PacificCPE

COURSE
11459B

Detecting and Analyzing Financial Market Misconduct

Spotting financial market misconduct requires both sharp analytical skills and the right frameworks for interpreting suspicious patterns. This course covers methods for identifying security market manipulation and introduces the analytical tools used to detect and measure financial misconduct. Whether you're in forensic accounting, internal audit, or financial advisory, these techniques add real value to your practice. You'll leave with a clearer understanding of how data-driven analysis supports investigations and how to apply these approaches when evaluating the integrity of market activity on behalf of clients or employers.

CREDIT HOURS 2 | FIELD OF STUDY AUDITING | EXAM QUESTIONS 10

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LEARNING ASSIGNMENTS AND OBJECTIVES

Assignment

- Study the full course materials included here.
- Complete the review questions after each chapter.
- Answer 10 final exam questions.
- Final exam is scored immediately, 70% or better passes.
- Certificate of completion is available in your account.
- Failed exams can be retaken free of charge.

Course Objectives

- Recall the various ways in which a securities market might be manipulated.
- Recall widely used supervised learning techniques for fraud detection.

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Chapter 1: IDENTIFYING SECURITY MARKET MANIPULATION

Chapter Objective

After completing this chapter, you should be able to:

- Recall the various ways in which a securities market might be manipulated.

16.1 INTRODUCTION

Expert witnesses in jurisdictions using or applying Anglo-Saxon law are invariably required to act independently of the parties that hire and pay for them. Their primary obligation is to assist the Court in sorting the wheat from the chaff as they assess a series of arguments and counter-arguments, ultimately boiling down to whether the market for a security has been subject to the "normal" – alternatively referred to as the "free market" or "genuine" – forces of demand and supply, or not. If one concludes the latter then it follows from legislation that the actions of the parties involved lead to a false and misleading appearance of either volume, price and the marketplace or all.

Notwithstanding this overriding obligation to assist the court, it is hard not to be influenced by the parties asking the questions/paying the bills, either implicitly or explicitly. While experienced expert witnesses tend to better understand their obligations, experts starting out often have difficulty resisting the pull of advocacy, leading them to get to appreciate the ramifications of failure to act in an independent manner when reminded of their obligations by a judge, a rather humiliating situation to experience.

This chapter explains how to use trading data to help identify prima facie evidence of market manipulation. While not all steps in the process that we outline are relevant to every case and the evidence does not conclusively identify manipulation (except for step 1), the outcomes do allow one to present a compelling case in the absence of a legitimate commercial explanation for the trading. To help avoid questions of conflict of interest, and in order to remain as objective as possible, this chapter outlines a procedure which allows the trading data tell the story. Although we acknowledge up front that parties can be convicted of market manipulation with no obvious impact on the trading data, simply because it was their intention to manipulate, direct evidence of the intention to manipulate is often difficult to adduce. This results in a great deal of reliance being placed on the impact of the manipulator's actions (typically represented by order placements, amendments, and cancellations as well as trades), on prices (a proxy for volatility), and/or volume (a proxy for liquidity), or a range of alternative proxies.

The procedure we implement in this chapter is based on many years of experience building algorithms to detect prima facie cases of market manipulation for the SMARTS real-time surveillance system. SMARTS is a system that is currently in use in more than 40 national exchanges and regulators and more than 200 brokers across 50 countries.[1] It is important to note at this stage that the specific algorithms identified in this chapter are not associated with any particular SMARTS client. We have no access to the algorithms used by any SMARTS clients and have developed an independent set of algorithms with which to identify manipulation.

For the purpose of our expert witness work, we have our own copy of the SMARTS market surveillance platform and the rules we have developed are those which we run against data in any case in which we are asked to participate. In this respect, it is important to appreciate that the client (whether they be the defense or the prosecution) have no say over either the algorithms we run or the parameters associated with the variables that form part of those algorithms.

In the following: Section 16.2 outlines the legislative underpinnings of our work, summarizing relevant laws and regulations from 7 jurisdictions including Australia, the UK, Hong Kong, Canada, Singapore, Malaysia, and New Zealand, all jurisdictions in which we have worked.[2] Section 16.3 then embeds the regulation into a discussion of trading activity, highlighting key elements that motivate the actions of surveillance departments. Section 16.4 outlines the specific rules which follow from this discussion and section 5 concludes by summarizing our key findings.

16.2 BACKGROUND LEGISLATION

16.2.1 Australia

Relevant legislation on market manipulation in Australia is contained in the Corporations act 2001 section 1041A. The section notes that a person cannot take part in or carry out (either directly or indirectly) one or more transactions likely to create or maintain an artificial price for a financial product. More details are supplied in section 1041B where a person is prohibited from creating or causing the creation of a “false and misleading appearance” of active trading, market for, or price of, a security. As we will see later, other jurisdictions use different more detailed descriptions in place of the word market referring to the “demand for and supply of” a financial product.

Section 1041B 2 (a) and (b) then outlines deemed manipulation as involving wash or prearranged trading. The former occurs when a party buys or sells to themselves or associated parties. The latter occurs when orders are placed by one party knowing by the nature of their timing (in close proximity) that there is a good chance they will trade with and associated party placing an opposite order for essentially the same or similar volume.

Section 1041C (a) then associates such trading with three purposes, being either to maintain, increase or depress price while section (b) appears to broaden the impact to causing volatility in the price of a financial product. This later condition is somewhat problematic as it would appear to

encompass movements between the bid and ask prices. The problem of such a wide definition will be taken up in Section 16.3 below. Section 1041D then prohibits the communication of information of transactions that would create an artificial price, particularly where they receive a financial reward for so doing. Finally, section 1041E prohibits the making or dissemination of false and misleading statements for the purpose of inducing other parties to trade, which is outlined in more detail in section 1041F.

In all cases (except wash trading), a defense against such provisions is outlined in section 5.7.2 (g) of the ASX Market Integrity Rules and a number of cases where the concept of a legitimate commercial purpose is outlined.[34]

16.2.2 UK

Relevant legislation on market manipulation in the UK is contained in the Financial Services and Markets Act 2000, Part 8, where section 118 deals with a more generic Market Abuse regime. Sections 5 and 7 of this section deal specifically with market manipulation where reference is made to the word "abnormal" in addition to "artificial price" at section 5(b). Section 7 makes the dissemination of information leading to a false and misleading appearance illegal, echoing notions from Australia that refer to the person knowing, or ought reasonably to have known, that the trading would cause the false and misleading appearance. The terms false and misleading are again used in 5(a) with the words "supply or and demand for" being used in place of "markets" as in Australia.

The UK legislation follows the EU Market Abuse Directive, articles 12 and 13, where a fair bit of emphasis is placed on the interaction between financial instruments, specifically prohibiting actions designed to create an artificial price in another financial instrument. The directive is more general than the UK legislation, nevertheless identifying in section 2 of Article 12 actions which would likely be considered as manipulative. These include a person who secures a dominant position in the demand for, and supply of, a security to fix a price or create what are referred to as "unfair trading conditions."

Other activities deemed to be manipulation are misleading investors as to price at the opening and closing of a market, the use of algorithmic trading to affect a false and misleading appearance as well as to prevent others from entering orders into a marketplace, the latter sometimes referred to as quote stuffing.

Another activity considered to be manipulative is disseminating information on a security while taking a position in that security so as to benefit from the information. In all cases, it is a defense against such charges if the person entering into the transaction established that it was for a legitimate commercial purpose or conforms with an accepted market practice, with the conditions for the latter being outlined in Article 13 section 2 including whether there is a substantial degree of

transparency with respect to the transaction, it does not interfere with the free market forces of demand and supply and has a positive impact on liquidity and efficiency.

16.2.3 Hong Kong

Relevant legislation on market manipulation in Hong Kong is contained in the Securities and Futures (SFO) and sub legislation, Division 5, sections 274–278 (which defines each term) and sections 295– 299 which formally identifies such behavior as an offense. Section 274 deals with False Trading and, like other jurisdictions, notes that false and misleading appearance is caused by either active trading or interference with the market or the price of a security. Section 274 (3) also identifies false trading as occurring when an artificial price is created or maintained. Section 274 (5) then deems wash trading to be manipulation, except the extent that it is part of an off-market transaction. Subsection 274 (6) provides a defense based on the fact that there is more than one purpose and the actual purpose was not for the purpose of creating a false and misleading appearance.

Section 275 deals with price rigging and deals with wash trading that maintains, increases, reduces, stabilizes or causes fluctuations in a security's price either in HK or an overseas market. Section 276 prohibits disseminating information about illegal transactions, while section 277 constitutes a general provision not to provide false information to induce others to trade. In all cases, one thing a little different about the Hong Kong market is numerous provisions identifying defenses to the prohibitions. Section 278 provides a general description of Stock Market Manipulation as occurring when a party increases, reduce, maintains, or stabilizes the prices of a security in Hong Kong (or a relevant overseas market) with the intention of inducing others to trade/not trade, subscribe/not subscribe for a given security.

16.2.4 Canada

Relevant legislation on market manipulation in Canada is contained in the Securities Act R.S.0 1990, section 5. The section of most relevance is section 126. Section 126 (1) (a) refers to a misleading appearance of trading activity or the creation of an artificial price. Section 126 (2) prohibits the dissemination of statements with are "misleading or untrue." The lack of specificity apparent in other jurisdiction's legislation is made up for in the Universal Market Integrity Rules (UMIR) of the Investment Industry Regulatory Authority of Canada, which is the practical surveillance authority for all markets in Canada. Policy 2.2, Parts 1-3 are the relevant provisions. In part 1 the rules refer to a "fictitious trade" and, unlike the UK, refers specifically to a deemed "manipulative and deceptive method." Part 1 (c) also prohibits cornering the market in a security in order to dictate settlement terms. Part 2 then refers to creating a false and misleading appearance and specifically prohibits prearranged trading at (a), (b), and (e). Part 2 (f) also prohibits entering orders that are not intended to be executed, which seems to outlaw the practice of providing a simultaneous bid and ask in order to prevent parties, presumably other than market makers, from entering a bid/ask into a market as

part of a strategy to disguise the precise motive for trading.[5] Wash trading is again prohibited as giving rise to a false and misleading appearance under section (i).

Part 3 deals with Artificial Pricing and notes a series of factors that would be taken into account in determining whether an artificial price had occurred. These include, but are not limited to, the preceding and succeeding trades, the change in the last trade price, bid and ask, the recent liquidity in the security, and the time when the order is entered and the instructions from the principal party. The latter almost certainly refers to orders entered late for small volumes which impact price and do not allow the market to respond. This will occur at the starting and closing auctions and the end of normal trading in a trading session.

16.2.5 Singapore

Relevant legislation on market manipulation in Singapore is contained in the Securities and Futures Act Part 12, in particular sections 196-204. Section 197 (1) refers to "False Trading and Market Rigging" and outlaws creating a false and misleading appearance by active trading and through interfering with the market for and price of a security. Section 197 (2) then refers to actions which inflate, depress or maintain a price deemed through wash trading, and at 197 (3) deems wash trading and prearranged trading to be manipulation. Section 198 then prohibits parties from carrying out two or more transactions likely to induce others to subscribe for a security by raising, lowering, maintaining, or stabilizing the price of a security or an associated security.

Like all other jurisdictions, section 199 then prohibits the making of false and misleading statements, the purpose of which is to induce others to trade or which has the impact of raising, lowering, maintaining or stabilizing the price of a security. Similar to other jurisdictions (though not all), reference is made to making a statement known to be false or which the party ought to have known was false or misleading. The section also uses the same terms as used in the UMIR in Canada of "Manipulative and Deceptive Devices" as a catch-all provision. Dissemination of information about illegal transactions is similarly outlawed under section 201, and there is a very specific provision under section 203 outlawing failure to live up to continuous disclosure obligations. As opposed to other jurisdictions that tend to account for all securities in general provisions, in Singapore futures are dealt with in Divisions 2 sections 205-212.

16.2.6 Malaysia

Relevant legislation on market manipulation in Malaysia is contained in the Securities Industry Act 1983 Part 9, Division 1 sections 84-88. Section 84 is very similar to the legislation in Singapore with the same subline, namely, "False Trading and Market Rigging Transactions." Under this provision Active Trading that gives rise to a false and misleading appearance is prohibited, as are actions that result in the false and misleading appearance of the market for, and price of, a security. Wash trading is prohibited under section 84 (2). Similar to Singapore, wash sales and prearranged trading are deemed to be manipulation under section 84 (3). A defense is outlined in subsection 4, although

the defense does not this time refer to the transaction as being for legitimate commercial purposes but simply that it was not for the purpose of creating a false and misleading appearance.

Section 85 deals with the bylines "Stock Market Manipulation" and introduces two new terms besides raising, lowering, maintaining, or stabilizing the price. The two terms are fixing and pegging. Again, this is a general provision not to do any of the above for the purpose of inducing others to trade, which is made more general at section 87. Section 86 prohibits false and misleading statements, similar to other jurisdictions, with section 88a providing a point of difference in that it contemplates civil action by parties that have lost out as a result of parties contravening section 86-88.

16.2.7 New Zealand

Relevant legislation on market manipulation in New Zealand is contained in the Financial Markets Conduct Act 2013, Subpart 3 sections 262-269. Section 262 deals with the provisions of misleading statement or information to induce others to trade. It adds as an offense inducing others to exercise or abstain from exercising a voting right. Section 265 deals with the false or misleading appearance of trading as a result of active trading or altering the demand and supply for a security or its price. Section 267 deals with deemed manipulation which again encompasses wash trading (267 (1)) and prearranged trading (267 (3)). While section 266 excludes short-selling and crossings and 268 provides a general defense if the transactions are in conformity with accepted market practice or for a proper purpose, section 269 makes contravention of these various provisions a criminal offense.

16.3 ATTRIBUTES OF MANIPULATION

Securities markets can be manipulated in a variety of ways. The most obvious method is for a trader to provide false or misleading information to the market in connection with a company or its securities. The false information induces others to trade, or not trade, when they wouldn't otherwise. In this case, it is the false information itself that leads to a market not subject to the genuine forces of demand and supply through affecting the demand, supply, and price of a company's securities.

Another approach is to trade in the securities in a way that gives the impression of positive (or negative) price-sensitive information impacting a marketplace, even though no such information, in fact, exists. A manipulator can alter the perception of demand and supply of a security by entering a significant amount of buy or sell orders on a public limit order book through wash trading or close to the close of trading with more limited volume. Either way, such actions give rise to an *artificial volume* or price. It is worth emphasizing that artificial volume is of little point unless it is used ultimately to constrain, lift, or reduce price.

There are numerous ways that a manipulator could engage in manipulative trading. This chapter cannot exhaustively cover all such means. However, several illustrative examples are now provided. For example, to artificially inflate the demand and price of a company's securities, a manipulator could place multiple orders on the buy side of the order book (but away from the best bid so as to avoid trading) to convey the impression of strong buying interest. This practice is called *layering*.[6] Layering the order book on the buy side can push up the price of a security, allowing a manipulator to sell at a higher price than they might otherwise have expected. The alternative form of layering is for the manipulator to place multiple orders in large volume on both sides of the order book (at or away from the best bid and best ask) in order to constrain the price of the share within a narrow band. This practice is commonly referred as *"constraining the spread,"* which conveys the impression of abundant liquidity and frenetic trading activity. Such a manipulator could also make a series of aggressive market orders several price steps above the best ask price, to convey the impression of strong buying interest. Again, this can push up the price of a security, allowing a manipulator to sell at a higher price than they would might otherwise have expected.

A manipulator who wishes to artificially hold the price of a company's securities within a stable range can place large limit orders on both sides of the order book but this can be very costly unless it is done through *wash trading*, more details of which are given below. The impact of the large orders are such that it becomes nearly impossible for the price of the share to move upwards or downwards, without very large orders corresponding orders by third parties, or unless the associated parties delete their limit orders. A manipulator may wish to do this when he has some ulterior reason for wanting to ensure that the price volatility of the securities in question is kept low (for example, if he wishes to use the securities as collateral for borrowing, and the lender examines price volatility in determining whether and how much to lend against such collateral).

Having placed such limit orders on both sides of the order book, a manipulator can then cause the price of the securities to rise, by suddenly deleting/amending or wash trading the limit orders on the sell side of the order book, or to fall, by suddenly deleting the limit orders on the buy side of the order book. In such a scenario, the manipulator's goal is that the sudden removal of significant orders on one side of the order book would convey to the market the impression of a significant change in buying (or selling) interest, which in turn can therefore be expected to have an impact on genuine supply and demand, as well as the price of the security.

16.3.1 How Traders Minimize the Resources Needed for Manipulative Trading

Many manipulative trading methods involve the manipulator using resources to generate artificial trading volume and to push up/down or maintain the price of the securities. For a manipulator to sustain such manipulation over a prolonged period of time, a substantial amount of resources is likely needed, and/or a strategy to minimize the extent of resources they need to deploy.