

# Market Manipulation Using High Frequency Trading and Issues Facing Japan

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## I. Introduction<sup>1</sup>

Centuries ago, a classic tactic to manipulate prices in the Amsterdam Stock Exchange was to spread false rumors that incoming trading companies' ships were full of furs and diamonds, in attempt to run up prices.<sup>2</sup> Back then, such attempts at market manipulation were buttressed by the fact that it took a long time for the rumors to spread widely enough to actually impact the market price. Today, the debut of so-called High Frequency Trading (HFT), amplifies both the speed and scale of potential market manipulation.

HFT is defined as a type of algorithm-utilizing securities trading by which high-speed trading is carried out – typically thousands of small-scale trades per second. Despite relatively small per-trade profits, HFT can yield large profits by repeating a large number of trades and accumulating a large volume of small per-trade profits. One immediate challenge for Japanese securities regulators is to find a way to regulate this new form of trading. Beginning in April 2016, the Financial System Council at the Financial Services Agency has begun to thoroughly review various issues regarding securities markets and stock exchanges, including the impact of the increase of algorithm-utilizing HFT on the fairness, transparency, and stability of the market.<sup>3</sup>

## II. Market Manipulation Regulations in Japan

### 1. Overview

Article 159 of the Financial Instruments and Exchange Act (the "FIEA") is one law that governs market manipulation in the Japanese securities markets. The FIEA was modeled, in part, on U.S. securities legislation, and it accordingly mirrors the U.S. securities laws' "intent based approach" (which focuses on the intention of a wrongdoer), as opposed to the U.K. securities laws' "effect based approach" (which focuses on the

effect of manipulating trades on the market). For example, violations of Article 159(1) of the FIEA require a showing that the perpetrator of misconduct has the purpose of misleading others into believing that transactions are thriving, etc., and violations of Article 159(2)(i) of the FIEA require a showing that the perpetrator of misconduct has the purpose of inducement.

### 2. Market Manipulation through Actual Transactions

In terms of market manipulation, the Securities and Exchange Surveillance Commission (the "SESC") has focused most of its investigatory resources on attempted market manipulation through actual transactions, which is governed by Article 159(2)(i) of the FIEA. This article, therefore, focuses on Article 159(2)(i) and the type of conduct it covers.

Article 159(2)(i) of the FIEA prohibits anyone (a) for the purpose of inducing purchase and sales of securities, etc., (b) from conducting a series of purchases and sales of securities, etc. or offering to conduct such transactions (c) in a manner that should (i) mislead a person into believing that the purchase and sales of securities, etc. are thriving or (ii) cause fluctuations in the market. For a time, Japanese lower courts disagreed about the meaning and role of the phrase, "the purpose of inducing the purchase and sales of securities, etc."<sup>4</sup> More specifically, courts disagreed on whether the essence of illegality of market manipulation existed in the "purpose of inducement" or the "fluctuating transactions" portions of Article 159(2)(i).

The Supreme Court settled this issue in the *Kyodo Shiryō Case*.<sup>5</sup> There, the Supreme Court concluded that the essence of illegality exists in the "purpose of inducement" portion of Article 159(2)(i) and construed this concept as "the purpose

of inducing investors to sell or purchase securities in a securities market by misleading them into believing that the prices of the securities are formed by natural relation between supply and demand although prices are, in fact, made to fluctuate by artificial manipulation." This means, the Supreme Court clarified its position that it narrowly interprets the purpose of inducement by adding, to the purpose of inducement itself, the element to mislead investors by artificial fluctuation of the price of securities in the securities market. It also made clear that it construes the "fluctuating transactions" portion of the law broadly to mean, "sales and purchase that would cause fluctuations in prices of securities in a securities market" and, thus, so to speak, as value-neutral (i.e. not per se illegal).<sup>6</sup>

Courts and legal commentators have also attempted to clarify the level of awareness needed to demonstrate "purpose of inducement" under Article 159(2)(i). In short, mere awareness of the possibility that investors may be induced to transact as a result of market manipulation is sufficient.<sup>7</sup> It is construed that, as long as this level of awareness exists, the establishment of market manipulation is unaffected, for instance, by the existence of another co-existing purpose or the principal and accessory relationship between the co-existing purposes.<sup>8</sup>

### III. Case Examples

At present, in Japan, there are no uncovered precedents which have been publicly announced as cases of market manipulation using HFT, but there are precedents of administrative monetary penalty cases regarding market manipulation through the use of algorithm trading. As a case example, this article will introduce the market manipulation committed by an individual in Singapore who engaged in spoofing using algorithms as a tool (the "JGB Futures Case").<sup>9</sup>

On September 5, 2014, the SESC recommended that an administrative monetary penalty payment order be issued against an individual in Singapore with regard to 10-year Japanese government bond futures (to be delivered September 2013), alleging that such person, with the purpose of inducement, conducted purchases and sales of the above futures and entrustment thereof by placing a large number of purchase orders at a price equal to or below the best ask price and a

large number of sale orders at a price equal to or above the best offer over 13 cycles without intention for the orders to be executed. This type of trading activity is known as "spoofing." The amount of the administrative monetary penalty was JPY 330,000.

In this case, the individual in Singapore used an algorithm to place small orders at the best bid (ask) (all on a scale around JPY 400 million), while placing large spoofing orders at the opposite best ask (bid) (from JPY several hundred million to several billion), which he never intended to execute, in order to induce others in the market to place orders that would match with the Singapore trader's small order to his benefit. The tool also allowed the trader to complete one trading cycle in an incredibly short period of time (the average time elapsed from the placement of the spoofing order and the cancellation was less than a mere 300 milliseconds) and accumulate profits by repeating such trading cycles multiple times. According to newspapers,<sup>10</sup> the individual was an officer of an investment management company, studied mathematics at a famous Chinese university, and he reportedly had rewritten

<sup>1</sup> The author previously served on the Securities and Exchange Surveillance Commission of Japan and engaged in surveillances and investigations into market misconducts such as market manipulation. All opinions expressed belong to the author, and do not represent the opinion of the organizations the author belongs to or has belonged to.

<sup>2</sup> See David J. Leinweber & Ananth N. Madhavan, Three Hundred Years of Stock Market Manipulations, *The Journal of Investing* (Summer 2001).

<sup>3</sup> Sectional Committee on Financial System, Financial System Council "Secretariat's Handouts (Review of Various Issues Surrounding the Market / Stock Exchanges)" (Planning and Coordination Bureau, Financial Services Agency, April 19, 2016)

<sup>4</sup> See, e.g. the Case of *Kyodo Shiryō*, Tokyo District Court Judgement (Decision), July 31, 1984, Hanji Vol 1138, at 25 and Tokyo High Court Judgement (Decision), July 26, 1988, Kousai Keishu Vol. 41, No. 2, at 269.

<sup>5</sup> See the Case of *Kyodo Shiryō*, Supreme Court Judgment (Decision), July 20, 1994, Keishu Vol. 48, No. 5, at 201.

<sup>6</sup> In practice, while the Supreme Court has offered clarity on the legal interpretation of Article 159(2)(i), this decision is not expected to greatly impact the manner and scope of regulators' investigations into specific cases of market manipulation.

<sup>7</sup> See "Annotated Financial Instruments and Exchange Act 4" written and edited by Hideki Kanda et al., p. 29 (Shojihomu, 2011)

<sup>8</sup> See, e.g. the so-called JFMA Stock Price Manipulation Case (Tokyo District Court Decision, December 7, 1981, Hanji No. 1047, at 164) as a criminal court precedent.

<sup>9</sup> [http://www.fsa.go.jp/sesc/news/c\\_2014/2014/20140905-1.htm](http://www.fsa.go.jp/sesc/news/c_2014/2014/20140905-1.htm)

<sup>10</sup> "Deceiving the Market with 0.3 Second Orders – Recommendation by SESC in Market Manipulation of Japanese Government Bond Futures" (Nikkei; September 6, 2014)

his own automated trading program so that it could be used to manipulate the market. In the beginning, the individual had reportedly stated to the regulator that he “surely deceived systems, but did not deceive people,” but in the administrative trial proceedings, the individual submitted an admission, and the FSA ultimately found the facts of the violation as asserted by the SESC.

#### IV. Issues Facing Japan Going Forward

##### 1. HFT and Market Manipulation Regulations under the FIEA

Is algorithm-using HFT subject to the market manipulation regulations under the FIEA?

One might argue that algorithm-using HFT would never constitute market manipulation as orders placed by a computer would never satisfy the subjective requirement of market manipulation such as the purpose of inducement even if those orders were objectively suspicious.

However, if a defendant in a murder case used a robot to commit the crime, that defendant could not plausibly be excused from his crime on the ground that the robot was a machine with no intent. In the same manner, market participants who use algorithms or computers to engage in market manipulation may be liable for such misconduct. While the subjective requirement of “purpose of inducement” is required to establish market manipulation, that requirement may be satisfied where a market participant knowingly designs or uses a program or algorithm to mislead investors. This understanding is consistent with the stance of the Supreme Court, which only requires awareness of the possibility that investors may be induced to transact as a result of market manipulation for a violation of Article 159(2)(i).

##### 2. Issues pertaining to the Administrative Monetary Penalty System

(1) Inexpensive administrative monetary penalty amount  
The amount of the administrative monetary penalty imposed in the JGB Futures Case was merely JPY 330,000, which appears extremely low when compared with the large civil penalties that are often imposed by foreign securities regulators

and covered in detail in the press.

The FIEA provides for a set of formulas calculating the amount of administrative monetary penalties for each category of market misconduct in a form which completely eliminates the regulators’ discretion. The level of the amount of administrative monetary penalty calculated by such formula has been set as the minimum level necessary for violation deterrence, and is limited to an amount equivalent to the wrongdoer’s profits resulting from particular trades that regulators specifically found to violate the securities laws.

In the JGB Futures Case, among the trades the individual conducted, the act which was found to be a violation was limited to that of one trading day. However, there was a report that “the period during which the individual actually manipulated the market appears to be longer than the findings, and the profits he illegally gained through the manipulation were likely to be substantial.”<sup>11</sup> If this report is true, it is hard not to feel like the wrongdoer successfully evaded a more severe (and more deserved) penalty. Given this seemingly light penalty, it is difficult to say for sure whether the administrative monetary penalty system’s purpose – which is to deter violations – was achieved through this case.

The SESC’s handling of the JGB Futures Case seems to have served other purposes, however. Absent swift enforcement action, the price of 10-year Japanese government bond futures could have adversely affected the price of actuals and interest rates. The regulators, therefore, likely succeeded in protecting investors by drawing prompt attention from the securities market, even if the administrative monetary penalty amount imposed was relatively low.

##### (2) Enormous volumes of trading data

Since there were as many as 13 violated trading cycles within only a single trading day in the JGB Futures Case, it is easy to imagine that regulators and investigators needed to review and analyze a substantial amount of trading data to support that case. What’s more, if orders are placed and cancelled within milliseconds via HFT, there could be thousands, millions, or even more trading cycles taking place in the market,

which would give rise to an immense amount of trading data that regulators would need to monitor and analyze for potential manipulation. This poses a significant challenge to Japanese regulators. Although the number of personnel at securities regulators including the SESC and local finance bureaus in charge of surveillance and investigation of market misconduct has been increasing (i.e. 202 persons as of the start of SESC in FY 1992, 552 persons as of the start of the administrative monetary penalty system in FY 2005 and 763 persons as of now in FY 2016)<sup>12</sup>, this increase may not yet be sufficient to exhaustively investigate and analyze all transactions suspected of being market manipulation by HFT.

My view is that it is not a worthwhile strategy to try to combat advancing technology solely with labor-intensive methods. Rather, I believe that it is necessary to examine whether the securities regulators’ current investigative practices are excessive in view of the degree of proof required in the administrative trial and criminal procedures, respectively.

Especially in the administrative trial procedure, unlike in the criminal procedure which requires a proof “beyond a reasonable doubt”, the standard of persuasion is said to be generally at the same level as the civil standard. Also, there have been no administrative precedents which dismiss an assertion by the SESC in a case of market manipulation through actual transactions. Considering these, the securities regulators should seek a way to combat market manipulation using HFT by devising effective methods of proving wrongdoings.

#### V. Conclusion

HFT involving the use of algorithms has dramatically evolved the speed and scale of conventional market manipulation practices. Amid the regulatory authorities in various countries struggling with how to regulate HFT itself and market manipulations by HFT, the Japanese securities regulators must also take prompt action. With respect to market manipulations by HFT, I think it is possible for the regulators to establish “purpose of inducement” where a market participant sets up or operates algorithms. Meanwhile, in order

<sup>11</sup> Id.

<sup>12</sup> <http://www.fsa.go.jp/sesc/english/aboutsesc/04.pdf>

to make regulations of market manipulations by HFT effective and efficient, Japanese regulators should seek a way to flexibly construe and apply the administrative monetary system and to come up with a method for providing proof of such manipulation within the current framework of the law.

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#### Practice Areas

Securities regulation; compliance; investigations & anti-corruption

#### Publications

- “Issuance of Share Certificates under Companies Act” (Ito & Mitomi Companies Act Newsletter vol. 15, March 2006) (only in Japanese)
- “Expanded Coverage of the Tender Offer Rules under the Amended Securities and Exchange Law of Japan” (Ito & Mitomi Newsletter, November 2006) (co-author) (both in English and Japanese)
- “Expanded Disclosures to Shareholders and Investors in Tender Offers” (Ito & Mitomi Newsletter, November 2006) (co-author) (both in English and Japanese)
- “Amendments to Exemptions from Insider Trading Regulations” (Business Law Journal, December 2015) (only in Japanese)  
<http://www.mofo.jp/topics/publication/201510bljniwa.html>

#### Seminars

- “Recent Administrative Trial Cases” (SESC, January 2013)
- “Material Facts under Insider Trading Regulations” (SESC, January 2014)
- “Legal Issues on Market Manipulation – Lessons from Criminal & Administrative Cases” (SESC, January 2014)
- “Laws & Regulations on Market Manipulation” (SESC, July 2014)
- “SESC’s Investigation Practice on Market Misconducts & Issues on Insider Trading Regulations – Based on Topics including Recent Law Amendments, Administrative Cases and Administrative Monetary Penalty System” (Financial Management Forums, Inc., April 2015)

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