

FICC MARKETS
STANDARDS BOARD

BEHAVIOURAL CLUSTER ANALYSIS

Misconduct Patterns in Financial Markets

July 2018



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Foreword



David Flowerday is currently EMEA Head of FICC Compliance at Citi having previously held positions at Credit Suisse and the Kyte Group. Prior to compliance, David was a fixed income derivatives trader and broker on LIFFE for Morgan Grenfell, Banque Belge and as an independent trader.

David Flowerday

Chair, FMSB BCA Committee

EMEA Head of FICC Compliance, Citigroup Global Markets Limited

The FEMR requested that FMSB undertake a number of key actions in the conduct sphere. These included the provision of real life case studies in areas detrimental to the effective operation of markets to explain (but not define) market practices through practical examples; the identification of the causes of misconduct to facilitate the application of those lessons to other business lines that may initially appear unrelated (what is now termed “market read across”) and that FMSB leverage the experience of other markets, jurisdictions and wholesale misconduct cases to achieve this.

The FEMR also requested that FMSB assist in the reinforcement of “collective memory”. As industry participants turn over, new actors take their place. The new actors have no experience of the failings of the past. BCA demonstrates that behavioural patterns recur. Efforts to reinforce collective memory are required to pre-empt this by identifying those patterns and setting them out in enduring media.

Other disciplines within financial services have leveraged prior events to inform and predict future developments. As far back as the 18th Century, Japanese merchants used historical price and volume data to predict future market movements in rice futures. Market risk functions use back testing for validating models and VaR parameters; therefore, with conduct risk a major consideration in any financial services firm, it surely deserves the same level of analysis as other risks.

The FMSB BCA Committee has sought to address these requirements in the publication of this document which describes the core misconduct patterns evident in large body of enforcement cases from multiple jurisdictions and markets and over an extended period of time; some 225 years. A reference database comprising all of the source materials reviewed has also been produced.

This is the first time that these patterns of behaviour have been collated, summarised and published as a single reference point for market participants.

This work would not have been accomplished without the efforts of a number of key people including the FMSB BCA Committee - comprised of Kevin Sawle (HSBC), Mandy DeFilippo (Morgan Stanley), Sean Bowles (Nomura), Karim Haji (KPMG) and Catherine Brown (Oliver Wyman). Roger Acton from KPMG undertook a detailed and wide-ranging survey of domestic and international case materials to expand upon the initial research and construct the international dimension to the BCA project. Craig Beevers of FMSB undertook extensive reviews of the research materials and outputs and Leslie Fasulo of FMSB reviewed and amended multiple drafts.

I would also like to extend my thanks to Dan Lavender (Macfarlanes) and to David Anders and Ian Boczeko (Wachtell, Lipton, Rosen & Katz) for their most excellent input, advice and assistance in the production of this document which was provided on a pro bono basis.

Foreword



Gerry Harvey is the Chief Executive of the FICC Markets Standards Board (FMSB). He was Group Head of Compliance for the ICAP Group from 2010 to 2015. Prior to ICAP he worked at a number of organisations including the Global Banking and Markets Division of RBS, Nikko Europe, LIFFE and NatWest Markets. He is a qualified Solicitor and worked at Cadwalader, Wickersham and Taft and Milbank, Tweed, Hadley and McCloy in London.

Gerry Harvey
CEO, FMSB

A number of years ago, I was reviewing enforcement notices and law reports in order to find a definition of a particular market abuse technique – the wash trade. The sources cited different titles for this technique; wash trade, matched trade, wash sale, washing sale, matched order and others. However, what became apparent was that regardless of the descriptions, the conduct to which they related followed similar patterns. The patterns were not only the same, but they repeated over time. This led to a question – was this repeat pattern evident only for wash trades or did the techniques used to conduct other types of abusive practice also repeat? Reviewing some 180 UK cases, the first one recorded being in 1814, it became apparent that the techniques which these materials described were not unique in each instance. Rather, the same 25 techniques were evident in the source materials and these repeated over time.

The FMSB has extended this work to review 390 cases in 26 jurisdictions which indicates that the same patterns were evident.

This conclusion should not be surprising. The FEMR noted, in relation to recent misconduct cases, that one of the Review's most striking findings was that "... the underlying behaviours were remarkably similar in many cases and relatively straightforward to describe.

The case history is fascinating in itself, but the objective of this exercise is not academic. It is entirely practical. Behavioural Cluster Analysis demonstrates that malpractice behaviours have been consistently similar over time, across asset classes and across jurisdictions. There is always scope for new patterns to emerge, but the persistence of these clusters is striking. This means that there exists an identifiable and core group of underlying behaviours which are used to commit market misconduct. By identifying this universe of repeat abusive techniques, more effective pre-emptive responses to core misconduct behaviours become possible.

Foreword

"Horizon scanning for existing and emerging threats to fair and effective markets is a key recommendation of the FEMR. It is fundamental to identifying the root causes of misconduct and to finding ways to reinforce the collective memory of the market about what constitutes acceptable conduct and practice. I'm delighted that the FMSB has developed this Behavioural Cluster Analysis methodology to support these goals. It is an innovative and evidence based methodology, of great value to market participants as well as regulators. I hope that all wholesale market firms will incorporate its lessons in their work to improve standards of conduct in wholesale markets."

Mark Carney, Governor Bank of England

"Conduct risk is systemic and does not respect asset class, geographic or jurisdictional boundaries. The purpose of supervisory and enforcement action is to deter wrong doing. But it is also undertaken so that all market participants can focus on the behaviours involved and use the lessons learned in a pre-emptive fashion, including by "reading across" to other business lines and markets. The Behavioural Cluster Analysis that the FMSB has undertaken provides a very helpful basis for firms to do this, by collating misconduct patterns from multiple markets and asset classes and drawing out lessons on where supervision and lines of defence should focus their energies."

Andrew Bailey, Chief Executive FCA

Contributors



Roger Acton
KPMG

Roger is a Senior Manager at KPMG in the Risk Consulting practice. Roger is a CFA Charterholder and has gained a wide range of experience in risk management, primarily with large banking institutions with international trading activity.

Roger was seconded to FMSB for 15 months to work with the Secretariat and Member firms to produce FMSB Standards, Statements of Good Practice and other material. A key part of this was performing research and analysis to develop Behavioural Cluster Analysis.

At KPMG Roger is responsible for managing client engagements that include advisory projects on the design and implementation of risk management frameworks, regulatory mandated reviews and conduct remediation projects. His experience includes work on high profile unauthorised trading incidents, reviews of front office conduct frameworks, risk governance, and various prudential risk matters. Roger continues to be involved with FMSB Committees and events.



David Anders
Wachtell, Lipton,
Rosen & Katz

David joined Wachtell, Lipton, Rosen & Katz in 2006 and became partner in 2008. His practice focuses on the representation of Fortune 500 and other companies in connection with the defence of regulatory, white-collar criminal and complex civil litigation matters. He also regularly advises clients in connection with internal investigations and corporate governance and compliance reviews.

Prior to joining the firm, David served as an assistant United States attorney. During his time at the United States Attorneys' Office, he investigated and prosecuted a wide variety of securities, commodities, and other investment fraud schemes, money laundering, immigration, racketeering, and associated violent crime. He tried 13 felony cases to verdict and briefed and argued numerous appeals before the United States Court of Appeals. He was involved in several significant prosecutions during that time, including the investigation and prosecution of the fraud at WorldCom.

David is a 1991 graduate of Dartmouth College and graduated from Fordham University School of Law in 1994. He served as law clerk to the Honorable Denny Chin of the United States District Court.



Craig Beevers
FMSB

Craig has over 25 years of experience in the financial markets, on both the buy side and the wholesale sell side. He has experience trading a variety of interest rate products and structuring a range of interest rate derivatives and other structured products, both as a trader and on the buy side for several major private equity funds. In addition, Craig has spent over 10 years of his career in risk management, including as head of global risk for Nikko Europe (now part of Citigroup).



Ian Boczko
Wachtell, Lipton,
Rosen & Katz

Ian is a litigation partner at Wachtell, Lipton, Rosen & Katz, focusing on complex litigation matters and arbitrations, contract disputes, insurance, internal investigations, and corporate governance issues.

Since joining Wachtell Lipton in 2001, Ian has worked on several of the Firm's high-profile matters. He has been involved in the Firm's representation of Silverstein Properties in its dispute with more than 20 insurance companies in the aftermath of the September 11 attacks, the Firm's representation of the New York Stock Exchange in litigation with dissident seaholders in connection with the NYSE becoming a publicly-traded company, the Firm's representation of IAC and Barry Diller in litigation against Liberty Media Corp, the Firm's representation of Philip Morris in litigation resulting from the Tobacco Master Settlement Agreement, and the Firm's representation of several clients in sensitive internal and government investigations.

Prior to joining Wachtell Lipton, Ian clerked for the Honorable Judge Miriam Goldman Cedarbaum, U.S. District Judge for the Southern District of New York. He is a 2000 graduate of Columbia Law School where he was a James Kent Scholar, served as a senior editor on the Columbia Law Review and was the recipient of the John Ordronaux Prize for highest academic average in the graduating class. He graduated summa cum laude from Columbia College with a degree in chemistry and was elected to Phi Beta Kappa.



Sean Bowles
Nomura

At Nomura, Sean is responsible for Front Office Supervision, Conduct and Control in Global Markets EMEA, promoting and coordinating effective supervision across Global Markets and embedding a structured and effective approach to supervision, conduct and control within the Global Markets culture.

Prior to joining Nomura Sean was Head of Markets Operational Risk for five years, moving into the Front Office to develop a Front Office Controls function in 2009, with an additional focus on risk and regulatory programmes. He then moved into Futures to further develop his product knowledge as Head of Risk and Controls, seeking to connect effective regulatory change and risk management with client requirements. In 2015, Sean returned to Front Office Controls for Nomura.



Catherine Brown
Oliver Wyman

Catherine Brown is a partner in Oliver Wyman's financial services practice accountable for delivering major strategic advisory and consultancy assignments to the world's top financial institutions.

Prior to joining Oliver Wyman in 2007, Catherine held various roles in investment banking at Salomon Smith Barney / Citi and fixed income sales and structuring at Lehman Brothers. She holds an MBA from Columbia Business School, MSc in Operations Research and BA in Mathematics.

Catherine grew up in six different countries, has lived and worked in London and New York, and travelled far beyond.



Mandy DeFilippo
Morgan Stanley

Mandy is a Managing Director and Head of Risk Management for Fixed Income & Commodities, EMEA at Morgan Stanley. Mandy joined Morgan Stanley in 2007, in the Global Capital Markets division, based in London. She first worked in the Equity Capital Markets team, and from 2011 until 2013, she ran the Capital Markets Structuring Team in GCM EMEA for both debt and equity products. From 2013 until the beginning of 2017, Mandy was Chief Operating Officer for Global Capital Markets in EMEA, and Chief Risk Officer for GCM International, covering EMEA, Asia-Pacific and Japan.

In her current role, Mandy sits on the regional and global management committees for the Fixed Income Division, and on a number of other governance related committees in the Firm, including Franchise and Risk committees.

Mandy is an active participant in industry-wide organisations in the European market, including initiatives to establish market standards for the industry, and she has spoken publicly in a number of forums in this connection. She is the Chair of the International Capital Markets Association (ICMA), a role to which she was elected in May 2018. She is also a member of the Conduct and Ethics Sub-Committee of FMSB.

Mandy holds a BA degree from Columbia University and a Juris Doctor degree from Harvard Law School.



Leslie Fasulo
FMSB

Leslie joined FMSB in July 2016. As the Office Manager, she oversees the operations side of the business, supports the FMSB Secretariat and manages various projects.

Previously Leslie worked at HSBC in business management for the Asset Management Technology group. Prior to HSBC, Leslie was with Triton Partners, a European Private Equity firm, where she held a variety of operations related roles during her tenure.

Leslie is American and relocated to London over 10 years ago having previously lived and worked in Florida, Washington, Chicago and New York.



Karim Haji
KPMG

Karim is a Partner and Head of Banking and Capital Markets for KPMG in the UK and has more than 22 years of experience of working in professional services. He works with global banking and capital markets clients with a particular focus on the investment banking sector.

Karim's advisory work focuses on governance, risk management and controls as well as regulations. Over the recent years, he has led engagements in relation to high profile industry issues such as Rogue Trading, LIBOR, FX market concerns as well as risk and regulatory transformation journeys for clients. Karim is also the client relationship partner looking after the overall client relationship for a global banking client.

Aside from leading the Banking and Capital Markets practice and the advisory work, Karim is also an accredited audit partner leading a large Corporate and Investment Banking audit.

Karim is a Chartered Accountant and holds a BSc (Hons) from Warwick University, UK.



Dan Lavender
Macfarlanes

Dan is a Partner in Litigation and dispute resolution at Macfarlanes and specialises in city and financial services litigation and investigations. He is experienced in managing and resolving major multi-jurisdiction litigation. Dan often advises on cases where the client's reputation and business are under severe threat.

Some of Dan's recent cases include acting for a UK listed financial institution in relation to all aspects of its involvement in the inquiries into LIBOR, numerous statutory and non-statutory inquiries in relation to City regulatory and other matters, including FCA Inquiries into insider dealing / market abuse and inquiries into "rogue traders" and fraud claims including a complex and long running international fraud claim involving derivatives transactions.



Kevin Sawle
HSBC

Kevin has worked at HSBC for 42 years, predominantly in Front Office Markets roles. Since January 2015 Kevin has held the role of Global Chief Control Officer for HSBC Markets.

Kevin is also a member of the GBM EMEA EXCO and sits on the Boards of HSBC Bank RR Moscow and HSBC Bank Polska S.A.

Introduction.

- 1.1 **FEMR.** The FEMR requires that FMSB undertake a number of actions. These include:
- (i) **Real Life Case Studies.** The provision of real life case studies in areas detrimental to the effective operation of markets. The FEMR considered that case studies which sought to explain (but not define) market practices through practical examples could perform a useful role in improving the practical application of standards.
 - (ii) **Market Read Across.** That market participants identify the causes of misconduct, and apply those lessons to other business lines that may initially appear unrelated and ensure that conduct lessons learned in one business line are applied elsewhere.
 - (iii) **International and Cross Market Sources.** That FMSB leverage the experience of other markets, jurisdictions and wholesale misconduct cases.
 - (iv) **Collective Memory.** The reinforcement of “collective memory”. As industry participants turn over, new actors take their place. The new actors have no experience of the failings of the past. The evidence demonstrates that behavioural patterns recur. Efforts to reinforce collective memory are required to pre-empt this by identifying those patterns and setting them out in enduring media.
- 1.2 **Conduct Patterns.** The “rules” do not define or specify the individual practices, activities or behaviours in markets which constitute good or bad practice. Rules may mean that certain practices are or are not acceptable but do not specify what those practices are.
- 1.3 **Conduct Cases.** Conduct patterns are described in enforcement cases and some regulatory materials. These materials are fragmented, have not been reviewed with a focus on behavioural patterns and have not been collated and published in a single place as a point of reference for, and as an input to, governance and oversight structures and methodologies
- 1.4 **Approach.** The regulatory response to recent conduct issues has been the development of a new regulatory approach which emphasises the alignment of behaviour, conduct, governance and culture. This approach requires a focus upon practice and conduct and not just upon process and “rules”. Behavioural Cluster Analysis (“BCA”) is derived from real cases of market misconduct. BCA is aligned to and seeks to support and advance the conduct and behavioural agenda of the regulatory authorities.

Behavioural Cluster Analysis.

“One of the Review’s most striking findings has been that, although the specific aspects of individual misconduct may have varied substantially across traders, firms and markets, the underlying behaviours were remarkably similar in many cases and relatively straightforward to describe”

The Fair & Effective Markets Review (FEMR) 2015.

- 2.1 **Summary.** In Behavioural Cluster Analysis (“BCA”) we identify the core behaviours which occur most frequently in market misconduct cases. In one sense, this exercise is not new – a number of different authorities and reviews, most recently the FEMR, have recognised the importance of focusing on the behavioural patterns underlying market misconduct. However, this is the first time that these patterns of behaviour have been collated, analysed and published as a single reference point for market participants.

BCA is based on a review of publicly available information set out in a large body of enforcement cases. The review was conducted by the FMSB Secretariat (supported by Macfarlanes LLP and Wachtell, Lipton, Rosen & Katz). This paper sets out the research findings following this review; it does not set out the views of FMSB member firms on the cases or behaviours in question.

The purpose of BCA is not to analyse the merits of individual enforcement cases or to provide a view on the culpability of the individuals or firms involved or any penalty imposed. The review does not seek to provide legal or regulatory definitions of particular practices. Rather, descriptions are provided to illustrate the behaviours in question, so that these can be understood by market participants and factored into systems and controls frameworks.

- 2.2 **Behavioural Cluster Analysis – Methodology.** The BCA methodology is simple. Enforcement cases and similar source materials describing actual adverse conduct are reviewed to ascertain the pattern of behaviour indicated in each case. These are compared with those in other cases in order to determine whether the same behaviours repeat or whether the underlying behaviours are unique or different in each case. The outcomes are then compared to those in other jurisdictions to establish if the same similarities exist. This review comprises behavioural patterns in some 390 cases from 26 countries over an extended period (225 years).
- 2.3 **Purpose of BCA.** The purpose of BCA is a practical one. Identifying the relevant behaviours underlying market misconduct is an essential step to forestalling them. BCA will therefore assist market participants working on the design and enhancement of systems for oversight and control.
- 2.4 **Outcomes.** Our work shows that the spectrum of potential malpractice behaviours is not in fact limitless. Instead, there is a much more limited horizon of behaviours which can be identified and further grouped into broad categories. These core behavioural patterns repeat and recur over time.

The review also identified that the same behavioural patterns occur in different jurisdictions and across different asset classes. This demonstrates the importance of focusing on the underlying behavioural patterns rather than the individual circumstances or the motivations of the individual actors in each case. A just observation arising from the review is that

behavioural patterns adapt to new technologies and market structures. There is a body of enforcement cases relating to misconduct involving electronic trading platforms and other forms of technology. A review of these cases shows that the behaviour in these cases is not new; it has simply adapted to new media and new technological market environments.

- 2.5 **Patterns and Categories.** Our review has identified 25 patterns which can be further grouped in to seven broad categories of behaviour:



- 2.6 **Summary: Thematic Findings.** BCA has yielded a number of thematic findings.

Finding 1: There are a Limited Number of Repeat Behavioural Patterns.

Review of source materials indicates that there are some 25 behavioural patterns evident in market misconduct cases. These patterns repeat and recur.

Finding 2: These Behavioural Patterns are Jurisdictionally and Geographically Neutral.

These behavioural patterns do not respect national or jurisdictional boundaries. They are evident internationally.

Finding 3: The Same Behavioural Patterns Occur in Different Asset Classes.

These behavioural patterns are not specific to particular asset classes. The same patterns are evident in different asset classes. This is rational: asset classes do not generate conduct risks – people do.

Finding 4: Behaviours Adapt to New Technologies and Market Structures.

Technology is not new – it has been a feature of markets for years, and as such there is corresponding body of evidence of conduct malpractice in the screen-based trading environment. These behaviours are not new – they are known behaviours that have adapted to new media.

Asset Classes.

The review has identified recurring patterns of misconduct in different markets and asset classes. The table below sets out the asset classes evident in the review cases.

Misconduct Cases: Asset Classes and Markets.

American Depositary Receipts	Equity Index Futures	Non-fat Dry Milk
Asset Backed Securities	Equity Options	Onion Futures
Bitcoin Non-Deliverable Forwards	Equity Warrants	Orange juice Futures
Brent Oil	Ethanol Futures	Palladium
Cheese Futures	Eurodollar Derivatives	Platinum
Cocoa Futures	Eurozone Government Bonds	Potato Futures
Coffee Futures	Floating Rate Notes	Property Futures
Collateralised Debt Obligations	FX Futures	Repurchase Agreements
Contracts for Difference	FX Options	Rice Futures
Convertible Bonds	Gas Oil	Silver
Copper	Gilts	Soybean Meal
Corn	Global Depositary Receipts	Soybean Oil
Corporate Bonds	Gold	Soybeans
Credit Default Swaps	Japanese Government Bond Futures	Spot FX
Eggs	Lead	Sunflower Seed Futures
Electricity	LIBOR	US Treasuries
Emerging Market Bonds	Mortgage Backed Securities	Volatility Index Futures
Emerging Market Warrants	Municipal Bonds	Wheat
Equity	Natural Gas	WTI Oil

This Document.

For the purposes of this document, behavioural clusters have been grouped in to 13 sections. Each section provides descriptions of the relevant behavioural patterns, variants on the patterns where evident, selected case studies and additional reference sources. The sections are ordered as follows:

- Wash trades, Matched Trades and Compensation trades.
- Ramping and Pools.
- Parking.
- Window Dressing.
- Bull and Bear Raids – Rumours.
- Execution Conflicts and Abuses.
- Closing and Reference Prices.
- Squeezes and Corners.
- Collusive Trading and Information Sharing.
- Insider Dealing.
- Spoofing and Layering.
- New Issue Support and Takeovers.
- Technology – Examples of Adaptation.

Wash trades, Matched trades and Compensation trades

This document is concerned with the description of patterns of aberrant trading and not with legal definitions. The phrases wash trade, washing trade, matched trade and matched order are frequently used interchangeably and inconsistently in source materials. The behaviours are the same.

1. Cluster.

At its most basic, the description “wash trade” is typically given to a pattern of behaviour that involves a purchase and sale of securities that match in price, size and time of execution, and which involves no change in beneficial ownership or transfer of risk. There are a number of variations to the basic wash trade. These range from transactions between accounts or entities controlled by a single person to arrangements involving multiple colluding parties. The two legs of a wash trade may also have price or size differences so that value can pass between the parties (for example, to compensate a party for facilitating the trade) and the time at which the legs are executed may not be simultaneous.

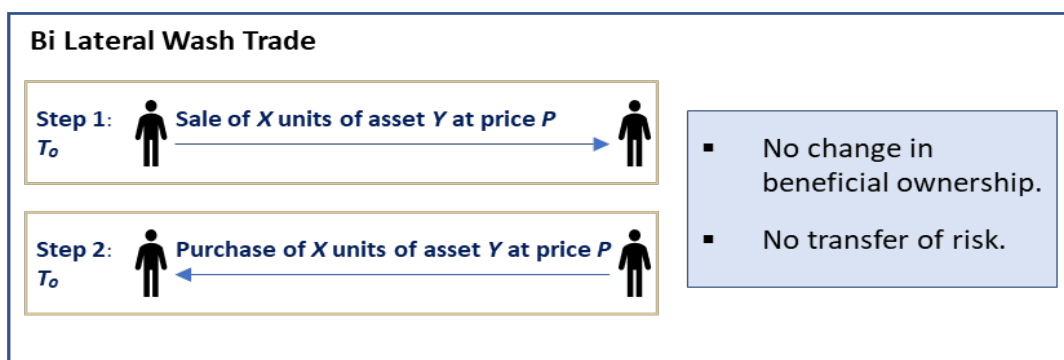
These behaviours can be used in combination with others to advance different manipulative techniques. In these circumstances wash trades, matched orders and matched trades are frequently described simply as collusive trading or pre-arranged trading. As noted above, sale and repurchase transactions can be used to facilitate compensation trades and money passes, and these can also be described as wash trades and matched trades etc.

For the purposes of behavioural description, the following behavioural clusters have been used:

- (i) Wash Trades: Wash Trade: Bi-lateral Trade.
Wash Trade: Single Party Trade.
- (ii) Matched Trades.
- (iii) Three Cornered Trade.
- (iv) Circular Trade.
- (v) Cross Trades.
- (vi) Compensation Trades – Money Passes.

2. Wash Trades.

- 2.1 **Wash Trade: Bilateral Trade.** The archetypal wash trade transaction involves a sale (or purchase) by Party A to Party B and a corresponding purchase (or sale) by Party A from Party B of the same asset at the same price in the same size. Typical transactions are undertaken intraday with each leg executed in close time proximity so that the trades net off and any transfer of market risk or beneficial ownership is avoided.



Case Study: Bilateral Wash Trade.

CFTC 2015. TeraExchange.

Tera offered a non-deliverable forward contract based on the relative value of the U.S. Dollar and Bitcoin for trading on its Swap Execution Facility ("SEF"). The only two market participants authorised at the time to trade on Tera's SEF entered into two transactions in the Bitcoin non-deliverable forward contract. The transactions were for the same notional amount, price and tenor, and had the effect of offsetting each other exactly. At the time, these were the only transactions in the contract undertaken on Tera's SEF. Tera arranged for the two market participants to enter into the transactions telling one trader that the trade would be *"to test the pipes by doing a round-trip trade with the same price in, same price out, (i.e. no P/L [profit/loss] consequences) no custodian required."* Tera subsequently represented these to the public as bona fide trading activity.

- 2.2 **Single Party Trade.** Single party wash trades use the same behaviours as bilateral wash trades. However, in this instance, a single party effects a wash trade between two separate accounts that are both under the control of that party. A sale from one account (Account A) to another account (Account B) takes place with a reversal either simultaneously or close in time. Examples of the types of accounts that have been used are listed below with example cases.

Case Study: Wash Trades between Dummy Accounts.

US 1935. United States v. Brown et al.

In 1929 Brown owned (or controlled) 90,900 shares in the Manhattan Electrical Supply Co., Inc., of which he was president. The company had 125,000 shares listed on the New York Stock Exchange. McCarthy became associated with Brown in December 1929 and they agreed to sell the shares at constantly rising prices. To accomplish this, they opened 91 accounts with 52 different brokers in their own names and those of their wives and in the names of others described as their "creatures". A single set of books contained all the purchases and sales and the actors furnished the bulk of the money to carry out the strategy.

The actors paid brokers to recommend the stock and conducted "washing" sales. "Washing" sales were made possible by the numerous accounts controlled by the actors between whom transactions could be executed and then cancelled. The actors also published false statements of the earnings of the company. By these means they forced up the price to \$55 in May 1930. Trading in the stock was suspended for several days after which the stock opened below \$20 and never recovered.

Case Study: Wash Trades between Personal and Relationship Accounts.**Hong Kong 2012. VST Holdings.**

The Chairman of VST Holdings, Li Jialin, executed matched trades between three accounts which he was found to have controlled. Between August 2007 and January 2008, Li operated three different accounts, one in his own name, another jointly with his wife and a third in his brother's name, through which he bought and sold VST shares in transactions that involved no change in the beneficial ownership of those shares. These transactions increased the price of VST. The Securities and Futures Commission alleged that the increase in the VST share price supported the year-end share price performance.

Case Study: Wash Trades between Investment Vehicles.**CFTC 2012. SMP Bank and Epaster Investments Ltd.**

The CFTC alleged that Epaster Investments Ltd. was an investment company located in Cyprus, owned and controlled by two partners of SMP Bank for the purpose of investing the partners' funds. The CFTC alleged that the same SMP employees controlled SMP's and Epaster's trading account and that on three occasions in March 2012, SMP traded Japanese Yen options contracts listed on the CME with SMP and Epaster on opposite sides of trades in the same contract. According to the CFTC, each of the orders in question was equal and offsetting in size and price and was initiated at or near the same time. The orders were entered, and the trades executed, in an illiquid market at prices higher than prevailing bids and offers in the market at the time. The CFTC claimed that the SMP employees knew that the transactions resulted in "financial nullity" and "achieved a wash result".

Case Study: Wash Trades between Dummy Accounts.**US 1944. United States v. Minuse et al.**

Norman W. Minuse and Joseph E. Pelletier, under the name of N. W. Minuse & Company, traded Tastyest Class A stock on the New York Curb Exchange. In 1935, they obtained an option on 73,000 shares of the stock and then used "wash sales", "matched sales" and "dummy accounts" to manipulate and inflate the price of the stock above the option price. Wash and matched trades were undertaken between "dummy accounts" which comprised persons operating at the direction of Minuse and Pelletier.

Case Studies: Wash Trades between Nominee Accounts.**SEC 2009. Georgiou.**

The SEC complaint against George Georgiou alleged that Georgiou used matched orders and wash trades between nominee accounts which he controlled to manipulate stock prices. According to the complaint, Georgiou used multiple nominee accounts at offshore broker-dealers in Canada, the Bahamas, the Turks and Caicos Islands and other locations. Georgiou asserted direct control over some accounts by issuing trading instructions directly to broker-dealers, and indirect control over others by communicating trading instructions to nominees who executed Georgiou's trading instructions. Through these accounts, Georgiou used a variety of manipulative techniques including executing or directing matched orders, wash sales, prearranged trades, marking-the-close, and paying illegal kickbacks in exchange for third-parties making specific stock purchases.

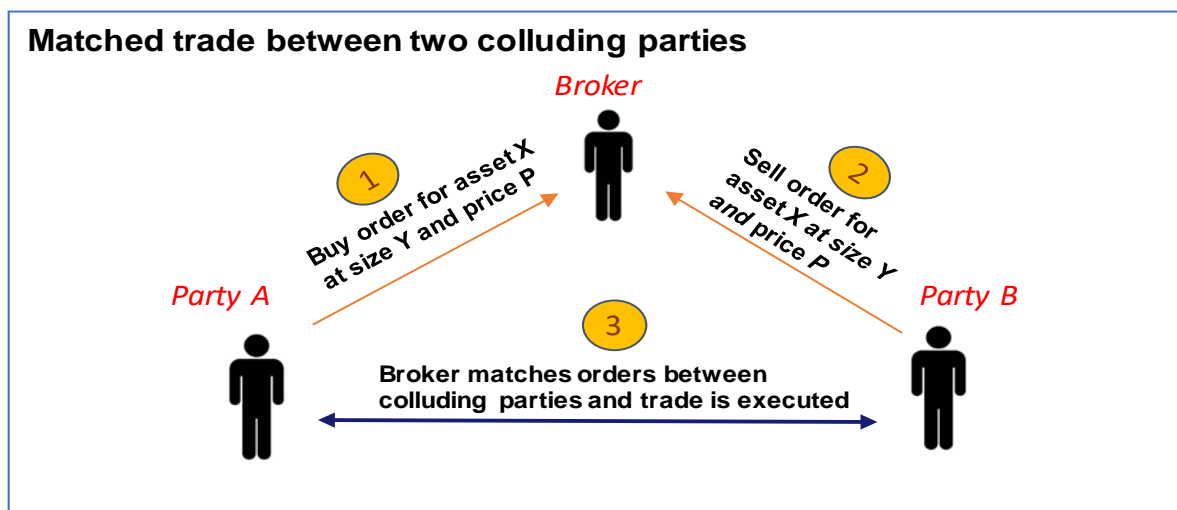
SEC. 1995. In the Matter of Carole L. Haynes.

The SEC alleged that over a period of one and a half years a fraudulent market manipulation scheme was conducted by John G. Broumas, a director of James Madison Limited ("JML"). From 1989 to 1990, Broumas controlled some 25 different brokerage accounts, in his own name and others, maintained by 14 different broker-dealers, through which he placed wash trades, matched orders, and marking-the-close trades in JML Class A stock. Broumas had sole authority to execute trades in these accounts. In addition to his own accounts, Broumas also traded JML Class A stock through the accounts of four nominees: a business associate as well as three former JML employees. Between January 1, 1989, and June 30, 1990, Broumas undertook some 545 trades in JML Class A stock. These 420 trades constituted 203 sets of wash trade or matched order transactions.

2.3 Matched Trades.

A matched trade is a form of wash trade between two different counterparties intermediated by a third party, typically a broker acting on behalf of one or more of the counterparties. The sale and repurchase could be instigated by a single party through two different brokers or two colluding parties through a single broker.

Because three “parties” are involved, this term has also been used to describe Single Party Wash Trades and Single Party Money Passes in which an account controller arranges transactions between two controlled accounts (see above, Section 3.2).



Case Studies: Matched Trades.

CFTC 2005. Armajaro and Corinth.

Armajaro Trading Limited (“Armajaro”) and Warenhandelsgeellschaft Corinth m.b.H (“Corinth”), prearranged two cocoa spread cross trades that were entered and executed on the Coffee, Sugar & Cocoa Exchange. Prior to the trades, employees at Armajaro and Corinth had telephone conversations with the broker who arranged the orders to be entered; they discussed the quantity and price of the orders that were to be executed. According to the CFTC, the prearranged buy and sell spread orders by Amajaro and Corinth ensured that the trades matching on the trading floor and negated market risk and price competition.

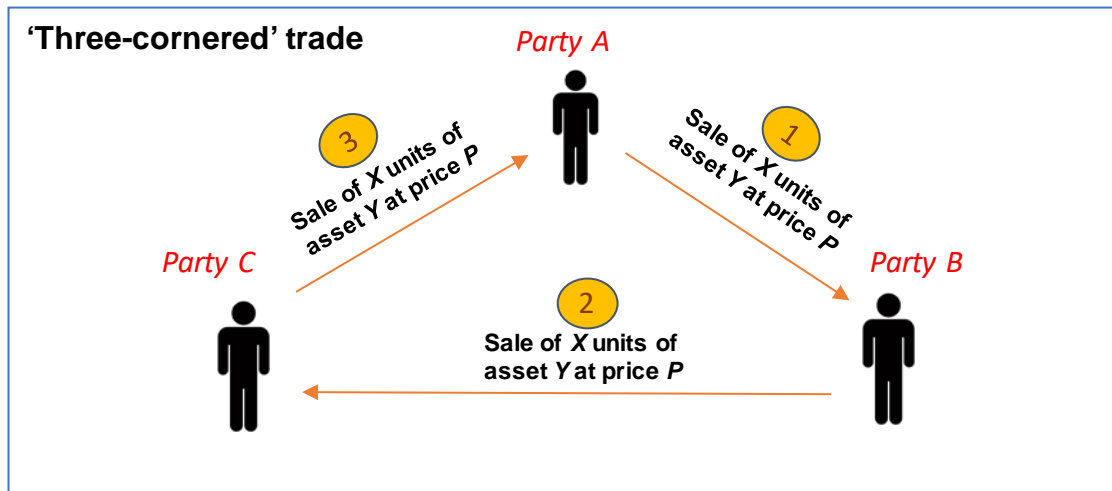
SEC. 1995. In the Matter of Carole L. Haynes.

The SEC alleged that over a period of one and a half years there was a fraudulent market manipulation scheme conducted by John G. Broumas, a director of James Madison Limited (“JML”). Haynes was the owner and president of First Potomac Investment Services, Inc. (“First Potomac”), a registered broker-dealer. Broumas traded JML stock through four nominee accounts and accounts of a number of his former employees. Haynes was found to have aided Broumas in his manipulation scheme by executing 61 wash trades and matched orders in JML stock on behalf of Broumas. Broumas would instruct Haynes to sell or buy stock in a certain quantity and at a certain price, and would then direct her to buyers or sellers who were connected to Broumas. The case described wash trades as purchases and sales of securities that match each other in price, volume and time of execution, and involve no change in beneficial ownership, being similar to wash trades but which involve a related third person or party who places one side of the trade.

2.4 Three-Cornered Trades.

A three-cornered trade is a three-party dealing ring. It has the same effect as a wash or matched trade but involves three parties that each execute trades with the others in turn. Therefore, the third party does not just facilitate (as in a Matched Trade) but is a party to the transactions.

A typical three-cornered trade involves a sale by Party A to Party B who on-sells to Party C who re-sells to Party A in the same asset at the same price in the same size. Conversely, Party A buys from Party B who then buys from Party C who buys from Party A. Typical transactions are undertaken in close time proximity to avoid market risk.



Case Study: Three-Cornered Trade.

Malaysian Securities Commission 2017. CIMB Securities Malaysia.

Three representatives used client accounts to perform matched trades and support the price of five different stocks over a period of 8 months. At times their transactions accounted for 90% of the trading volume.

2.5 Circular Trades.

Circular trades occur when an actor trades with itself (or enters bids and offers in its own favour). Essentially, the counterparty to the wash trade is the originating actor.

Case Studies: Circular Trading

CFTC 2012. SMP Bank and Epaster Investment Limited.

The CFTC alleged that Epaster Investments Ltd. was an investment company owned and controlled by two partners of SMP Bank for the purpose of investing the partners' funds. The CFTC further alleged that the same SMP employees controlled SMP's and Epaster's trading accounts, and that on three occasions in March 2012, SMP traded Japanese Yen options contract listed on the CME with SMP and Epaster on opposite sides of trades in same contract. According to the CFTC, each of the orders in question was equal and offsetting in size and price and was initiated at or near the same time. The orders were entered, and the trades executed, in an illiquid market at prices higher than prevailing bids and offers in the market at the time. The CFTC claimed that the SMP's employees knew that the transactions resulted in "financial nullity" and "achieved a wash result."

ASIC 2015. Derek Heath.

It was found that Heath ramped prices to induce investor participation by circular trading and using spoof bids and offers. Heath traded in shares and contracts for difference (CFDs) in four resource companies through nine separate share trading and CFD trading accounts. Between 2 July 2012 and 11 October 2013, Heath executed 30 simultaneous buy and sell transactions involving shares and CFDs relating to the resource companies which had the effect of artificially increasing the price for trading in those shares on the ASX. These trades, commonly referred to as 'matched trades', caused an increase to the price of shares traded on the ASX of between 3.1% and 6.9%.

2.6 Cross Trades.

A typical cross trade is a simultaneous trade in the same security and size between two accounts at the same market price, which price is "on market". This is a legitimate practice. However cross trades can also be used for abusive purposes.

Case Studies: Cross Trades.

SEC 2013. United States v. Laurienti.

Laurienti worked at Hampton Porter, a firm that sold illiquid securities which it aggressively stimulated a market for by promoting them to clients and later dissuading clients from reselling them. The firm, and several employees, bought the securities in their own names at lower prices and later resold at higher, artificial prices which they generated by their trading patterns. In addition to participating in this activity, Laurienti made unauthorised purchases of securities for clients and executed unauthorised cross-trades between client accounts.

SFA 2000. Butler.

Butler undertook cross trades in Brent Crude futures contracts on the International Petroleum Exchange which could have influenced the closing price of Brent futures contracts.

Singapore MAS 2017. Chionh Teow Hie John (Chionh) and Kiew Yoon Seng (Kiew).

Between June 2008 and November 2009, Chionh and Kiew engaged in false trading in the shares of Keda Communications Limited (“Keda”) by crossing 52 trades with each other using trading accounts held with a securities firm. Chionh also conducted six wash trades in Keda through two of his trading accounts held with brokerage firms. By doing so, Chionh was essentially trading with himself. The 58 cross and wash trades collectively accounted for 34% of the total traded volume of Keda shares between June 2008 and November 2009. Many of the cross and wash trades also artificially raised the price of Keda shares, with increases ranging from 11% to 146% from the previous traded price.

2.7 Compensation Trades and Money Passes.**2.7.1 Compensation Trades.**

The objective of a compensation trade is not to manipulate markets. Compensation trades are a variant of wash trades effected between two parties to facilitate cash payments to one party using a securities transaction as the medium to effect the payment. Examples include the generation of commission for counterparties as consideration for some form of other service (e.g., aspects of the Libor cases in which compensation trades were used to remunerate brokers for assistance in communicating Libor submission levels).

Case Study: Compensation Trade.**FCA 2014. RP Martin – Quote from Final Notice.**

*“For example, on 18 September 2008 Trader A explained to Broker A: “if you keep 6s [i.e. the six-month JPY LIBOR rate] unchanged today... will ****ing do one humongous deal with you...Like a 50,000 buck deal, whatever...I need you to keep it as low as possible...if you do that.... I’ll pay you, you know, 50,000 dollars, 100,000 dollars...whatever you want... I’m a man of my word”.”*

2.7.2 Money Passes.

Wash trades can be used as “money passes”. A money pass is a transaction undertaken by a party controlling two or more accounts or entities used as a conduit to move money between those accounts or entities.

Case Study: Money Pass.**CFTC 2014. Fan Zhang.**

The CFTC alleged that Zhang undertook fictitious sales and non-competitive prearranged trades in the Las Vegas Housing Market Futures Contract, the CME Cash-Settled Cheese Futures Contract and the CBOT Ethanol Futures Contract. Zhang transferred trading profits between two accounts which he controlled by undertaking buy and sell orders for the same price and volume between the accounts. One of the accounts was an investment club (which was 50 per cent. owned by Zhang) and the other account was held in the name of Zhang’s mother. Zhang engaged in the trades for the purpose of transferring money between the accounts.

2.7.3 **Fraudulent Money Passes.**

Wash trade strategies can be used to undertake fraud. Money Passes can be used in this fashion and wash trades at off market prices between accounts can be used to transfer monies and give the impression of bona fide transactions. These types of transactions have been used to defraud firm accounts and client accounts.

(i) **Case Study: Firm Accounts.**

CFTC 2015. Yumin Li and Kering Capital Ltd.

The CFTC alleged that Li defrauded Li's employer, Tanius Technology ("Tanius"), by trading the employer's account against a Kering account that Li controlled. Li placed orders for the Kering Account to buy Eurodollar futures against opposite side orders placed for the Tanius account at the same price and in the same volume. Li then undertook offsetting transactions to close out the position. The transactions were structured such that Li bought futures from the Kering account at higher prices and then sold those same futures back to Kering at lower prices (or the reverse). These transactions resulted in profits to Kering at the expense of Tanius.

(ii) **Case Study: Client Accounts.**

SEC 1949. Norris & Hirschberg ("NH").

NH dealt in both listed and unlisted stocks and bonds. It dealt primarily in local, unlisted securities and specialised in the issues of five small companies. It dominated the market in those securities.

Customers of NH were under the impression that NH acted as agent for them rather than as principal. It was generally believed by NH's customers that its income was derived primarily from the commissions it charged rather than mark-ups. NH's practice was to "constantly whip its specialties back and forth in its customers' accounts so that, within a short space of time, one can observe the interesting phenomenon of the same customers selling securities to NH and then a few days later buying the same securities back at higher prices." This "continual shuffling" of securities between customer's accounts allowed NH to accomplish its trading profits.

2.8 **Variations.**

2.8.1 **Time Variations.**

A typical wash or matched trade will be simultaneous or near simultaneous in order to avoid the assumption of market risk. In some cases, there may be a longer time period between the initial trade and the reversal trade, in particular where one party has control over both the accounts that are undertaking the trade.

Case Study: Time Variation.**SEC 2012. Steven Hart.**

The SEC alleged that Hart used his control of Octagon Capital Partners, LP, a small investment fund, and his position as a portfolio manager, to direct thirty-one matched trades between the two investment funds, benefitting Octagon at the expense of his employer's fund. According to the SEC complaint, Hart caused Octagon to purchase stock in small, thinly traded issuers at the market price and, on the following day, sold the same stock to his employer's fund at a price substantially above the prevailing market price. Each of the sales from Octagon to the employer's fund occurred in premarket trading; thus, Hart ensured that the trades matched. Later that same day or within a few days of the matched trades, the employer's fund, at Hart's direction, sold the recently-acquired stock on the open market at a loss.

2.8.2 Size Variations.

Size symmetrical wash trades are relatively easy to detect. However, variations may be deployed to avoid detection mechanisms:

- (i) The size of the trades in legs one and/or two, and for each of legs one and two, can be varied – traded sizes can be asymmetrical (see discussion in Wright v. SEC. 1940).
- (ii) One or both legs of a wash trade can be executed in different “shapes” (e.g., buy 10, 15, 20; sell 5, 5, 10, 25).
- (iii) Price variations may arise on some, but not all, shapes.

2.8.3 Price Variations.

- (i) The price on the legs of a wash trade may be the same. This may be the case where the objective of the trade is simply to give a false impression of market activity (e.g., price, size or volume) or to generate commission in a compensation trade.
- (ii) The price on one (or more) legs of a wash trade may differ – the differential representing payment to the counterparty for facilitating the trade. The originating trader may “pay” the accepting trader a spread by way of price differential for facilitating the strategy.
- (iii) If the objective is a compensation trade, a price differential may reflect the compensation amount – the amount of cash which the transaction is designed to pay to one counterparty.
- (iv) Pricing may vary in relation to shapes, with some shapes being at the same, and others different prices to reflect payment or compensation.

2.8.4 Additional Case Studies.

Wash trades, Matched Trades, Matched Orders and Three-Cornered trades have been used in a variety of contexts. These include the creation of false impressions as to price, size and/or market volume. Wash trades have been used to manipulate closing and reference prices, to high or low tick prices and serial wash transactions have been used to facilitate price ramping (what are now called “pump and dump” schemes”). Examples of these scenarios are provided below.

(i) Case Studies: High/Low Ticking.

South Africa FSB 2008. Johannes Albertus van Zyl.

van Zyl completed four wash trades in sunflower seed futures at prices higher than those prevailing in the market. As there was no change in beneficial ownership, these trades were found to have created a false impression of the market price.

SFA 2000. Butler.

Butler undertook cross trades in Brent Crude futures contracts on the International Petroleum Exchange which could have influenced the closing price of Brent futures contracts.

(ii) Impression of Volume.

Wash trades can be undertaken to misrepresent market volume.

Case Studies: Impression of Volume.

CFTC 2002. Dynergy.

The CFTC found that Dynergy reported false natural gas trading information, including price and volume, to reporting firms which compiled and published surveys and indexes of prices at US hubs.

Hong Kong 2015. Wong Chun.

Wong Chun undertook wash and matched trades between his own account and customer accounts which he controlled in order to inflate trading volume in SinoTech shares to facilitate the sale of his own holdings.

Thailand SEC 2016. Somchi Chaisrichawla.

Somchai undertook bilateral wash trades to manipulate the stock price of the Asia Metal Public Company Limited and misrepresent market volume. Between September and November 2006, it was found that Somchai colluded with Chaninan Luangwaykin to use his own securities trading account and the accounts of others to purchase and sell AMC shares to mislead the market to believe that the AMC shares were being traded in volume to induce investor interest.

(iii) **Volume Rebates.**

Wash Trades have been used to create fictitious transaction volumes for the purposes of generating market volume rebates.

Case Study: Volume Rebates.

SEC 2005. MarketXT.

The SEC alleged that MarketXT used wash trades and matched orders to qualify itself for a tape revenue rebate program offered by NASDAQ when one of its employees ran an automated trading system that entered buy and sell orders in close proximity to increase volume. This program was designed to facilitate “trading for trading’s sake”. Based on this trading activity, MarketXT then would receive monetary rebates and have a higher reported market share.

(iv) **Closing Prices.**

A significant number of wash trade and matched trade cases relate to the manipulation closing prices on exchanges, a practice now called “banging the close”. The characteristics of this behaviour are set out later in this document.

Case Study: Closing Price Manipulation.

SEC 2005. SEC v. Competitive Technologies Inc (“CTT”).

The SEC alleged that between July 1998 and June 2001, CTT, its CEO and others participated in a scheme to artificially raise and maintain the price of CTT’s stock. According to the SEC, these persons placed buy orders at or near the close of the market in order to inflate the reported closing price (i.e. “marking the close”), placed successive buy orders in small size at increasing prices (i.e. “painting the tape”) and using accounts they controlled or serviced, placed pre-arranged buy and sell orders in identical amounts (“matched trades”) and placed other buy orders intended to minimize the negative impact on CTT’s price from sales of the stock (i.e. pegging.) The SEC also alleged that the defendants used CTT’s own stock purchase plan to offset selling pressure, place late day orders, and maintain the stock price.

(v) **Case Study: Testing Market Levels.**

US 1939. In the Matter of Richards.

Benson & Co. Ltd. entered matched orders for the purchase and sale of stock to create the appearance of trading activity. Benson & Co. claimed that the purpose of the matched trades was merely to test the price level at which shares could be traded and averaged.

Ramping and Pools.

Ramping can involve single or multiple actors. Ramping schemes can be undertaken in short periods or can extend to weeks and even months. More complex schemes involving multiple actors deploying a range of manipulative techniques in combination are referred to as Pool operations. Pool operations deploy similar manipulative techniques to Boiler Room Operations (see Mohammed Fezzani et al v. Bear, Stearns & Co., Inc et al. (1999); manipulation by the Boiler Room operation A.R. Baron & Co.)

1. Cluster: Ramping.

1.1 Single Actor.

It is possible for a single actor to ramp the price of a security through the impact of their own trading.

Case Studies: Single Actor.

FCA 2011. Geddis.

Geddis had responsibility for London Metal Exchange ("LME") trading and broking for his firm. He built a large position in short term Lead contracts traded on the LME and used this position to drive the price of those contracts to unprecedented levels during trading in the LME's open outcry session.

On 21 November 2008, having started the day flat, Geddis began to build a position in Tom-Next Lead contracts by trading on the LME's electronic trading platform, LMEselect. By 08:28 he had undertaken 20 trades building a position equivalent to over 50% of the live warrants available that day. Geddis continued to borrow, undertaking another 26 trades. By 11:56 Geddis had increased his WTC (Warrants. Tom and Cash) position to over 122% of available warrants.

Geddis then traded through a broker in the "ring". LME Lending Guidance required a participant with a dominant position to lend to the market. As such, Geddis should have opened the ring with an offer to lend at level. He did not do this. Instead he waited to see where the market was trading and then put in his first offer to lend in the ring at double the price of the previous trade. Once that offer was filled, Geddis put new offers into the market each time his previous offer was filled.

SEC 2009. Georgiou.

The SEC alleged that Georgiou used multiple accounts under his control to manipulate the stock price of four microcap stocks. Wash trading was combined with misleading communications in a pump and dump scheme.

US 1962. In the Matter of Associated Investors Inc.

Associated Investors, a broker-dealer, guaranteed that it would establish and maintain successively higher market prices for specified securities for a two-year period. The SEC observed that "it is clear that where the seller dominates and controls the market and fixes the price of the stock at increasingly higher levels, he is engaging in an activity which has the effect of artificially inflating the market and is manipulative in purpose."

ASIC 2015. Derek Heath.

It was found that Heath ramped prices to induce investor participation by circular trading and using spoof bids and offers. Heath traded in shares and contracts for difference (CFDs) in four resource companies through nine separate share trading and CFD trading accounts. Between 2 July 2012 and 11 October 2013, Heath executed 30 simultaneous buy and sell transactions involving shares and CFDs relating to the resource companies which had the effect of artificially increasing the price for trading in those shares on the ASX. These trades, commonly referred to as 'matched trades', caused an increase to the price of shares traded on the ASX of between 3.1% and 6.9%.

US 1972. United States v. Stein and Security Underwriting Consultants, Inc.

Stein and his partner Davis brought about a sale of 603,000 shares of Buckeye Corporation stock, which was traded on the American Stock Exchange, through their company Security Underwriting Consultants Inc. in a period in which Buckeye Corporation had a \$4 million operating loss. This was accomplished by artificially supporting the stock price through purchases of small amounts of stock on exchange through different brokers and in different names in order to ramp the price. Davis and Stein offered the brokers secret compensation to induce their customers to buy Buckeye stock. Using these methods, Davis and Stein maintained the price of Buckeye stock.

US 1996. United States v. Catalfo.

Catalfo and Zimmerman bought CBOT Treasury bond put options and sold Treasury Bond futures in very large volumes with the intention of providing a negative signal to the market and igniting a momentum price decline. Catalfo and Zimmerman timed their trades with the release of the Department of Labor's unemployment statistics. In the first nine minutes of trading they bought 4,100 puts. Shortly after, bond prices began to plummet and Catalfo and Zimmerman sold their positions to make a sizeable profit.

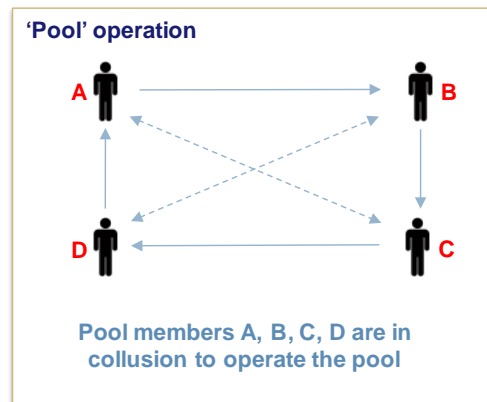
SEC 2015. Galas, Hawatmeh, Mrowca and Pustovit.

The SEC alleged that a group of four defendants used wash and matched trades to ramp prices (together with marketing and communications materials to generate investor interest). The SEC allegations provided that the group of four investors bought thinly-traded microcap stocks on the open market and conducted pre-arranged, manipulative matched orders and wash trades, which created the illusion of an active market in the stocks. They then sold their positions in coordination using aggressive promotional campaigns that urged investors to buy the stocks claiming that the prices would rise. However, some of the companies had little to no business operations at the time and there was no information or news to provide any basis for a significant price increase. Following the investors' promotions, the stock prices collapsed. The SEC alleged that the actors gained over \$2.5 million in profits through their schemes.

2. Pools.

A “Pool” is a multi-party dealing ring which may be coordinated by a nominated or key individual (the “Pool Manager”). Pools involve multiple (collusive and pre-arranged) transactions between multiple parties within the pool to give a false impression of market activity or to ramp prices and subsequently close positions at a profit. Transactions between Pool members are undertaken at progressively higher prices (normally) in smaller size until the price target is reached, at which point positions are liquidated and the market is left to adjust. As such, the actors trade with each other and do take market risk and there is change in beneficial ownership. By their nature, Pools tend to be longer term strategies in which manipulation takes place over a period of days, weeks or months.

A typical Pool operation will involve sales by counterparty A to counterparty B, who on sells to counterparty C, who sells to counterparty D who then sells to counterparty A. Conversely, Counterparty A buys from counterparty B who buys from counterparty C who buys from counterparty D who buys from A. Transactions may also take place “across the pool” (counterparty A sells to counterparty D who sells to counterparty C who sells to counterparty A).



The actors may also engage in the practice of “puffing” the relevant security by publishing purported research materials, stock tips, media reports and other marketing materials to generate non-pool investor interest and activity. The actors may also use these techniques in combination with other manipulative methodologies including wash and matched trades, and parking strategies.

Pools are distinguished from Three Cornered Trades as comprising more than three actors.

2.1 Cluster.

The heyday of Pool operations was in the US equity markets in the 1920s and 1930s. Pool operations remain evident in the North American and Asian Markets.

Case Study: Historical Example - Pool Operation.

US 1935. United States v. Brown et al.

In 1929 Brown owned (or controlled) 90,900 shares in the Manhattan Electrical Supply Co., Inc., of which he was president. The company had 125,000 shares listed on the New York Stock Exchange. McCarthy became associated with Brown in December 1929 and they agreed to sell the shares at constantly rising prices. To accomplish this, they opened 91 accounts with 52 different brokers, in their own names and those of their wives, and in the names of others who were their “creatures”. A single set of books contained all the purchases and sales, and the actors furnished the bulk of the money to carry out the strategy.

The actors paid brokers to recommend the stock and conducted “washing” sales. “Washing” sales were made possible by the numerous accounts controlled by the defendants between whom transactions could be executed and then cancelled. The actors also published false statements of the earnings of the company. By these means they forced up the price to \$55 in May 1930. Trading in the stock was suspended for several days, after which the stock opened below \$20 and never recovered.

Case Studies: Modern Pool Operations.

Thailand SEC. 2014. Porntep Thawornwisuthikul and Arada Lertpinyopap, former executives of United Securities Plc., Naruephol Chatchalermvit, Prayuth Lertpinyopap, Karuna Kaewmanee, and another.

The SEC filed a criminal charge alleging that seven conspirators manipulated the share price of Union Petrochemical Plc. (UKEM). They colluded to trade UKEM shares through seven trading accounts, inflated and stabilised the share price and matched orders within the group. They ramped the closing price of UKEM's shares from 2.60 baht per share on 18 July 2008 to close at 6.20 baht per share on 20 August 2008.

FBI 2013. Mazuar, Kaplan and Others.

Federal authorities arrested 14 people involved in long-term schemes to manipulate stock prices that led to more than 20,000 investors losing over \$30 million when artificially inflated stock prices collapsed.

According to the indictment, the actors gained control of the majority of the stock of publicly traded companies, concealed their control by purchasing and transferring shares to offshore accounts and to nominee entities; fraudulently inflated the prices and trading volumes of the companies' stocks through marketing campaigns, misleading press releases, payments to stock promoters, and "cross-trading" among themselves to make it appear that the stocks were being actively traded. The actors allegedly coordinated the sale of their positions at the peak of the manipulated markets and concealed the profits in nominee and offshore accounts.

SEC 2006. SEC v. Competitive Technologies Inc.

Between July 1998 and June 2001, CTT, its CEO and others participated in a scheme to artificially raise and maintain the price of CTT's stock. According to the SEC, they placed buy orders at or near the close of the market in order to inflate the reported closing price (i.e. "marking the close"), placed successive buy orders in small amounts at increasing prices (i.e. "painting the tape") and using accounts they controlled or serviced, placed pre-arranged buy and sell orders in virtually identical amounts ("matched trades") and placed other buy orders intended to minimize the negative impact on CTT's price from sales of the stock. The SEC also alleged that the defendants also used CTT's own stock purchase plan to offset selling pressure, place late-day orders, and maintain the stock price.

Parking.

“Parking is the sale of securities subject to an agreement or understanding that the securities will be repurchased by the seller at a later time and at a price which leaves the economic risk on the seller.”

SEC v. Gellas (1997). SEC v. Anderson (1996).

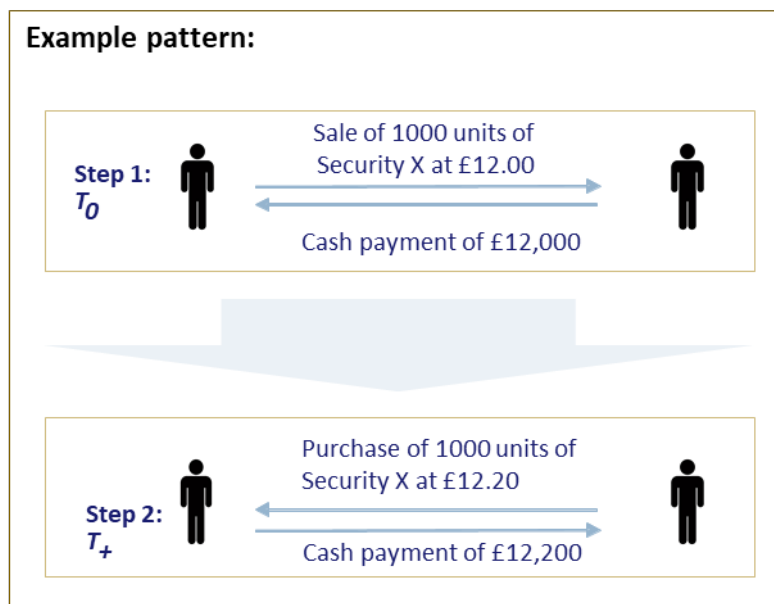
1. Cluster.

Parking is a form of position concealment. A typical parking transaction involves the sale of a position by Party A to Party B with an agreement that Party A will repurchase the relevant securities at a future date. Pricing may differ on one leg of the transaction reflecting facilitation payments to the counterparty. The transactions may be reversed prior to or following settlement. The sizes of the legs may be asymmetrical.

A number of parking cases have been undertaken to avoid aging inventory charges. Miss-statement of capital can be an ancillary effect of parking activity where the relevant positions are significant in relation to the scale of the firm’s business. Parking activity has also been used to sustain a firm which had insufficient capital to carry on its business (this factor is evident in the complex case of Mohammed Fezzani et al v. Bear, Stearns & Co., Inc. et al.). Parking strategies have also been used to conceal positions relating to underwriting sticks.

These activities are not relevant to bona fide repurchase agreements and stock borrowing and lending activity which is undertaken under legitimate commercial contract terms.

An Example Parking Transaction.



2. **Variations.**

Two patterns are evident in the source materials; parking with a third party (External Parking) and parking on an internally controlled account (Internal Parking).

2.1 **External Parking.**

Actors may park securities externally with third parties. In these cases, the price may differ on the two legs of the transaction in order to effect payment to the counterparty for facilitating the trade.

Case Study: External Parking – Avoiding Aging Inventory Limits.

SEC 2014. SEC v. Gonnella.

In May 2011, Gonnella (a trader at Firm A), was about to incur aged inventory charges on positions in several asset-backed securities. On 31st May, Gonnella contacted King (a trader at Firm B) to undertake parking transactions in four bonds to avoid the aged inventory charges.

King agreed to buy the bonds with the understanding that Gonnella would repurchase the bonds one day after the sale. Gonnella repurchased the bonds from King at one point more than King paid per bond, providing an immediate profit to Firm B at the expense of Firm A and allowing Gonnella to avoid the aged inventory charges.

At the end of August and the beginning of September 2011, Gonnella offered three bonds to King which King agreed to buy on Firm B's behalf. The next day Gonnella repurchased two of the three bonds at higher prices and sold King five more bonds. Two days later, Gonnella repurchased the additional five bonds. In September 2001, Gonnella repurchased the last remaining bonds that he had sold to King in August.

Case Studies: External Parking – Avoiding Capital Requirements.

US 1999. A.R Baron.

Baron used parking transactions to conceal its true net capital position. Baron principals, traders and registered representatives had parking arrangements with Baron customers as well as with other broker-dealers. Some parking arrangements were agreed with customers who were paid to facilitate the parking transactions. Others took the form of unauthorised trades undertaken for, and booked to, Baron customer accounts

SEC 2001. In the Matter of Kent T. Black, Joel L. Hurst, David E. Lynch, Larry E. Muller and Robert L. McCook. SEC 2001.

Staff at First Montauk Securities undertook parking transactions in CMOs with Crestar Securities Corporation to avoid internal restrictions on position taking and net capital requirements. The transactions were concealed by pre-arrangement and intermediation of the transactions with and through a third party - Simmons Bank.

2.2 Internal Parking.

It is also possible to undertake parking using different trading accounts that are held by the same firm. Therefore, this can be undertaken by a single individual with control over such accounts without the need for collusion with other actors. The types of internal trading accounts that can be used are varied and include the use of client and proprietary accounts.

Case Study: Internal Parking – Underwriting Stick.

SEC 1973. SEC v. Resch-Cassin & Co.

The firm was underwriter to an equity offering of 150,000 shares of Africa, a Delaware corporation. Under the terms of the offering, all 150,000 shares had to be sold within 60 days. The firm parked unsold stock in client accounts without client authorisation. On occasion this activity was undertaken by inflating the size of genuine client orders.

Case Study: Internal Parking.

SEC 1996. Paul Stansberry.

Some \$2 million Angeion shares were parked in customer accounts to relieve excess inventory at a broker-dealer. This was undertaken to avoid selling the stock in the open market and risking negative price pressure. Wash trades and matched trades were also employed to support the share price.

Window Dressing.

For the purposes of this document Window Dressing refers to the practice whereby actors manipulate the prices of securities held in portfolios to enhance portfolio performance prior to a reporting period.

The term Window Dressing is also sometimes applied in an accounting context whereby an asset is removed from a firm's balance sheet prior to a financial reporting period with an agreement that it will be repurchased after the reporting period. In this fashion, the asset is not recorded on the books and records of the firm at the relevant time. This practice is not the subject of this document.

1. Cluster.

Case Study: Window Dressing – Marking the Close.

SEC 2009. SEC v. Eric Wanger.

Wanger (a fund manager) marked the close (i.e. placed execution orders shortly before the close of trading to artificially affect the closing of the security) in four stocks on 15 occasions. Wanger engaged in this conduct to artificially improve the Fund's reported monthly and quarterly performance. Wanger's manipulative trading inflated the Fund's monthly reported performance by amounts ranging from approximately 3.60% to 5,908.71%, and artificially increased the Fund's net asset value by amounts ranging from 0.24% to 2.56%.

Case Study: Window Dressing – Broker Intermediation.

SEC 2011. In the Matter of Donald L. Koch and Koch Asset Management.

During September through December 2009, Koch engaged in marking-the-close transactions in two securities so as to artificially increase the reported closing price of those securities. The closing prices affected the valuation of all of the Respondents' advisory clients' accounts that held the securities at the end of those quarters.

For example, Koch held positions in High Country Bancorp (HSBC). In December 2009, when the stock had a bid-ask quote of \$14.05 to \$16.70, Koch instructed his broker to *"Please put on your calendar to buy HCBC 30 minutes to an hour before the close of the market for the year. I would like to get a closing price in the 20 – 25 range, but certainly above 20"*. The broker bought 3,200 shares with the final trade two minutes before the close at \$19.50 (the closing price). The SEC found that Koch's motive for this trading activity was to affect the closing price of the security.

Case Study: Window Dressing – Marking the Close.**SEC 2008. SEC v. Lauer.**

The SEC alleged that Lauer conducted a hedge fund fraud scheme that resulted in the loss of hundreds of millions of dollars in investors' funds. Lauer overstated his hedge funds' valuations for the years 1999-2002, manipulated the prices of seven securities that were a material portion of the funds' portfolios from November 1999 to April 2003, misled investors about the hedge funds' actual holdings by providing them with fake portfolios and falsely represented the hedge funds' holdings in newsletters.

Lauer, a founder of Lancer Management Group and Lancer Management Group II, directed the day-to-day operations of five hedge funds. The investment strategies for the two largest funds, Offshore and Partners, were concentrated on investments in small and mid-cap companies that were "investment community pariahs." In a 1997 *Business Week* article, Lauer was quoted as stating that the Funds' secret was seeking out "fallen angels" - companies in which Wall Street firms have little or no interest.

The Funds relied on a few highly valued small cap issuers which were a substantial portion of their portfolios. The majority of the stocks in which the Funds were invested were thinly traded on the OTCBB and pink sheets. Most had virtually no operations or earnings but were assigned values in the hundreds of millions of dollars

Lauer manipulated the price of certain securities in which the Funds were invested. The manipulative trading practices consisted of purchasing blocks of certain thinly traded stocks, generally at increasing prices, at or near the close of the last trading day of the month. The purchases were made to raise the closing market price of certain stocks in the Funds' portfolios. The ultimate objective of the scheme was to overinflate the Funds' performances and NAVs.

Case Study: Window Dressing – Broker Intermediation.**FCA 2011. Fagbulu and Visser.**

Fagbulu and Visser were fund managers. They purchased small tranches of shares in two illiquid issuers at significant premiums above opening prices from a market maker. They also made additional purchases through a broker. The share prices increased accordingly, enhancing the gross performance of the fund by +5.2% for May 2007. Without the purchases, the performance would have been +0.3% for the month. The purchases also led to breaches of mandate limits on the size of holdings in off exchange traded securities.

Bull and Bear Raids – Rumours.

Bull and Bear Raiding (sometimes referred to as spreading rumours) constitutes the practice of taking a position in a security and publishing or disseminating false information in relation to the issuer or the security in order to move the price to the advantage of the publisher. The position is then closed at a profit.

1. Cluster.

The base behaviour, the dissemination of false information, is a consistent feature of the cluster. Variations have arisen over time as new media have been developed to which the base behaviour has adapted.

Case Study: Early Case - Word of Mouth and Semaphore Telegraph.

UK. R v. de Berenger 1814.

A conspiracy was formulated between Charles de Berenger, Sir Thomas Cochrane and six others to profit from the publication of false information that Napoleon Bonaparte had been killed. Having accumulated a large position in UK Government Bonds, De Berenger appeared in the port of Dover, Kent, disguised as a Bourbon Officer and calling himself Lieutenant Colonel Du Bourg. He reported that Napoleon had been killed by the Prussians and sent a false letter to that effect to the Port Admiral at Deal for transmission to the Admiralty in London by semaphore telegraph (which was expected to be published in the press). Co-conspirators paraded across London Bridge in a post chaise proclaiming an allied victory and handing out handbills to that effect. The price of UK Government Bonds rose on the news. The conspirators then sold the Bonds which they had purchased prior to the bull raid on the London market.

1.1 Traditional Media.

The traditional media (newspapers, radio etc.) have been used frequently in this area. This activity was prevalent in the 1920s and 1930s when Pool operators employed media specialists to “tout” stocks on their behalf. Traditional media (newspapers) have also been used to conduct bull and bear raids more recently.

Case Study: Traditional Media.

UK 2005. Bhoyrul and Hipwell (The “City Slickers” Case).

Hipwell and Bhoyrul were journalists at the Daily Mirror who produced the “City Slickers” column in which they tipped various shares. They were convicted of conspiring to use the column to spread favourable rumours about shares between August 1999 and 2000. Hipwell and Bhoyrul would purchase positions in these stocks immediately before they were tipped in the City Slickers column and sell them soon afterwards making a profit from the resulting price increase. Shepherd, a private investor, was also convicted for taking part in the scheme.

Case Studies: Newspapers.**US 1985. Robert Foster Winans.**

Foster Winans was a columnist for The Wall Street Journal and co-wrote the "Heard on the Street Column" from 1982 to 1984. Because of its perceived quality and integrity, it had an impact on the market prices of the stocks it discussed. He was convicted in 1985 of leaking advance word of the contents of his columns to a stockbroker, Peter N. Brant, at Kidder, Peabody & Co. Winans entered into a scheme with Kenneth Felis and Brant who, in exchange for advance information from Winans as to the timing and contents of the column, bought and sold stocks based on the column's probable impact on the market and shared their profits with Winans.

US 1979. Zweig and Bruno v. Hearst Corporation.

Richard Zweig and Muriel Bruno sued Alex Campbell, a financial columnist for the Los Angeles Herald-Examiner; Campbell's employer, the Hearst Corporation and H. W. Jamieson and E. L. Oesterle, directors of American Systems, Inc. (ASI).

Campbell wrote, and the Herald-Examiner published, a column that contained a highly favourable description of ASI. The plaintiffs alleged that the directors of ASI had made material misrepresentations and omissions in an interview with Campbell and hoped that he would publish false information "puffing" ASI shares. Campbell published the favourable story about ASI after first buying 5,000 shares from the company at a substantial discount below their market price.

1.2 New Media - Technology Adaptation.

By its nature, Bull and Bear Raiding is an abuse which readily adapts to new technologies. New and social media allow for widespread dissemination of false information and more readily enable actors to disguise their identities.

Case Studies: Internet.**UK 2005. Isaacs.**

Isaacs obtained material non-public information relating to TrafficMaster, an LSE listed company, after reading copies of the company minutes which had been left at an acquaintance's house. The minutes contained details of expected profits and product development. Isaacs purchased the stock and subsequently posted anonymous opinions on internet bulletin boards with the intention of increasing the share price to benefit his holding.

US 2006. SEC v. Zafar and Thawani.

Faisal Zafar and Sameer Thawani perpetrated securities fraud using the internet. Between 2004 and 2006, Zafar and Thawani engaged in a "pump and dump" scheme to manipulate the market for 24 illiquid microcap and small cap stocks. After buying shares at prevailing market prices, Zafar and Thawani used online aliases to post messages touting the stocks and containing false press release excerpts and other false "news" about the issuers to deceive investors. The false headlines allegedly created by the actors included references to large business contracts, mergers and strategic alliances between the issuers and major corporations (such as Google, Kmart and Sun Microsystems) and other developments designed to make the targeted stocks appear to be significant investment opportunities.

The basic structure of the alleged scheme was:

- One or both of Zafar or Thawani would purchase shares of the issuer's stock in their online brokerage accounts;
- Zafar and Thawani would register multiple online identities with internet message board services;
- They would post multiple messages regarding the touted stock or to other, more widely followed stocks;
- The messages contained false statements about the issuers and urged other investors to buy the stocks; and
- As soon as the stock prices increased due to purchases induced by the false statements, the defendants sold their shares at the inflated prices.

After the sales, the prices of the stocks would return to their pre-manipulation levels. These events sometimes occurred within the span of a single day.

Case Study: E-mails and Instant Messages.**US 2008. SEC v. Berliner.**

Paul S. Berliner was a registered representative of a broker-dealer, Schottenfeld Group, LLC. In May 2007, Alliance Data Systems Corp. ("ADS") announced it was to be acquired by the Blackstone Group. In November 2007, Berliner allegedly drafted and disseminated false rumours that ADS's board of directors was meeting to consider a revised proposal from Blackstone to acquire ADS at a significantly lower price than previously reported. According to the complaint, Berliner disseminated this instruction by way of instant messages to brokers and hedge funds. The rumours were reported in the press and Alliance stock fell 17%. Berliner had shorted Alliance stock before disseminating the rumours.

Case Study: Social Media.**US 2010. SEC v. McKeown and Ryan.**

A Canadian couple, Carol McKeown and Daniel F. Ryan, used their website (PennyStockChaser), Facebook and Twitter accounts to tout various U.S. microcap companies. In some cases, the defendants received shares of these microcap companies from the issuers' affiliates or third parties as compensation for touting the issuers' stocks. McKeown and Ryan used PennyStockChaser and social media accounts to predict significant price increases for the microcap companies, while simultaneously selling their shares on the open market.

1.3 Twitter.

There have been a number of cases of Twitter messages being published containing false information which has impacted market prices. Examples include:

June 2012: Tweets were published falsely claiming the death of Syrian President Bashar al-Assad. These caused the price of WTI Crude Oil to rise by over \$1 in a matter of minutes.

April 2013: A Tweet purported to be published by the Associated Press asserted that there had been explosions at the White House and that President Obama had been injured. It transpired that the Associated Press Twitter account had been hacked - but the false information caused the Dow Jones Industrial Average to fall over 100 points in two minutes.

Case Study: Twitter.**2015. SEC v. Craig.**

The SEC alleged that James Alan Craig manipulated the share prices of two publicly traded companies by tweeting false and misleading information. Craig allegedly used a fabricated Twitter account to tweet rumours that federal law enforcement agencies were investigating Audience, Inc., a public technology company, for fraud, and that Sarepta Therapeutics, Inc., a public biopharmaceutical company, had tainted drug trial results which had led to a federal government agency seizing evidence. The SEC reported that the tweets were made from Twitter accounts mimicking established securities research firms. According to the SEC, Craig attempted to capitalise on the downward movement in the stock price by buying the shares of the companies' stock soon after the share prices fell in response to the false tweets, and later selling these shares.

Execution Conflicts and Abuses.

A number of sources indicate behavioural patterns which generate conflicts of interest between clients and market participants in the execution and management of client orders. These include Cherry Picking, Front Running, behaviours relating to Fixes, behaviours relating to certain order types including limit orders and activity to push or protect “barriers”.

1. Cherry Picking.

1.1 Cluster.

Cherry Picking is the practice of executing a client or firm order and withholding the allocation to the client or firm pending assessment as to whether the execution is a winning or losing trade. If the market moves adversely, the trade is allocated to the client. If the market moves positively, the trade is taken by the actor.

1.2 Withholding Allocation.

In order to undertake Cherry Picking, the actor needs to find a way to withhold the allocation to the client or firm (e.g., by allocating the transaction to a suspense or error account etc.). Where an order is only partially filled, the order is incomplete and awaits completion prior to allocation. As such, partial fills can lend themselves to the practice of Cherry Picking. Where a partial fill is executed and moves to profit due to a positive market price movement an actor can take the profit from the trade and report that the order was unfulfilled. If a partial fill results in a loss due to an adverse price movement it can be allocated to the client.

Case Study: Cherry Picking – Side by Side Funds.

FCA 2014. Aviva.

Aviva Investors employed a side-by-side management strategy on certain desks within its Fixed Income business whereby funds that paid differing levels of performance fees were managed on a side-by-side basis, i.e. by the same desk. A proportion of these performance fees were paid to traders on Aviva Investors fixed income business who managed the funds on this basis.

This incentive structure created conflicts of interest as these traders had an incentive to favour one fund over another. This risk was more acute on desks where funds traded in the same instruments. Traders could delay recording the allocation of executed trades. By delaying the allocation of trades, traders who managed funds on a side-by-side basis could assess a trade’s performance during the course of the day and when it was recorded allocate trades that benefitted from favourable intraday price movements to one fund and trades that did not to other funds.

Case Study: Cherry Picking - Client to PA Accounts.**SEC 2015. Mark P. Welhouse and Welhouse & Associates Inc.**

Welhouse & Associates Inc. and its sole owner, Mark. P. Welhouse, allegedly engaged in fraudulent trade allocation, or “cherry picking,” by unfairly allocating options trades amongst various accounts. The actors allegedly inappropriately allocated options trades that had appreciated in value during the course of the trading day to the owner’s personal and business accounts while allocating trades that depreciated in value to client accounts. According to the SEC, Welhouse was able to unfairly allocate the trades by purchasing options in an omnibus or master account for Welhouse & Associates Inc. and delaying allocation of the purchases until later in the day, after he saw whether or not the securities appreciated in value.

Case Study: Cherry Picking - Firm Accounts.**CFTC 1998/1999. Steven G. Soule, Kyler F. Lunman II and Hold-Trade, Inc.**

From September 1993 to December 1994, the actors engaged in a scheme in which they defrauded Coastal Corporation by misappropriating energy futures trades made on behalf of Coastal and allocating them to accounts they controlled. Soule, as the Coastal employee responsible for entering its energy futures orders to the floor of the NYMEX, allocated profitable Coastal trades to futures trading accounts owned or controlled by Lunman and Hold-Trade Inc. who, along with Rossi, distributed the profits among the members of the scheme. Soule and Thomas F. Demarco, a telephone clerk on the NYMEX, ensured the successful completion of the wrongful allocations by creating false floor order tickets and entering into additional transactions to replace those that were misappropriated.

Case Study: Cherry Picking - Between Client Accounts.**CFTC 1999. In re Mitsopoulos, et al.**

The CFTC brought charges based on an alleged fraudulent trade allocation scheme by an introducing broker (“IB”) over a two-year period. S. Jay Goldinger was a registered IB with Refco Inc. Goldinger fraudulently allocated trades among dozens of Refco customer accounts based on the trades’ profitability by, among other things, delaying the assignment of customer account numbers until after trades had been executed, and directing Refco phone clerks to change account numbers for trades previously executed. Goldinger entered orders for thousands of Treasury bond futures and options contracts per day for its customers through Constatine Mitsopoulos’ Refco floor desk at the Chicago Board of Trade. Mitsopoulos allowed Goldinger to enter orders through the Refco desk without providing account identification at the time trades were given. In addition, Mitsopoulos allowed the Refco desk clerks to help Goldinger change account numbers for trades already executed. As a result, Goldinger was able to allocate more profitable trades to certain customer accounts and less profitable trades to other customer accounts.

2. **Front Running.**

2.1 **Cluster.**

Front running is the practice of entering into a transaction in advance of a pending order that will or may impact the price of the relevant security. The practice may involve cross market transactions (e.g., a derivatives transaction ahead of a transaction in the underlying or vice versa).

The sources indicate two types of front running: the front running of client orders and the front running of firm orders. In addition, the sources indicate two patterns in relation to actors; front running by the actor directly and the disclosure of order information by one actor to another to permit the second actor to front run.

2.2 **Case Studies: Front Running Clients.**

US 1985. United States v. Dial.

Donald D. Dial was an experienced silver trader and a manager at Clayton Brokerage Company. Dial, with the assistance of Salmon, the president of Clayton Brokerage, used a personal trading account at Clayton to buy silver futures contracts without putting up any cash or cash-equivalent margin. At the same time, Clayton sought a large-foreign investor, International Monetary Corporation ("IMC"), to take delivery on a large number of silver future contracts in order to cause silver prices to rise. Dial, with the knowledge that the IMC account would be available for a large purchase, advised other customers to purchase silver future contracts. While holding many customer orders and aware that later large purchases for the IMC account would cause the silver futures prices to rise sharply, Dial allegedly entered purchase orders first on behalf of accounts in which he and Salmon had a financial interest. Dial then entered or caused to be entered orders on behalf of other customers before entering large orders for the IMC account. These IMC orders, totalling 6,000 contracts, caused the prices of all Chicago Board of Trade silver futures to rise to artificially high levels.

FCA 2004. Bruce and Gamwells.

Client order information was passed to internal proprietary traders and to other clients. This allowed front running by firm proprietary traders and by third parties.

2.3 **Case Study: Front Running - Own Account.**

SEC 2013. Bergin.

Daniel Bergin was a senior equity trader at an asset management firm. The SEC alleged that Bergin made over \$500,000 by using confidential trading information regarding the size and timing of securities trades to purchase securities in his wife's accounts before placing large trades on behalf of his firm's clients.

2.4 Case Study. Front Running – Own Firm.

CFTC 2015. In the Matter of Motazedi.

Arya Motazedi, a proprietary trader in gasoline futures, used his firm's proprietary information to trade in his personal account. Motazedi had non-public information relating to the intended trading of his employer including the timing, contracts, prices and sizes of intended trades.

Between September and November 2013, Motazedi prearranged 34 trades between his employer's account and personal accounts at prices which disadvantaged his employer. Motazedi caused the employer's account to buy at higher prices and sell at lower prices in trades opposite two personal accounts. Motazedi also placed orders for his personal accounts ahead of orders for his former employer's account on some 12 occasions thereby generating additional profits for himself to the detriment of his employer. According to the CFTC, Motazedi's trading activity caused his employer approximately \$216,955 in trading losses.

2.5 Case Studies: Front Running – Disclosure to Third Parties.

CFTC 1998. Kelly and Rhee.

Thomas Kelly, a commodities trader for John W. Henry & Company, disclosed information as to his employer's confidential trading activity and strategy in gold futures to Andrew Rhee, who owned his own trading company. Rhee then traded on this confidential information generating personal profits.

FCA 2012. Sidhu.

Between 15 May 2009 and 22 August 2009, Rupinder Sidhu (a management consultant) and Anjam Ahmad (a trader and risk manager with AKO Capital LLP) conspired to front-run the trading business of AKO. In his role as a trader at AKO, Ahmad had inside information about forthcoming securities transactions by AKO. Ahmad would tip off Sidhu as to which shares AKO were intending to buy and sell on a particular day. Ahmad would hold back the execution of his firm's trades enabling Sidhu to place spread bets to front run AKO.

2.6 Case Study: Technology: Client Front Running.

SEC 2015. ITG Inc./AlterNet Securities (affiliates).

The SEC alleged that ITG Inc. operated an alternative trading system, commonly referred to as a dark pool, known as POSIT. AlterNet, an affiliate of ITG, provided trading algorithms and smart order routers that sent orders to various market centers including POSIT.

According to the SEC, between April and July 2011, ITG operated a proprietary trading desk known as "Project Omega." Project Omega accessed live feeds of ITG customer and POSIT subscriber order and execution information and traded algorithmically based on that confidential information in both POSIT and other market centers. The SEC claimed that as part of one of its trading strategies, Project Omega identified and traded with sell-side POSIT subscribers and ensured that those subscribers' orders were configured in POSIT to trade "aggressively" so as to benefit Project Omega.

3. Execution Conflicts: FX Fixes.

3.1 Introduction.

Customers placed orders with banks to trade at a rate determined by the FX Fix. These orders were placed prior to execution in the fixing window. As such, all of the terms of the orders were known except the price which would be set in the future by the Fix. If the bank did not achieve the fixing price, then it would still have to trade with its clients at the fixing price. This would mean that in some circumstances the bank would be required to fill client fixing orders at a loss (e.g., where its own positions were assumed at prices higher or lower than the fixing price). In addition, client activity in the Fix could drive prices higher or lower to the detriment of bank proprietary positions and could also adversely impact positions in respect of which the fixing price triggered derivative contracts.

3.2 Collusion.

Traders entered in to coordinated strategies to manipulate FX benchmark rates. They used exclusive multiparty chat rooms to coordinate collusive trading strategies. Traders disclosed proprietary position and client order information, exchanged the size and direction of net Fix orders and used this information to coordinate trading strategies. Traders agreed the timing and sequencing of Fix order executions and transferred positions and orders to coordinating traders to add weight and volume of orders in the Fix to ensure desired outcomes.

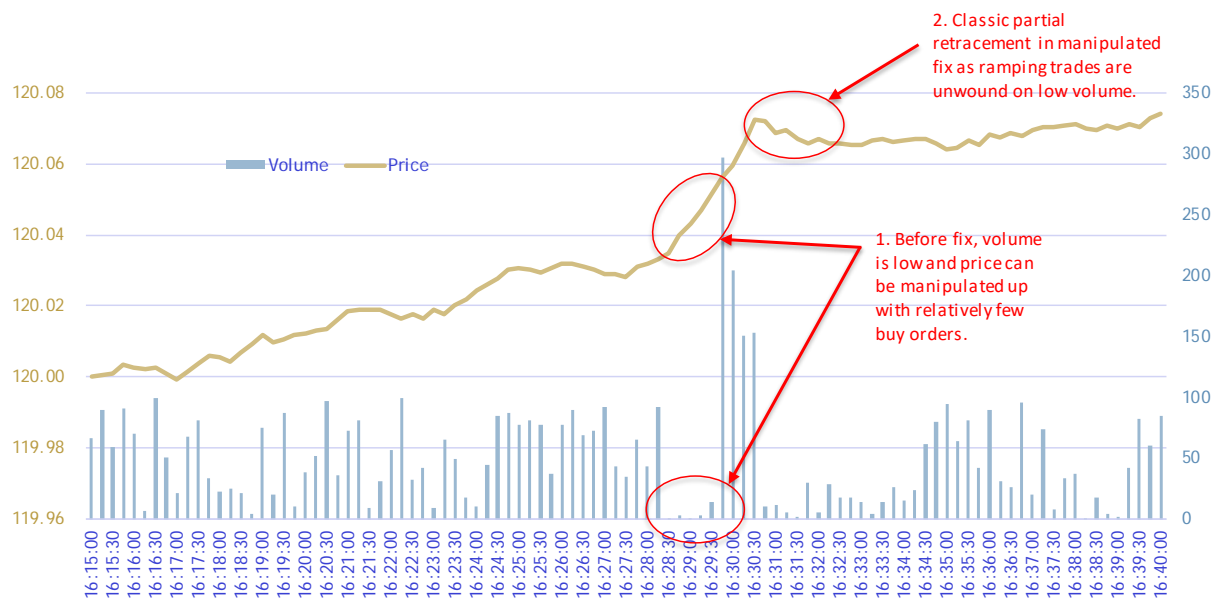
3.3 FX. Order/Position Transfer – “Building Ammo”.

At its most basic, traders colluded to sequence their trading to have maximum effect on the price in the required direction during the fixing window. More sophisticated techniques were also adopted to advance this objective.

A colluding group of traders may have an amount to transact in the Fix and may wish to move the price in the Fix. In order to add weight to the manipulation strategy, traders would buy (or sell) additional currency prior to the fix which would then be sold (or bought) in the Fix in addition to the original net amount in order to better influence the direction of the market. This added to the size and volume of orders in the Fix to ensure desired market directional outcomes.

In some instances, this was achieved by open market purchases (the trader would simply buy or sell currency in addition to the net amount to be traded in the Fix). In others, participating traders seeking to move the Fix in a particular direction would transfer their Fix orders and/or positions to a single coordinating trader who would then execute the strategy on behalf of the wider group. Traders would nominate one trader to execute the Fix manipulation strategy and would transfer their positions (their “ammo”) to that trader in order that he/she had sufficient weight to impact pricing and could determine the optimum timing of trade executions given the short fixing window.

The figure below is an illustrative example, for a fictional currency, of the volume and price dynamics that occurred in and around the time of a Fix:



3.4 Loading.

Loading is the practice of transacting with traders outside of the collusive group to increase the size of orders in the same direction during the Fix period in order to enhance the strategy of a collusive group for Fix manipulation. Using this technique, Trader D, a seller in the Fix, would sell to Trader A, a trader outside of the colluding group prior to the Fix. Trader A then became a seller in the Fix or would have additional currency to sell in the Fix. (See CFTC Press Release 12 November 2014.)

3.5 Clearing.

Clearing is the practice of transacting with traders outside of the collusive group to reduce the size of orders in the opposite direction during the Fix period which, if executed, might frustrate the strategy of the collusive group for Fix manipulation. Using this technique, Trader D, a seller in the Fix, discovers that Trader A, a trader outside of the colluding group, is a buyer in the Fix. Trader A's fixing order would net off Trader D's orders and inhibit downward selling pressure on the fixing price. Prior to the Fix, Trader D sells to Trader A who then no longer needs to participate in the Fix – Trader A is "cleared" from the Fix. (See CFTC Press Release 12 November 2014.)

3.6 Withholding.

Where a trader who was a member of a colluding group had orders in the opposite direction to the colluding group, that trader could withhold those orders from the Fix to avoid moving the rate in a direction adverse to the colluding group.

"By agreeing not to buy or sell at certain times, the traders protected each other's trading positions by withholding supply of or demand for currency and suppressing competition in the market."

DOJ Press Release 20th May 2015.

The first recorded discussion of withholding arose in the US equity market.

Case Study: Withholding.

Otis & Co v. Securities and Exchange Commission 1939.

Otis & Co. was primarily engaged in underwriting and dealing in securities. It acquired large blocks of securities from issuers and holders and distributed them to its customers. Daley, the president of Otis and Co., became interested in stock of Murray-Ohio Company after a conversation with a director of the company. Otis & Co. had previously assisted Murray-Ohio and received its financial reports for several years. Based on these reports, Daley believed Murray-Ohio's stock was undervalued and that the stock's selling price would increase to reflect the company's economic condition. Daley undertook to acquire 10,000 shares of the company's stock and induced five stockholders to sell 4,918 Otis shares at the exchange price. Otis also entered into withholding agreements with various shareholders of Murray-Ohio by which the shareholders agreed not to sell their shares for a sixty-day period. After Otis bought shares of Murray-Ohio and secured withholding agreements, it proceeded to distribute the shares over-the-counter, recommending the securities to its customers. In its recommendations, Otis did not disclose either the withholding agreements or its purchasing activities. The SEC alleged that Otis, in its over-the-counter sales, failed to disclose material facts necessary to prevent the representations from being misleading.

4. Execution Conflicts: Stop Losses, Limit Orders and Barriers.

4.1 Stop Losses and Limits.

The FX source materials indicate that traders, either individually or in collusion, manipulated market prices to trigger client stop loss orders and limit orders. For example, if a trader was holding a client limit or stop loss order to sell at 10, and the trader anticipated that the market would move upwards, the trader would undertake transactions at 10 in order to trigger the limit, take the resultant position and profit in the rising market. Conversely, firms would accept limit orders from customers and then inform the customer that the order could not be filled (in whole or part) in circumstances in which the firm was in fact able to fill the order but to do so would result in a loss to the firm or it would be more profitable not to do so.

4.2 Protecting/Pushing Barriers.

Protecting or pushing barriers is the practice of manipulating markets to benefit derivatives or other positions. Underlying markets may be manipulated to avoid (protect) or trigger (push) derivatives contracts.

Case Studies: Protecting/Pushing Barriers.

US 1938. In the Matter of Harold T. White, et al.

The SEC alleged that White Weld & Company manipulated an illiquid stock to raise its price and make the exercise of its options contract profitable.

FCA 2011. Goenka.

Goenka ramped the closing price of Reliance GDRs to avoid a strike on a three-stock basket Structured Product. Goenka used large serial simultaneous buy and sell orders at the close to ramp the price of relevant stocks.

Goenka purchased two structured products in 2007. Structured Product 1 was a “3Y USD Phoenix Plus Worst of Gazprom/ Lukoil/ Surgut” issued on 30 April 2007 which had a maturity date of 30 April 2010. Structured Product 2 was an “Airbag Leveraged Laggard Note” on Indian ADRs issued on 17 October 2007 which had a maturity date of 18 October 2010. The Structured Products each had a cost (face value) of USD 10 million. The Structured Products related to a basket of three GDRs, representing shares in three different companies. For both the Structured Products the final pay-out to Goenka was dependent on the closing price of the worst performing or “laggard” of the three different GDRs on the stated maturity dates.

In early April 2010, an investment adviser to Goenka (A), approached B, a London-based broker, on behalf of Goenka, to establish whether it was possible to increase the closing price of certain GDRs on a given date by placing large trades in the LSE closing auction. A strategy was developed to manipulate the closing price in Reliance stock which was the laggard in Structured Product 2.

On 18 October 2010 at 3.19pm, approximately 10 minutes before the closing auction commenced, Goenka called B to confirm his orders for closing auction trades. Reliance GDRs were trading at USD 48.28. Goenka provided B with details of the following orders that he wished to place:

- (i) simultaneous buy and sell orders of 100 GDRs at USD 48.69;
- (ii) simultaneous buy and sell orders of 100 GDRs at USD 48.71;
- (iii) an order to buy 18,000 GDRs at market. An order at market has no price limit and is given priority in the uncrossing phase of the auction;
- (iv) an order to buy 770,000 GDRs at USD 48.71;
- (v) a further standby order of 351,000 GDRs at USD 48.69 to act as “a cushion” and only be released on Goenka’s instructions.

Goenka’s orders were equivalent to 280% of the average daily volume of trading in Reliance GDRs at that time. All the orders were above the knock-in price and the level at which the GDRs were trading at the time. In total the orders, if filled in their entirety, would have required an expenditure of approximately USD 55.4 million.

Goenka was in continuous contact with B during the closing auction. During that time the first four orders were placed. The order to buy 18,000 at market was entered at 3:39:50 pm, and the order to buy 770,000 at USD 48.71 was entered at 3:39:52 pm, ten and eight seconds respectively before the start of the randomisation period. The “cushion” order to buy 351,000 was not entered.

Prior to entering the final order for 770,000 GDRs the Reliance IUP was USD 47.93, 72 cents below the “knock-in price” of USD 48.65. The impact of Goenka’s orders was to increase the IUP price to USD 48.71, 6 cents above the “knock-in price”. This higher indicative IUP was maintained throughout the remainder of the auction, and became the uncrossing, or closing, price.

FSA 2002. Fleurose.

Fleurose undertook Index manipulation to avoid an option exercise which would have led to payment under a binary option. Under the option, a payment would be made to the counterparty if both the FTSE 100 Index and the S&P 500 Index were higher at the end of the month than at the beginning.

On November 28, 1997 the S&P Index was significantly higher than it had been at its November opening, but by the end of the last trading day of that month, the FTSE 100 was closer to the option strike level of 4842.3. At 4.10 p.m. the FTSE 100 stood at 4856.56 points, and at 4.29 p.m., 4869.856. The FTSE 100 closes at 4.30 p.m. and, during the last six seconds of trading, the Index dropped by 38.08 points to below the strike level of the option. The binary option was out of the money and the payment was avoided. The reason for the sudden fall in the FTSE 100 Index just before close of business was due to sales by Fleurose in the cash market during the last ten minutes of trading prior to the close.

Other Reference Cases.

FCA 2014. **Plunkett. Gold Fixing.** Plunkett entered fixing orders to depress the gold fixing level against a digital option position.

HK 2016. **Ong.** Ong sold holdings in Korean stocks at the close which caused the KOSPI 200 Index to fall 2.79% in order to benefit an options position.

5. Programme Trades.**5.1 Introduction.**

Execution conflicts can arise in relation to programme trading where transactions are undertaken on a principal basis or an “agency trade on a principal basis” in which circumstance a portfolio is worked as agent up to a specified time at which the remainder of the transaction falls to the executing intermediary as principal. In these circumstances, hedging activity may move market prices to the detriment of the client. This has arisen in a number of cases.

Case Studies: Programme Trades.**SFA 1996. Swiss Bank Corporation.**

Swiss Bank Corporation was engaged to liquidate a trust. The transaction was structured as an agency trade on a principal basis. Transactions designed to establish liquidity levels prior to the assumption of the remainder of the portfolio as principal impacted prices to the detriment of the selling client.

FCA 2009. Shroff.

Shroff undertook pre-hedging activities prior to the execution of principal programme trades on seven occasions between June and October 2007 without the consent of the clients involved. He knew that the said pre-hedging activity was expressly prohibited by his Firm's internal policy. The pre-hedging activity caused the mid-prices of most of the stocks traded to move against the client before the trade was struck.

FSA 2004. Morgan Grenfell.

On the relevant day between 11.24 and 11.31, an asset manager contacted three brokers to request quotes for a programme trade. The brokers, one of which was Morgan Grenfell, were asked to provide a quotation in respect of a blind bid principal programme trade comprising 55 FTSE 100 securities. The value of the trade was approximately £65 million. The identity of the component securities of the programme trade and whether the trade was a buy or sell was not disclosed to the firms who were invited to bid.

More detailed information was provided in respect of seven stocks which were intended to be substantial components of the programme. This included the percentage of average daily volume, the multiple of normal market size and the value of that security within the portfolio. The firm correctly identified the seven component securities of the programme trade from the information provided and determined that the customer was intending to buy the portfolio.

Having decided to bid for the trade, the programme trading desk dealt in the seven stocks in order to hedge against the risk to which the firm would be exposed if it won the order. One of the seven component securities was Daily Mail. The firm commenced trading in all seven of the component securities at 11.41. It then provided two quotations (a buy and a sell price) to the customer at 11.43. The programme trade was awarded to the firm at approximately 11.59 and it was informed that the customer was a buyer. It was agreed that the strike time would be 12.02:15. The firm continued to trade the seven of the component securities of the programme trade until just after the strike time.

In the twenty-minute period between the commencement of trading and the strike time, the firm represented 93.52% of the total purchases in Daily Mail and the price of the stock rose by 9.99%. During the same period, the price of the remaining six stocks increased between 1.12% and 3.81%. It was at these increased prices that the programme trade was struck. The customer paid more than it would otherwise have done due to the firm's trading in the seven component securities.

6. **Guarantees and Indemnities.**

6.1 **Introduction.**

A number of cases involve the provision of indemnities or guarantees against loss by firms to clients or counterparties. This activity has also been deployed to facilitate third party involvement in manipulative trading. In one case it led to significant firm losses which were concealed until the losses became unsustainable and the firm failed.

Case Studies: Guarantees and Indemnities.

Japan 1992. Yamaichi – Tobashi.

Tobashi is a practice whereby investment firms sell or otherwise take loss-bearing investments off the books of a client company at their near-cost valuation to avoid disclosure of investment losses in clients' financial statements. The scheme often makes use of off-balance sheet financing or Special Purpose Vehicles with non-coterminous accounting periods. Assets and liabilities are transferred at fictitious valuations in the hope that losses are deferred until the market recovers.

According to reports, in January 1992, Yamaichi Securities executives used such a scheme. They established a subsidiary company called Yamaichi Enterprise which opened an account at the Tokyo branch of an international bank. Depositing ¥200 billion in Japanese government bonds, the Yamaichi subsidiary then used dummy companies to generate profits for clients while absorbing losses of ¥158.3 billion. A separate scheme using foreign currency bonds resulted in losses of ¥106.5 billion being hidden in a subsidiary of Yamaichi.

US 1994. United States v. Minuse.

Norman W. Minuse and Joseph E. Pelletier, under the name of N. W. Minuse & Company, traded Tastyest Class A stock on the New York Curb Exchange. In 1935, they obtained an option on 73,000 shares of the stock and then used "wash sales", "matched sales" and "dummy accounts" to manipulate and inflate the price of the stock above the option price. Wash and matched trades were undertaken between "dummy accounts" which comprised persons operating at the direction of Minuse and Pelletier. The dummy accounts of friends and associates were induced to participate in the scheme by means of guarantees against loss and rebates or discounts on the purchase price of the stock.

US 1967. A.T. Brod & Co v. Perlow.

The plaintiff alleged that A.T. Brod & Co. purchased securities on the New York Stock Exchange with the intent of paying for the securities only if their market value had increased by the date payment was due, and that Brod refused to pay for the securities when the price declined.

US 1985. Rooney Pace Inc. v. Reid.

Rooney Pace, a brokerage house, alleged that Thomas W. Reid ("Reid"), Armond Zaccaria ("Zaccaria"), and Jerry Phillips ("Phillips"), engaged in a conspiracy to manipulate the market for securities of Threshold Technology, Inc. and First City Properties, Inc. ("FCP").

It was alleged that Phillips acted in concert with Reid and Zaccaria in coordinating investments for the purpose of inducing others to purchase or sell, creating an "artificial market" for the stock. As part of the conspiracy, Phillips ordered Threshold stock not intending to pay for it unless the trading price rose and upon his refusal to pay, Rooney Pace liquidated his account at a loss. On the same day, Phillips placed an order with Rooney Pace for the purchase of 3500 shares of Threshold and Zaccaria also opened an account at the New York offices of Rooney Pace, ordered 10,000 shares of Threshold, and subsequently failed to pay.

Closing and Reference Prices.

A closing price is a reference price – it is a price against which positions are valued and can determine derivative strike prices etc. There are other forms of reference prices. These include exchange delivery settlement prices for financial and commodity derivatives and financial and commodity reference prices against which valuations and cashflows are determined (such as Libor, the LBMA gold fixing, etc.).

1. Marking (or “Banging”) the Close.

Marking (or “Banging”) the close involves deliberately buying or selling securities and/or derivatives contracts at the close of the market to alter the closing price of the security or derivatives contract or index value. This practice may take place on any individual trading day but is particularly associated with dates such as future/option expiry dates or quarterly/annual portfolio or index reference or valuation points. The strategy can be achieved with straight one-way (buy or sell) orders, by using wash or matched trades or three-cornered trades. Multi-party Pool operations have as their objective the generation of progressive price increases to induce third party investment. This activity will focus to a significant extent on closing prices.

2. Cluster.

2.1 Case Studies: Commodities.

CFTC 2012. Optiver.

Optiver traded a large volume of Crude Oil, Heating Oil, and New York Harbor Gasoline futures contracts to manipulate the settlement price for these contracts. Optiver’s trading was conducted on the Globex electronic trading platform. Globex operates on a “first in, first out” system. Bids and offers quoted at the same price were executed based on the order in which they were entered into the system. To ensure that its orders were first in the queue, Optiver designed a software program referred to as the “Hammer,” which was created to rapidly enter a series of orders into Globex.

CFTC 2013. Daniel Shak and SHK Management, LLC.

Daniel Shak and SHK Management (“SHK”) attempted to manipulate the price of Light Sweet Crude Oil (“WTI”) futures contracts on the New York Mercantile Exchange. SHK established substantial net short positions in WTI futures contracts through Trading at Settlement (“TAS”), an exchange rule which permits the parties to a futures trade to agree that the price of the trade will be that day’s settlement price – or the settlement price plus or minus a specified differential. The CFTC found that SHK traded a significant volume of futures contracts in the opposite direction, building a long position before and during the two-minute window of the closing or settlement period in an effort to influence the price of WTI futures contracts. The settlement price of WTI futures contracts, including the TAS WTI futures contracts, is determined by the volume-weighted average price of trades executed during the close. According to the CFTC, SHK used this trading strategy to drive the settlement price of the WTI futures contract higher than the average cost of the long position that SHK established before the start of trading during close.

2.2 Case Studies: Equity Markets.

SEC 2014. Athena Capital Research.

Athena was a high-frequency trading firm that, according to the SEC, developed a complex computer program to carry out a manipulative scheme that consisted of marking the closing price of publicly-traded securities. Athena allegedly developed a series of algorithms called “Gravy”, which assisted Athena in making large purchases or sales of stocks in the first few seconds before market close in order to drive closing prices slightly higher or lower.

US 2005. Black v. Finantra Capital.

Robert Press and David Horlington, acting on behalf of Finantra Capital Inc., personally solicited Herbert Black to make a private purchase of restricted shares from Finantra. Black subsequently discovered that Finantra was engaged in a scheme to manipulate its stock price. Witnesses testified that the scheme involved Finantra (and affiliates and insiders) selling unregistered Finantra shares at below-market prices and then using the proceeds to purchase Finantra stock on the market at higher prices, essentially dissipating Finantra's capital in order to buy back its own stock at an inflated price. Witnesses also testified that the broker executing Finantra's buybacks was “marking the close” by making purchases at the end of the day.

US 2005. SEC v. Competitive Technologies Inc.

The SEC alleged that between July 1998 and June 2001, CTT, its CEO and others participated in a scheme to artificially raise and maintain the price of CTT's stock. According to the SEC, the defendants placed buy orders at or near the close of the market in order to inflate the reported closing price (i.e. “marking the close”), placed successive buy orders in small amounts at increasing prices (i.e. “painting the tape”) and using accounts they controlled or serviced, placed pre-arranged buy and sell orders in identical amounts (“matched trades”) and placed other buy orders intended to minimize the negative impact on CTT's price from sales of the stock (i.e. “pegging”). The SEC also alleged that the defendants used CTT's own stock purchase plan to offset selling pressure, place late-day orders, and maintain the stock price.

2.3 Case Study: Customer Instructions.

FSA 2003. Ackers.

Three bank traders followed customer instructions to ramp the close in four stocks. Instructions were relayed through a US sales trader. In one stock the traders ramped the close and delayed the trade reporting of an agency cross to guarantee that the last reported trade would be artificially high. Proprietary orders were used to support the scheme. The trades in question constituted 90% of the transactions undertaken in the last 10 minutes of trading.

Ackers breached the three-minute reporting rules of the London Stock Exchange by delaying the reporting of an agency cross during the post close agency period in order to guarantee that the last trade reported at 17:15:00 was priced at an artificially high price.

3. Case Study: Reference Prices.

FSA 2010. Andrew Kerr.

Andrew Kerr, on the instruction of a client ("Client A") manipulated the market in London International Financial Futures and Options Exchange, ("LIFFE") coffee futures and coffee futures options.

Kerr's client (Client A – a proprietary trader) held positions in LIFFE traded September 2007 Robusta coffee futures and September 2007 coffee futures options ("coffee options") with a strike price of \$1,750. Client A held a large position (2,000 contracts) in the September \$1,750 coffee put options ("coffee put options").

The coffee options reference price ("CORP") was calculated by reference to the volume weighted average price ("VWAP") of coffee futures trading between 12:29 and 12:30 on the third Wednesday of the preceding month. In the minute prior to 12:29 on 15 August 2007, coffee futures had been trading at \$1,745 and the VWAP was below \$1,750. Accordingly, it appeared that Client A's coffee put options would expire ITM.

Shortly before 12:29, and following a plan developed during a series of telephone conversations between Kerr and Client A, which commenced on 14 August 2007, Client A instructed Kerr to time a 600 lot coffee futures buy order to be entered seconds before 12:30. Client A made it clear to Kerr that the order must be executed prior to 12:30 and that his intent in placing the order was to manipulate the coffee futures price so that the CORP would close above \$1,750 and the put options would expire OTM. Kerr executed the order and the price of coffee futures rose to \$1,757 at 12:30 and the CORP was set at \$1,752.

4. Derivative Behaviours – Protecting and Pushing Barriers.

As noted, closing and reference price manipulation has been undertaken to push or protect barriers.

Case Studies: Pushing/Protecting Barriers.

US 1938. **In the Matter of White.** An illiquid stock was manipulated upward to profit on an options contract.

- FSA 2002. **Fleurose.** Fleurose engaged in Index manipulation to avoid a binary option strike.
- FSA 2011. **Goenka.** Goenka ramped closing price of reliance GDRs to avoid strike on existing three stock basket structured product.
- FSA 2014. **Plunkett.** Plunkett entered gold fixing orders to depress the gold fixing level against a digital option position.
- HK 2016. **Ong.** Ong sold holdings in Korean stocks at the close which caused the KOSPI 200 Index to fall 2.79% in order to benefit an options position.

5. **Technology.**

Closing and Reference Price Manipulation has been undertaken on technological trading platforms.

Case Studies: Technology.

CFTC 2012. Optiver.

Optiver traded a large volume of Crude Oil, Heating Oil, and New York Harbor Gasoline futures contracts to manipulate the settlement price for these contracts. Optiver's trading was conducted on the Globex electronic trading platform. Globex operates on a "first in, first out" system. Bids and offers quoted at the same price were executed based on the order in which they were entered into the system. To ensure that its orders were first in the queue, Optiver designed a software program referred to as the "Hammer," which was created to rapidly enter a series of orders into Globex.

SEC 2014. Athena Capital Research.

Athena was a high-frequency trading firm that, according to the SEC, developed a complex computer program to carry out a manipulative scheme that consisted of marking the close price of publicly-traded securities. Athena allegedly developed a series of algorithms called "Gravy", which assisted Athena in making large purchases or sales of stocks in the first few seconds before market close in order to drive closing prices slightly higher or lower.

Athena's trading focused on trading in order imbalances in securities at the close of the trading day. Imbalances occurred when there were more orders to buy shares than to sell shares (or vice versa) at the close for any given stock. Every day at the close of trading, NASDAQ ran a closing auction to fill all on-close orders at the best price, one that is not too distant from the price of the stock just before the close. Athena placed orders to fill imbalances in securities at the close of trading, and then traded or "accumulated" shares on the continuous market on the opposite side of its order with the goal of holding no positions by the close. According to the SEC, Athena used these strategies to help generate profits, and, with help from its Gravy algorithms, refined a method to manipulate the process used to set closing prices.

Squeezes and Corners.

A corner arises where a party attempts to achieve a dominant controlling position in a commodity, security and/or related derivatives to influence the price of the commodity, security or related derivatives and profit from that activity. This can be undertaken to drive prices or to support them.

A squeeze arises where a party does not seek dominance but attempts to gain control of sufficient amounts of a commodity or security to impact prices.

“...a “squeeze” has been defined as a type of manipulation, generally occurring when the long holder does not have direct control over the cash crop, as in a “corner”. A prototypical squeeze occurs when a trader attains a dominant position and can force shorts facing an inadequate cash supply to cover their positions at unfair prices. The shorts are “squeezed” into settling their holdings with the dominant long at above market prices as the delivery date approaches.”

Frey v. CFTC (1991).

1. Commodities.

There is a long history of corners and squeezes in the Commodities markets. Commodities markets which have suffered corners and squeezes include Rye (1868), Gold (1869), Oil (1868), Oats (1872), Rubber (1879), Wheat (1886), Coffee (1887 – 1888), Cotton (1888), Pork (1897) and Ice (1900). Twentieth Century cases include Wool (1940), Soybeans (1941), Silver (1947), Butter (1947), Eggs (1947), Oats (1951), Onions (1952 – 1954), Potatoes (1955), Cattle (1979), Copper (1996) and Cocoa (2010).

Case Studies: Commodities.

US 1963. Soybean Oil.

In what is known as the Great Salad Oil Swindle, Anthony DeAngelis, owner of the Allied Crude Vegetable Oil Refining Corp., created false warehouse receipts for non-existent soybean oil (through a variety of methods including filling storage tanks with water and covering the water with a thin layer of soybean oil on top) and used those receipts as loan collateral to finance heavy trading of soybeans, soybean oil, and cottonseed oil futures (including a 1962 attempt to corner the soybean market). The scandal caused 16 firms (including two Wall Street brokerage houses) to go bankrupt and led to calls for increased regulation of the commodity futures markets.

US 1955. Onions. Vincent Kosuga and Sam Siegel.

In 1955, two onion traders, Sam Siegel and Vincent Kosuga, cornered the onion futures market on the Chicago Mercantile Exchange.

The complaint alleged that, in the autumn of 1955, Siegel and Kosuga attempted to manipulate upward prices of the onion future on the exchange and cash onions, and that in the winter of 1956, they manipulated downward prices of onion futures and cash onions. In order to put upwards pressure on the price of onion futures, they bought sufficient physicals and futures to control 98% of the available onions in Chicago and then entered into agreements with onion growers pursuant to which the growers would purchase and take title of car-lots of onions and merchandise them in regular channels of trade. They agreed that they would make no deliveries of onions on any exchange for the balance of the onion season. The purpose of this agreement was to remove potential deliveries of onions to the Chicago Mercantile Exchange, thereby increasing or preventing a decrease in the prices of futures and of cash onions.

In order to manipulate the price of onion futures downward, Siegel and Kosuga developed a dominant short position in onion futures, maintained that position during the weeks just prior to the beginning of the delivery period while other shorts were covering, carried a large short interest into the delivery month, maintained a complete monopoly of cash supplies and made deliveries as soon as the delivery period opened.

CFTC. 1998. Sumitomo Corporation.

As part of a settlement with Sumitomo Corporation, the CFTC stated that Sumitomo Corporation of Japan engaged in a scheme to manipulate the price of copper through actions taken on the London Metals Exchange ("LME"). Sumitomo, acting through its agents, established and maintained large and dominant futures positions in copper on the LME. Sumitomo engaged a copper trader who in turn entered into a series of agreements with a U.S. copper merchant, whereby Sumitomo agreed to purchase copper from the U.S. merchant on a monthly basis for a period of three years. The CFTC further stated that starting in February 1994, Sumitomo's copper trader and the U.S. copper merchant began communicating about ways they could act in concert through market operations to cause copper prices to increase, that the parties established several trading accounts at various brokerage firms and Sumitomo's copper trader authorised the U.S. merchant to effect LME future trades and other copper business on Sumitomo's behalf by forging the signatures of his superiors on documentation and giving the U.S. merchant power of attorney over the brokerage accounts. The settlement order further stated that in 1995, the parties executed a scheme to artificially inflate copper prices, which entailed purchasing all stocks of deliverable copper in the LME warehouses. Sumitomo's copper trader authorised the acquisitions of LME warehouse stocks so that Sumitomo and the U.S. merchant together controlled up to 100% of LME stocks along with a large LME futures position and that once copper prices increased sharply, the parties began to profit from the price inflation through a combination of sales of their positions and lending forward.

CFTC 2011. Parnon Energy Inc., Arcadia Petroleum Ltd., Arcadia Energy (Suisse) SA, et al.

The CFTC alleged that, from 2007 through 2008, a common enterprise of crude oil speculators (“Arcadia”) manipulated and attempted to manipulate the contract prices of the New York Mercantile Exchange (“NYMEX”) West Text Intermediate (“WTI”). According to the CFTC complaint, Arcadia took advantage of a tight physical market, executed a manipulative trading strategy designed to affect NYMEX crude oil futures contract spreads by building a dominant controlling position in physical WTI crude oil deliverable at Cushing, Oklahoma under the NYMEX futures contract; holding the physical position until after futures expiry with the intent to affect NYMEX crude oil spreads and selling off the physical position in a concentrated fashion during the cash window at a loss. The complaint further alleged that Arcadia sought to generate profits by buying WTI futures spreads prior to widening the spreads through their manipulation and selling WTI futures spreads prior to selling their physical WTI crude oil position.

2. Case Studies: Securities.**US 1792. The Macomb and Duer Corner – the First T-Bond Issues.**

In December of 1791, William Duer, Alexander Macomb and others engaged in a manipulative scheme in connection with the Bank of the United States. Duer, Macomb and others borrowed large sums of money in an attempt to corner the markets in U.S. debt securities as well as the stocks of the Bank of the United States, with the goal of selling shares to European investors at a profit. When the Bank of the United States opened in December 1791, the price of U.S. debt securities increased. Duer and Macomb exhausted their credit, were unable to meet contracts for security purchases, and eventually suspended payment on their obligations. With Duer and his pool no longer able to buy shares in the Bank of the United States, the price of the stock began to fall precipitously in March 1792. Duer and Macomb were eventually imprisoned and the price of the Bank of the United States stock collapsed.

SEC 1994. Securities and Exchange Commission v. Mozer and Murphy.

The SEC alleged that Paul Mozer and Thomas Murphy, former managing directors at Salomon Brothers Inc., submitted false customer bids in auctions of U.S. Treasury securities, some of which were submitted in the names of customers without their knowledge or authorisation, but were actually on behalf of Salomon. The complaints alleged that these bids were made to circumvent the limitations imposed on the amount of securities any one person or entity may purchase in an auction.

Mozer and Murphy exceeded purchase caps (35%) on US Treasury Note auctions. They used client accounts to acquire bonds without authorisation. The objective was to create a squeeze in the auctioned issue. They submitted bids for four-year Notes in 1990 and five year Notes in 1991 using the names of persons who had not authorised the bids. Salomon then purchased the bonds from those accounts.

CFTC 1996. Fenchurch Capital Management.

According to the CFTC, in June 1993, Fenchurch committed to take delivery on a large long position in the June 1993 Ten-Year U.S. Treasury Note Futures contract (June contract) traded on the CBOT. The CFTC found that, during the last four business days of the delivery period and after the last trading day on the June contract, Fenchurch gained and maintained control and over a dominant portion of the available supply of the cheapest-to-deliver Treasury Notes on the June contract. The terms of the June contract allowed a range of Treasury Notes to be delivered, but typically one note becomes the cheapest-to-deliver and the price of the futures contract converges with the cash market value of the cheapest-to-deliver at expiration of trading on the contract. The CFTC concluded that Fenchurch increased its position in the cheapest-to-deliver note through a series of transactions in the repurchase market at a time when the Notes were in tight supply, which exacerbated tightness. As a result, shorts on the futures contracts were unable to obtain sufficient quantities of the notes and had to deliver a more valuable security.

FCA 2014. Stevenson.

Stevenson bought £331 million of the UKT 8.75% 2017 (the “Bond”), a UK government gilt, between 09:00 and 14:30 on 10 October 2011. The Bond was relatively illiquid and Stevenson’s purchases represented approximately 2,700% of the average daily volume traded for the Bond in the previous four months and 92% of volume purchased in the IDB market on 10 October 2011. The price and yield of the Bond significantly outperformed all gilts of similar maturity on 10 October 2011 as a direct result of Stevenson’s trading.

This trading took place on the first day of the second round of quantitative easing in the UK. During quantitative easing the Bank of England purchased certain gilts from GEMMs, injecting money into the economy. Offers for sale of eligible gilts to the Bank of England could be made by GEMMs between 14:15 and 14:45 on 10 October 2011. Stevenson offered to sell £850 million of the Bond to the Bank of England on 10 October, which included the £331 million acquired that day. Stevenson’s offer price to the Bank of England was based upon the prevailing market price for the Bond, which had been influenced upwards by his trading that day. The FCA concluded that Stevenson’s trading on 10 October 2011 was designed to move the price of the Bond in an attempt to sell it to the Bank of England at an abnormal and artificial level thereby increasing the potential profit made from the sale of the Bond.

Collusive Trading and Information Sharing.

The essence of collusive trading in the context of market abuse is joint activity by two or more persons in the pursuit of an abusive market strategy. As such, this activity differs from activities such as primary loan and bond market syndication which are recognised, transparent, undertaken for legitimate commercial purposes and subject to formal agreements.

1. Pre-arranged Trading.

Pre-arrangement usually describes circumstances in which two-parties “tee-up” a transaction between themselves, inter-alia, to avoid the exposure of an order to competitive market forces. Pre-arranged trades arise in circumstances in which Party A discloses a transaction to Party B in order that Party B can take the other side. One party has prior knowledge that an order will be entered and has a first mover advantage allowing them to take the other side of the trade before others have had the opportunity to respond.

2. Matched Orders.

Pre-arranged trades are sometimes referred to as matched orders. A matched order occurs when both buy and sell orders are entered at the same time, with the same price and quantity by different but colluding parties. These differ to circular trades in which bids and offers are placed by the same party.

Case Studies: Matched Orders.

CFTC 2014. FirstRand Bank Ltd.

FirstRand and another company (Company A) entered prearranged trades in CBOT corn and soybean futures contracts. Before these trades were entered, employees for FirstRand and Company A communicated by telephone and agreed on the contract, quantity, price, direction and timing of the trades. According to the CFTC, the prearranged trades negated market risk and price competition.

CFTC 2005. Armajaro and Corinth.

Armajaro Trading Limited (“armajaro”) and Warenhandels-gellschaft Corinth m.b.H (“Corinth”), prearranged two cocoa spread cross trades that were entered and executed on the Coffee, Sugar & Cocoa Exchange. Prior to the trades, employees at Armajaro and Corinth had telephone conversations with the broker who arranged the orders to be entered; they discussed the quantity and price of the orders that were to be executed. According to the CFTC, the prearranged buy and sell spread orders by Amajaro and Corinth ensured that the trades matching on the trading floor and negated market risk and price competition.

3. **Directed Trades.**

Directed trades are a form of pre-arranged trading where an actor agrees to direct an order or orders to a particular trader or broker, for example, in return for services or information. Compensation trading can be undertaken by way of directed trading (e.g., without a wash trade). Directed trades were used to compensate brokers for “favours” in the Libor matter.

Case Studies: Directed Trades.

US 1976. United States v. Corr.

Corr and brokers at three brokerage firms manipulated the sale and purchase of the stock of Jerome Mackey's Judo, Inc. (“Judo”) from June 1971 to June 1973. Judo stock was purchased and sold through various brokerage firms at Corr's direction or with his knowledge and assistance, and in various accounts at brokerage firms without the authority of those in whose names the accounts were opened. Corr kept in constant contact with each of the brokers who were encouraged to solicit purchases of Judo stock and was informed by each of them as to their positions in the stock and the names of all buyers and sellers. Corr “directed orders” to and from each of these brokers and advised them when and where to buy and sell Judo stock. Corr directed the two principal market makers in Judo stock to maintain the high bid on Judo stock.

FCA 2014. RP Martin – Quote from Final Notice.

*“For example, on 18 September 2008 Trader A explained to Broker A: “if you keep 6s [i.e. the six-month JPY LIBOR rate] unchanged today... will ****ing do one humongous deal with you...Like a 50,000 buck deal, whatever...I need you to keep it as low as possible...if you do that.... I’ll pay you, you know, 50,000 dollars, 100,000 dollars...whatever you want... I’m a man of my word”.”*

Information Sharing.

4. **Front Running.**

The practice of front running can be undertaken by a single individual, as described in the Front Running section of this document. The disclosure of information by one party can also facilitate manipulative or other adverse behaviours by another actor. A number of cases indicate actors disclosing firm or client pending order or market strategy information to third parties for the purposes of facilitating front running by the third parties.

Case Studies: Front Running.

FCA 2004. Brandeis.

Client order information was passed to internal proprietary traders and to other clients. This enabled front running by firm proprietary traders and by third parties.

2013. R v. Paul Milsom.

Milsom, an equities dealer, disclosed inside information relating to his employer's pending transactions which was used by his accomplices to place spread bets.

CFTC 1998. Kelly and Rhee.

Thomas Kelly, a commodities trader for John W. Henry & Company, disclosed information as to his employer's confidential trading activity and strategy in gold futures to Andrew Rhee, who owned his own trading company. Rhee then traded on this confidential information generating personal profits.

FCA 2012. Sidhu.

Between 15 May 2009 and 22 August 2009, Rupinder Sidhu was jointly involved with Anjam Ahmad, a hedge fund trader and risk manager with AKO Capital LLP (AKO). In his role as a trader at AKO, Ahmad knew about forthcoming equity transactions by AKO. Ahmad would tip off Rupinder Sidhu as to what shares AKO would buy and sell on a particular day. Ahmad would "hold back" on making trades enabling Sidhu to place spread bets to front run AKO's orders.

5. Withholding.

Disclosure that an individual is not taking action can, depending upon the circumstances, be collusive. This is apparent in the case of "Withholding". Agreeing not to trade can be collusive and market abusive.

Case Studies: Withholding.**US 1939. Otis & Co v. Securities and Exchange Commission 1939.**

Otis & Co. was primarily engaged in underwriting and dealing securities. It acquired large blocks of securities from issuers and holders and distributed them to its customers. Daley, the president of Otis and Co., became interested in stock of Murray-Ohio Company after a conversation with a director of the company. Otis & Co. had previously assisted Murray-Ohio and received its financial reports for several years. Based on these reports, Daley believed Murray-Ohio's stock was undervalued and that the stock's selling price would increase to reflect the company's economic condition. Daley undertook to acquire 10,000 shares of the company's stock and induced five stockholders to sell 4,918 shares at the exchange price. Otis also entered into withhold agreements with various shareholders of Murray-Ohio by which the shareholders agreed not to sell their shares for a sixty-day period. After Otis bought shares of Murray-Ohio and secured withholding agreements, it proceeded to distribute the shares over-the-counter, recommending the securities to its customers. In its recommendations, Otis did not disclose either the withholding agreements or its purchasing activities. The SEC alleged that Otis, in its over-the-counter sales, failed to disclose material facts necessary to prevent the representations from being misleading.

FX. DOJ Press Release May 20, 2015.

As part of an agreement to plead guilty, the DOJ stated that a group of traders manipulated the euro-dollar exchange rate by, among other things, agreeing to withhold bids or offers for euros or dollars.

“By agreeing not to buy or sell at certain times, the traders protected each other’s trading positions by withholding supply of or demand for currency and suppressing competition in the market.”

DOJ Press Release May 20, 2015.

6. Client Order Information.

FX Examples: Information Disclosure. The FX notices and settlement documents indicated that traders disclosed client order and other information. The disclosure of such information provided the recipient with an information advantage over the market at large. Traders disclosed:

- (i) Pending Client Orders. This gave recipients an advantage in assessing supply and demand and potential price impact and range. This could also facilitate “Third Party Front Running” – the recipient could front run the pending orders.
- (ii) Fixing Orders – Net Positions. Traders disclosed net positions for execution at the fix to other traders as part of collusive trading activity designed to manipulate the fix.
- (iii) Limit and Stop Loss Orders. Traders disclosed client limit and stop orders and colluded to trigger limits and stops. Limits and stops (“barriers”) frame the market – they provide support and resistance points and as such can constitute important market information. Information relating to the timing of triggers can benefit a third party who can pre-position and benefit from resulting impact or momentum.
- (iv) Onward Disclosure. Confidential information imparted to one party generated the risk that it was then passed on to others in chains of confidentiality breaches.

7. Case Study: Technology.**SEC 2015. ITG Inc. and AlterNet Securities (affiliates).**

The SEC alleged that ITG Inc. operated an alternative trading system, commonly referred to as a dark pool, known as POSIT. AlterNet, an affiliate of ITG, provided trading algorithms and smart order routers that sent orders to various market centers including POSIT.

According to the SEC, between April and July 2011, ITG operated a proprietary trading desk known as “Project Omega.” Project Omega accessed live feeds of ITG customer and POSIT subscriber order and execution information and traded algorithmically based on that confidential information in both POSIT and other market centers. The SEC claimed that as part of one of its trading strategies, Project Omega identified and traded with sell-side POSIT subscribers and ensured that those subscribers’ orders were configured in POSIT to trade “aggressively” so as to benefit Project Omega.

Insider Dealing.

The offence of insider dealing is well documented in the UK and internationally. Despite this history, and the success of the Authorities in bringing enforcement actions, insider dealing remains a persistent offence. The majority of cases concern equity markets but the source materials indicate a number of FICC market cases. Soundings have been a key issue for corporate bond markets.

Clusters under this heading include insider dealing by lone market employees, by corporate insiders and corporate advisors and by collusive groups. Corporate bond market cases focus upon two key risk areas: soundings relating to pending new issues and buy backs.

1. Cluster.

There are a number of patterns evident in the insider dealing cluster. It is of note that whilst direct participants in financial markets (e.g., bankers, brokers, fund managers etc.) are evident, a significant number of cases involve persons who are not. This cluster also includes corporate employees and officers, corporate advisors and consultants, auditors and accountants, technologists, medical professionals (e.g., with knowledge of the results of drug trials), legal advisers and groups tipped by corporate insiders (including amateur golfers (see SEC Press Release 2014-134), spouses (SEC Press release 2014 – 61), a film producer, his relatives and friends (SEC Press Release 2012 – 86) and investor relations professionals (SEC Press Release 2014 – 175)).

Common patterns are:

- (i) Insider Dealing – Market Participant.
- (ii) Insider Dealing – Corporate.
 - Corporate Insiders.
 - Corporate Advisors.
- (iii) Insider Dealing – Relationship Groups.
- (iv) Insider – Collusive Groups.
- (v) Information Disclosure.
 - Research cases.
 - Soundings (relating to new issues and bond buy backs).

2. Case Studies: Insider Dealing – Market Participant.

UK 2007. R v. Asif Butt.

Asif Butt was a bank compliance officer with access to inside information from the bank's Control Room. He passed information to an associate who executed insider deals using spread bets.

FCA 2010. Calvert.

Calvert was an insider with access to non-public information relating to M&A activity. He disclosed information to an associate (his bookmaker, Hatcher) who executed insider deals. Calvert used an unknown insider at his former employer to obtain information about a number of proposed mergers and takeovers between 2003 and 2005. He then passed the details to Hatcher who bought shares in three companies. The two men split the profit from the illegal deals, with Calvert getting two-thirds of the money.

Reference Cases.

SFA 1999. Dootson & Sharples.

FCA 2011. Massey.

SEC 2014. Eydelman.

3. Insider Dealing – Corporate Insiders and Corporate Advisors.**4.1 Case Studies: Corporate Insiders.****FCA 2004. Middlemiss. Company Secretary.**

Middlemiss was Company Secretary to Profile Media Group (“PMG”) which was listed on the UK Alternative Investment Market. Middlemiss was made aware by management colleagues in the PMG Head Office of a material fall in the revenues of a significant subsidiary and of the need for urgent reforecasting for other PMG subsidiaries. He was made aware that this would be publicly announced. Middlemiss sold his holdings in PMG prior to this announcement.

FCA 2004. Davies. Finance Department.

Davies worked in the Finance Department of Berkeley Morgan Group (“BMG”) as Group Financial Controller reporting directly to the Finance Director. Davies knew that the exceptional items contained in BMG's accounts in the previous financial year (2002/2003) which had had an adverse effect on BMG's profits would not be recurring. He also knew that BMG's interim results were favourable and that these results demonstrated that the company had returned to profitability, and that this would be announced in the interim results. Davies bought shares with the intention to benefit from the price rise in BMG shares which he considered was likely to occur upon the announcement of the company's favourable interim results the next day. Following the announcement BMG stock rose 29%. On the following day, Davies sold the shares.

FCA 2005. Malins. Finance Director.

Malins was a founding member and the Finance Director of Cambrian Mining at the material time. Malins chaired a Board meeting held to discuss a placing of shares. Malins then purchased 50,000 ordinary shares in Cambrian ahead of the announcement concerning the placing on the same day. In addition, Malins purchased a further 20,000 shares in Cambrian a week later ahead of an interim results announcement on the same day.

Reference Cases.

FCA 2006. Parker. Company Credit Risk and Treasury Manager.
FCA 2008. Ralph. Company Executive Chairman.
FCA 2009. Clifton. Company Non-Executive Director.
FCA 2010. Sepil. Company CEO.
FCA 2015. Coyle. Group Treasurer and Head of Tax.
FCA 2015. Wilmott. Company Group Reporting and Financial Planning Manager.
SEC 2013. Marchand. Board assistant to a CEO.
SEC 2013. Wang. President of Global Business Operations.

4.2 Case Studies: Corporate Advisors.

FCA 2004. Bracken. PR Consultant.

Bracken was a PR and Communications consultant to Whitehead Mann. He sold shares short twice: once ahead of a negative company announcement and again just before the announcement of the company's interim results.

FCA 2005. Arif Mohammed. Auditor.

Mohammed was an auditor working for an international audit firm. He bought shares in Delta plc ("Delta"), a London Stock Exchange listed electrical and engineering services company, based on his knowledge that the company intended to sell its electrical division. Mohammed knew this information because Delta's electrical division was an audit client of his firm and he worked on the company's audit. He was told that this information was confidential. He was aware that the sale process was ongoing and was getting close to agreement. Based on this information, he purchased shares in Delta. Delta announced the disposal on 9 December 2002 and Mohammed sold his shares the following day.

SEC 2017. Hedayati. Auditor.

According to the SEC, Nima Hedayati, a junior auditor, learned through his work that Lam Research Corporation was preparing to acquire KLA-Tencor Corporation ("KLA"). Soon after learning this confidential information, Hedayati purchased out-of-the money call options on KLA common stock in his brokerage account and in his fiancée's brokerage account. He also advised his mother to trade KLA common stock, which she did. After the merger was publicly announced, KLA's stock price increased nearly 20% and Hedayati and his mother profited from their KLA trades.

5. Case Studies: Relationship Cases.

FCA 2009. Uberoi and Uberoi. Father and Son.

During the summer of 2006, Matthew Uberoi was an intern at a corporate broking firm working on takeovers and other price sensitive transactions. He passed inside information to his father, Neel Uberoi, in relation to three transactions. His father then purchased shares in those companies and made substantial profits.

FCA 2010. Burley and Burley. Father and Son.

Jeremy Burley ("JB") was the Managing Director of BMS Minerals Limited ("BMS"), a Ugandan company which provided vehicles and equipment for oil and gas exploration companies in Uganda including Tower Resources Plc ("Tower Resources"). Tower Resources was incorporated in the UK with shares quoted on the Alternative Investment Market of the London Stock Exchange. On or around 11 June 2009, JB acquired inside information concerning the results of an exploration of Tower Resources' first oil well in Uganda, namely that the drilling looked unlikely to produce oil and that the exploration of a second well was therefore unlikely to proceed. Prior to a public announcement on 15 June 2009 by Tower Resources of this negative news, JB passed the inside information to his father, Jeffery Burley and another individual and instructed Jeffery Burley to sell JB's 790,000 shares in Tower Resources.

FCA 2009. McQuoid/Melbourne.

McQuoid was the general counsel of TTP Communications. Melbourne was his father in law. McQuoid passed inside information to his father who bought TTP shares.

FCA 2012. Littlewood & Littlewood. Insider dealing by a Banker and his Wife.

Christian Littlewood, a senior investment banker, and his wife Angie Littlewood, pleaded guilty to eight counts of insider dealing in a number of different London Stock Exchange and AIM listed shares between 2000 and 2008.

FCA 2012. Ammann, Weckwerth and Mang.

Thomas Ammann, an investment banker, was advising on a corporate acquisition and had access to inside information relating to the takeover. Rather than dealing in his own name, Ammann encouraged two others, Christina Weckwerth and Jessica Mang, to buy shares in the target company prior to the acquisition being announced. Following the announcement of the acquisition, Weckwerth and Mang sold their shares for a profit which they then shared with Ammann.

6. Case Study: Collusive Groups.

FCA/SEC 2011. Sanders and Sanders & Swallow.

A dealing ring was formed between James Sanders, a director of Blue Index (a specialist Contract for Difference brokerage), his wife Miranda, James Swallow (a former employee at Blue Index) and Arnold and Annabel McClellan. Arnold McClellan was a senior partner in a US accounting firm that was an insider to a number of mergers and acquisitions in US securities listed on the NYSE and NASDAQ exchanges. Miranda Saunders and Annabell McClellan were sisters.

Inside information was leaked by Arnold or Annabel McClellan and passed to James and Miranda Sanders who used the information to commit insider dealing in the relevant US securities between October 2006 and February 2008.

James Sanders also disclosed information to others including James Swallow, who used that information to commit insider dealing. In addition, James Sanders encouraged clients of Blue Index to trade in CFDs on the basis of the inside information. James Sanders created spread bets to cash in on the information for both himself and his clients.

7. Printers.

Print room employees have used information from confidential documents to trade based on inside information.

Case Study: Printers.

US 1980. Chiarella v. United States (1980).

Chiaraella was an employee at a financial printer, which was engaged by certain corporations to print corporate takeover bids. Through his employment, he obtained confidential information related to takeover bid documents, deduced the names of the target companies based on this information, purchased stock in the target companies, and sold his shares immediately after the takeover bids were made public.

Reference case: FCA 2012 - Saini, Mustafa, Shah & Ors.

Reference case: FCA 2013 - Joseph.

8. Information Disclosure.

8.1 Case Study: Research Cases.

FCA 2010. Chhabra/Patel.

Chhabra was a research analyst at Evolution Securities Limited ("Evolution") responsible for covering, inter alia, Ebookers plc ("Ebookers") and Eidos plc ("Eidos"). Evolution acted as corporate broker to both companies. Patel was a friend of Chhabra's and a prolific spread bettor. Three series of spread bets placed by Patel in the period May to July 2004, which referenced the shares of Ebookers or Eidos were made on the basis of information which had been disclosed to him by Chhabra.

Reference Cases.

SFA 1999. Reed and Murch.

FSA 2004. Smith and Hutchings.

8.2 Case Studies: Disclosure.

FCA 2012. Kyprios.

In November 2009, US telecommunications company Liberty Global, inc (“Liberty”), agreed to acquire Unitymedia GmbH (“Unitymedia”), a German cable television company. Liberty appointed a bank as lead book runner for a potential €2.5 billion bond issue, the proceeds of which were likely to be used to finance the acquisition and refinance outstanding debt. Prior to the announcement of the takeover and issue, Kyprios, who worked as Head of Credit Sales at the bank, signaled non-public information to two Fund Managers, against the express instructions of his employer and despite the fact that the Fund Managers asked not to be wall crossed. Kyprios disclosed that: (i) Unitymedia was potentially about to bring a big bond issue to market; (ii) the issue was intended to be announced the next day; (iii) the potential rating of the issue; (iv) the fact that Unitymedia would redeem outstanding bonds; and (v) the issue was M&A-related. The information was price sensitive to outstanding Unitymedia Floating Rate Notes.

FCA 2017. Christopher Niehaus.

On a number of occasions between 24 January 2016 and 16 May 2016, Niehaus shared client confidential information which he had received during the course of his employment with both a personal acquaintance and a client of his firm. Some of the confidential information disclosed to the client related to one of its competitors. The information was disclosed using an instant messaging application (WhatsApp), not for the purpose of it being used by the recipients, but because Niehaus wanted to impress them.

Reference Case: FCA 2012. Hannam.

8.3 Case Studies: Soundings.

FCA 2008. Harrison.

Harrison was a portfolio manager for a credit fund. On 28 September 2006, he was sounded and given inside information in respect of the refinancing of Rhodia SA (“Rhodia”) bonds. Later on the same day, Harrison instructed a colleague to buy up to 10 million Rhodia 10.50% Senior Notes due 2010 (“the 2010 Notes”) in the knowledge that there was to be an imminent refinancing by Rhodia which would involve their tendering for those bonds at a premium to the market price. In the event, he purchased 2 million of the 2010 Notes.

The 2010 Notes were purchased by the credit fund at EUR 118.75 for a total consideration of EUR 2,446,166.67. On Monday 2 October 2006, Rhodia announced that it had commenced a cash tender offer and consent solicitation for certain specified bonds including its 2010 Notes and that there would be concurrent issue of new floating rate notes to finance this. On 16 October, Rhodia announced the pricing of the tender offer: the 2010 Notes would be repurchased at the price of EUR 120.952. The credit fund accepted the tender for the bonds on 17 October 2006, resulting in a profit of approximately EUR 44,000.

FCA 2009. Morton and Parry.

Parry was a Vice President of an investment bank and part of the portfolio management team within the bank's Structured Investment Unit ("SCI") which managed the bank's Structured Investment Vehicle, ("SIV"). Morton was a director within and co-head of the SCI.

In 2007 an issuer provided a mandate to an investment bank to contact key investors to ascertain their appetite for a proposed new issue. The bank contacted the SIV and spoke with Morton. During a telephone call, Morton was told that a new issue would probably be announced the following Tuesday. Morton was informed that the investment bank had been given a mandate by the issuer to contact key investors to gauge appetite before the new issue was made public and that he should keep the information to himself and within his firm. Morton informed Parry. Following receipt of this information, Parry sought a bid for \$30 million of the issuer's existing FRNs and sold. At the same time, Morton informed the bank that the SIV would have an appetite for \$200 million of the new issue.

Later, the bank told Morton that the transaction might happen that day. Morton confirmed the SIV's order as firm for \$200 million of the new issue. Minutes after this conversation concluded, Parry sought a bid to sell a further \$35 million of the existing FRNs. Parry accepted a bid from a counterparty and sold \$35 million of the existing FRNs, which represented the remainder of this holding in the portfolio. The sales of a total of \$65 million of the existing FRNs were made at a time when Morton was in possession of the information regarding the potential new issue which was likely to have an impact on the market for the existing FRNs. The new issue was announced later that day and was priced and allocated on the following day. Shortly after the announcement of the new issue, both counterparties who had been sold the existing FRNs made complaints to the SIV stating that they would have bid a lower price had they known of the new issue and requested a reversal of the trades.

Spoofing and Layering.

Different sources and different jurisdictions use the terms “spoofing” and “layering” in different ways and sometimes interchangeably.

Spoofing is often characterised as the placing of orders with the intention to cancel those orders prior to them being filled. Layering is characterised as a specific form of spoofing where the actor enters multiple orders at different levels in order to create the illusion of market liquidity.

This document does not seek to distinguish or define terms. The case studies below maintain the language used by the relevant authority.

Case Studies: Spoofing and Layering.

FCA 2015. Swift Trade.

Swift Trade engaged in a form of manipulative trading activity known as “layering”. This caused a succession of small price movements in a wide range of shares on the London Stock Exchange (“the LSE”) from which Swift Trade was able to profit. The trading activity involved tens of thousands of orders, was repeated on many occasions and was conducted in many different shares.

Layering involves entering relatively large orders on one side of the order book which has the effect of moving the price as the market adjusts to the fact that there has been an apparent shift in the balance of supply and demand. This is then followed by a trade on the opposite side of the order book which takes advantage of, and profits from, the price movement. This is in turn followed by a rapid deletion of the large orders which had been entered in order to cause the movement in price, and by a repetition of this behaviour in reverse on the other side of the order book.

Swift Trade placed the large orders in order to give a false and misleading impression of supply and demand. The large orders were not intended to be executed. They were placed close enough to the touch price (i.e. the best existing bid/offer) to give a false and misleading impression of supply and demand, but far enough away to minimise the risk that they would be executed. They were deleted in seconds in order to further minimise the risk that they would be executed. The trading activity caused many individual share prices to be positioned at an artificial level, from which Swift Trade profited directly.

Monetary Authority of Singapore 2017. Tey Thean Yang Dennis (Tey).

In 2012 and 2013, Tey transacted in CFDs which were offered by IG Asia and CMC Markets. Tey knew that the CFDs were generally priced on a real-time basis to the live prices of the underlying securities. Tey entered false orders in the underlying securities in order to temporarily change the prices of the securities and thereby the prices of the corresponding CFDs. He then executed CFD trades at prices which were beneficial to him but were detrimental to the two CFD providers. After executing the CFD trades, Tey removed the false orders for the underlying securities. Tey used different trading accounts to enter the false orders in the underlying securities and to execute the CFD trades.

CFTC 2011. Ecoval Dairy.

The CFTC found that, from September to October 2007, Ecoval attempted to manipulate the daily settlement prices of each of the Chicago Mercantile Exchange ("CME") Non-Fat Dry Milk ("NFD") monthly commodity futures contracts for December 2007 to July 2008. Ecoval executed various trading strategies on the electronic market trading platform, Globex, with the intent to "push" the prices of the NFD futures contracts higher so Ecoval could potentially establish a large short position at higher prices.

The NFD futures market was illiquid and thinly traded. Starting in September 2007, Ecoval formulated a strategy, documented in several emails, to try to "push" NFD futures contracts higher than existing market forces dictated so Ecoval could potentially establish large short positions in monthly NFD futures contracts at higher prices. Ecoval attempted to manipulate the NFD market by using various trading strategies, including executing trades by (1) "lifting" offers and then immediately bidding a higher price than just paid in the trade; (2) placing both bids and offers above prevailing market prices across multiple contract months in order to establish higher price ranges in the market; and (3) consistently placing bids above the opening price or the prevailing price across multiple contracts and bidding, and then quickly cancelling the bids, without the intent to have the bids filled.

Monetary Authority of Singapore 2013. Lee Wee Soon.

Lee entered five buy orders through his personal account for shares in Cosco Corporation (S) Ltd (Cosco), during the Singapore Exchange Pre-Open Phase. The buy orders were priced between \$3.38 and \$3.48, totaling 1.1 million shares, and represented 62.7% of all buy side volume at the 20 best bid prices for Cosco shares at the time. Concurrently, Lee also placed a sell order for 100,000 Cosco shares at \$3.35. Lee deleted the buy orders just before the opening price for Cosco shares was determined at 8:59 a.m. Lee admitted that he had no intention of fulfilling the buy orders but had entered them to create a favourable environment to fulfill his sell order at \$3.35.

CFTC 2017. In the Matter of Jonathan Brims 2017. In the Matter of Stephen Gola 2017.

The CFTC alleged that Brims and Gola engaged in a practice of "spoofing" (bidding or offering with the intent to cancel the bid or offer before execution) in U.S. Treasury futures markets.

According to the CFTC, the spoofing strategy involved placing bids or offers of 1,000 lots or more with the intent to cancel those orders before execution. The spoofing orders were placed in the U.S. Treasury futures markets after another smaller bid or offer was placed on the opposite side of the same or a correlated futures or cash market. The CFTC stated that this created the impression of greater buying or selling interest than would have existed absent the spoofing orders and was done to induce other market participants to fill the smaller resting orders on the opposite side of the market from his spoofing orders in advance of anticipated price changes. According to the CFTC, Brims and Gola cancelled the spoofing orders after either the smaller resting orders had been filled or he believed that the spoofing orders were at too great a risk of being executed.

In addition to executing the spoofing strategy individually, at times, the actors coordinated with one or more other traders on the U.S. Treasury desk to implement the spoofing strategy. According to the CFTC, in some of those instances, the actors would place one or more spoofing orders after another trader had placed one or more smaller resting orders in the same or a correlated futures or cash market. In other instances, another trader would place spoofing orders to benefit the smaller resting orders.

Reference Case.

CFTC 2013. Gelber Group, LLC. Spoofing the Open.

New Issue Support and Takeovers.

Misconduct surrounding new issues and takeovers has been evident historically. Specific activities differ and the case studies below illustrate a number of behaviours.

1. Case Studies: Offerings: New Issue Price Support.

SEC 1962. Wolf Inc.

The SEC found that in August 1961 Wolf, Inc. violated anti-fraud provisions in the offer and sale of stock of Chrislin Photo Industries, Inc. According to the order, Wolf, Inc. was underwriter for a proposed offering of 50,000 Chrislin shares at \$6 per share. However, no shares were to be sold at that price until after a market was established at a higher level. Immediately prior to sales at \$6 per share, there was trading activity in the over-the-counter market at prices ranging from \$17 to \$22.50 per share (in which one Michael C. Hellerman, a principal stockholder of Wolf, Inc. was the most active participant). A substantial number of shares were reserved for sale and sold at \$6 per share to persons related to or associated with the firm, and were immediately resold by them at higher prices. Prior to the completion of the public offering, the firm told investors that no shares were available at \$6 and induced them to purchase at prices ranging up to \$21 per share.

SEC 1965. Tager v. SEC.

In August 1960, Sidney Tager agreed to underwrite the sale of 68,000 shares of Diversified Capital Corporation. The shares were to sell at \$4 each, with Tager retaining 60 cents commission and an expense allowance of 20 cents for each share sold. After a short period of unsuccessful efforts by Tager to sell the stock, Diversified's president suggested that bid and asked that quotations by other brokers and dealers appear in the sheets published by the National Quotations Bureau. Tager approached Darius Incorporated and Englander & Co., Inc., and persuaded them to insert quotations in the sheets at prices set by Tager. Tager also promised that he would attempt to find buyers and sellers for Darius. From September to November 1960, one or both firms inserted bids and asks at certain prices. Two customers were recommended to Darius by Tager during this period. When Tager was advised by his attorney that his arrangement with Darius and Englander "was not right," he conveyed this information to the firms. Englander ceased entering prices for Diversified in the sheets on October 17, 1960; Darius ceased on November 14, 1960.

Shortly after terminating its price quotations for Diversified stock, Englander purchased 100 shares of Diversified from Darius, which had acquired them as a result of its bids. About a month later, Tager's wife, on Tager's suggestion, purchased these shares from Englander.

In December 1960 Tager withdrew as underwriter. As underwriter Tager sold 11,647 shares of Diversified to 81 investors, for a total of \$46,588, out of which he retained \$9,318. From September 15 through November 14, 1960, when quotations were being entered by Darius and Englander, Tager sold 7,062 shares to 48 investors, for a total of \$28,248, out of which he retained \$5,650. Tager admitted that he told some investors that there was a market in the stock during the period when Darius and Englander were placing quotations and that he never disclosed that a market was being made at his request. The Commission found that Tager had unlawfully stimulated the insertion of quotations which led to a false appearance of market activity in Diversified, which he was then underwriting and had failed to disclose this fact to his customers.

UK 1892. Scott v. Brown, Doering, McNab & Co.

Brown, Doering and McNab & Co. were brokers to the Steam Loop Company which had issued a prospectus inviting subscriptions for its share capital. They were instructed by promoters of the company, following encouragement by McNab, to purchase and trade in the shares across a number of accounts thereby increasing the observed demand for the stock.

3. Case Study: Underwriting Sticks.**SEC 1973. SEC v. Resch-Cassin & Co.**

Resch-Cassin & Co were underwriters to equity offering of 150,000 shares of Africa, a Delaware corporation. Under the terms of the offering, all 150,000 shares had to be sold within 60 days. The firm experienced difficulties in completing the distribution and arranged for a group of traders to support the offering by buying stock and trading between themselves. Resch-Cassin & Co, placed orders for its own account through the group and also undertook unauthorised trading on a client account.

4. Case Study: Block Trade**FCA 2006. Maslen.**

A bank undertook a block trade of some 63.7 million shares in Scania AB. The bank agreed to purchase the shares from a corporate holder and distribute them to institutional investors by an accelerated book build. Maslen was Head of European Cash Trading at the bank. A trader in the bank's equities trading division undertook proprietary trading in the shares in the secondary market for a period during the book build which was conducted through two external Swedish brokers at the request of Maslen, rather than the bank itself. This had an effect on the market price of the shares for a period while the book build was in progress moving the share price up by approximately 0.85% to within the marketing range for the block.

5. **Case Studies: M&A Activity.**

US 1969. Crane Co v. Westinghouse Air Brake Co.

Crane Company bid for Westinghouse Air Brake Co. Air Brake declined the offer and agreed to merge with American Standard Inc. Crane then made a tender offer for Air Brake shares. Crane alleged that American Standard had obstructed its tender offer by manipulating Air Brake stock prices above Crane's \$50 offer price. American Standard undertook a series of transactions in Air Brake on the final day of the tender offer to ramp the share price higher than Crane's \$50 offer price.

SEC 1988. SEC v. Zico Investment Holdings.

The SEC alleged that Zico Investments Holdings Inc. ("Zico") engaged in a scheme to manipulate the market price of Bancroft Convertible Fund, Inc. immediately prior to Zico's tender offer for majority control of Bancroft.

FSA 1992. SBC.

On 19 December 1994, Trafalgar House announced the terms of an offer for Northern Electric which was made on its behalf by its financial adviser, SBC. Prior to announcement of the offer, Trafalgar House entered into CFDs with SBC which were linked to the share prices of Northern Electric and certain other regional electricity companies. The CFDs did not involve Trafalgar House acquiring Northern Electric shares nor any rights to them but allowed Trafalgar to benefit from movements in the share price of Northern. SBC market makers acquired a stake of 8.2 per cent in the company, more than double the level required for hedging purposes.

Technology – Examples of Adaptation.

1. **Emerging Risks.**

- 1.1 **Adaptation.** There is evidence that behavioural clusters apparent in the non-screen-based markets also occur in screen-based markets. An important emerging risk is that behavioural clusters presently prevalent in screen-based markets (e.g., equities, FX) can migrate to other asset classes as these become platform traded. Most behavioural clusters are asset class neutral – they can be undertaken in any asset class.

2. **Clusters.** The following behavioural clusters are evident in technologically based markets.

Wash Trades.
Programme Trades.
Banging the Close.
Circular Trading.
Layering and Spoofing.
Fictitious trading to generate enhanced rebates.
Use of Algorithms to Front Run Dark Pools.
Cross Venue Manipulation.
Information Security and Inside Information.
Information Disclosure.
Execution Conflicts.

1.1 **Case Study: Wash Trades.**

CFTC 2013. In the Matter of Enskilda Futures Ltd.

The CFTC found that Enskilda Futures Limited, a registered future commission merchant, entered matching buy and sell orders on behalf of a hedge-fund client, which were executed through the Globex platform.

1.2 **Case Study: Programme Trades.**

FSA 2005. Citigroup Global Markets Limited.

Bank traders developed a trading strategy whereby a long cash bond, short futures position would be established; the futures position would then be closed leaving a long cash position. This cash position would then be closed using an algorithm which would capture all firm bids on the MTS trading platform (a European electronic intra-dealer trading system) within a specified price range almost simultaneously. Without the use of the algorithm, manual bids inputting of orders would otherwise be required with a potential to move the spread of firm bids. In executing this leg of the strategy, bonds were sold on MTS with 188 orders submitted in 18 seconds. This had the effect of causing a hiatus in quotes on the platform as some participants temporarily withdrew from the market.

1.3 Case Studies: Algorithms to Bang the Close.

SEC 2014. Athena Capital Research.

Athena was a high-frequency trading firm that, according to the SEC, developed a complex computer program to carry out a manipulative scheme that consisted of marking the closing price of publicly-traded securities. Athena allegedly developed a series of algorithms called “Gravy,” which assisted Athena in making large purchases or sales of stocks in the few seconds before market close in order to drive closing prices slightly higher or lower. Athena’s trading focused on trading in order imbalances in securities at the close of the trading day. Imbalances occurred when there were more orders to buy shares than to sell shares (or vice versa) at the close for any given stock. Every day at the close of trading, NASDAQ ran a closing auction to fill all on-close orders at the best price, one that is not too distant from the price of the stock just before the close. Athena placed orders to fill imbalances in securities at the close of trading, and then traded or “accumulated” shares on the continuous market on the opposite side of its order with the goal of holding no positions by close. According to the SEC, Athena used these strategies to help generate profits, and, with help from its Gravy algorithms, refined a method to manipulate the process used to set closing prices.

The firm implemented additional algorithms known as “Collars” to ensure that Athena’s orders received priority over other orders when trading imbalances.

CFTC 2012. Optiver.

Optiver traded a large volume of Crude Oil, Heating Oil, and New York Harbor Gasoline futures contracts to manipulate the settlement price for these contracts. Optiver’s trading was conducted on the Globex electronic trading platform. Globex operates on a “first in, first out” system. Bids and offers quoted at the same price were executed based on the order in which they were entered into the system. To ensure that its orders were first in the queue, Optiver designed a software program referred to as the “Hammer,” which was created to rapidly enter a series of orders into Globex.

1.4 Case Study: Circular Trading.

ASIC 2015. Heath.

Heath ramped prices to induce investor participation, traded with himself and entered spoof bids and offers. Heath traded in shares and contracts for difference (CFDs) in four resource companies through nine separate share trading and CFD trading accounts. Heath caused 30 simultaneous buy and sell transactions involving shares and CFDs relating to the resource companies which had the effect of artificially increasing the price for trading in those shares on the ASX. These trades, commonly referred to as 'matched trades', caused an increase to the price of shares traded on the ASX of between 3.1% and 6.9%.

1.5 Case Study: Layering and Spoofing.

FCA/SEC 2013. Coscia.

The U.S. government alleged that Michael Coscia was involved in spoofing and commodities fraud. Coscia allegedly commissioned and utilised a computer program designed to place small and large orders simultaneously on opposite sides of the commodities market in order to create illusory supply and demand and, consequently, to induce artificial market movement.

The charges against Coscia were based on his use of pre-programmed algorithms to execute commodities trades in high-frequency trading. According to trial testimony, Coscia's conduct followed a particular pattern. First, Coscia would begin by placing a small order requesting to trade at a price below the current market price. He then would place large-volume orders (i.e. "quote orders") on the other side of the market. The large orders were generally placed in increments that quickly approached the price of the small orders. This created an illusion of market movement, which allowed Coscia to execute trades at the artificial price his activity had created. Second, Coscia then utilized the same strategy on the opposite side of the order book to trade out of the position created in the first step. The Government also presented evidence of Coscia's intent to cancel the large orders prior to their execution.

Reference Cases.

PBOC 2014. China. A Chinese investor wrote an algorithm to spoof the JGB futures market.

FCA 2015. UK. Da Vinci.

CFTC 2016. Oystacher (S&P futures, Copper, Crude Oil, natural Gas, VIX).

1.6 Case Studies: Price Manipulation.

CFTC 2011. Ecoval Dairy.

The CFTC found that, from September to October 2007, Ecoval attempted to manipulate the daily settlement prices of each of the Chicago Mercantile Exchange Non-Fat Dry Milk ("NFDm") monthly commodity futures contracts for December 2007 to July 2008. Ecoval executed various trading strategies on the electronic market trading platform, Globex, with the intent to "push" the prices of the NFDm futures contracts higher so Ecoval could potentially establish a large short position at higher prices.

The NFDm futures market was illiquid and thinly traded. Starting in September 2007, Ecoval formulated a strategy, documented in several emails, to try to "push" NFDm futures contracts higher than existing market forces dictated so Ecoval could potentially establish large short positions in monthly NFDm futures contracts at higher prices. Ecoval attempted to manipulate the NFDm market by using various trading strategies, including executing trades by (1) "lifting" offers and then immediately bidding a higher price than just paid in the trade; (2) placing both bids and offers above prevailing market prices across multiple contract months in order to establish higher price ranges in the market; (3) consistently placing bids above the opening price or the prevailing price across multiple contracts and bidding, and then quickly cancelling the bids, without the intent to have the bids filled.

CFTC 2014. Moncada.

Moncada engaged in a strategy of repeated trading activity in an attempt to manipulate the price of the December 2009 Wheat Futures Contract. Moncada's strategy was to manually input and immediately cancel multiple orders for 200 lots or more ("large lot orders") without the intent to have the large lot orders filled but to create the misleading impression of increasing liquidity in the market; place large lot orders at or near the best bid or offer price in a manner to avoid being filled by the market; and place small-lot orders on the opposite side of the market from these large-lot orders with the intent of taking advantage of any price movements that might result from the misleading impression of increasing liquidity that the large-lot orders created.

Case Study: Layering and Spoofing.**FCA 2011. Swift Trade.**

Swift Trade operated a network of over 50 customers based in over 150 trading locations worldwide which in turn engaged over 3,000 traders. During the relevant period, Swift Trade placed orders to buy or sell swaps or contracts for difference (CFDs) with LSE member firms providing DMA to the order book. Those orders were then reflected on the order book by orders for shares placed by the DMA provider as an immediate and automatic hedge to Swift Trade's synthetic orders.

The trading activity involved placing individually or cumulatively large orders to buy or sell shares on the order book, the majority of which orders were subsequently cancelled without being executed. Relatively small orders were placed on the opposite side of the order book. The large orders gave the impression of substantive demand for, or supply of, shares and had the effect of moving the share price such that the smaller orders entered on the other side of the order book became more attractive and were executed, at which point Swift Trade's large orders were cancelled. Swift Trade profited from the small price movements which followed such orders by buying, after triggering a fall, and selling, after triggering a rise, in the share price.

The large orders were not intended to be traded and were unlikely to be so because of the combination of their size, their distance from the touch price and their short duration given their rapid cancellation. They created a false impression of supply of or demand for, or price of, the shares in question as there was no intention to trade at the prices and in the quantity stated. The purpose of the large orders was to trigger share price movements from which Swift Trade could profit.

Individual price movements were small. However, the trading activity created a movement of the price first one way and then the other. This movement was created by Swift Trade which was then in a position to gain an advantage over other market participants by trading in response to the price movement it had caused. By repeating the pattern many times a day and in a large number of shares across a range of market sectors, the small benefit from each individual price movement was magnified.

1.7 Case Studies: Fictitious trading to generate enhanced rebates.

NASDAQ 2005. MarketXT.

The SEC alleged that MarketXT used wash trades and matched orders to qualify itself for a tape revenue rebate program offered by NASDAQ when one of its employees ran an automated trading system that entered buy and sell orders in close proximity to increase volume. The program was designed to facilitate “trading for trading’s sake.” Based on this trading activity, MarketXT then would receive monetary rebates and have a higher reported market share.

SEC 2015. Afshar and Afshar.

The SEC alleged that brothers Behruz Afshar and Shahryar Afshar and broker Richard Kenny engaged in a fraudulent scheme that involved the mismarking of options orders to obtain execution priority and lower fees, and engaged in spoofing scheme to collect rebates from an options exchange.

The spoofing scheme was designed to take advantage of the option exchange’s “maker-taker” fee model. The maker-taker model offered rebates for orders that provided liquidity and charged fees for orders that “took” liquidity. An order that was sent to the exchange and executed against a subsequent order generated a “maker” rebate from the exchange. In contrast, an order that immediately executed against a pre-existing order was charged a “take” fee.

The Afshars carried out the scheme by using All-Or-None (AON) options orders – hidden orders that must be executed in their entirety or not at all – and placing smaller, non-bona fide displayed orders in the same option series and price as the AON orders, but on the opposite side of the market. The smaller orders were not intended to be executed but instead were placed to alter the option’s best bid or offer in order to induce, or spoof, other market participants into placing orders at the same price. Those orders from other market participants executed against the Afshars’ hidden AON orders, and any open displayed orders were then canceled. Because the executed AON orders existed before the orders sent by the spoofed counterparties, they were deemed to have added liquidity and generated rebates.

1.8 Case Study: Technology: Front Running.

SEC 2015. ITG Inc./AlterNet Securities (affiliates).

The SEC alleged that ITG Inc. operated an alternative trading system, commonly referred to as a dark pool, known as POSIT. AlterNet, an affiliate of ITG, provided trading algorithms and smart order routers that send orders to various market centers including POSIT.

According to the SEC, between April and July 2011, ITG operated a proprietary trading desk known as “Project Omega.” Project Omega accessed live feeds of ITG customer and POSIT subscriber order and execution information and traded algorithmically based on that confidential information in both POSIT and other market centers. The SEC claimed that as part of one of its trading strategies, Project Omega identified and traded with sell-side POSIT subscribers and ensured that those subscribers’ orders were configured in POSIT to trade “aggressively” so as to benefit Project Omega.

1.9 Case Study: Cross Venue Manipulation.

SEC 2016. Evo Investments.

Evo Investments placed market bid orders for shares prior to the open and the placed sell orders on a proprietary trading system.

1.10 Case Study: Inside Information – Security.

SEC 2008. Shevlin.

Shevlin used his position in IT to access senior executives' password protected e-mails to obtain inside information.

1.11 Case Study: Insider Dealing.

FCA 2015. Coyle.

Coyle was Group Treasurer and Head of Tax at Wm Morrison Supermarkets plc. Coyle was privy to confidential price sensitive information about Morrisons' ongoing talks regarding a proposed joint venture with Ocado Group plc. Coyle took advantage of this information by trading in Ocado shares between 12 February and 17 May 2013 using two online accounts which were in the name of his partner.

1.12 Case Study: Disclosure.

FCA 2017. Christopher Niehaus.

On a number of occasions between 24 January 2016 and 16 May 2016, Niehaus shared client confidential information which he had received during the course of his employment with both a personal acquaintance and a client of his firm. Some of the confidential information disclosed to the client related to one of its competitors. The information was disclosed using an instant messaging application (WhatsApp), not for the purpose of it being used by the recipients, but because Niehaus wanted to impress them.

1.13 Case Study: Execution Conflicts.

SEC 2011. Pipeline Trading Systems LLC.

Pipeline Trading Systems LLC. operated an alternative trading system, commonly referred to as a “dark pool.”

Pipeline described its ATS as a “crossing network” that anonymously matched customers’ orders. However, Pipeline did not disclose to its customers that the majority of shares traded on its ATS were bought or sold by a wholly-owned subsidiary of Pipeline. According to the SEC, Pipeline’s claims that the trading opportunities on the ATS were “natural” were false and misleading because its subsidiary was on the other side of the majority of trades executed on the ATS.