at 530-31.

¹⁷⁹ Haerberle & Henderson, *supra* note 7, at 1432.

¹⁸⁰ Harris, *supra* note 4, at 225; Jinghan Cai et al., *Hide and Seek: Uninformed Traders and the Short-sales Constraints*, 20 *Annals. Eco. & Fin.* 319, 327, fn. 5 (2019).

¹⁸¹ Harris, *Id.*, at 223.

¹⁸² *Id.*, at 238.

purchased ahead of others, and the information is gradually reflected in the market price and can no longer enjoy “noise,” unfair information asymmetry is largely resolved by the selective disclosure, and the new disclosure mechanism levels the playing field in essence.

(d) *Avoiding the Cost of Information Asymmetry*

Even if the information asymmetry mitigation period is established, investors who cannot predict the timing of information asymmetry or access information late will be exposed to the risk of adverse selection, so the information asymmetry mitigation period, which does not presuppose investor protection systems, provides only a legal predatory trading period. Thus, the key in the discussion to establish a period of easing information asymmetry is to set up a protection plan for ordinary investors during the process of easing information asymmetry.

This work begins with the fact that the process in which information is reflected in the market price is none other than a “transaction” between investors.¹⁸³ Transaction costs increase or decrease depending on the timing.¹⁸⁴ Further, while not only slow-informed investors but also uninformed investors cannot predict and detect the timing of information asymmetry occurrence, they have a strategy that can determine the timing of their transaction.¹⁸⁵ When the existence of new information in the market is known, it is common for them to stop trading related stocks until the information is fully introduced and reflected in the market due to the so-called “Event Uncertainty.”¹⁸⁶ Here, even if information asymmetry itself cannot be avoided, “transactions” can be avoided.

In accordance with that, if the information inferiors can be provided with an opportunity to detect and avoid when information asymmetry occurs prior to the transaction of the information superiors,¹⁸⁷ the inferiors will have an opportunity not to pay the cost of information asymmetry. Since not paying information asymmetry costs has the same meaning as avoidance of information asymmetry, in a selective disclosure environment, investors get the opportunity not to pay information asymmetry costs to fast traders. These measures are also evaluated as the best way to avoid “predators” for slow investors. I think the provision of such avoidance opportunities is also considered to be in line with the purpose of the Securities law to guarantee reasonable investment decisions. Even under the current disclosure system, many investors are taking the same avoidance strategy to

¹⁸³ *Id.*, at 224.

¹⁸⁴ *Id.*, at 427-8.

¹⁸⁵ O’Hara, *supra* note 9, at 129; Haerberle & Henderson, *supra* note 7, at 1432.

¹⁸⁶ David Easley & Maureen O’Hara, *Time and the Process of Security Price Adjustment*, 47 J. Fin. 577, 580 (1992); Cai et al., *supra* note 180, at fn. 1.

¹⁸⁷ O’Hara, *supra* note 9, at 130.

identify the timing of information inflow and avoid information asymmetry that occurs currently.¹⁸⁸

IV REBUILDING RULES LEVELLING THE PLAYING FIELD

A New Insider Trading Theory: Discretion of Corporation Theory

Obviously, the new plan is directly against current insider trading regulation, so to harmonize the new information asymmetry regulation and insider trading regulation, it is necessary to unravel a clue about the fundamental purpose of insider trading regulation, which focuses on the inherent unfairness of information asymmetry occurring in the securities transaction process.¹⁸⁹ To regulate insider trading, the US heavily relies on theories of insider trading, and whenever a new dispute occurs, the purpose of fairness, investor protection, and market efficiency has been achieved through the interpretation of the theories.¹⁹⁰ In my view, this is the nature and reason for the existence of law as a metaphysics, so this providence of the law can also be applied to discuss the possibility of solving the structural flaw of the current capital market. Based on the theories and precedents established so far, the unfairness of information asymmetry does not lie in its existence and use of asymmetry, but in the process of owning and using it.¹⁹¹ Accordingly, we need to ponder the nature of inherent unfairness from the perspective of law with the aim of deriving all the grounds for information transactions and disclosure obligations. Based on this discussion, it is possible to examine whether the means of access to information and the purpose of use are allowable.

¹⁸⁸ Haerberle & Henderson, *supra* note 7, at 1424.

¹⁸⁹ *In re Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 43 S.E.C. 933, 936-38 (1968); *Sec. & Exch. Comm'n v. Cap. Gains Rsch. Bureau, Inc.*, 375 U.S. 180, 186 (1963); Yadav, *supra* note 17, at 1003-4; *In Re Invs. Mgmt. Co., Inc.*, 44 S.E.C. 633, 637 (July 29, 1971); Kon Sik, Kim, *Theoretical Basis of the Insider Trading Regulation*, 28 Korean J. Fin. Stds. 149, 156-57 (2001); Imchool, Park, *A Proposal to Reform the Insider Trading Regulation*, 4 The Korean J. Sec. L. 67, 70 (2003) (<https://www.kci.go.kr/kciportal/ci/sereArticleSearch/ciSereArtiView.kci?sereArticleSearchBean.artiId=ART000852026>) (Dec. 25, 2022); Wan Suk, Suh, *Legal Regulation of Unfair Trade Practices by Artificial Intelligence — Focusing on Unfair Trade Practices under the Capital Market Act*, 21 The Korean J. Sec. L. 23, 65 (2020) (<https://www.kci.go.kr/kciportal/ci/sereArticleSearch/ciSereArtiView.kci?sereArticleSearchBean.artiId=ART002585756>) (Dec. 25, 2022).

¹⁹⁰ Regarding the transformation of the history of insider trading theory, *note* Kalina Laleva, *SEC v. Talbot: The “Misappropriation-Plus” Theory*, 39 Golden Gate U. L. Rev. 377 (2009); Mackenzie Dooner et al., *Thirty-Sixth Annual Survey of White Collar Crime*, 58 Am. Crim. L. Rev. 1431, 1467-74 (2021); Stephen M. Bainbridge, *A Critique of the Insider Trading Prohibition Act of 2021*, UCLA School of Law, Law-Econ Res. Paper No. 21-08 (2021); Donald C. Langevoort, *Watching Insider Trading Law Wobble: Obus, Newman, Salman, Two Martomas, and a Blaszczyk*, 89 Fordham L. Rev. 507 (2020); Reinier H. Kraakman, *The Legal Theory of Insider Trading Regulation in the United States*, in Hopt, K. and Wymeersch, E. (eds.), *European Insider Dealing*, Butterworths (1991).

¹⁹¹ Ventrizzo, *supra* note 11, at 3-12; Stephen M. Bainbridge, *The Law and Economics of Insider Trading 2.0*, UCLA School of Law, Law-Econ Res. Paper No. 19-01 (2019), at 3-10; Dooner et al., *Id.*, at 1466-77.

1 Reappraisal of Property Rights Theory

(a) Nonpublic Material Information as a Property

Unlike the SEC, which did not accept the premise that nonpublic material information was a form of intellectual property rights,¹⁹² the Supreme Court took a different stance from it.¹⁹³ The watershed is none other than the *Chiarella* case where a financial printer's employee ("Chiarella") purchased stock that the target companies issued and sold it immediately after the takeover attempts were made public without informing its shareholders of his knowledge of the proposed takeover.¹⁹⁴ In light of the fact that Chiarella's transactions damaged the target corporation's shareholders,¹⁹⁵ the takeover bid information of the customer of the printer company belongs to the customers as one kind of right, and Chiarella could benefit from stealing it while he caused costs that the customer must pay to increase.¹⁹⁶ In addition, the ruling is in line with Court's the property rights approach,¹⁹⁷ and, in dissenting, Justice Warren E. Burger held that the instruction led the jury to determine that Chiarella benefited from the deal by misappropriating the "property" of a print shop client.¹⁹⁸

In the same context, in the *Carpenter* case, the Second Circuit Court of Appeals held that the plaintiffs, co-authors of "Heard on the Street" of the Wall Street Journal ("Journal"), defrauded third parties' private interests by trading based on information that the unpublished column included and that potentially impacted on the price of regarding stocks before the publication of the Journal was released.¹⁹⁹ In this case, the column did not contain any inside information about the Journal, nor was it pending reporting.²⁰⁰ However, it was the Journal's practice and policy to treat the content of the column that is not published as inside information.²⁰¹ Moreover, although intangible property rights are distinguished from tangible rights, providing the contents in advance of publishing is not excluded from the scope of protection against the mail fraud statute. On this basis, the Court held that providing the contents of the column before publication in

¹⁹² Jonathan Macey, *Beyond the Personal Benefit Test: The Economics of Tipping by Insiders*, 2 J. L. Pub. Affrs. 1, 7 (2017).

¹⁹³ Hazen, *supra* note 142, at 525; Macey, *Id.*, at 8.

¹⁹⁴ *Chiarella v. United States*, 445 U.S. 222, 224 (1980).

¹⁹⁵ Investor.gov, *Tender Offer* (<https://www.investor.gov/introduction-investing/investing-basics/glossary/tender-offer>) (Dec. 7, 2022).

¹⁹⁶ Macey, *supra* note 149, at 27-28.

¹⁹⁷ *Id.*, at 28; Macey, *supra* note 192, at 8.

¹⁹⁸ 445 U.S. 222, *supra* note 171, at 244.

¹⁹⁹ *Carpenter v. United States*, 484 U.S. 19, 19-20, 22 (1987).

²⁰⁰ *Id.*, at 22; *U.S. v. Winana*, 612 F.Supp. 827, 830, fn. 2 (S.D.N.Y. 1985)

²⁰¹ 484 U.S. 19, *Id.*, at 22.

violation of the Journal's practice was a "Mail Fraud"²⁰² against the Journal.²⁰³

In this process, according to the Court, the purpose of mail fraud is to protect personal property rights,²⁰⁴ and the company's undisclosed information has long been recognized as property.²⁰⁵ The nonpublic information obtained or generated by the company during operation is regarded as a type of asset that the company has exclusive rights and beneficial rights.²⁰⁶ Finally, in the *O'Hagan* case, the Supreme Court recognized the company's ownership of its inside information from the perspective of the company's asset rights.²⁰⁷ In addition, based on the viewpoint of the misappropriation theory, the misappropriation of undisclosed information was regarded as an "embezzlement" such as the fraudulent appropriation of trust assets or products for the benefit of the trustee.²⁰⁸ In light of the insight that the company has completely independent property and rights,²⁰⁹ I think the perception that the company has exclusive rights to nonpublic material information can be seen as universal and natural.²¹⁰

(b) Division Point toward Discretion of Corporation Theory

While the logic of the corporation's discretion theory has the same roots as the property right theory, which is one of the approaches to insider trading regulation,²¹¹ the new theory's perception of company ownership is merely a means of confirming that ownership of information is a natural right of the company and deriving the possibility of information transaction. That is, the logic of the new theory is separated from discussions other than ownership of information, such as the ultimate benefits and protections of laws. This is because the property right approach is not suitable as a framework for regulating information asymmetry by understanding insider trading regulations and overcoming the limitations of the

²⁰² 18 U.S.C.A. § 1341.

²⁰³ 484 U.S. 19, *supra* note 199, at 19-20; *McNally v. U.S.*, 483 U.S. 350, 350-51 (1987).

²⁰⁴ 484 U.S. 19, *Id.*, at 25; 483 U.S. 350, *Id.*, at 359, fn. 8.

²⁰⁵ 463 U.S. 646, *supra* note 12, at 653, fn. 10; *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986, 1001-14 (1984); *Board of Trade of Chicago v. Christie Grain & Stock Co.*, 198 U.S. 236, 250-51 (1905).

²⁰⁶ 484 U.S. 19, *supra* note 199, at 26; 198 U.S. 236, *Id.*, at 250-1.

²⁰⁷ 521 U.S. 642, *supra* note 18, at 643, 654.

²⁰⁸ *Id.*, at 654 ("Under this theory, a fiduciary's undisclosed, self-serving use of a principal's information to purchase or sell securities, in breach of a duty of loyalty and confidentiality, defrauds the principal of the exclusive use of that information.").

²⁰⁹ David Ciepley, *The Anglo-American Misconception of Stockholders as 'Owners' and 'Members': Its Origins and Consequences*, J. Inst. Econ., Forthcoming (2019), at 36.

²¹⁰ In the same vein, there is an argument that the EU MAR should recognize the company's ownership of information in line with the changing market reality, citing the U.S. theory. See Taleska, *supra* note 17.

²¹¹ *Note Id.*, at 571-77; Tomotaka Fujita, *Criteria for Good Laws of Business Association: An Outsider's View*, 2 Berkeley Bus. L.J. 39 (2005); Richard J. Morgan, *Insider Trading and the Infringement of Property Rights*, 48 Ohio St. L.J. 79 (1987); Kevin R. Douglas, *Missing the Role of Property in the Regulation of Insider Trading*, 69 Cath. U. L. Rev. 209 (2020); Robert A. Prentice, *Permanently Reviving the Temporary Insider*, 36 J. Corp. L. 343 (2011); Kim, *supra* note 189, at 156.

principle of simultaneous dissemination. This property approach leaves it to the company's discretion whether insider trading regulations are violated.²¹² Accordingly, while selective disclosure can be allowed, the basis for the duty to disclose information transactions cannot be derived, and in the case of the company's self-tender,²¹³ the counterparty cannot be protected as well.

(c) Conflicts between Information Transactions and Insider Trading Regulation

In the case of securities transactions based on traded information, information providers (sellers) and information recipients (buyers) have a contractual relationship called information transactions, so in fact, information buyers should be regarded as insiders who can access important information. Accordingly, the securities transaction of the information buyers using traded information constitutes fraud due to its inherent unfairness of the securities transaction.²¹⁴ In addition, the act of an insider providing inside information to trading relatives or acquaintances is virtually the same as the insider using internal information on his or her own and then distributing the profits.²¹⁵

Because the legitimacy of the information market in which material nonpublic information is traded cannot be established without resolving the conflict between the insider trading regulation and information business, the plan for providing all investors the opportunity to avoid information asymmetry and current regulation can never be compatible. Therefore, it is necessary to suggest a way to harmonize two legal systems, and this work can be done based on the re-exploration of "Valid Business Purpose."

2 Re-exploration of the "Valid Business Purpose"

(a) Variability of Business Purpose in Corporate Governance

According to the Supreme Court,²¹⁶ whether the purpose of using the material inside information meets the business purpose is standard to decide whether the securities transactions are fraud,²¹⁷ so, how the corporation purpose is defined determines whether securities transactions violate insider trading regulations. Further, deception is necessary to constitute fraud under insider trading regulations,

²¹² Roberta S. Karmel, *Outsider Trading on Confidential Information: A Breach in Search of a Duty*, 20 Cardozo L. Rev. 83, 112-13 (1998-1999); Kim, *Id.*, at 165.

²¹³ Regarding the "self-tender," Note Nasdaq, *Self Tender* (<https://www.nasdaq.com/glossary/s/self-tender>) (Dec. 7, 2022).

²¹⁴ 43 S.E.C. 933, *supra* note 189, at 936; 463 U.S. 646, *supra* note 12, at 654.

²¹⁵ *Salman v. U.S.*, 137 S. Ct. 420, 422 (2016); 463 U.S. 646, *Id.*, at 664.

²¹⁶ 521 U.S. 642, *supra* note 18; 463 U.S. 646, *Id.*

²¹⁷ 521 U.S. 642, *Id.*, at 652, 659, fn. 9; 463 U.S. 646, *Id.*, at 662, fn. 11; Kim, *supra* note 189, at 158-59.

but the court explained that there was no such element in the case.²¹⁸ From this context, it was argued that an ambiguous interpretation problem has been opened that the company is possible to permit transactions based on inside information.²¹⁹ If the information seller provided the information to the purchaser for a valid corporation purpose, and the company granted to trade (sell) it, all securities transactions on this are free from the responsibility of insider trading regulation.²²⁰ These discussions lead to the issue of interpretation of the valid business purpose, which is directly related to the discussion on corporate governance dealing with the agent problem. This is because property rights are one type of natural right, and the way to explain individual basic rights determines how costs and rewards are distributed to stakeholders.²²¹

In this regard, it should be noted that even though the company itself has a legal personality, a corporation is an inanimate legal entity,²²² so the company can exercise its rights only through agents subject to fiduciary duty.²²³ But agents often pursue their own interests instead of the interests of the company. Thus, the fundamental problem that the corporation faces is how to monitor the agents, and insider trading regulation is one way of it.²²⁴ Naturally, this matter is connected to the issue of how to understand corporate governance. Unlike the approach of shareholderism,²²⁵ in the approach of stakeholderism, the matter of whose interests among stakeholders will be prioritized can change depending on the times and spatial situations.²²⁶ Based on the stakeholder approach, I think the purpose of the company can vary depending on the subject and object of the making and execution

²¹⁸ 521 U.S. 642, *Id.*, at 643-44.

²¹⁹ Jonathan Macey, Martoma and Newman: Valid Corporate Purpose and the Personal Benefit Test, 71 SMU L. Rev. 869, 873 (2018).

²²⁰ *Id.*, at 873; Kim, *supra* note 190, at 165.

²²¹ Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. Fin. Econ. 305, 307-8, fn. 6 (1976).

²²² Jonathan R. Macey & Leo E. Strine, Jr., *Citizens United as Bad Corporate Law*, Harvard Law School, John M. Olin Institute for Law, Economics, and Business Discussion Paper No. 972 (2018), at 31; Stuart L. Pachman, *The Power of Corporations and LLCs to Indemnify: Similarities, Differences, and Risks*, American Bar Association (Oct. 24, 2022).

²²³ Adolf A. Berle & Gardiner C. Means, *The Modern Corporation & Private Property*, Transaction Publishers (1932), at 3; Loewenstein & Wang, *supra* note 132, at 52, 77.

²²⁴ Macey, *supra* note 219, at 874.

²²⁵ Regarding the general contention of shareholder approach, see *Dodge v. Ford Motor Co.*, 204 Mich. 459, 507 (1919) (“A business corporation is organized and carried on primarily for the profit of the stockholders.”); Milton Friedman, *Capitalism and Freedom*, University of Chicago Press (1963), at 133; Milton Friedman, A Friedman doctrine-- The Social Responsibility Of Business Is to Increase Its Profits, N.Y. Times (Sep. 13, 1970); H. Jeff Smith, *The Shareholders vs. Stakeholders Debate*, 44 MIT Sloan Mgmt. Rev. 85, 87-88 (2003); Rüdiger W. Waldkirch, *The Shareholder vs. Stakeholder Debate Reconsidered*, Wittenberg-Zentrum für Globale Ethik Wittenberg Center for Global Ethics, Diskussionspapier Nr. 2008-2 (2008), at 4-6.

²²⁶ James E. Post et al., *Managing the Extended Enterprise: The New Stakeholder View*, 45 Cal. Mgmt. Rev. 6, 8-9 (2002); Smith, *Id.*, at 85, 89-90; Waldkirch, *Id.*, at 9-10; Suh, *supra* note 209, at 351, 375, fn. 32, 107.

of business judgment, the timing and situation, space, and historical background. In connection with the way to interpret the valid corporation purpose, it is surely understandable that selling a corporation's information by own its will to other people is not against insider trading rules.

(b) Priority of Interest of Company and Shareholder

(i) Priority Setting Basis: Stakeholderism

Despite the fiduciary relationship between the company and agents, the agent's business judgment cannot fully represent the interests of all individual shareholders. This fact implies that the interests of the company and the interests of individual shareholders may not match, which leads to the question of whose interests should have higher priority between the company and shareholders.²²⁷ Here, the matter is particularly problematic which of the interests among the company's stakeholders should be prioritized by management.

In this regard, it is worth noting that not all violations of fiduciary duty not always violate SEC Rule 10b-5²²⁸ because insider trading regulation presupposes the unfairness inherent in the fraud, and the unfairness arises only in situations where information intended to be used for "valid corporation purposes" is used for other purposes.²²⁹ The information transaction for the business purpose at this time is a matter for the management of the company, so it is a matter to be decided by the board of directors, and what should be discussed in the matter of management performing the company's purpose is the question of which stakeholder interests should be prioritized by the decision-making of the agent.

Accordingly, the problem of judging the legitimate business purpose is a problem of corporate governance, which leads to the problem of agent theory and agent cost.²³⁰ In this context, it is necessary to decide which perspective to be based on between shareholderism and stakeholderism. In my view, the corporation system was created by several uncharacterized investors for the purpose of accomplishing concentration of capital,²³¹ and the corporation is a depersonalized entity that is separately divided from the stock owner.²³² It cannot be denied that the interests of various stakeholders coexist, and in turn, the perspective of stakeholderism is more

²²⁷ Loewenstein & Wang, *supra* note 132, at 52, 77.

²²⁸ 463 U.S. 646, *supra* note 12, at 654; *Santa Fe Industries, Inc. v. Green*, 430 U.S. 462, 472 (1977).

²²⁹ 43 S.E.C. 933, *supra* note 189, at 936.

²³⁰ Bohinc Rado, *Comparative Company Law: An Overview on US and Some EU Countries' Company Legislation on Corporate Governance*, VDM Verlag Dr. Müller (2011), at 146; Jensen & Meckling, *supra* note 221, at 306, 307-10.

²³¹ Berle & Means, *supra* note 223, at 18-9.

²³² Barbara Abatino et al., *Depersonalization of Business in Ancient Rome*, 31 *Oxford J. of Lgl. Stds.* 1, 2 (2011).

consistent with the capture of a corporation.

(ii) The Owner of the Company: The Company Itself

Distinguishing between the personality of shareholders and the corporate is the cornerstone of understanding the corporation system.²³³ From the perspective of stakeholderism, among the various stakeholders of a company, shareholders are not the owner of the company, but the mere owner of the stock.²³⁴ By law, the company itself is a person with an independent legal personality,²³⁵ and this legal personality cannot be transferred to shareholders or other persons.²³⁶ Therefore, a corporation is the owner of the corporation itself.²³⁷ The same as a natural person becomes the subject of her or his own rights and duty, the subject of the rights and obligations of a corporation is the corporation itself. Putting this logic into the case of insider trading, because directors do not have the status of trustees for shareholders,²³⁸ directors have a fiduciary duty, not to shareholders but to the company which is the subject of its own right and duty.²³⁹

(iii) Priority of Interest: Company's Interest

Based on the logic that the owner of a corporation is the corporation itself, even if information transactions for the business purpose do not completely represent the interests of shareholders, prioritizing the interests of the company does not

²³³ Salomon v. Salomon & Co Ltd [1897] AC 22, 51 (16 Nov. 1896); PERCIVAL V. WRIGHT (1902) 2 CH. 421; Paddy Ireland et al., *The Conceptual Foundations of Modern Company*, 14 J. L. & Soc. 149, 149-50 (1987).

²³⁴ C. R. N. W., *Extent of Shareholders' Interests*. Macaura v. Northern Assurance Co., Ltd. [1925] A.C. 619, 2 Cambridge L.J. 397, 397 (1926); Ireland et al., *Id.*, at 152-3; Ciepley, *supra* note 209, at 32-33, 36; Wan Suk, Suh, *Protection of Minorities and Stakeholder Participation in Commercial Law Amendments - Review of necessity, limitations and methods -*, 29 Commercial Cases Rev. 339, 343-4 (2016) (<https://www.kci.go.kr/kciportal/ci/sereArticleSearch/ciSereArtiView.kci?sereArticleSearchBean.artiId=ART002186442>) (Dec. 25, 2022); Wan Suk, Suh, *Long-term Shareholder and Long-term Capital - Focusing on the Discussions in the United States -*, 34 KCLA 175, 192 (2015) (<https://www.kci.go.kr/kciportal/ci/sereArticleSearch/ciSereArtiView.kci?sereArticleSearchBean.artiId=ART002021044>) (Dec. 25, 2022).

²³⁵ Paul L. Davies & Sarah Worthington, *Gower's Principles of Modern Company Law (10th ed.)*, Sweet & Maxwell (2016), at 35; Paddy Ireland, *The Corporation: A Critical, Multi-Disciplinary (Finance and the Origins of Modern Company Law. In G. Baars, & A. Spicer (Eds.))*, Cambridge University Press (2017), at 6; Ireland et al., *Id.*, at 150.

²³⁶ Ciepley, *supra* note 209, at 35-36.

²³⁷ R v Arnaud, [1846] 9 QB 806, 818 (1846); Phillip Lipton, *The Mythology of Salomon's Case and the Law Dealing with the Tort Liabilities of Corporate Groups: An Historical Perspective*, 40 Monash Univ. L. Rev. 452, 457 (2014); Ireland et al., *Id.*, at 150; Suh, *supra* note 234, at 345.

²³⁸ Goodwin v. Agassiz, 283 Mass. 358, 361 (1933); Smith v. Hurd, 53 Mass. 371, 384 (1847); Lee v. Fisk, 222 Mass. 424, 426 (1915).

²³⁹ Stephen M. Bainbridge, *Securities Law: Insider Trading (2nd Ed.)*, Foundation Press (2007), at 16; William J. Carney, *Signaling and Causation in Insider Trading*, 36 Cath. U. L. Rev. 863, 867, fn. 13 (1987).

undermine the purpose of the company. Because if there is no inappropriate purpose, there is no violation of the fiduciary duty, and if so, there is no violation of the duty derived from it,²⁴⁰ when the use of information for company purposes is not inappropriate, it can be concluded that tippees do not violate their duty even when they purchased inside information in advance of mandatory public disclosure and use it for their securities transaction. Likewise, from the perspective of corporate governance, information transactions can be considered justifiable when the transaction represents the corporation's interest, even if it does not represent the interests of shareholders to the fullest. From this, even if the interests of the company and the interests of shareholders coexist, executives who decide and execute business plans should prioritize the company's interests.²⁴¹ In turn, the company is free to sell its information at its own liability.

(c) Matter of Conflicts between Interests of the Company and Shareholder

It is also necessary to examine whether it can be justified to prioritize the interests of the company even when the interests of the company conflict with shareholders' interests. For this, it should be explained by the fact that the profit that the company would earn exceeds the total profit that shareholders would earn. This question can be answered based on *Consequentialism* or *Utilitarianism*.²⁴²²⁴³ In order to review the basis for judging which choice is better, the maximum benefit of each choice must be compared.

First, focusing only on the "financial profit," it is true that information transactions are not directly delivered to shareholders, so information transactions have nothing to do with shareholders' interests. However, there is room for the shareholders to be given indirect benefits because information transactions make for company to be possible to finance for disclosure, and the cost savings lead to higher stock prices and dividend profits.²⁴⁴ Second, by focusing on the "cost" of business, a company can raise profits above disclosure costs through information business. Subsequently, an increase in disclosure quality due to incentives for information business can improve corporate transparency and agent monitoring functions, which may have a positive impact on stock prices in the long run.²⁴⁵

²⁴⁰ 463 U.S. 646, *supra* note 12, at 646-7.

²⁴¹ Davies & Worthington, *supra* note 235, at 465-67; Suh, *supra* note 234, at 348-78.

²⁴² The position contending that company profits should be prioritized falls under *Deontology*.

²⁴³ John P. Anderson, *Greed, Envy, and the Criminalization of Insider Trading*, 2014 Utah L. Rev. 1, 28 (2014).

²⁴⁴ Macey, *supra* note 149, at fn. 98; Chris B. Murphy, *Why Do Companies Care About Their Stock Prices?*, Investopedia (Sep. 11, 2022).

²⁴⁵ Macey, *supra* note 196, at 874-75; Art Durnev et al., *Property Rights Protection, Corporate Transparency, and Growth*, 40 J. Int. Bus. Studies 1533, 1559 (2009); Eugene F. Fama, *Agency Problems and the Theory of the Firm*, 88 J. Pol. Econ. 288, 291-93 (1980).

Therefore, even if the corporation's interest is prioritized in a situation where the company's interest conflicts with shareholders' interests, the information transaction can be legitimate.

(d) *Matter of Inherent Unfairness of the Trading of Information Buyers*

(i) *The inevitability of "Noise" Payment*

The fact that someone's transaction must be premised for undisclosed information to be reflected in the market price signifies that someone must pay "noise."²⁴⁶ In other words, it is impossible to prevent some investors from voluntarily paying the cost of information asymmetry since immediately after the paid selective disclosure (information transition) on a particular event is made the information asymmetry in the related stock clearly occurs.

But the idea of "Noise," invented by Fischer Black, one of the founders of the Black-Scholes model,²⁴⁷ became the basis of the norm of "Noise Trader,"²⁴⁸ the information-based traders also enjoyed "noise" through these noise traders,²⁴⁹ there are always specific investors in the market who willingly want to take risks.²⁵⁰ Furthermore, the fact that they are essential to supply liquidity in markets is needed to consider,²⁵¹ and there is no basis to prohibit or curb investors from voluntarily putting money in Securities laws. Moreover, the financial investment itself is an investment in high uncertainty,²⁵² There are always winners and losers in stock trading, but those who lost their money are not always victims of fraud.²⁵³ Therefore, it is desirable to allow all investors an opportunity to take risks, and it is fair to say that Securities law plays a sufficient role just by guaranteeing a chance to make a reasonable investment decision by informing all participants of the timing of information asymmetry.

(ii) *Borrowing the Logic of "Bespeaks Caution" Doctrine*

As a matter of law, the "Bespeaks Caution" Doctrine, which replaced *Caveat*

²⁴⁶ O'Hara, *supra* note 9, at 57, 251; Harris, *supra* note 4, at 229, 237, 395; Haeberle, *supra* note 3, at 176.

²⁴⁷ Adam Hayes, *Black-Scholes Model: What It Is, How It Works, Options Formula*, Investopedia (Oct. 26, 2022).

²⁴⁸ Black, *supra* note 124, at 530-1.

²⁴⁹ *Id.*, at 533.

²⁵⁰ *Id.*, at 534; Haeberle & Henderson, *supra* note 280, at 406-7; Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision under Risk*, 47 *Econometrica* 263 (1979); Thomas Russell & Richard Thaler, *The Relevance of Quasi Rationality in Competitive Markets*, 75 *The American Eco. Rev.* 1071 (1985).

²⁵¹ Black, *Id.*, at 529.

²⁵² Principal, *What's Investment Risk and Why Does It Matter?* (<https://www.principal.com/individuals/build-your-knowledge/what-is-investment-risk-and-why-does-it-matter>) (Dec. 7, 2022) ("Risk is inherent in stock markets and investment portfolios.").

²⁵³ 463 U.S. 646, *supra* note 12, at fn. 27.

Emptor,²⁵⁴ is the principle of exempting the issuer from liability from the uncertainty of forward-looking representation.²⁵⁵ This principle renders forward-looking statements alleged misrepresentations and omissions immaterial if the caution or warning contained that the results are uncertain and may not be realized as predicted with enough cautionary language.²⁵⁶

Given that the main purpose of this principle is to protect issuers,²⁵⁷ so it has a different context from the obligation to disclose information transactions that is focusing on protecting investors. But focusing on that bespeaks caution meaningfully warns investors about the certain risk through the cautionary statements,²⁵⁸ this doctrine can be applied as a logic and means to cure the unfairness inherent in someone's payment for the information asymmetry cost through disclosure of information transactions including certain warnings about expected risk.

Indeed, the Securities Act of 1933²⁵⁹ and Securities Exchange Act of 1934²⁶⁰ is based on Louis Brandeis's insight, "sunlight is said to be the best of disinfectants; electric light the most efficient policeman."²⁶¹ In addition to this philosophy, the securities law system of United States embraced the disclosure system instead of the "merit regulation" of the "Blue Sky laws"²⁶² in response to

²⁵⁴ Julian Kagan, *Caveat Emptor*, Investopedia (June 20, 2021); FindLaw, *What Does 'Caveat Emptor' Mean?* (<https://www.findlaw.com/consumer/consumer-transactions/what-does-caveat-emptor-mean-.html>) (Dec. 26, 2022); Upcounsel, *The Doctrine of Caveat Emptor Means* (<https://www.upcounsel.com/the-doctrine-of-caveat-emptor-means>) (Dec. 26, 2022); LII, *Caveat Emptor* (https://www.law.cornell.edu/wex/caveat_emptor) (Dec. 26, 2022).

²⁵⁵ 15 U.S. Code § 78u-5; *Strong v. Repid*, 1213 U.S. 419 (1909); *Luce v. Edelstein*, 802 F.2d 49, 56 (1986); *Virginia Bankshares, Inc. v. Sandberg*, 501 U.S. 1083, 1096 (1991); Bryan A. Garner, *Black's Law Dictionary (5th Pkt. ed.)*, Thomson Reuters (2016), at 107; George W. Ashford, Jr., *Corporations: Director Liability: "Special Facts" Doctrine Applied to Director in Minority Shareholder's Sale to Third Party*, 51 Cal. L. Rev. 626 (1963); Andrew M. Campbell, *"Bespeaks Caution" Doctrine under Federal Securities Laws*, 130 A.L.R. Fed. 119, 20, 59 (Originally published in 1996) ([https://1.next.westlaw.com/Document/I80c65cc24a7a11da9596f7b3fff54a03/View/FullText.html?originationContext=typeAhead&transitionType=Default&contextData=\(sc.Default\)](https://1.next.westlaw.com/Document/I80c65cc24a7a11da9596f7b3fff54a03/View/FullText.html?originationContext=typeAhead&transitionType=Default&contextData=(sc.Default))) (Dec. 29, 2022).

²⁵⁶ *In re Donald J. Trump Casino Sec. Litig.-Taj Mahal Litig.*, 7 F.3d 357, 371 (3d Cir. 1993); Campbell, *Id.*, at 21; Donald C. Langevoort, *Disclosures that "Bespeak Caution"*, 49 Bus. Lwyr. 481, 483 (1994); Erin M. Hardtke, *What's Wrong with the Safe Harbor for Forward-Looking Statements? A Call to the Securities and Exchange Commission to Reconsider Codification of the Bespeaks Caution Doctrine*, 81 Marquette L. Rev. 133, 134 (1997).

²⁵⁷ Thomson Reuters Practical Law, *Bespeaks Caution Doctrine* ([https://uk.practicallaw.thomsonreuters.com/w-000-3638?transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://uk.practicallaw.thomsonreuters.com/w-000-3638?transitionType=Default&contextData=(sc.Default)&firstPage=true)) (Dec. 8, 2022).

²⁵⁸ 7 F.3d 357, *supra* note 256, at 364; Langevoort, *supra* note 256, at 481; Hardtke, *supra* note 256, at 158.

²⁵⁹ 15 U.S.C. § 77a et seq.

²⁶⁰ 15 U.S.C. § 78a et seq.

²⁶¹ Louis D. Brandeis, *Other People's Money-and How Bankers Use It*, Fredrick A. Stokes Com. (1914), at 92.

²⁶² *S.E.C. v. Zandford*, 535 U.S. 813, 813 (2002); Charles C. Cox, *Small Issuer Disclosure Policy and the Fringes of "Merit Regulation"*, SEC, News Release (Oct. 3, 1986), at 2, 5 ("the Commission does not endorse the idea of "merit regulation," but usually relies on disclosure. ... The idea of "merit regulation"

the Presidential message urging “let the seller also beware.”²⁶³ What the securities law aimed by burdening the issuers to tell the truth was to protect the investors,²⁶⁴ and in an extension of this context, legal basis, “full disclosure forecloses liability” which was established in the *O’Hagan* case,²⁶⁵ can apply mutatis mutandis to the case of information transaction. In other words, by borrowing the logic of the “bespeaks caution” doctrine, it is possible to derive the rationale that there is no need to protect investors who want to take risks beyond the protection system, the name of the obligation to disclose information transactions.

Yet, the majority of slow investors are less sensitive to information inflow or market signals,²⁶⁶ in particular, liquidity providers, which are a link in which information asymmetry costs are passed on to ordinary investors, may not be able to expect an active response because they normally take a passive role.²⁶⁷ Of course, bespeaks caution doctrine plays a role in protecting the issuer separately from the new duty of disclosure.

(iii) *Healing of Unfairness of the Trading of Information Buyers*

Regarding the problem that transactions based on material inside information are justified by disclosure of information transaction, several facts were criticized generally as follows: (1) the profit created from using nonpublic material information is at the counterparty’s expense,²⁶⁸ (2) even if the company allowed, not all moral claims can be marginalized or traded with other interests,²⁶⁹ and (3) shareholders and potential shareholders have the right not to be victims of insider trading.²⁷⁰ On the last point, it was a question of whether the right could be traded or permitted by the consent of the informant.²⁷¹ In other words, there is an argument that no one can be excluded from the right not to be a victim of insider

-- that some securities simply shouldn't be sold to anyone even if they want them -- exists in the regulatory schemes in some states but is not part of the plan under the federal securities laws.”); Ronald J. Colombo, *Merit Regulation via the Suitability Rules*, 12 J. Int’l. Bus. & L 1, 2, 6 (2014); Daniel J. Morrissey, *The Road Not Taken: Rethinking Securities Regulation and the Case for Federal Merit Review*, 44 U. Rich. L. Rev. 647, 648, 649 (2010); Jonathan R. Macey & Geoffrey P. Miller, *Origin of the Blue Sky Laws*, 70 TEX. L. Rev. 347, 348 (1991).

²⁶³ *Wilko v. Swan*, 346 U.S. 427, 430 (1953); H.R.Rep.No.85, 73d Cong., 1st Sess. 2; 77 CONG.REC. 937 (1933); Seligman, *supra* note 157, at 1105-6.

²⁶⁴ 77 CONG.REC. 937 (1933). (“The purpose of the legislation I suggest is to protect the public with the least possible interference to honest business. This is but one step in our broad purpose of protecting investors and depositors.”).

²⁶⁵ 521 U.S. 642, *supra* note 18, at 643.

²⁶⁶ Easley & O’Hara, *supra* note 186, at 580.

²⁶⁷ O’Hara, *supra* note 9, at 129, 130; Harris, *supra* note 4, at 401.

²⁶⁸ Leo Katz, *Crime, Consent, and Insider Trading*, 5 J. Contemp. Legal Issues 217, 218 (1994).

²⁶⁹ *Id.*, at 224.

²⁷⁰ *Id.*, at 226, 234.

²⁷¹ *Id.*, at 234; Leo Katz, *The Problem with Consenting to Insider Trading*, 69 Univ. Miami L. Rev. 827, 828-30 (2015).

trading, in the same context of reckless assault based on *Eventualvorsatz* or *bewusste Fahrlässigkeit*.²⁷²

As an answer to this criticism, the theory of corporation discretion can present the fact that the company provides all investors with an opportunity not to be victims of insider trading through the duty to disclose information transactions. That is, the new disclosure mechanism provides investors with the opportunity to avoid paying for inherent unfairness, and if investors don't pay the cost, it can be said that insider trading will not occur even if insiders' and tippees' securities transactions are based on nonpublic material information. Subsequently, the imposition of the new series of obligations above functioning as the "Bespeaks Caution Doctrine" cures the inherent unfairness of information buyers' investment and the contradiction caused by the reappraisal of insider trading regulation theories. Therefore, it can be fair to say that the transition of the regulatory system accordingly can be justified based on the discretion of corporation theory's logic.

B Introduction of New Disclosure Rules

1 Broadening Scope of Disclosure

Not only the issuer's periodic disclosure information but occasional and subsidiary information such as the CEO's disease has a significant impact on investment decisions.²⁷³ Many market participants also rely on that information as well.²⁷⁴ Considering that predatory traders also rely on that information, and information asymmetry is generated when all kinds of corporation-related information flow into markets, sniping²⁷⁵ occurs when the market fluctuates.²⁷⁶ Therefore, to

²⁷² Katz, *supra* note 268, at 226; John P. Anderson, *What's the Harm in Issuer-Licensed Insider Trading?*, 69 U. Miami L. Rev. 795, 807 (2015).

²⁷³ Chris Dolmetsch & Peter Burrows, *Apple May Not Need to Disclose Details of Jobs Medical Leave, Lawyers Say*, Bloomberg (Jan. 18, 2011); Thomas C. Hayes, *Tenneco's Chief Has Brain Cancer*, N.Y. Times (Jan. 21, 1993); Miguel Helft, *Jobs Takes Sick Leave at Apple Again, Stirring Questions*, N.Y. Times (Jan. 17, 2011); Yukari Iwatani Kane & Joann S. Lublin, *Apple Chief to Take Leave*, Wall St. J. (Jan. 18, 2011); The Associated Press, *Sara Lee Chief Is Leaving After a Stroke*, N.Y. Times (Aug. 9, 2010); Michael Oneal, *Sara Lee CEO Barnes Discloses She Had a Stroke*, Chicago Tribune (June 14, 2010).

²⁷⁴ Tom C.W. Lin, *Undressing the CEO: Disclosing Private, Material Matters of Public Company Executives*, 11 U. Pa. J. Bus. L. 383 (2009); Nizan Geslevich Packin, *Show Me the (Data about the) Money!*, 2020 Utah L. Rev. 1277, 1331-32 (2020); Charles D. Collver, *Is There Less Informed Trading after Regulation Fair Disclosure?*, 13 J. Corp. Fin. 270, 279 (2007); Yadav, *supra* note 14, at 253-54.

²⁷⁵ Predatory trading is also referred to as sniping, picking off, free option risk, and parasitic trading in light of that it targets orders or quotes that do not reflect newly flawed information. See Foucault & Moinas, *supra* note 5, at 10, 16, 17; Adrian, *supra* note 42, at 258; Budish et al., *supra* note 94, at 3, 17; Charles R. Korsmo, *High-Frequency Trading: A Regulatory Strategy*, 48 U. Rich. L. Rev. 523, 557-60 (2014).

²⁷⁶ Adrian, *Id.*, at 270; Moign & Benhami, *supra* note 44, at 5; Gomber et al., *supra* note 42, at 29-30; McGowan, *supra* note 44, at 21; 國枝繁樹, *supra* note 44, 47頁.

substantially regulate information asymmetry, it is necessary to first expand the scope of the disclosure as much as possible.

However, the biggest problem with expanding the scope of the disclosure is “cost.” Since the scope of the disclosure and the cost of the disclosure are directly proportional, there is no incentive for the issuer to welcome the expansion of the scope of the disclosure.²⁷⁷ If this motion is enforced, there is no actual function to improve the level of disclosure, or the cost borne by the issuer is eventually passed on directly or indirectly to consumers, investors, and shareholders.²⁷⁸ In addition, for various reasons such as privacy and leakage of corporate secrets, issuers show strong opposition to the expansion of the scope of the disclosure.²⁷⁹ However, in my view, the conflict between the scope of the disclosure and the disclosure cost can be solved by allowing the prior selling of company information.

2 *Allowing Corporations to Sell Their Information*

The transaction of company information means that the issuer notifies the market in advance of the information to be selected and provided to a specific person before disclosing it to the public in accordance with the current legal disclosure obligation.²⁸⁰ This information transaction corresponds to matters related to management because the company sells its own property. Therefore, information transactions are lawful only if the corporation sells based on a legitimate decision-making process, such as a meeting of the board of directors or a general meeting.

Under the current fair disclosure system, issuers cannot cover the cost of raising the disclosure quality outside the company because the disclosure system requires all disclosure target information to be distributed to all investors at the same time without any compensation.²⁸¹ However, from the perspective of market principles, traders can get rewards for first beginning a series of processes such as collection, analysis, and making decisions. So, corporations can generate profits in

²⁷⁷ SEC, *supra* note 17, at 51731-3; Susan B. Heyman, *Rethinking Regulation Fair Disclosure and Corporate Free Speech*, 36 *Cardozo L. Rev.* 1099, 1131 (2015); Mark Bagnoli et al., *Reg-FD and the Competitiveness of All-Star Analysts*, 27 *J. Acct. & Pub. Pol’y* 295, 297-98 (2008); Frank H. Easterbrook & Daniel R. Fischel, *Mandatory Disclosure and the Protection of Investors*, 70 *Va. L. Rev.* 669, 707-9 (1983).

²⁷⁸ Collver, *supra* note 274, at 279; Étienne Farvaque et al., *Corporate Disclosure: A Review of Its (Direct and Indirect) Benefits and Costs*, *Économie Internationale* 2011/4 (n° 128) (2011), at 21-24; Anwer S. Ahmed & Richard A. Schneible, Jr., *The Impact of Regulation Fair Disclosure on Investors’ Prior Information Quality - Evidence from an Analysis of Changes in Trading Volume and Stock Price Reactions to Earnings Announcements*, 13 *J. Corp. Fin.* 282, 283 (2007); Donald C. Langevoort & G. Mitu Gulati, *The Muddled Duty to Disclose under Rule 10b-5*, 57 *Vand. L. Rev.* 1639, 1677 (2004).

²⁷⁹ Farvaque et al., *Id.*, at 15-19; Lin, *supra* note 274, at 411; Ufuoma Barbara Akpotaire, *Examining Timely Disclosure of Material Information and the Privacy Concerns of Executive Officers*, SSRN (June 2, 2011), at 22-26; Peter Elkind, *The Trouble with Steve Jobs*, *Fortune* (Mar. 5, 2008).

²⁸⁰ Kevin Haerberle & Todd Henderson, *Making a Market for Corporate Disclosure*, 35 *Yale J. Reg.* 383, 411 (2018).

²⁸¹ *Id.*, at 399-400.

the information markets in return for providing early access to information. This circumstance indicates that the demand for early access eventually results in the supply of early provision,²⁸² and that issuing corporations can be incentivized to disclose more frequently.²⁸³

Substituting this into the case of the consumer sentiment index, it can be expected to provide subscription services to consumers who want to access company information earlier or sell the information by auctioning.²⁸⁴ In this case, the disclosure cost borne by the issuer may be covered by the duty of fair disclosure, and eventually, which may be expected to lead to active information production. Moreover, a piece of ambiguous information such as rumors or hearsay can also be the subject of commercialization by a corporation itself, and it would be helpful for the company to make profits above the disclosure cost.

3 *Imposing Duty to Disclose of Information Trading*

Allowing information transactions is a prerequisite for establishing an environment in which information asymmetry occurs and alleviates more stably before fair disclosure, so the obligation to disclose information transactions must be premised. However, in addition to the issuer, some people produce market information,²⁸⁵ so it is necessary to consider whether all kinds of market information producers should also be obligated to disclose to discuss the possibility of regulating predatory transactions. In my opinion, it is not possible to precisely determine the scope of information that affects the market price immediately, and imposing disclosure obligations on all information producers excessively hinders market autonomy. Thus, imposing this new duty on all information transactions is socially undesirable.²⁸⁶

Instead, starting with imposing disclosure obligations to them as duties accompanied by allowing corporations' discretion on their properties, I intend to take the first step in solving the difficult information asymmetry problem. Unless it is unstructured information that has nothing to do with the issuer, such as weather or satellite information, most market information is based on the issuer's performances,²⁸⁷ and the issuer can most accurately grasp the business environment outlook or expected performance, which is considered a crucial

²⁸² Haerberle & Henderson, *supra* note 7, at 1377.

²⁸³ Because securities regulation adopted a disclosure system rather than merit regulation, corporations are needed to be incentivized to make themselves disclose more and more. *See* Park, *supra* note 150, at 105.

²⁸⁴ Haerberle & Henderson, *supra* note 280, at 411-13.

²⁸⁵ Packin, *supra* note 274, at 1279.

²⁸⁶ Samuel W. Buell, What Is Securities Fraud?, 61 Duke L.J. 511, 562 (2011).

²⁸⁷ Taleska, *supra* note 17, at 575.

indicator of market information, and the market information prepared by the issuer itself is considered inside information.²⁸⁸ If a transparent information market is established, market information directly or indirectly related to the issuer may be expected to be replaced by company information produced by the issuer through the issuer's information commercialization. Furthermore, through the duty to disclose information transactions, the new disclosure mechanism can provide investors with an opportunity to avoid predatory transactions by fundamentally controlling the problem of information asymmetry caused by various factors.

Meanwhile, the information prepared by the issuer unavoidably reflects an optimistic view,²⁸⁹ and this phenomenon can occur throughout information transactions as well. But market principles, such as "seeking good quality of information" and "improvement of information value" made in terms of the company's efforts will function as a self-purification, or civil damage cure mechanism alleging substantially low quality of information, omission, or misrepresentation can also prevent the side effect. As a result of it, this problem can be expected to converge to a more objective level.

4 Adopting a Preliminary Disclosure System

To provide investors with opportunities to get out of the market during the period of easing information asymmetry, it is essential to inform the market of the fact of information transactions in advance of the transaction target information is delivered. Information is produced from time to time during the trading day,²⁹⁰ thus if the fact is disclosed at the same time as the information is provided, investors who have not engaged in information transactions will miss the opportunity to avoid information asymmetry.

However, the current disclosure system only provides the disclosure deadline but does not have any regulations on the duty to disclose the timing of disclosure. For this reason, investors are often exposed to information asymmetry that occurs immediately after disclosure, regardless of the level of access to disclosure information.²⁹¹ The problem of information asymmetry that occurs immediately after disclosure can be solved simply by introducing a "preliminary disclosure regulation" (or "disclosure of disclosure"²⁹²) that requires the disclosure obligation to disclose the timing in advance before disclosing the information.

²⁸⁸ *Note TSC Indus., Inc. v. Northway, Inc.*, 426 U.S. 438 (1976); CFA Institute, *Standard II(A) Material Nonpublic Information*, CFA Institute, Standards of Practice Guidance (2014); Lim, *supra* note 145, at 313.

²⁸⁹ Andrew W. Fine, *A Cautionary Look at a Cautionary Doctrine*, 10 *Brook. J. Corp. Fin. & Com. L.* 521, 522 (2016) ("Optimism is an indispensable element of effective salesmanship.").

²⁹⁰ Easley & O'Hara, *supra* note 186, at 580.

²⁹¹ Haerberle & Henderson, *supra* note 7, at 1424-26, 1431.

²⁹² *Id.*, at 1431-32.

When this preliminary disclosure system is introduced in the disclosure obligation of information transactions, at least investors paying attention to information asymmetry occurring immediately after disclosure may revise their plans for non-time-sensitive trading in time for information buyers to be provided or take steps out of the market until information asymmetry is eased. As a result, the preliminary disclosure system not only protects ordinary investors from information asymmetry problems immediately after information provision, but also provides broader and diverse investor protection effects beyond the information asymmetry problem itself.²⁹³

(a) Disclosure Standard: Information Transaction

Unlike imposing disclosure obligations based on the materiality of the information,²⁹⁴ if it is determined based on the facts of information transactions, the complex problem of determining materiality can be solved simply. Further, “materiality” is an extremely broad concept,²⁹⁵ and applying the fact of information transaction as a disclosure criterion is not rejected against materiality. In addition, information buyers are likely to buy material information, so, considering such market principle, it is possible to naturally derive whether the traded information is material. Thus, as a condition of activating the duty of disclosure, the materiality and fact of information transactions can coexist with the current disclosure system. Whether it affects investment decisions is essentially determined by investors,²⁹⁶ so, it is natural for information consumers to purchase information for use or reference in investment judgment, and a series of information transaction negotiation processes and results eventually derive the materiality of the information. In some cases, the purchased information may not affect the investment judgment, but it is obvious that the information purchase itself causes information asymmetry as selective disclosure, so it is appropriate to impose a disclosure obligation based on this fact.

²⁹³ *Id.*, at 1432.

²⁹⁴ 426 U.S. 438, *supra* note 288, at 439 (“The general standard of materiality best comports with Rule 14a-9’s policies ...”); Mary Jo White, The Path Forward on Disclosure, SEC Speech (Oct. 15, 2013); Business Roundtable, *The Materiality Standard for Public Company Disclosure: Maintain What Works*, Business Roundtable (2015), at 3-5.

²⁹⁵ *Northway, Inc. v. TSC Indus., Inc.*, 512 F.2d 324, 330 (7th Cir. 1975), *rev’d*, 426 U.S. 438 (1976); 426 U.S. 438, *Id.*, at 449 (1976); 485 U.S. 224, *supra* note 145; Paul Munter, Assessing Materiality: Focusing on the Reasonable Investor When Evaluating Errors, SEC Statement (Mar. 9, 2022); FASB, *Amendments to Statement of Financial Accounting Concepts No. 8 - Conceptual Framework for Financial Reporting - Chapter 3, Qualitative Characteristics of Useful Financial Information* (2018), at 4 (“proposed that materiality is a pervasive constraint in financial reporting because it is pertinent to all of the qualitative characteristics.”).

²⁹⁶ 426 U.S. 438, *Id.*, at 445 (“Variations in the formulation of a general test of materiality occur in the articulation of ... how certain it must be that the fact would affect a reasonable investor’s judgment.”).

(b) Contents of Disclosures: Disclaimer, Non-Specific Information, and Due Date of Traded Information Disclosure

As the information transaction disclosure borrows the “Bespeaks Curation Doctrine,” the preliminary disclosure must include a disclaimer warning that the information transaction will be carried out. It is not appropriate to borrow it as it is because its nature and context are different from the forward-looking statements.²⁹⁷ Instead, a cautionary phrase should include (1) the fact that stocks related to information transaction disclosure are scheduled, (2) the related information will be provided after the preliminary disclosure, and (3) if related stocks are traded by the deadline for disclosing traded information, investors may be exposed to information asymmetry.

Meanwhile, considering the interests of the information transaction parties and the scarcity of information, there will be an explicit agreement to keep the information subject to the transaction as a contract condition or in the process of negotiating the transaction.²⁹⁸ Even so, in order to increase market transparency and minimize the occurrence of unnecessary market confusion and rumors, non-specific information that has been processed so that the transaction target information cannot be specified should also be disclosed. For example, “sales performance” at a specific time, “change in transaction (contract) relations of the corporation”, and “new technology safety experiment results” can be presented. As described below, it is also necessary to disclose the due date for disclosing traded information.

(c) Due Date: Focusing on the Market Realities

The preliminary disclosure due date refers to the period when information transaction facts, etc. should be disclosed before the information is provided according to information transactions. Even if the information transaction is disclosed as prescribed by the proposed law, investors do not immediately become aware of the disclosure, so it is necessary to guarantee the minimum period necessary for investors’ to reasonably make investment decisions in the light of the purpose of the preliminary disclosure is to level the playing field.²⁹⁹ In terms of setting the due date, it is necessary to note that these days, all kinds of available information are reflected in the market price in less time than it takes to blink.³⁰⁰

²⁹⁷ Fine, *supra* note 289, at 525-27.

²⁹⁸ Haerberle & Henderson, *supra* note 280, at 413.

²⁹⁹ Kerry E. Berchem et al., New Proposed Rules Affecting 10b5-1 Trading Plans and Share Repurchase Programs, Aking Gump (Mar. 3, 2022). (“The cooling-off periods are intended to ensure that even if an insider holds information not known to investors at the time of a plan adoption or modification, that information will be stale by the time trades are made under the plan.”).

³⁰⁰ Fama, *supra* note 151, at 383; Gilson & Kraakman, *supra* note 148, at 554-55; Michael Lewis, *Flash*

Given this reality, setting a deadline of several days is meaningless, and at this point, South Korea's cooling-off period (or waiting period³⁰¹) banning securities trading at most three hours after disclosure can be referred to.³⁰² Of course, there is a difference in nature from the preliminary disclosure performed before information delivery in that the cooling-off period is a period during which the person "who has insider information" cannot trade securities. Nonetheless, if the information is provided to information buyers after a period corresponding to the three hours has elapsed since the preliminary disclosure, investors will be guaranteed sufficient time to recognize the information transaction. Also, I think those information buyers can receive information and use it according to their intended purpose within three hours.

5 Setting Due Date for Traded Information Disclosure

Regardless of the legal disclosure obligation, it is necessary to publicly disclose the traded information after a certain period has elapsed. Otherwise, information buyers can engage in transactions at a slow pace for a very long time without a deadline, and this information advantage will last for a period from immediately after the information is provided to the due date of the current legal disclosure.³⁰³ As a result, investors who are not engaged in information transactions cannot accurately grasp

Boys: A Wall Street Revolt (Reprint ed.), W. W. Norton & Company (2015), at 99, 285; Hu et al., *supra* note 6, at 410, 411; CFTC & SEC, *Preliminary Findings Regarding the Market Events of May 6, 2010*, CFTC & SEC (May 18, 2010), at 2, 64-67; Korsmo, *supra* note 275, 523-27; Yesha Yadav, *How Algorithmic Trading Undermines Efficiency in Capital Markets*, 68 *Vand. L. Rev.* 1607, 1620 (2015); Benjamin Clapham, *Popular News Are Relevant News! How Investor Attention Affects Algorithmic Decision-Making and Decision Support in Financial Markets*, 23 *Information Systems Frontiers* 477, 477-80, 491-92 (2019); Rory Van Loo, *Digital Market Perfection*, 117 *Mich. L. Rev.* 815, 861 (2019); Andrei A. Kirilenko et al., *The Flash Crash: High-Frequency Trading in an Electronic Market*, 72 *J. Fin.* 967, 968 (2017); Mark Buchanan, *Physics in Finance: Trading at the Speed of Light*, *Nature* (Feb. 11, 2015); Edward E. Kaufman, Jr. & Carl M. Levin, *Preventing the Next Flash Crash*, *N.Y. Times* (May 5, 2011); Eric T. Schneiderman, *Op-Ed: Cracking Down on Insider Trading 2.0*, *The Bus. J.* (Oct. 11, 2013); B10NUMB3R5, *Average Duration of A Single Eye Blink* (<https://bionumbers.hms.harvard.edu/bionumber.aspx?&id=100706&ver=4>) (Dec. 8, 2022).

³⁰¹ Joel H. Trotter et al., *EC Proposes Stricter Requirements for the Rule 10b5-1 Affirmative Defense*, Latham & Watkins LLP (Jan. 7, 2022).

³⁰² FINANCIAL INVESTMENT SERVICES AND CAPITAL MARKETS ACT Presidential Decree of Republic of Korea, Article 201(2)2; Meanwhile, the waiting period in the US is better for preventing insider trading of insiders. But these periods are not appropriate as a reference for the due date of the information transaction disclosure obligation because the periods are generally too long for the deadline of the new duty. See Thomson Reuters Practical Law, *Waiting Period* ([https://ca.practicallaw.thomsonreuters.com/7-382-3906?transitionType=Default&contextData=\(sc.Default\)](https://ca.practicallaw.thomsonreuters.com/7-382-3906?transitionType=Default&contextData=(sc.Default))) (Dec. 8, 2022); SEC, *Rule 10b5-1 and Insider Trading*, 17 *CFR Parts* 229, 232, 240 and 249 (Sec. 15, 2021), at 13-16; SEC, *SEC Proposes Amendments Regarding Rule 10b5-1 Insider Trading Plans and Related Disclosures*, SEC Press Release 2021-256 (Dec. 15, 2021); Bradford Lynch et al., *Gaming the System: Three "Red Flags" of Potential 10b5-1 Abuse*, *Harv. Law School Forum on Corporate Governance* (Jan. 28, 2021); Bloomberg Law, *Executive Stock Sales Face More Scrutiny as SEC Tightens Rules*, Bloomberg Law (Dec. 20, 2021).

³⁰³ Haerberle & Henderson, *supra* note 7, at 1433.

the period during which information asymmetry costs are expected to increase, and because they must leave the market until information asymmetry is sufficiently minimized, problems such as loss of trading opportunities occur to the investors who did not purchase the information.³⁰⁴ In addition, if the traded information is not subject to current disclosure obligations, it will be virtually impossible for an investor who has not engaged in the information transaction to access the information, resulting in serious defects in the investor protection system.

In this circumstance, a due date for publicly disclosing traded information should be introduced.³⁰⁵ This additional duty further strengthens the investor protection system as an extension of the preliminary disclosure system. The goal of this obligation is to resolve the uncertainty problem caused by information transactions by allowing investors who are not engaged in information transactions to estimate the expected period of the magnitude of information asymmetry raised.³⁰⁶

(a) Longest Due Date: 24 Hours after Information Is Provided

If the due date of the disclosure is too far from the time when information was provided to purchasers, slow investors will lose transaction opportunities for too long, so the longest deadline for traded information disclosure should be set to a range that is not too long. In my opinion, considering that information is quickly reflected in market prices these days and that the general practice that fast traders, especially high-frequency traders, liquidate all positions before the market closing,³⁰⁷ it is expected that information asymmetry will be minimized within a day. Given these facts, the longest due date of traded information disclosure can be set for 24 hours after information is provided, regardless of the regular markets' timetable.

(b) Shortest Due Date: 15 Minutes after Information Is Provided

The shortest period of traded information disclosure can be set in seconds, as in the case of the consumer sentiment index. This period has the advantage of minimizing the chance of that slow investor losing their transaction opportunities during that period. On the other hand, the excessively short period of time is difficult to meet

³⁰⁴ *Id.*, at 1434.

³⁰⁵ *Id.*, at 1434; The "Shot Clock" in this context can be understood as one basketball rule limiting the maximum time for making a shot. See Merriam-Webster, *Shot Clock* (<https://www.merriam-webster.com/dictionary/shot%20clock>) (Dec. 9, 2022).

³⁰⁶ Haerberle & Henderson, *Id.*, at 1434-35.

³⁰⁷ Megan Woodward, *The Need for Speed: Regulatory Approaches to High Frequency Trading in the United States and the European Union*, 50 *Vand. J. Transnat'l L.* 1359, 1369 (2017); SEC, *supra* note 42, at 45.

various demands for information transactions. Also, when setting the shortest deadline for disclosing traded information, it should also be considered that information asymmetry is compressed as the information asymmetry-reducing period is shorter. Therefore, the minimum period should be set to a range that is not excessively short.

Regarding this matter, in consideration of the easing pattern of information asymmetry and the impact on market volatility, 15 minutes, the longest time when transactions are halted by the “Circuit Breakers,”³⁰⁸ can be used as a reasonable standard. This period was set based on experience in the market crisis and this system is for balancing the halted time for market stabilization and the side effects of trading suspension and providing investors with room to examine market conditions.³⁰⁹ By borrowing this time period, it is appropriate to set the shortest period of disclosure to 15 minutes after the information is provided.

Taken together, the maximum due date for disclosing traded information is 24 hours after the information is provided, and the shortest period is 15 minutes after the information is provided. Within this range, it would be sufficient to leave it to autonomy to decide when to disclose traded information through consultation between the parties to the information transaction or based on the corporation’s policy.

C Limits of Information Purchasing of Corporation

1 Restrictions on the Corporation’s Use of Information Asymmetry

When a company directly trades its own stocks based on its inside information, it should be regarded as insider trading. As discussed above, the owner of the corporation is the company itself, so, the scope of insider includes the corporation itself, and from a traditional theoretical point of view, there is no clear reason to distinguish between the issuer and the issuer’s insider, so it is common to hold the issuer accountable for insider trading.³¹⁰ Furthermore, insiders are in a mutual relationship with the issuer, so the prevailing view is that they are also in a typical fiduciary relationship with shareholders who are counterparties of trading.³¹¹

³⁰⁸ Jason Fernando, *What Is a Circuit Breaker in Trading? How Is It Triggered?*, Investopedia (June. 21, 2022); Nasdaq, Market Wide Circuit Breaker (<https://www.nasdaqtrader.com/trader.aspx?id=CircuitBreaker>) (Dec. 8, 2022).

³⁰⁹ Merritt B. Fox et al., *The New Stock Market: Sense and Nonsense*, 65 *Duke L.J.* 191, 272 (2015); Jason Fernando, *Circuit Breaker*, Investopedia (Feb. 26, 2021).

³¹⁰ Loewenstein & Wang, *supra* note 132, at 77.

³¹¹ *Id.*, at 58; Ian Ayres & Joe Bankman, *Substitutes for Insider Trading*, 54 *Stan. L. Rev.* 235, 259 (2001); Dale E. Barnes, Jr. & Karen Kennard, *Greater Expectations: Risk Disclosure Under the Private Securities Litigation Reform Act of 1995-An Update*, 2 *Stan. J.L. Bus. & Fin.* 331, 335 (1996); Steven E. Bochner & Samir Bukhar, *The Duty to Update and Disclosure Reform: The Impact of Regulation FD and Current Disclosure Initiatives*, 7 *Stan. J.L. Bus. & Fin.* 225, 229 (2002); Victor Brudney, *Equal*

The typical fiduciary relationship among the issuer, managers or employees, and counterparty of stock trading formed a triangular relationship,³¹² and if insider trading by insiders other than the company is illegal, the same standard applied to the company's securities transaction. Further, according to the corporation's discretion theory, it is impossible for the company to trade information with itself. Despite that logic, if the company is allowed to make profits through its rights, there is a blind spot that the company is free from insider trading regulations. This regulatory vacuum can be filled through two grounds.

The first is the company's insider trading against the Constitution. That is, even if a corporation's information is an asset owned by itself, it cannot be used to harm the rights of others. Discrimination of Corporation Theory is based on ownership of information, so it needs to be approached from the perspective of private property rights guaranteed by the Constitution. Like the logic of the "Harm Principle"³¹³ insisting an individual's freedom shall stop in the face of the freedom of others, the ownership of a company cannot be expanded indefinitely. Thus, regardless of any logic, the company's insider trading should be banned.

The second is that the logic of healing the inherent unfairness of information transactions suggested above does not work. The obligation to disclose information transactions cannot apply when a company trades treasury stocks, and if so, the "Bespeaks Caution" does not function. As a result, slow investors cannot be provided with the opportunity to avoid information asymmetry costs. Selective information transactions are allowed in the logic that the inherent unfairness generated from this is cured through the new mechanisms for protecting market participants. If such a healing function cannot be secured, information transactions are no different from pure selective disclosures or insider violations of fiduciary obligations. Therefore, the company's use of information asymmetry constitutes insider trading. However, there should be no change in the fact that the company's treasury stock transactions are allowed only in certain cases.

2 Blocking Insider Trading by Other than the Company

From the viewpoint of the new theory, even if an insider other than the corporation

Treatment of Shareholders in Corporate Distributions and Reorganizations, 71 Cal. L. Rev. 1072, 1108 (1983); Theresa A. Gabaldon, *State Answers to Federal Questions: The Common Law of Securities Regulation*, 20 J. Corp. L. 155, 198 (1994); Robert H. Rosenblum, *An Issuer's Duty Under Rule 10b-5 to Correct and Update Materially Misleading Statements*, 40 Cath. U. L. Rev. 289, 304-5, fn. 65 (1991); Donald C. Langevoort, *Investment Analysts and the Law of Insider Trading*, 76 Va. L. Rev. 1023, 1052 (1990); Note & Deborah I. Mitchell, *Leventhall V. General Dynamics Corporation: No Recovery for the Plaintiff- Option Holder in a Case of Insider Trading Under Rule 10B-5*, 79 Nw. U. L. Rev. 780, 791, fn. 70 (1984).

³¹² Loewenstein & Wang, *supra* note 132, at 57, 77.

³¹³ John S. Mill, *On Liberty*, Batoche Books (1859), at 13.

itself sells inside information or for allowing any third party to use the information on securities transactions regardless of the existence of compensation, it is prohibited insider trading. If it is not an information transaction according to the due process, such as the general meeting of stockholders or the board of directors meeting, there is no room for acceptance of the claim that it is part of the business judgment made by insiders other than the company. Moreover, the obligation to disclose information transactions is not premised, so the healing logic of inherent unfairness cannot be applied. Therefore, all information transmission or transaction recommendation activities by insiders other than the company constitute a violation of insider trading regulations. This is consistent with the trend of the United States, where personal benefit test is gradually expanding³¹⁴ and the EU and the United Kingdom's approach limitlessly broadened the scope of inside information and insiders.³¹⁵

3 *Relationship between the Business Purpose and Other Purposes Without Personal Benefits*

There is room for dispute over whether a case where a person other than the company divulges information but does not gain any profit is considered to have provided information for company purposes. It is insisted that if an insider other than the company itself provided information without personal benefits, it should be regarded as a company purpose,³¹⁶ but from the perspective of discretion of corporation theory, a situation that any insider provided any information owned by the company to third parties is prohibited regardless of the existence of personal benefits because the information delivering was without fulfilling the obligation to disclose information transactions. Further, it is worth noting that the scope of personal benefits is very broad, so, in the case that the tippers provided information as *quid pro quo* of intangible, indiscernible, and indirect compensation, those benefits can meet the personal benefits test.³¹⁷

³¹⁴ United States v. Newman, 773 F.3d 438 (2d Cir. 2014); 137 S. Ct. 420, *supra* note 215; United States v. Martoma, 894 F.3d 64 (2nd Cir. 2018); Gupta v. United States, 2019 WL 165930 (2d Cir. Jan. 11, 2019); Bainbridge, *supra* note 191, at 4-6; Langevoort, *supra* note 180; Karen E. Woody, *The New Insider Trading*, 52 Ariz. St. L.J. 594 (2020); HLR, *Recent Cases - Second Circuit Redefines Personal Benefit Requirement for Insider Trading*, 132 Harv. L. Rev. 1730 (2019); Georgakopoulos, *supra* note 11, at 9-14; John C. Coffee, Jr., *The Blaszcak Bombshell: A Return to the "Parity of Information" Theory of Insider Trading?*, CLS Blue Sky Blog (Feb. 26, 2020); Jonathan E. Green et al., *Past, Present, and Future: Insider Trading's Personal Benefit Test After Martoma, Gupta, and Other Recent Cases*, Arnold & Porter Kaye Scholer (Jan. 31, 2019), at 3.

³¹⁵ EU MAR §§ 7-8; The Market Abuse (Amendment) (EU Exit) Regulations 2019 No. 310 (18th Feb. 2019) §§ 7-8.

³¹⁶ Macey, *supra* note 196, at 876.

³¹⁷ 894 F.3d 64, *supra* note 314, at 83; Proskauer, *Second Circuit Again Holds That Tipper/Tippee Liability Can Arise from a Gift of Inside Information Even Without a Close Personal Relationship*, Proskauer (Jun 28, 2018).

4 *Matter of Coexistence of the Company's Purpose and Other Purposes*

Information transactions for company purposes cannot be ruled out because the company has no choice but to make decisions through agents, the possibility that the company's decisions will be made in the direction of realizing the interests of stakeholders such as agents, controlling shareholders, and institutional investors.³¹⁸ This is a limitation that arises from the natural defects of a company as an inanimate object, and further discussions should follow in the future to prevent agent problems from increasing through a system such as blocking information transactions between special stakeholders, establishing an appropriate "Chinese Wall"³¹⁹ for restraining information divulging and blocking unfair trade practice under antitrust laws.³²⁰ Since the goal of these expected and needed works is consistent with the discrimination of corporation theory, I think the regulatory vacuum that occurs when insider trading regulations are changed can be effectively removed.

V CONCLUSION

So far, I have discussed a plan for leveling the playing field of digitalized capital markets in a substantive condition. The only purpose is to protect ordinary investors from information asymmetry. Contrary to all the efforts of securities laws in the world, because of different trading conditions between investors such as the discrepancy in "timing" of accessing information, the varying "distances" to information sources, and the different "speeds" of a network, it is not possible to realize equal access to information. For this reason, information asymmetry always exists in current capital markets, and these days, all market information is reflected in market price in a few milliseconds. From this basis, slow investors are always exposed to a risk of adverse selection created by fast traders using predatory strategies.

To examine this problem, I discussed the results of information asymmetry and the paradox of the duty to disclose or abstain. Even though ordinary investors are not hugely paying the cost of information asymmetry to fast traders, given that the quality of professional liquidity suppliers' spread decides the general market quality, that they are the main victims of information asymmetry, and that their defense mechanism passes the adverse selection cost to ordinary investors, we can easily find how the information asymmetry is disrupting the capital markets. Also, from the viewpoint of market microstructure theory, it can be said that the duty to

³¹⁸ Loewenstein & Wang, *supra* note 132, at 52.

³¹⁹ Regarding the "Chinese Wall," see Will Kenton, Chinese Wall: Definition and Examples in Business and Finance, Investopedia (Feb. 3, 2021).

³²⁰ For example, Note 15 U.S.C. §§ 1-38 (Sherman Act); 15 U.S.C. §§ 12-27 (Clayton Act); 15 U.S.C. §§ 41-58 (Federal Trade Commission Act).

disclose or abstain is one main factor making information asymmetry contrary to its original goal. Accordingly, the question of why current insider trading regulations and disclosure systems should change is simply answered.

To solve this inherent flaw of the current legal system, I suggested a plan for allowing issuers to sell their all inside information in advance of mandatory disclosure based on the new insider trading regulation theory, the name “discretion of corporation theory.” However, securities trading based on selectively traded information has inherent unfairness, so, it establishes fraud. Unless the information transaction and insider trading regulations are harmonized, the plan that I suggested can never be justified. To solve this contradiction, I re-examined the “valid business purpose” established by the Supreme Court in the *O’Hagan* case.³²¹ According to the corporation has a right to its own information. Further, considering that understanding corporate governance based on stakeholderism is more appropriate, that the owner of the company is the corporation itself, and that the interest of the corporation should be prioritized over other stakeholders’ interests, selling the corporation’s nonpublic information does not harm the interests of the company.

Of course, in light of the only goal of this plan, information transactions must accompany specific series of new duties. To be more specific, only when the duty to disclose information trading, preliminary disclosure system, and duty to disclose traded information are introduced along with selective information selling, the playing field can be leveled in a substantive meaning. Furthermore, to make every effort on improving the value of fairness, certain limitations be set for securities transactions of insiders including the corporation itself must. From all these discussions and suggestions, in my view, slow investors can realize that the light that they are seeing is from 50,000 years ago.³²²

³²¹ 521 U.S. 642, *supra* note 18.

³²² Adler, *supra* note 15.