Bank of England Foreign Exchange Market Investigation

A Report by Lord Grabiner QC

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EXECUTIVE SUMMARY

1. I have been asked by the Oversight Committee of the Bank of England to investigate whether, between 2005 and 2013, any Bank of England official was involved in, or aware of, the conduct which is the subject of the FCA's investigation into the foreign exchange ("**FX**") market.[1] The law firm Travers Smith LLP ("**Travers Smith**") and Adam Rushworth, a barrister in my Chambers, were appointed to support me in this task. I received the full cooperation of the Bank of England (the "**Bank**") throughout my investigation.

2. We have extracted and reviewed a large quantity of documents and recordings of telephone calls. I have also interviewed current and former Bank officials, and current and ex-employees of banks who attended relevant meetings with Bank officials.

3. My key findings, in summary, are:

   (a) I have found no evidence to suggest that any Bank official was involved in any unlawful or improper behaviour in the FX market.

   (b) A substantial part of the FCA's investigation concerns bank traders sharing confidential information, including aggregated information about their client orders, which was then used for improper behaviour. No Bank official was aware that this improper behaviour was happening.

   (c) However, from at least 16 May 2008, the Bank's Chief FX Dealer, Mr Martin Mallett, was aware that bank traders were sharing aggregated information about their client orders for the purposes of a practice known as "*matching*" and had concerns that regulators would take an interest in it. The practice is not itself improper but it can increase the potential for improper conduct. Mr Mallett explained to a market participant in March 2012 that "*…if* [regulators] *were aware that it was going on* [they] *would be uncomfortable with it…*" and that he "*would just feel uncomfortable justifying it to the regulator the way it's currently set up*". From at least 28 November 2012, Mr Mallett had concerns that the practice could involve collusive behaviour and lead to market participants being

[1] See Chapter III for more information. In summary, the FCA's investigation concerns attempts to manipulate the WM/Reuters 4pm and ECB 1.15pm fixes, attempts to trigger client stop loss orders, and the improper sharing of confidential information.

disadvantaged. Notwithstanding those concerns, Mr Mallett did not escalate this issue to an appropriate person. This was an error of judgment for which he should be criticised. However, I should emphasise the limited nature of this criticism. Mr Mallett did not act in bad faith. He was not involved in any unlawful or improper behaviour nor was he aware of specific instances of such behaviour. In particular, he was not aware of the improper behaviour with which the FCA is concerned that goes far beyond his own concerns about potential misconduct. Rather, he was aware of a market practice which he thought could involve collusive behaviour and lead to market participants being disadvantaged and he failed to raise this with the appropriate people.

I. SCOPE OF INVESTIGATION

4. My terms of reference are reproduced in Appendix 1. In summary, I have been asked to investigate whether, between 2005 and 2013, any Bank official was involved in, or aware of, the conduct which is the subject of the FCA's investigation into the FX market. Accordingly, I am concerned with the conduct and awareness of Bank officials over a period of 8 years. This required an examination of the behaviour of a number of people over a substantial period of time. Travers Smith oversaw the extraction of more than 1.8 million documents and 87,000 telephone calls from the Bank's IT systems. A subset of this data was then selected, by the application of search terms, for review. I interviewed 10 current or ex-Bank officials, and 18 current or ex-employees of banks who attended the relevant meetings. More details of the process adopted when conducting the investigation are in Appendix 2.

5. This exercise had clearly defined limits which I should spell out:

   (a) It was not my task to determine whether there has, in fact, been any improper conduct in the FX market, nor was I in a position to do so. That is the task of the FCA which has powers of investigation and compulsion over the bank users of the market. I therefore take what the FCA says to be correct and address whether Bank officials were aware or should have been aware of the alleged improper conduct identified by the FCA.

   (b) Similarly, I am not in a position to decide whether there are, or have been, cartels or anti-competitive practices in this market. This would require a detailed knowledge of the activities of the relevant market participants and their broader market effects, and these matters are also outside my terms of reference.

   (c) It was not my task to make recommendations on whether, and if so, how, this market ought to be regulated. That is a task for the Fair and Effective Markets Review, led by Dr Nemat Shafik, which published its consultation document on 27 October 2014 and will publish a final report in June 2015.

   (d) It was not my task to make recommendations on how FX benchmarks could be improved. That is a distinct task for the Financial Stability Board which published a consultative report on 15 July 2014 and a final report on 30 September 2014.

6. The structure of my report is as follows:

   (a) Chapter II explains those aspects of the FX market which are relevant to my investigation;

   (b) Chapter III describes the FCA's investigation and the improper conduct it says it has found;

   (c) Chapter IV describes the structure and activities of the Bank and, in particular, its Foreign Exchange Division;

   (d) Chapter V contains my findings on relevant factual matters involving Bank officials;

   (e) Chapter VI sets out my conclusions;

   (f) Chapter VII suggests recommendations for the Bank for the future.

II. THE FX MARKET

Introduction

7. The FX market is the market in which currencies are traded. It is exceptionally large: according to the Bank of International Settlements, trading in the FX market averaged US$5.3 trillion per day in April 2013.[2] This figure includes FX swaps, forwards and options as well as spot transactions.

8. There are many end users of the FX market ranging from consumers purchasing currency for holidays to central banks trading in order to rebalance their currency portfolios. The focus of my investigation has been on the wholesale[3] FX market and the management of client orders in that market. For example, an asset manager (the client) may place an order with a bank to exchange £100 million for US Dollars. The bank may quote a rate to the client, in which case it will be acting as a principal, or it may agree to go into the interbank market and perform the trade on a best endeavours basis, in which case it will be acting as an agent for the client.

UK Regulation

9. Dealing in spot FX is not a regulated activity under the Financial Services and Markets Act 2000 ("**FSMA**").[4] Nor does the statutory market abuse regime (sections 118-131A of FSMA) apply to such transactions.[5]

10. Notwithstanding that dealing in spot FX is not a regulated activity, authorised firms (which includes all UK banks, be they deposit-takers or investment banks) are subject to a number of high-level regulatory Principles, including Principle 3 of the FCA Principles for Businesses which states that they must take reasonable care to organise

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[2] BIS Triennial Central Bank Survey 2013, page 3.

[3] This is largely the interbank FX market, although there are some intermediaries that are not banks.

[4] The standard settlement date for a spot FX transaction is 2 days after the transaction. Such transactions are not "*investments of a specified kind*" under the Financial Services and Markets Act 2000 (Regulated Activities) Order 2001/544 (see articles 84(2) and (4)).

[5] The statutory market abuse regime applies to behaviour which occurs in relation to: (a) "*qualifying investments*" admitted to trading on a "*prescribed market*" or in respect of which a request for admission to trading on such a market has been made; or (b) in the case of insider dealing and improper disclosure of inside information, investments which are related investments in relation to such qualifying investments (that is, an investment whose price or value depends on the price or value of the qualifying investment). Spot FX transactions are not qualifying investments, nor are they traded on a prescribed market. Further, they are not related investments to a qualifying investment because their value does not depend on the price of any qualifying investment.

and control their affairs responsibly and effectively, with adequate risk management systems. This Principle also applies to the carrying on of unregulated activities in the context of activities which have, or might reasonably be regarded as likely to have, a negative effect on the integrity of the UK financial system or the ability of the firm to meet either the fit and proper test (the minimum conditions that a firm must satisfy to obtain permission to carry on a regulated activity) or the applicable requirements and standards under the regulatory system relating to the firm's financial resources. The FCA has investigated firms for breach of Principle 3 on the basis that they did not have adequate systems and controls in place to prevent the improper conduct the FCA says occurred (such improper conduct is described in Chapter III below).

Voluntary codes

11. There are a number of industry codes of conduct for the interbank spot FX market. These include:

(a) The Non-Investment Products Code for Principals and Broking Firms in the Wholesale Markets (current edition published in November 2011) (the "**NIPs code**"). The NIPs code is maintained by, among others, the Foreign Exchange Joint Standing Committee which is a committee established under the auspices of the Bank. Further information about this committee is provided in paragraph 37 below.

(b) The New York Foreign Exchange Committee Guidelines for Foreign Exchange Trading Activities (current edition revised in November 2010). These guidelines are published and maintained by the New York Foreign Exchange Committee which is organised by the Federal Reserve Bank of New York.

(c) The Singapore Guide to Conduct & Market Practices for Treasury Activities (current edition released in April 2012). This guide is published by the Singapore Foreign Exchange Market Committee, whose membership includes the Monetary Authority of Singapore.

(d) The Tokyo Foreign Exchange Market Committee Code of Conduct (current edition published September 2008). This code is published by the Tokyo Foreign Exchange Market Committee, whose membership includes the Bank of Japan.

(e) The ACI Financial Markets Model Code (current edition published January 2013). This code is published by the Financial Markets Association, which is an association of industry professionals.

Benchmarks

12. There are a number of published FX benchmark rates. The two most commonly used are the WM/Reuters[6] 4pm fix and the ECB[7] 1.15pm rate:

(a) The WM/Reuters 4pm London fix is the most common FX reference rate used in the market.[8] It is unnecessary to explain its precise mechanics but, in summary, it takes account of market activity from 30 seconds before until 30 seconds after 4pm and uses this data to identify and publish a median, mid-rate for each currency pair.[9] WM/Reuters also publishes median bid and offer rates at the same time but the focus of this report is on the fix mid-rate.

(b) The ECB publishes a 1.15pm (2.15pm Central European Time) rate which is used particularly by European corporates.[10]

13. There is substantial client demand for banks to exchange currency at particular FX benchmark mid-rates. The Financial Stability Board explains this demand as follows:[11]

> *FX benchmarks are used by market participants for a variety of purposes, but most notably for valuing, transferring and rebalancing multi-currency asset portfolios. In particular, the mid-rates produced by WMR are embodied in the construction of published indices used for tracking multi-country/currency portfolios of bonds, equities or credit instruments, and hence are implicit in many investment mandates. That usage incentivises asset and other money managers – particularly those with passive mandates which aim toward the replication of an index – to ensure that their FX dealing intermediaries (usually but not always banks) execute their foreign exchange trades at the same mid-market price as recorded at the fix. That eliminates any 'tracking error' arising from foreign exchange, when the investor has chosen to invest in the performance of some other asset such as bonds or equities.*

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[6] "*WM*" refers to The World Markets Company plc, which, with Reuters, provides the WM/Reuters 4pm fix, along with other FX benchmarks.

[7] "*ECB*" refers to the European Central Bank.

[8] Financial Stability Board's Final Report on Foreign Exchange Benchmarks, dated 30 September 2014, page 7.

[9] For full details of the mechanics of the WM/Reuters 4pm fix, see the Financial Stability Board's Final Report on Foreign Exchange Benchmarks, dated 30 September 2014, pages 8-11.

[10] For full details of the mechanics of the ECB 1.15pm rate, see the Financial Stability Board's Final Report on Foreign Exchange Benchmarks, dated 30 September 2014, page 11.

[11] Financial Stability Board's Final Report on Foreign Exchange Benchmarks, dated 30 September 2014, page 2.

> *Other users, such as some sovereign wealth funds, or corporates (which often do not have active foreign exchange dealing desks), also tend to use the same approach of trading with their dealers at a guaranteed published fix price, in order to establish transparency of execution.*

14. Some banks accept what are sometimes referred to as "*fix orders*" before the relevant fix. A bank might agree to exchange the relevant amount of currency at the fix price, yet to be determined. The bank acts as principal in these transactions. For example, an asset manager may want to exchange £100 million for US Dollars and, at 3.30pm, he might place an order with his bank, the exchange rate to be that day's WM/Reuters 4pm fix rate. The bank then has to manage the risk that arises from guaranteeing a price to be determined in the future. In practice, the bank is likely first to net off all its client orders for that fix and then seek to trade any residual position in the market around the 4pm fixing window. I refer to the bank's residual position after internally netting its client fix orders as its "*aggregate fix position*".

15. One way a bank could trade its aggregate fix position in the market is by finding another bank with an opposite aggregate fix position and agreeing to net these off. This is referred to as "*netting off*" or "*matching*":

    (a) Suppose Bank 1 has two client fix orders to sell £100 million for US Dollars (i.e. £200 million in total) and one client fix order to buy £150 million. Bank 1 will internally net these client fix orders which, in this example, means that Bank 1's aggregate fix position is that it has to sell £50 million for US Dollars in the market in order to satisfy its clients' orders. In practice, the number of orders may be significantly greater than in this example but the principle is the same. Further, each bank will have an aggregate fix position for each currency pair.

    (b) Suppose Bank 2's aggregate fix position is that it has to buy £50 million for US Dollars.

    (c) If Bank 1 and Bank 2 exchange this information, for example in a chat room, they can agree to match (or net off) their orders. That is, Bank 1 will sell Bank 2 £50 million for US Dollars at whatever turns out to be the 4pm fix price. Neither bank makes any profit on the transaction, but nor do they make a loss.

(d) The FCA accepts that there is nothing necessarily inappropriate about this practice.[12]

Stop loss orders

16. Banks also provide clients with the ability to place "*stop loss orders*". A stop loss order is an instruction from the client to the bank to trade a currency if the currency trades at a specified rate. For example, an asset manager may purchase from its bank £100 million for US Dollars at a GBPUSD rate of 1.61740 (which will cost him US$161,740,000). However, the client also places a stop loss order at GBPUSD 1.615. This means that, if the value of sterling against the dollar weakens to such an extent that the rate hits 1.615, the bank exchanges the £100 million the client had previously purchased for dollars at a rate of 1.615 and therefore delivers US$161,500,000 to the client. The client loses US$240,000 on the trades but will not lose any more if the GBPUSD rate continues to decline below 1.615.

[12] However, the FCA says that where the practice is used as part of a strategy to manipulate the fix rate (as described in paragraphs 21(a) and 21(b)(i) below), it will be improper.

III. THE FCA'S INVESTIGATION

17. As explained above, the FX market is very large with an estimated US$5.3 trillion in transactions every day. Given this size, some of the people I have interviewed expressed scepticism that it could be improperly manipulated, particularly in the more liquid currency pairs.

18. However, the FCA says it has identified control failings by firms that allowed the following three types of improper behaviour to occur in the spot FX market:

    (a) Attempts to manipulate the WM/Reuters 4pm and the ECB 1.15pm fix rates alone and in collusion with traders at other firms for the firm's own benefit and to the potential detriment of clients and other market participants;

    (b) Attempts to trigger client stop loss orders for the firm's own benefit and to the potential detriment of clients and/or other market participants; and

    (c) Inappropriate sharing of confidential information with traders at other firms, including specific client identities and, as part of (a) and (b) above, information about clients' orders.

    The FCA says that these behaviours were typically facilitated by means of traders at different firms colluding via electronic messaging services, including chat rooms.

19. I should record here that I have received a great deal of assistance from the FCA during this investigation. The FCA has described to me the kinds of misconduct it has been investigating and has also provided documents which would not otherwise have been available to me.

Attempts to manipulate the WM/Reuters and ECB fix rates

20. The FCA says that banks shared their fix positions[13] with other banks and used this information to determine their trading strategies including, depending on the circumstances, attempting to manipulate the fix.

21. In particular, the FCA has described a number of behaviours that occurred:

[13] This could include their aggregate fix position (see paragraph 14), a particular client's fix position and/or a fix position the relevant bank had built for itself.

(a) Traders in a chat room with fix positions in the opposite direction to the desired movement at the fix sought before the fix to transact or "*net off*" their orders with third parties outside the chat room, rather than with other traders in the chat room. This maintained the volume of orders in the desired direction held by traders in the chat room and avoided orders being transacted in the opposite direction at the fix. Traders referred to this process as "*leaving you with the ammo*" or similar.

(b) Traders in a chat room with fix positions in the same direction as the desired rate movement at the fix sought before the fix to do one or more of the following:

(i) Net off these positions with third parties outside the chat room, thereby reducing the volume of orders held by third parties that might otherwise be transacted at the fix in the opposite direction. Traders have referred to this process as "*taking out the filth*" or "*clearing the decks*" or similar;

(ii) Transfer these positions to a single trader in the chat room, thereby consolidating orders in the hands of one trader. This potentially increased the likelihood of successfully manipulating the fix rate since that trader could exercise greater control over his trading strategy during the fix than if he were confronted by a number of traders acting separately. Traders have referred to this as "*giving you the ammo*" or similar; and/or

(iii) Transact with third parties outside the chat room in order to increase the volume of orders held by them in the desired direction. This potentially increased the influence of the traders at the fix by allowing them to control a larger proportion of the overall volume traded at the fix than they would otherwise have and/or to adopt particular trading strategies, such as trading a large volume of a currency pair aggressively. This process was known as "*building*".

(c) Traders increased the volume traded by them at the fix in the desired direction in excess of the volume necessary to manage the risk associated with the firm's fix position. Traders have referred to this process as "*overbuying*" or "*overselling*".

22. The FCA says that the effect of these actions was to increase the influence that the traders in a chat room had with regard to a forthcoming fix and therefore the likelihood

of them being able to manipulate the rate in the desired direction. The trader(s) concerned then traded in an attempt to move the fix rate in the desired direction.

Non-fix related improper conduct

23. The FCA has also said that it has found examples of improper behaviour which were not, or not necessarily, related to the fix: these are trading behaviours around stop loss orders and sharing confidential information.

Triggering client stop loss orders

24. Stop loss orders are described at paragraph 16 above. The FCA says that some banks have been trading (including in collusion with other banks) in order to trigger their client stop loss orders so the bank makes a profit. For example,[14] the client holds a position of £100 million and the GBPUSD rate is 1.68400. The client places a stop loss order that, if the GBPUSD rate hits 1.68300, the bank is to sell the client's sterling position for US Dollars. The bank then sells, on its own account, £100 million at the prevailing 1.68400 rate, thereby obtaining US$168.4 million. This trade causes sterling to weaken and the rate falls to 1.68300. This triggers the client's stop loss order and the bank buys £100 million from the client which, at the now prevailing rate, costs US$168.3 million. The bank makes a profit of US$100,000 from the trade.

Inappropriate sharing of confidential information

25. The FCA says the above activities involved inappropriate disclosures of client order flows at fixes and details of client stop loss orders. The FCA also says that market participants disclosed client activities to traders at other firms whilst those activities were going on. The market participants would use code words to disclose the identity of clients.

[14] This example concerns a bank acting unilaterally and not in collusion with other banks.

26. The precise obligations of confidence owed by a bank to its client will depend on the terms of the agreement between them. However, the voluntary industry codes of conduct all set out confidentiality requirements. Of particular relevance to the UK market, the NIPs code states:[15]

> *Confidentiality is essential for the preservation of a reputable and efficient market place. Principals and brokers share equal responsibility for maintaining confidentiality. Principals or brokers should not, without explicit permission, disclose or discuss, or apply pressure on others to disclose or discuss, any information relating to specific deals which have been transacted, or are in the process of being arranged, except to or with the parties directly involved (and, if necessary, their advisers) or where this is required by law or to comply with the requirements of a supervisory body. All relevant personnel should be made aware of, and observe, this fundamental principle.*

[15] NIPs code, Chapter III, paragraph 15, page 18.

IV. THE BANK

27. The Bank's interaction with the FX market is predominantly through its FX Desk.[16] This Chapter explains the role of the FX Desk and its dealings with the market. This interaction occurs in two (sometimes concurrent) contexts:

    (a) First, members of the FX Desk trade currency in the market;

    (b) Second, members of the FX Desk gather market intelligence about the FX market which is then distributed within the Bank to assist its policy decisions.

28. This Chapter also explains the obligations, in the relevant period, on members of the FX Desk to escalate matters of concern.

FX Desk

29. The Foreign Exchange Division (the "**FED**") is part of the Markets Directorate of the Bank.[17] It contains a number of subdivisions[18] but the relevant subdivision is the FX Desk.

Personnel

30. The Chief Dealer, who for the relevant period was Mr Mallett, has general oversight of the FX Desk. The Trading Manager, who for the relevant period was Mr James O'Connor, is responsible for day-to-day execution and trading strategy. He reports to the Chief Dealer. There are five other (and less senior) FX dealers on the FX Desk.

Role

31. The FX Desk trades FX on two accounts:

    (a) The Treasury Exchange Equalisation Account (the "**EEA**"); and

    (b) The Bank's own account.

32. EEA trading involves the following operations:

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[16] The FX Desk was renamed the FX and Money Markets Desk in May 2011. It will be referred to as the FX Desk in this report.

[17] An organogram showing where, in the relevant period, the FED sat within the Bank can be found at Appendix 4.

[18] An organogram of the FED can be found at Appendix 5.

(a) Performing spot FX transactions for government departments that require FX to fund activities or transactions abroad. For example, a government department may agree to purchase hardware from a US company for US$50 million. That government department will want to buy US Dollars to perform the transaction and the FX Desk will carry out the purchase of those US Dollars.

(b) Providing FX hedging for government departments. For example, a government department may know that it will have to make a number of purchases in Euros over the coming 5 years and may wish to hedge its exposure to changes in the Euro exchange rate.

(c) Managing the EEA reserves. The government has FX reserves which must be balanced.

(d) In emergency situations, intervening in the FX market to stabilise or support sterling.

33. The Bank's own account trading involves the following operations:

(a) Trading FX for clients of the Bank. The clients are mainly other central banks but also include the Bank's pension fund and some private individuals.

(b) Trading the fixed term deposit book held by the Bank. This is where the Bank takes fixed term deposits from central bank customers and places those funds in the repurchase (or "*repo*") market producing income for the Bank.

(c) In emergency situations, intervening in the FX market with its own FX reserves.

Market intelligence

34. In addition to their day-to-day operational responsibilities, FX Desk employees are also responsible for gathering market intelligence. Market intelligence is information gathered about the financial markets for the purposes of informing the Bank's policy functions of monetary policy and financial stability. The Bank's appetite for market intelligence grew substantially from around 2002.

35. The Market Intelligence section of the FED designates market intelligence champions for approximately 20 market areas (e.g. commodities, equities, FX, gilts, government bonds etc.). These champions are responsible for reporting relevant market intelligence

to the Head of Market Intelligence and are assisted by teams of analysts. Both the champions and their analysts perform these roles in addition to their day-to-day jobs. They gather market intelligence by maintaining contact with financial market participants and reporting information gathered from those participants.

36. For the relevant period, Mr Mallett was the market intelligence champion for FX and his team of analysts were the other members of the FX Desk.[19] They gathered market intelligence from a number of sources and, in particular, through participating in Bloomberg chat room conversations with market participants. Mr Mallett also gathered market intelligence through the chief dealers' subgroup of the Foreign Exchange Joint Standing Committee, which I explain below.

FXJSC and its subgroups

FXJSC

37. The Foreign Exchange Joint Standing Committee ("**FXJSC**") was established in 1973 under the auspices of the Bank as a forum for banks and brokers to discuss broad market issues. It comprises senior staff from major banks operating in the wholesale FX market and representatives from brokers and trade associations. One of its main responsibilities is to maintain the NIPs code.[20] The FXJSC meets six times a year and is chaired by the Head of Foreign Exchange at the Bank.

FXJSC subgroups

38. The FXJSC has three main[21] subgroups:

    (a) The FXJSC operations subgroup. This was set up in 2002 to focus on infrastructure systems in the FX market. The chair is from outside the Bank but the Bank provides secretariat support.[22]

[19] Some of those members were also analysts for other market areas.

[20] Detailed at paragraph 11(a) above.

[21] There is a fourth subgroup called the buy-side subgroup which has been in operation at various points in time including at present.

[22] Secretariat support includes: assisting with arranging meetings; drafting the agendas; helping with meeting minutes; dealing with memberships; and liaising between the different subgroups.

(b) The FXJSC legal subgroup. This was set up in 2005 to bring together lawyers to consider, amongst other things, best practices and execution in FX transactions. The chair is from outside the Bank but the Bank provides secretariat support.[23]

(c) The FXJSC chief dealers' subgroup ("**CDSG**"). This was established in 2005 to discuss "*conjunctural and structural*" developments in the FX market. It is chaired by the Bank's Chief Dealer and, in the relevant period, the Bank's Trading Manager, Mr O'Connor, would often attend. It is not generally supported by the Bank's secretariat but the secretariat provides limited support on a "*best endeavours*" basis.[24] The CDSG met 4 times a year and, in addition to the two Bank officials referred to above, its membership was drawn from FX traders at banks. It is clear from the evidence given to me that, from the Bank's perspective, one of the CDSG's primary purposes was to enable the Bank to gather market intelligence from bank chief dealers.

Escalation policies relevant to FX Desk employees

39. The only written escalation policy in place before 1 August 2012 was contained in the FED Manual which is a complex set of linked intranet pages and documents. This has stated, since 2005:

> *If staff become aware of any activity that may constitute market abuse either internally in the Bank or externally, this should be brought to the attention of your line manager or Head of Department who may alert the appropriate authorities.*

40. However, the statutory market abuse regime does not apply to transactions in spot FX.[25] Accordingly, this obligation does not apply to the matters with which I am concerned.

41. On 1 August 2012, the Bank introduced a formal escalation policy for the Markets Directorate of the Bank. The impetus for its introduction was the LIBOR scandal. It provided, in summary, that if a Bank official becomes privy to information which suggests misconduct in the financial markets, that official is responsible for escalating the matter in an email to a Markets Head of Department or the Markets Executive

[23] For the meaning of secretariat support, see footnote 22 above.

[24] This is limited to updating the standing items section of the CDSG speaking notes which concerns: (1) a summary of the work of the FXJSC and its other subgroups which is generally used to flag updates of important information which has come to light since the previous meeting; (2) a summary of the work of comparative international groups; and (3) a regulatory update which includes flagging new regulations that could affect the FX market.

[25] See paragraph 9 above.

Director. The policy was subsequently amended on 17 December 2013, in particular, to require that "[p]*articular attention should be paid to information about price setting in or around market "fixes"*".

V. FINDINGS

Introduction

42. As explained in Chapter III above, the FCA's investigation concerns attempts to manipulate the WM/Reuters 4pm and ECB 1.15pm fixes, attempts to trigger client stop loss orders, and the improper sharing of confidential information.

43. In the period from 2005 to 2013, the Bank did not do transactions at either the WM/Reuters 4pm or the ECB 1.15pm fixes: the Bank executes its spot business on a best endeavours basis. Nor does the Bank offer stop loss orders to its clients. In the circumstances, it is unsurprising that I have found no evidence to suggest that any Bank official was attempting to manipulate the WM/Reuters 4pm or ECB 1.15pm fixes, or to trigger client stop loss orders. I have also found no evidence to suggest that Bank officials shared confidential client information.

44. However, my terms of reference extend to whether Bank officials were aware of such activities or the potential for them. I set out below a chronological account of the relevant events followed by two general findings which are not connected to any specific event.

Chronology of relevant events

4 July 2006 CDSG meeting

45. The issue of fixings was discussed at a CDSG meeting on 4 July 2006. Mr Mallett and Mr Stuart Cole, a member of the Bank's FX Desk, attended from the Bank. The minute records:

> *11) It was noted that there was evidence of attempts to move the market around popular fixing times by players that had no particular interest in that fix. This was not in the interest of customers if the market was forced away from where it should be when the fixing snapshot was taken. It was noted that 'fixing business' generally was becoming increasingly fraught due to this behaviour.*
>
> *12) The discussion widened to cover…the formulation and treatment of price benchmark services. It was noted that it was no longer uncommon to be selling/buying to/from a customer at a fixing price that could not be obtained in the market. Simply using EBS/Reuters platforms for determining where the market was trading was also questioned; more attention needed to be taken of the large banks and the other e-platforms that were available.*

> *Similar concerns were raised regarding options barriers, where using a single platform to determine if a particular price had traded was increasingly dangerous: some systems required multiple hits above a certain size to record a price as having traded; others had very poor liquidity at certain times; some were more easily manipulated by vested interests. The Chair noted that this was largely a competitive issue and it was the responsibility of the banks themselves to define precisely what measure would be used to determine if a barrier had traded or not. It was suggested that it might be beneficial for one of the large benchmarking firms to present to the Sub-group on their fixing methodology.*

46. The minute evidences two things:

(a) First, traders were complaining about market participants without an interest in the fix attempting to move the market around fixing times. The traders said this was making it more difficult for them to mitigate the risk of their fixing orders. In short, market participants, such as hedge funds, who did not have client fix orders, were seeking to profit for their own account from speculative trading around the fix. There is nothing necessarily improper about such behaviour: market participants are entitled to engage in proprietary trading around the fix.

(b) Second, traders had concerns about how to determine whether option barriers have been traded. Such options go in or out of existence depending on whether a particular rate has been traded in the market. Traders were concerned about how to determine whether a particular rate had, indeed, traded in the market. These concerns included the possibility that if a single trading platform was used to determine whether a rate had been hit, vested interests might trade on that platform to manipulate the rate. Again, such trading would not necessarily be improper. Mr Mallett told the banks that it was up to them to define precisely (in the relevant contracts) what measure should be used to determine if a barrier had traded or not.

9 October 2006 CDSG meeting

47. Fixings were again discussed at a CDSG meeting on 9 October 2006. Mr Mallett and Mr O'Connor attended from the Bank. The relevant minute records:

> *10) The group discussed the topical issue of order management clustered around fixings. There continued to be some unease about the methodologies used, latency in publications and how new matching technology proposed by some service providers, so-called "dark room netting", might change the dynamics*

of fixing flows. The group have previously considered inviting a fixing firm to the meeting to present on methodology and hear from practitioners first hand about the issues the [dealers] *face, and agreed to pursue this.* ***Action:*** *Chair to invite fixing company to present at future CD meeting.*

48. The minute shows:

(a) Traders were concerned about how fixes were being calculated and the delay in their publication. As a result, it was agreed that the chair, Mr Mallett, would invite a suitable representative from a fixing company to present at a future CDSG meeting. In the event, Mr Mallett did not get around to this for some time.

(b) Traders were concerned about how new matching technology or "*dark room netting*" would affect fixing flows. I have explained the process of matching at paragraph 15 above. "*Dark room netting*" is technology which allows banks to submit their aggregate fix positions into a system which anonymously matches off the orders. Any residual that cannot be matched will be returned to the relevant bank(s) which will then have to trade the residual in the market. The advantage of this technology is that traders do not disclose their aggregate fix positions to each other and so there is less scope for the type of improper behaviour described by the FCA in relation to fixes.[26]

16 May 2008 CDSG meeting

49. Fixing issues were again discussed at a CDSG meeting on 16 May 2008, some 19 months later. Mr Mallett and Mr O'Connor attended from the Bank. The relevant minute records:

8) Issues around market fixings

There was considerable discussion on this topic with the large majority of members expressing concern about the lack of transparency among some methodologies and the impacts in managing order flow and pricing liquidity at times of concentrated benchmarked interest such as the 4pm London fix.

The chair proposed inviting a representative from a major fixing company to present to the group and hear member's [sic] *views at the July meeting. Action with chair. [Have discussed with Mr Freeman re inviting WM company to 4 July meeting.]*

50. I have interviewed all the CDSG members who attended this meeting. None of them had much recollection of this discussion. This is unsurprising as it took place many

[26] See paragraphs 21 to 22 above.

years ago. However, there are three important contemporaneous documents which evidence what happened at that meeting:

(a) The first is a chat room conversation which took place within hours of the meeting between Mr Mallett and two attendees. Mr Mallett wrote:

> *…i was, as* [James O'Connor] *says, in preach mode. good discussion i thought. i will get fix guy in i think. a senior one from WM. thanks again to both of you…*

(b) The second is a chat room extract of 19 May 2008, three days after the meeting. It records a conversation between two people, one of whom attended the CDSG meeting. The CDSG member, Mr Niall O'Riordan of UBS, described part of the meeting as follows:

> *BoE is not a regulatory institution but wants to have its house in order.*
>
> *worried about* [the] *open discussions banks have ref the fix*
>
> *and matching it off*
>
> *its pre-execution and regardless of how a client may be better off if we match it probably doesnt look good*
>
> *fair enuff.,…. good point*
>
> *cue half the table whinging about the 4pm fix*

(c) The third is another chat room extract of 19 May 2008 in which Mr O'Riordan describes part of the CDSG meeting to his superior as follows:

> *the BoE showed a little concern with banks openly chatting to each other on reuters/bloomie about the upcoming fixes and matching them off*
>
> *the BoE feel the SFA* [sic] *might , in the light of recent market turmoil, have a look into* [the] *'best practises' of the FX world*
>
> *they feel these discussions pre trading* [might] *come up on the radar*
>
> *purely hypothetical but …………..*
>
> *that apart it was pretty run of the mill stuff*

Mr O'Riordan confirmed to me in interview that he presumed that, when he referred to "*the BoE*", he was referring to Mr Mallett.

51. In addition to those contemporaneous documents, there is a further relevant email sent 6 weeks later, on 1 July 2008 from Mr Mallett to a former Chief FX Dealer at the Bank. In that email, Mr Mallett referred to fixings as "*this thorny issue*" and said:

> *my view is that banks* [should] *try to spread some of the risk out by steering clients away from one (say the 4pm) fix. the fact that some banks are huddling in Bloomberg chat room to pre match some of their exposures is not the optimum solution even if it is delivering reduced risk on their balance sheets and decent execution for the clients.*

No other Bank official was party to this email.

52. In light of the above, I find that:

(a) Mr Mallett and Mr O'Connor were aware, at the latest from 16 May 2008, that banks were having open discussions about their respective fix positions in chat rooms in order to match them off.

(b) Mr Mallett had concerns about this practice and expressed them in the CDSG meeting on 16 May 2008. In particular, he was concerned that it did not look good and the FSA (as it then was) may take an interest in the practice.

53. There is no evidence that Mr Mallett raised his concerns either within the Bank, to the FXJSC or to a regulator.

4 July 2008 CDSG meeting

54. Mr Mallett invited a speaker from WM/Reuters, Mr Brian Dawson, to attend the subsequent CDSG meeting on 4 July 2008. Mr Dawson explained the mechanics of how WM/Reuters calculated the various fixes it publishes. The minutes record the following discussion after Mr Dawson's presentation:

> *It was noted that WM/Reuters do not use traded volumes data in the calculation of the spot rates. While they have access to Reuters volume data, the same is not the case for EBS data. The Chief Dealer group agreed that actual traded volumes is a key consideration in the calculation of accurate fixings and suggested that this would be a useful next step in the development of WM/Reuters' model. Furthermore it was suggested that using a snapshot of the market may be problematic, as it could be subject to manipulation. Perhaps WM could use a window of observations, and determine at what point to fix using volume data.*

55. I do not think this evidences awareness of actual or attempted improper manipulation of the WM/Reuters 4pm fix. Rather, the chief dealers are making the obvious point that a

benchmark which relies on what trades have been performed at one particular moment in time (unlike the WM/Reuters 4pm fix which looks at market activity over a period of one minute) could be subject to manipulation, although this may depend on the liquidity of the market.

3 October 2011 call

56. The next event of importance was a telephone call on 3 October 2011 between Mr Mallett and a trader. Mr O'Connor was listening in to the call. The trader was concerned with the activities of brokers and banks around the WM/Reuters 4pm fix and wanted to raise his concerns with Mr Mallett. The key part of the conversation is as follows:

Trader:	*The 4 o'clock fixings in sterling in particular are getting bigger and bigger and bigger and bigger and I understand that the sort of real money guys, you know they've got less, they've got more regulation and less discretion there so they are doing more and more on the fixes and the tickets we see y'know are kinda genuine from these guys, y'know up to… we had one guy last week with sort of seven hundred pounds worth split between Euro and Yen etc etc…*
Mallett:	*Yeah.*
Trader:	*And they tend to be just following the trend, you know if cable comes down they're selling if it goes up they're buying, so I don't know what they're tracking, or whether they're tracking, I know some of the guys are tracking their stock prices…*
Mallett:	*So they're mostly using the WM fix as well.*
Trader:	*Yes the 4 o' clock one definitely.*
Mallett:	[overspeaking] *Yep.*
Trader:	*But it's getting, y'know Friday's one was particularly, y'know in the brokers* […] *they're you know, I've got a bank that needs to sell £400, £350, and they, I don't know, some of them are genuine because there is some genuine stuff going around…*
Mallett:	[overspeaking] *Mmm.*
Trader:	*… but I'm sure a lot of them are being made up and washed around but it just, it's gone from…*
Mallett:	*Why would they do that?*
Trader:	*Just to create, yeah just to create brokerage, right, really, but um…*

Mallett:	*Ok – so to draw you in to...*
Trader:	*To create brokerage, but also, to, you know, some of these banks want to build a book and try and bully the fix…*
Mallett:	[overspeaking] *Mmm.*
Trader:	*… and it's not real genuine, you know they'll go in and say, "I'm a buyer," when they're actually a seller, just to build a book but it does seem to be getting bigger and bigger and bigger.*
Mallett:	*And it's specifically in sterling?*
Trader:	*Yep, absolutely, cable. For instance on Thursday I went from err, I went from a net, you know at 10 to 4, I had to buy 400 cable, at 5 to 4 I was selling, I was selling 800.*
Mallett:	[overspeaking] *Right.*
Trader:	*It spun around that much…*
Mallett:	[overspeaking] *Yeah.*
Trader:	*Erm, so it's just, these numbers are getting bigger and bigger and I'm just…*

…

Mallett:	*… what troubles me is your, um, your accusation that there could actually be some, ummm…*
Trader:	*It's not an, well, accusation is probably a strong word, there's stuff going through that probably…*
Mallett:	*Doesn't exist…*
Trader:	*… doesn't exist and it's kind of…*
Mallett:	*Well yeah…*
Trader:	*… it's being, it's being exaggerated shall we put…*
Mallett:	*Well that's market manipulation isn't it?*
Trader:	*Yep absolutely.*

…

Mallett:	*You don't have to answer this, but do you suspect, of the two brokers you name, one is more…*
Trader:	*No, no, no, no definitely not, no no.*
Mallett:	*So you think that…*

Trader:	*I don't think, I don't think it's…The brokers are facilitating it for the banks.*
Mallett:	*Yeah ok.*
Trader:	*As opposed to the brokers, as opposed to the brokers…*
Mallett:	*It's the banks, if you like, try to manipulate the market through the brokers?*
Trader:	*It's not that, they're just trying to build a book. So they'll go into, they'll go into a brok-, y'know I do it, if you've got a genuine interest you'll try and flatten it out…*
Mallett:	*Mmm.*
Trader:	*… or you'll say – if you've got an interest to buy £200, or £300 – you'll just go into the broker and say I can buy and sell at this fix, I've got a genuine interest…*
Mallett:	[overspeaking] *Mmm.*
Trader:	*… and you'll either end up with a bigger book or a smaller book.*
Mallett:	*Yeah, your point is that some people are doing that without actually…*
Trader:	*Without an interest.*
Mallett:	*Yeah ok, I understand. Right, well, er…*
Trader:	*It's just that it could get a bit, at some stage it could get a bit…*
Mallett:	[overspeaking] *Can you keep us in touch?*
Trader:	*Yeah yeah, I will do yeah.*
Mallett:	*…over the next few weeks if you hear more of this … and* [James O'Connor] *is listening in, so either me or* [James O'Connor] *yeah.*
Trader:	*Yeah, I'll just give you a heads up.*

57. The trader's explanation of his concern is unclear and I do not think that either Mr Mallett or Mr O'Connor understood it at the time. There is an essential distinction between a bank trading in order to satisfy its clients' orders (that is, giving effect to its order book) and a bank engaging in speculative (proprietary) trading. The trader is complaining that banks are not only trading at or around the fix in order to satisfy their client orders but are also engaged in speculative trading. That is, they are giving orders to brokers to buy or sell fix positions which do not relate to the aggregate of the fix orders of their clients. Although the trader refers to such orders as not "*genuine*", there

is nothing necessarily improper about speculative trading. However, the trader gives two reasons why this may be happening. The first is to create brokerage for the brokers. The second is because banks want to build up a position that they can use to "*bully*" the fix, by which I understand him to mean, alter the fix rate. This may be a description of the type of activity the FCA refers to as "*building*"[27] but it is unclear from the above transcript.

58. Neither Mr Mallett nor Mr O'Connor escalated this concern but I make no criticism of this because the explanation they were given was unclear and I do not think they understood it. There is no evidence that, subsequent to this conversation, the trader called Mr Mallett or Mr O'Connor with details of the alleged activities.

19 March 2012 call

59. Five months later, the issue of fixings was again raised with Mr Mallett by a bank representative. On 19 March 2012, Mr O'Riordan[28] telephoned Mr Mallett. The entire transcript of that call is in Appendix 3. In summary:

(a) Mr O'Riordan phoned Mr Mallett because his manager was concerned about "*shenanigans*" that could possibly go on around the WM/Reuters 4pm fix. Mr O'Riordan said that this had been "*touched on*" in the FXJSC, by which it is almost certain he meant the CDSG (Mr O'Riordan was a member of the CDSG but not the FXJSC).

(b) Mr O'Riordan said that banks were using chat rooms to share their aggregate fix positions with each other and asked for Mr Mallett's view on this, particularly in light of the LIBOR issue. Mr O'Riordan gave an example where three banks share their aggregate fix positions in a chat room and they discover they are all "*facing the same way*".

(c) Mr Mallett said "*if* [regulators] *were aware that it was going on* [they] *would be uncomfortable with it...*" He thought the practice was in "*that sort of shadowy darky murky area*" and that "*maybe it's something we need to talk about at the JSC, both at our committee and the main committee at some point.*" Mr Mallett

[27] See paragraph 21(b)(iii) above.

[28] See paragraph 50(b) above.

suggested putting the issue on the agenda for the next CDSG meeting, which he did.

(d) Mr Mallett also said that the practice raised the question of "*anti-competition and all this kinda stuff*".

60. Immediately following the call, Mr Mallett emailed his personal assistant, copying in Mr O'Connor, with the following agenda item for the next CDSG meeting: "*Transparency issues around matching off flows ahead of fixes (I'll refine this before we send out the agenda)*".

61. There is no evidence to suggest that Mr Mallett discussed his conversation with Mr O'Riordan with Mr O'Connor, who was away from the Bank that day.

62. My findings on this conversation are as follows:

(a) The information that banks were sharing their aggregate fix positions in chat rooms did not come as a surprise to Mr Mallett.

(b) Mr Mallett was concerned that the practice could have regulatory and competition law implications.

(c) Mr Mallett did not raise his concerns within the Bank, to the FXJSC or to a regulator.

23 April 2012 CDSG meeting

63. The first CDSG meeting following the conversation between Mr Mallett and Mr O'Riordan was on 23 April 2012. On 10 April 2012, Mr O'Riordan emailed Mr Mallett's personal assistant to add as an agenda item "*communication around fixes*" and this was duly put on the circulated agenda. Mr Mallett and Mr O'Connor attended on behalf of the Bank. The meeting minutes record the following discussion:

> *Extra item: Processes around fixes. There was a brief discussion on extra levels of compliance that many bank trading desks were subject to when managing client risks around the main set piece benchmark fixings eg WMR.*

64. There is no contemporaneous note of this part of the meeting. I have, however, reviewed a limited amount of contemporaneous documentation created shortly after the

meeting. Further, I have interviewed[29] all the attendees of this meeting, including Mr Mallett and Mr O'Connor. My findings are:

(a) Mr O'Riordan opened the discussion on this item. The gist of his introduction was that UBS compliance officers were looking at the processes around fixes to ensure they had robust policies and, in particular, the fact that traders at banks were speaking to each other before fixes with a view to matching their positions. Mr O'Riordan wanted to obtain the opinions of others on this issue. The discussion occurred in the context of the then recent LIBOR scandal.

(b) Some of the other CDSG members shared their internal rules concerning such communications. There was a marked difference in internal rules ranging from some banks barring any communication about fix positions to some banks having no internal rules about the communication of fix positions to other banks.

(c) Mr Mallett said it was for each bank to determine its own compliance arrangements and that he did not think it was necessary to elevate this issue to the FXJSC.

(d) There is conflicting evidence on: (a) whether Mr Mallett told the group he would not be minuting the conversation; and (b) whether concerns about competition law were discussed.

(e) Following the meeting, Mr Mallett did not raise the issue with anyone inside the Bank and it was not raised to the FXJSC.

65. Although Mr Mallett did not raise the issue with anyone inside the Bank, nor did he raise it to the FXJSC, it is evident that he still had concerns about the matching process.

7 November 2012 Mr Mallett meeting with senior FX trader

66. On 7 November 2012, Mr Mallett met a senior bank FX trader. Mr Mallett expressed his concerns to the trader about chat rooms and the discussions banks were having around fixes.

[29] All but one of these interviews was done in person. Mr Ryuichi Takami of Bank of Tokyo Mitsubishi was sent questions to which he responded in writing.

28 November 2012 call

67. On 28 November 2012, a market commentator telephoned Mr Mallett to say that he had been told that regulators were looking into the WM/Reuters 4pm fix. Mr Mallett again expressed his concerns about the approach of the FX market to benchmarks and, in particular, the discussions banks had in chat rooms. The relevant part of the transcript of the call reads:

Commentator:	*I spoke to* [an FX trader] *yesterday.*
Mallett:	*Oh yeah.*
Commentator:	*Yeah, just on this, nothing changes still carry on… and he says to me, he says, "You know, I've been out with a few people" and I go "Ah yeah, what's on your mind…," and he went* "[…] *are you hearing any talk about, erm, WMR being looked at?"*
Mallett:	*Ok.*
Commentator:	*I went, "in what respect* […]?" *He went "some of the banks are getting very sweaty under the collar about WMR."* *Now I remembered that you'd mentioned it to me when I was with you [in/and]* [inaudible] *… but I didn't say anything to* [him] *… I went* "[…] *I haven't heard that mate before." He went "Well, just be aware mate" he said "The talk on the street is that the regulators are looking at WMR now very closely".*
Mallett:	*Ok, well I mean I, you know I…*
Commentator:	*I know, I shouldn't have said anything, I don't want…just passing it on mate.*
Mallett:	[overspeaking] *No, no, no, ok, thank you. I know I'm gonna say something which is probably repeating what I said when we met last time, which is that I don't think any benchmark or fixing rate is gonna, is gonna avoid scrutiny…*
Commentator:	[overspeaking] *No.*
Mallett:	*…whichever asset class it's in so I wouldn't be at all surprised if WMR in addition to, erm, other fixes are gonna be, um, are gonna be investigated. I mean I'd be disappointed if they weren't quite frankly.*
Commentator:	*Oh absolutely… Obviously there's a few sweaty palms out there.*
Mallett:	*Erm…*
Commentator:	*Of course if you haven't done anything wrong there's nothing to worry about is there?*

Mallett:	*No, no, but I mean I think there is, erm, you know there is some issue, again I may have mentioned this to you before, but I, on a personal level, I, you know I'm a little bit, erm worried for the industry in terms of its, erm, chattiness, I think I mentioned this to you before…*
Commentator:	[overspeaking] *Mmm.*
Mallett:	*… the FX Market is inherently chatty, and that's actually what, um, facilitates the exchange of information and makes the market an efficient place to operate as far as I'm concerned. But, um, it's a fine line in, particularly in this environment between chattiness and collusive behaviour…*
Commentator:	[overspeaking] *Mmm.*
Mallett:	*…and when you have a lot of people talking on Reuters Messenger or on Bloomberg Chats, you know 20 minutes, 15 minutes, 10 minutes before 4pm, erm, you know there are no doubt a number of conversations that take place even today that maybe in a few months' time, or in a few years' time we'll look back on and say "Well, you know, don't feel that comfortable with that". You know, that's part of what the market, the FX market, and every market is, is doing, is actually adapting to a different set of standards…*
Commentator:	[overspeaking] *Mmm.*
Mallett:	*…and the standards of the past which, and the behaviour of the past, which looked perfectly reasonable back then, in the cold light of 2012 or 2013, erm, maybe we don't feel quite so comfortable about and, erm, so that's why you know I'm a little bit nervous about, erm, about the FX market's approach to benchmarking, fixing, because of its inherent chattiness and like I say, there's a fine line between chattiness and, and acting in a way which disadvantages others…*
Commentator:	[overspeaking] *Oh exactly, I agree.*
Mallett:	*…which you know it makes the playing field less level I guess is what I'm trying to say. So um, so yeah we'll see, we'll see. If you get any more let me know, but um…*
Commentator:	*Yeah of course, no worries.*
Mallett:	*…like I say, I'd be disappointed if all of these benchmarks and fixes weren't being looked at.*

…

68. This call clearly shows that Mr Mallett still had concerns about the matching process and, in particular, that the practice could involve collusive behaviour and lead to market participants being disadvantaged.

11 April 2013 call

69. The issue of fixes came up again in a call between Mr Mallett and a bank salesman, on 11 April 2013. The relevant part of the transcript is as follows:

Salesman:	*I cannot believe that they haven't looked at the WMR fix yet.*
Mallett:	*Well it's probably on the list, and you know, as I think we've discussed before, my personal – and this is very much my personal view, not a Bank of England view – as regards the FX market in all of this is its inherent chattiness could well prove to be a bit of an Achilles heel for it, because as much as it assists in the dissemination of information and the formulation of liquidity in the FX market, some of the conversations, some of the traffic that are going across chats, whether it's Reuters messenger, and I've got a Reuters guy sitting next to me or whether it's Bloomberg chat, in the cold light of day in a court of law a year, two, three, five years from now will make people uncomfortable. Well don't you agree?*
Salesman:	*Hmm…*
Mallett:	*Some of the traffic that goes on around fixes for example?*
Salesman:	*Oh yeah. Well, frankly I'm not convinced it's the traffic around the fixing itself that's an issue.*
Mallett:	*No, but I'm giving an example, I'm giving you that as an example. –*
Salesman:	[overspeaking] *Hear me out, Martin. For me that's not the real issue. Because let's say listen, I've got your five hundred and the other guys says I've got your three hundred, d'you wanna match it or I'll do it or whatever, that in itself I don't think is the real issue. The real issue is have they executed the price in such a way as to maximize the potential profit by trying to ensure that the rate at four o'clock is at a certain level and not another.*
Mallett:	*Agreed. But those conversations… don't always result in the perfect match, and therefore there is an exchange of information that has potential value in terms of the direction of the move which a bank desk, dealing desk, in possession of that information ahead of the fix…*
Salesman:	*Mmm hmm.*
Mallett:	*… could deploy in terms of positioning for it.*
Salesman:	*Yeah, but…*
Mallett:	[overspeaking] *That is collusion.*

Salesman: *I understand, but hold on a second, my point is what if there is no email traffic and the guy's got five yards to do at the fix. And he, you know, quietly goes about his business for fifteen minutes, half an hour, forty-five minutes, whatever it is, before –*

Mallett: *Then you'll have a slightly more volatile marketplace.*

Salesman: *And then, at you know two minutes to or one minute to, he goes into the bookies and we have a maah maaaaahh you know and –*

Mallett: *Well, then you'll have a bit more volatility. And the customer won't get as good a rate.*

Salesman: Correct, and that…

Mallett: [overspeaking] *But sometimes the customer will get a better rate – it will vary. The point is that it's a completely opaque process – no one has any additional information advantage over anyone else aside from the orders that they have on their own books. Yes, you end up with more volatility and probably also you end up with a situation where people realise that the concentration risk around a single point in the day, the atomic hour of 16:00:00 is nonsense, and actually customers and investors and banks should be looking to diversify the way they hedge their risks away from a single point in time.*

Salesman: *Mmm hmm.*

Mallett: *Then that would surely be better than to have a whole group of banks chatting to each other in the fifteen minutes before a fix, trying to suss out how they can minimise the volatility for their clients. Because there is, there are vagaries around that process which could potentially leave the banks or the clients exposed to a misuse of that information – that's my point.*

…

Mallett: *Whether it's, you know, clearing, or it's increased volatility around fixes because they're standardised and banks aren't allowed to match off before the event, whatever. Clients will end up paying more. And there'll be less aggregate liquidity in the system. That's almost certainly gonna happen, but that's what happens when you get regulators being pushed by politicians and their public to get on top of a situation which ran out of control.*

Salesman: [overspeaking] *It's difficult.*

Mallett *You end up with bad regulation. I know. But that's life. But my broader point is that I do think that compared with other asset classes, the FX market is overly chatty – most of that traffic is harmless, no problem at all. Some of it is a little less agreeable, let's* *say, and I mean we're already hearing that banks, several banks, are actually now starting to, if not police that, actually insist that their, some of their desks, FX desks close out some of those chats with, bilaterally with banks.*

Salesman: *Mmm. Well we're certainly not allowed to talk about fixings at all –*

Mallett: *Well I'm not just talking about fixings, I'm talking about client behaviour more generally. You know, triple A name doing this or real money doing that, you know a lot of that stuff is now being outlawed – and actually ultimately it will be bad for the market because it's the way the FX market in real time instantaneously processes that information which makes the asset class one of the most liquid on the planet.*

Salesman: *Do you have a way of influencing regulations in that sphere?*

Mallett: *Not really. I'm a mere underling*

Salesman: *Yeah yeah yeah yeah yeah yeah yeah, I don't believe you for one second. Not for one second. I'm sure you have ways of doing that. Umm…*

Mallett: *I say it as I see it, that's the only way I can influence it.*

...

70. The call shows that:

(a) Mr Mallett had serious concerns about the practice of matching fixing orders. In particular, he thought that the practice could potentially leave banks or clients exposed to the misuse of the information exchanged. Mr Mallett told me in interview that he did not mean what he said and was trying to be "*provocative*" to get a response. I did not find this explanation convincing.

(b) Mr Mallett was aware that confidential information was being shared by traders, albeit without specifically naming the client (for example, "*triple A name doing this*") and that regulators would act when they were aware of this. Mr Mallett clearly thought that regulators would consider this to be inappropriate behaviour.

19 April and 17 May 2013 emails from Mr Mallett/Mr O'Connor to more senior Bank officials

71. There are two instances where Mr Mallett and/or Mr O'Connor did refer to banks' concerns about processes around fixings in emails to, *inter alios*, more senior Bank officials:

(a) On 18 April 2013, Mr Michael Cross, Mr Mallett's line manager, asked him and Mr O'Connor to provide a list of "*what keeps us awake at night as far as the fx market is concerned*" for a talk Mr Cross was going to give to an external organisation. Mr Mallett and Mr O'Connor provided a list of "*keeping awake at night risks*" by an email the following day. The third of these was described as follows:

> *Fixings. Aware banks are looking at processes around fixings in markets other than LIBOR. Some progress in FX made but still a source of scrutiny and risk for some.*

(b) On 17 May 2013, Mr Mallett circulated a seven page Markets Morning Report which contained the following paragraph:

> *The decision by Citi to impose controls on the internal use of the Bloomberg chat system follows similar moves by other banks in recent months but the difference is that other banks have been tightening external conversations traffic for reputational rather than security reasons. We know that RBS for example has, on some sales and trading desks, banned interbank chat rooms. The FX market thrives on its broad cross asset class information clearing role. But post Libor there are concerns that where those conversations stray into making assessments around likely client flows such as those ahead of the big real money fx benchmarks like State Street's WM fix, they could expose liquidity providers to unacceptable reputational risks.*

72. These emails do not set out the issue discussed at the 23 April 2012 CDSG meeting, nor do they indicate that Mr Mallett had any concerns about that market practice.

General findings

73. I make two further findings which are not connected to any specific event:

(a) From at least 2011, Mr Mallett was aware that FX traders were sharing confidential information and had concerns about this. From this time, Mr Mallett refers to the FX market being "*too chatty*". It is one thing to consider that a market is "*chatty*" but an entirely different thing to consider it "*too chatty*".

"*Too*" indicates a level of inappropriateness. In my view, the most likely inference from this observation is that he was aware that confidential information was being shared in the market. His explanation when interviewed was that he only meant that the FX market had not adapted to the change of technologies and, in particular, the increased use of chat rooms. I did not find this explanation convincing. Chat rooms are not themselves a problem. What matters is what is shared in them. This finding is also confirmed by Mr Mallett's comments in the call of 11 April 2013, set out at paragraph 69 above.

(b) There is significant uncertainty amongst members of the Bank's FX Desk (including Mr Mallett) about where the boundary lies between the sharing of confidential client information and providing commentary or "*colour*" about the market. For example, I discussed with Mr O'Connor the following comment a salesperson had made in a chat room with the Bank:

> *FLOW: we are selling gbpusd and eurusd here* [for] *a HF* [hedge fund] *– they will certainly cap the topside after fix* [related] *flows – already pushed eurusd and gbpusd LOWER.*

There is no suggestion that the Bank would use such information for trading purposes as opposed to market intelligence purposes. However, Mr O'Connor speculated that the salesperson would probably be broadcasting this to a lot of clients simultaneously to give them a picture of the market. He considered that the employee would not have asked permission from his or her client to broadcast this information but would not broadcast it if the client specifically instructed they wanted the transaction to be kept quiet. Mr O'Connor's view was that distributing such information did not amount to a breach of confidentiality or the NIPs code because the information was not specific enough. I have set out the relevant part of the NIPs code at paragraph 26 above. This says it is a fundamental principle that traders should not, without explicit permission, disclose or discuss any information relating to specific deals which have been transacted or are in the process of being arranged. On its face, this rule is strictly worded. However, its application is a matter of interpretation.

VI. CONCLUSIONS

74. I have found no evidence to suggest that any Bank official was involved in any unlawful or improper behaviour in the FX market. Subject to the issues I discuss below, I have found no evidence that any Bank official was aware or should have been aware of any unlawful or improper behaviour in the FX market.

75. I have found that, from May 2008, the Bank's Chief FX Dealer, Mr Mallett, was aware of the fact that banks were having open discussions about their fix positions in chat rooms with a view to matching them off. He was worried about the practice and thought that regulators may take an interest in it. The view he expressed on 19 March 2012 was that he would "*feel uncomfortable justifying it to the regulator the way it's currently set up*".[30] Further, from at least 28 November 2012, he had concerns that the practice could involve collusive behaviour and lead to market participants being disadvantaged.[31] Notwithstanding his concerns, Mr Mallett did not raise them with an appropriate person at the Bank, with the FXJSC (on which the FSA sat) or with the FSA.

76. Mr Mallett's view is that his conduct should not be criticised. He says that the Bank had no formal escalation policy until 1 August 2012 and, in any event, he was not under any escalation obligations because he was not aware of any actual misconduct. He also says that he had no obligations to report his concerns to the FXJSC or the FSA. He says that it was open to the bank representatives on the CDSG to raise any concerns they had with their representatives on the FXJSC.

77. I do not find this convincing. Once Mr Mallett had concluded that regulators might consider the practice improper, he should have raised this issue with an appropriate person within the Bank, with the FXJSC or with the FSA:

    (a) There was no relevant escalation policy in place during a large part of the relevant period.[32] However, this does not excuse his conduct for two reasons. First, as Mr Mallett accepted in his interview with me, even if there was no written escalation policy in force, it was a matter of judgment whether to escalate an issue. In my

[30] See 19 March 2012 transcript at Appendix 1.
[31] See paragraphs 67 to 70 above.
[32] See paragraphs 39 to 41 above.

opinion, it was an error of judgment for him not to escalate his concerns. Secondly, irrespective of his escalation obligations concerning improper conduct, it was a substantial part of Mr Mallett's duties to collect and distribute relevant market intelligence about the FX market, including about the integrity of that market. Mr Mallett had obtained relevant market intelligence but failed to distribute it.

(b) In my opinion, it would have been sufficient for Mr Mallett to have raised the issue with the FXJSC or the FSA. However, he did not do so.

(c) It is no excuse that bank representatives on the CDSG could have raised concerns they had with their representatives on the FXJSC.

In these circumstances, I consider he should be criticised.

78. It is, however, important to emphasise the limits of this criticism. Mr Mallett did not act in bad faith. He was not involved in any unlawful or improper behaviour nor was he aware of specific instances of such behaviour. In particular, he was not aware of the improper behaviour with which the FCA is concerned that goes far beyond his own concerns about potential misconduct. Rather, he was aware of a market practice which he thought could involve collusive behaviour and lead to market participants being disadvantaged and he failed to raise this with the appropriate people.

79. Mr O'Connor, Mr Mallett's deputy, was also aware that banks were having open discussions about their fix positions with a view to matching them off. Although he was not a party to many of Mr Mallett's telephone conversations referred to above, Mr O'Connor did attend some of the CDSG meetings where this was discussed.[33] Nevertheless, I do not think that Mr O'Connor should be criticised for failing to escalate this matter. As explained above, the practice is not by itself necessarily inappropriate and there is no evidence to suggest that Mr O'Connor had concerns about the practice, or where it may lead, nor can he be criticised for not having had such concerns on the basis of the information he had. Mr O'Connor is not therefore in the same position as Mr Mallett.

[33] In particular, the CDSG meetings on 16 May 2008 and 23 April 2012.

80. I have found that Mr Mallett was aware that FX traders were sharing confidential information and had concerns about this.[34] He thought that such information sharing would be seen by regulators as improper and I have found no evidence to suggest he escalated these concerns. Again, this was an error of judgment by Mr Mallett and he should be criticised for it.

81. Save for in the case of Mr Mallett, I have not found any evidence to suggest that any member of the FX Desk considered that confidential information was being shared for the purposes of trading in the FX market. However, I have found that there is considerable uncertainty amongst the Bank's FX Desk about where the boundary lies between the sharing of confidential client information and providing commentary or "*colour*" about the market.[35] I note, in this regard, that Recommendation 12 of the Financial Stability Board's Final Report on Foreign Exchange Benchmarks recommends:[36]

> *Codes of conduct that describe best practices for trading foreign exchange should detail more precisely and explicitly the extent to which information sharing between market-makers is or is not allowed. They also should, where appropriate, incorporate specific provisions on the execution of foreign exchange transactions including fix orders.*

I recommend in Chapter VII that members of the Bank's FX Desk receive training in the key principles of the NIPs code and, in particular, its application.

82. I have carefully considered whether Mr Mallett's superiors should also be criticised in respect of the matters for which I have criticised him. I do not think they should be. I have seen no evidence that they were aware that banks were having open discussions about aggregate fix positions in chat rooms in order to match them off or that concerns might exist around this practice. Nor do I think that they should have been aware of this issue as it was neither escalated to them nor raised in market intelligence reports. The position is no different with respect to the sharing of confidential information referred to in paragraph 80 above.

[34] See paragraph 73(a) above.

[35] See paragraph 73(b) above.

[36] Financial Stability Board's Final Report on Foreign Exchange Benchmarks (30 September 2014), page 4.

VII. RECOMMENDATIONS

83. I have been asked by the Oversight Committee for recommendations to improve processes and procedures within the Bank. I have three:

(a) **Documentation**: It is apparent from my findings that minutes of CDSG meetings were insufficient: there was no official note taker present at the meetings; minutes were sometimes produced months after the relevant meeting; sometimes the minutes did not adequately record the discussion. If adequate minutes had been produced and properly distributed, it is possible that the relevant issues would have been raised to a more senior level at a much earlier stage than in fact happened. Since these events, the Bank has conducted a review of its records management[37] and amended its record management policy. I recommend that the Bank reviews whether the steps it has taken will ensure that sufficient minutes will be taken and distributed of meetings like the CDSG meetings.

(b) **Education**: The FX market is, at the moment, a largely unregulated market. The Bank has put a substantial amount of effort into promulgating a voluntary code of conduct, known as the NIPs code, through the FXJSC. This is a strict and extensive code. A number of Bank officials I interviewed were unfamiliar with key provisions of the NIPs code and unclear about its application to examples. Accordingly, I recommend that any Bank official working in connection with the FX market should receive continuing training in the NIPs code or, if the Government decides to regulate the FX market, the relevant regulations.

(c) **Effects of increased market intelligence role of Bank officials**: From around 2002, the Bank has increased substantially its appetite for market intelligence. Its officials are expected to obtain as much market intelligence as they can in order to assist the Bank make its policy decisions. I am concerned that the Bank's systems and controls have not always kept pace with this change of role:

(i) Market participants regularly provide the Bank, on an informal basis, with confidential client information in order to assist the Bank's understanding of the market for its policy purposes. As long as there are systems and

[37] http://www.bankofengland.co.uk/about/Documents/rmr111213.pdf (as at 20 October 2014).

controls in place at the Bank to ensure that this information is not used by the Bank for its own trading purposes or passed on to other market participants (which I discuss below), I do not think this should be discouraged. However, I have not seen any public document which clarifies the relationship between the Bank and market participants in the context of market intelligence. In my view, the Bank should explain to market participants its role in this regard and the uses to which it puts such intelligence.

(ii) All of the Bank's FX traders emphasised to me that they were not allowed to use any market intelligence gathered for trading purposes and there is no evidence to suggest they ever did this. However, I recommend that there should be a formal written policy setting this out and that regular training be provided. The Bank should also review its controls around such intelligence being, intentionally or not, passed to other market participants.

(iii) The increased market intelligence role of Bank officials means they are far more likely to obtain information about improper conduct in the market. Accordingly, it is important for the Bank to have a written escalation policy explaining both what improper conduct is and what a Bank official who sees such conduct should do about it. The Bank first introduced such a policy on 1 August 2012. I recommend that this policy be regularly reviewed and, as part of their continuing professional development, Bank officials with market intelligence roles be given training in the meaning of improper conduct.

APPENDIX 1: TERMS OF REFERENCE

The Oversight Committee has appointed Lord Grabiner QC to lead its investigation into the role of Bank officials in relation to conduct issues in the foreign exchange market. As previously announced, the investigation, supported by Travers Smith LLP, will focus on matters relevant to the FCA's current investigation into trading on the foreign exchange market, and specifically whether any Bank official, during the period July 2005 to December 2013:

(a) was either (i) involved in attempted or actual manipulation of the foreign exchange market (including the WMR FX benchmark), or (ii) aware of attempted or actual manipulation of the foreign exchange market, or (iii) aware of the potential for such manipulation, or (iv) colluded with market participants in relation to any such manipulation or aware of any such collusion between participants;

(b) was either (i) involved in the sharing of confidential client information or (ii) aware of the sharing of such information between participants for the purposes of transacting business in the foreign exchange market; or

(c) was involved in, or aware of, any other unlawful or improper behaviour or practices in the foreign exchange market.

In light of the results of the investigation, the Oversight Committee may request recommendations to improve processes and procedures within the Bank.

The investigation will be given access to:

- any electronic, audio and hard copy materials within the possession of the Bank that may be relevant to its investigation;
- any Bank employees or officers; and
- any experts in the field of foreign exchange (whether or not from within the Bank) that the investigation needs to consult in order properly to understand the workings of the foreign exchange market and the issues relating in particular to the WMR FX benchmark.

The conclusions of the investigation will be contained in a report that will be made publicly available. The publication is likely to be deferred until the conclusion of the FCA's investigation.

APPENDIX 2: SCOPE OF DATA REVIEW

1. This appendix, which has been prepared by Travers Smith, summarises the various categories of evidence obtained, reviewed and considered for the purposes of Lord Grabiner's investigation (the "**Investigation**"). That evidence comprises:

   a. Evidence provided by the Bank.

   b. Evidence provided by banks that had CDSG representatives at relevant meetings.

   c. Evidence provided by the FCA.

A. EVIDENCE AND INFORMATION PROVIDED BY THE BANK OF ENGLAND

(i) Interviews with Bank staff

2. **Substantive interviews**. Lord Grabiner conducted interviews with the following Bank staff in relation to the matters set out in the Terms of Reference:

   a. Martin Mallett, the Bank's Chief Dealer and Chairman of the CDSG.

   b. James O'Connor, the Bank's Trading Manager and attendee at the CDSG.

   c. Five other members of the Bank's Foreign Exchange Desk.[38]

   d. Michael Cross, Head of the Foreign Exchange Division from April 2009 onwards.

   e. Paul Fisher, Head of the Foreign Exchange Division (to March 2009), Executive Director, Markets (March 2009 to March 2014), and Deputy Head of the PRA, Executive Director Supervisory Risk Specialists and Regulatory Operations, Executive Director Insurance Supervision (March 2014 to present).

   f. Sir Paul Tucker, Executive Director, Markets (to February 2009) and Deputy Governor, Financial Stability (February 2009 to October 2013).

[38] Andrew Shankland, David Barley, Patrick Campbell, Chris Cox and Rob Spillett.

3. **Background interviews**. Background interviews were conducted in relation to, *inter alia*, (i) the organisational structure of the Bank, particularly the structure of, and information exchange between, the FXJSC and its subgroups, including the CDSG; and (ii) the Bank's market intelligence function. Interviews were conducted with: (a) Jonathan Rand, Head of Market Intelligence from June 2012; and (b) Grigoria Christodoulou and Sumita Ghosh, members of the FXJSC Secretariat.

(ii) Electronic document review

4. The Investigation conducted a focused review of electronic documents. 1,823,493 unique electronic documents were extracted from 10 custodians at the Bank. Of these, 61,144 documents were reviewed by Travers Smith during an initial investigation for the Bank Executive,[39] prior to the commencement of the Investigation. Another 65,695 documents were reviewed during the Investigation. This targeted subset was arrived at by careful selection of search terms, which were then applied across the documents provided by the Bank. An electronic review platform provided by Huron was used for the document reviews described in this Appendix.

5. **Custodians**. The selected custodians[40] were: (i) Martin Mallett; (ii) James O'Connor; (iii) Michael Cross; (iv) Paul Fisher; (v) Andrew Shankland; (vi) David Barley; (vii) Grigoria Christodoulou; (viii) Sumita Ghosh; (ix) Jack Garrett-Jones;[41] and (x) Lynn Rosemeyer (Mr Mallett's personal assistant).[42]

6. **Document types**. The following documents types were extracted: (a) documents and emails retained by the Bank;[43] (b) Bloomberg chats and messages; (c) Reuters chats; and (d) messages sent on the Bank's "Communicator" internal instant messaging system.

[39] Between October 2013 and March 2014.

[40] Huron confirmed by mapping communications between custodians that there were no additional custodians who were obvious targets for review.

[41] Member of the FXJSC Secretariat.

[42] The Bank also provided a small amount of data for Sir Paul Tucker. See paragraph 9(a) and footnote 45 of this Appendix for more details.

[43] A proportionate approach was taken to the extraction of such documents from the available sources to ensure Travers Smith could be satisfied that available, relevant documents were very likely to be extracted without unnecessarily prolonging the Investigation or incurring disproportionate costs.

7. **Time periods**. Requests for documents were limited to the periods in which a custodian held a relevant role. In addition, requests were limited by availability of documentation:

   a. Bloomberg chats and messages were only available for 2007 onwards.

   b. Reuters chats were only available from 2009 onwards.

   c. The retention of emails is likely to have been less comprehensive before 2012.

   d. Communicator has only been used by the Foreign Exchange Desk since early 2011.

8. **Audit**. The extracted data was audited, with the assistance of Huron, to ensure that it was complete.

9. **Searches**. The searches conducted on the dataset of approximately 1.8 million documents to arrive at the population for review were as follows:[44]

   a. **Searches carried out during our initial investigation for the Bank Executive**. During Travers Smith's initial investigation, two categories of search were carried out over a more limited set of materials:[45] (a) keyword searches, based on keywords suggested by the Bank and the FCA; (b) searches for all documents within key periods; and (c) searches for all communications between Bank officials and CDSG members.

   b. **Keyword searches**. A list of keywords was initially prepared based on terms identified by the FCA; it was refined by Travers Smith during its initial investigation on behalf of the Bank Executive and the first part of the Investigation; it was then optimised using Huron's Initial Case Assessment ("**ICA**") process.

   c. **Narrow keyword searches**. Targeted additional keyword searches were executed while Huron carried out the ICA. These searches traversed a number

[44] Communicator was only used sparingly by the Foreign Exchange Desk. The Communicator data did not respond to any keywords. A linear review was therefore conducted of Martin Mallett's and James O'Connor's communications only.

[45] I.e. documents relating to Martin Mallett and James O'Connor, and a small subset of documents relating to Michael Cross, Paul Fisher and Sir Paul Tucker around key dates.

of specific elements of the review, notably: (i) escalation by Messrs Mallett and O'Connor to Bank senior management; (ii) contact by the Bank with non-Bank traders under investigation either by the FCA or their own banks; (iii) any references to any of the chat rooms in which the activities central to the FCA's investigation allegedly took place; and (iv) any reference in the documents to "manipulation" or any derivative of "manipulate".

d. **Stops searches**. Highly targeted keyword searches were carried out to identify communications relating to stop loss orders, in light of the FCA's particular focus on them (see paragraph 24 of the above report).

e. **Date-specific searches**. Searches, applying wider search terms, were carried out around key dates, including a series of searches identified with the assistance of the FCA and all documents responsive to those search terms were reviewed.

f. **Reactive searches**. Final searches were carried out applying search terms derived from key documents identified in the document and audio reviews.

(iii) Audio review

10. The Investigation conducted a focused review of telephone calls using Nexidia's[46] phonetic search functionality: 6,745 calls or call extracts[47] were reviewed, of 87,346 extracted from the Bank. This targeted subset was arrived at by careful selection of search terms.

11. **Custodians**. Audio data was extracted for Martin Mallett, James O'Connor, Michael Cross, Andrew Shankland and David Barley.[48]

12. **Time periods**. The Investigation considered audio data from early 2010, the earliest date from when such data was preserved by the Bank.[49]

[46] An audio review tool which enabled the processing, hosting and searching of audio data.

[47] In most cases, only relevant parts of calls were reviewed, around search term "hits", but with sufficient breadth to ensure the search term was placed fully in context.

[48] Certain further custodians initially considered for review did not have recorded lines.

[49] Mr Cross' data covered the period from 15 October 2011 to 5 September 2013; the data for the other four custodians covered the period from 1 January 2010 to 31 December 2013.

13. **Audit**. The extracted data was audited, with the assistance of Nexidia, to ensure that it was not corrupted and/or no data had failed to be extracted.

14. **Searches**. The searches conducted on the dataset, using Nexidia's software, were:

    a. **Initial keyword searches**. Searches were identified and optimised by considering: (i) the searches suggested by the FCA; (ii) keywords developed during Travers Smith's work for the Bank Executive and the early stages of the Investigation; (iii) guidance provided by Nexidia; and (iv) preliminary searches using Nexidia.

    b. **Linear searches**. Reviews were carried out, without the application of any search terms, of all extracted audio data from periods either considered important to the Investigation or surrounding a call or document of particular relevance.

    c. **Reactive searches**. Final searches were carried out applying search terms derived from key calls identified in the audio review.

(iv) Hard copy documents/background information

15. The Bank confirmed to the Investigation that it had carried out an extensive search for all relevant hard copy documents, and that in fact very few relevant hard copy documents exist. Hard copy documents were provided from the records of (i) the FXJSC Secretariat; (ii) Martin Mallett; (iii) James O'Connor; and (iv) Lynn Rosemeyer.

B. EVIDENCE FROM CDSG BANKS

16. **Interviews**. 18 non-Bank individuals in total attended at least one of the key CDSG meetings on 16 May 2008, 23 April 2012 and 13 July 2012. All have assisted with the investigation. 15 were interviewed by Lord Grabiner in person, and three by way of written questions and answers, as follows (in alphabetical order):

Interviewed		
Robert De Groot, Citi and BNP Paribas[50]	Ed Monaghan, RBC	Rohan Ramchandani, Citi
Chris Freeman, State Street	Gary Nettleingham, HSBC	Stuart Scott, HSBC
Angus Greig, Deutsche Bank	Niall O'Riordan, UBS	Geoff Thorpe, JPMC
Mark Iles, Royal Bank of Canada ("**RBC**")	James Pearson, RBS	Richard Usher, JPMC
Bernard Kipping, Commonwealth Bank of Australia ("**CBA**")	Jon Pierce, Goldman Sachs	Daniel Wise, Barclays and Credit Suisse
Written questions		
Ichei Kuki, Bank of Tokyo-Mitsubishi	Tatsuro Mitsui, Bank of Tokyo-Mitsubishi	Ryuichi Takami, Bank of Tokyo-Mitsubishi

17. **Documents**. We requested documents relating to the key CDSG meetings from each CDSG bank, and we have received documents from Bank of Tokyo-Mitsubishi, BNP Paribas, Citi, Credit Suisse, Deutsche Bank, RBC, RBS, JPMC and UBS. Barclays, CBA, Goldman Sachs, HSBC and State Street have all confirmed that they do not hold any relevant documents.

C. EVIDENCE AND INFORMATION PROVIDED BY THE FCA

18. **Electronic documents**. The FCA provided the Investigation with Bloomberg chats, emails and audio transcripts considered potentially relevant to the Investigation, on a continuing basis.

[50] The banks listed are those by which the individual in question was employed at the time of the relevant CDSG meetings.

19. **Interview transcripts**. The FCA provided the Investigation with transcripts of interviews it conducted with Bank staff.

20. **Background information**. The FCA provided the Investigation, on an ongoing basis, with information about the FX market and about the behaviours that it had seen and was investigating within the market.

APPENDIX 3: 19 MARCH 2012 MALLETT/O'RIORDAN CALL

Start time: 13:00:19

O'Riordan:	*Hey Martin, how are ya…*
Martin Mallett:	*Well hello, yeah not bad.*
O'Riordan:	[inaudible] *Sorry I hit the wrong line, how are you sir?*
Martin Mallett:	*Yeah I'm good.*
O'Riordan:	*Listen, I just wanted to have a little quick chat with you about something...*
Martin Mallett:	*Yeah sure.*
O'Riordan:	*Before one of the meetings I just wanted to get your take on this, obviously, it's a little bit sensitive because of our LIBOR issues at the bank, erm our manager is a little bit concerned about fixings, ok...*
Martin Mallett:	*Mmm hmm.*
O'Riordan:	*... and the shenanigans that could possibly go on around fixings...*
Martin Mallett:	*Mmm hmm.*
O'Riordan:	*… and I know we touched on this before in the JSC.*
Martin Mallett:	*You're talking about FX fixing...*
O'Riordan:	*Yeah, 4 PM fixing.*
Martin Mallett:	*Yeah, yeah.*
O'Riordan:	*Ok, and you know the situation where you have you know Bank A,B and C say well actually I'm getting and the other guy says well I'm losing and Bank C says I'm not doing anything and then we match off and everybody is happy and it's probably good for the shareholders of the company, good for the shareholders of the bank etc etc. Now the situation is where people say well actually A B and C we're all losing say a hundred quid and the market rallies. Now, eh, sure these things happen, but broken down we're not in control of it. The fix is, is deemed by I guess most of the asset managers as the benchmark that has to be benched against, so there's nothing we can do about that. But what's your take though on, how can I put this, chat activity on Bloomberg?*
Martin Mallett:	*Chat activity on Bloomberg...*
O'Riordan:	*I.e. y'know if there's three banks in the chat and they're all sorta saying well actually, you know, I'm losing 2 hundred, I'm losing 3 hundred, I'm losing 4 hundred...*

Martin Mallett: *Mmm.*

O'Riordan: *… where the amounts are stated, the direction is stated, etc. What's your take on that? Bearing in mind the recent LIBOR issues.*

Martin Mallett: *Yeah, no I know what you're getting at...*

O'Riordan: *If you're a lawyer, if you're a lawyer, now sure I think we can talk our way around it but if you're a legal eagle it may not get through to…*

Martin Mallett: *I mean my starting point is that the, is the FX market is uh, is chatty. Y'know, it's the basis of the way it transacts information. It's a clearing house for what's going on in every asset class and that is the way it is and y'know over the last few years that sort of chattiness has become a big feature of the Bloomberg product which facilitates it and y'know as far as I am concerned that is, that's good, that, y'know, in terms of swapping information and ideas it's good. It's where it starts to get into the realms of, um, something that looks like off-market transactional behaviour…*

O'Riordan: *Mmm hmm.*

Martin Mallett *… um, where again, y'know, a few years ago people wouldn't really have batted an eyelid, but in this new enlightened world of openness and transparency and aversion to dark pools and everything wanting to be lit and so on, umm I think it looks increasingly anachronistic that sort of behaviour, so I think y'know there's a difference between the market chatting about what's going on, umm, and the market discussing stuff which has kind of a transactional meaning to it in terms of, y'know, how it could affect fixing rates for example. I think that that is much less secure ground for the market to proceed on. I mean there are actually people out there umm at the sort of more aggressive end of the spectrum who think that even the chattiness of the FX market is suspect…*

O'Riordan: *Yep.*

Martin Mallett: *… and they don't like it, um, and would like to see it outlawed. I think that would be a retrograde step, but this obviously is, um, is a different matter altogether and I think that uh, I think that regulators if they were aware that it was going on would be uncomfortable with it…*

O'Riordan: *Mmm, OK…*

Martin Mallett: *… is my view. But I mean there's no legal, there's no legal basis to make that assertion, it's just a personal observation that, it, that sort of behaviour doesn't seem to me to fit with, y'know with the kind of new thinking on – regulatory thinking – on transparency, openness and a fair level playing field for all.*

O'Riordan: *Does it concern you, Martin?*

Martin Mallett: *Does it concern me? Umm…*

O'Riordan: *Is this something on your radar or do you just think, "Mmm not terribly…" [Or is it…]?*

Martin Mallett: *I could see reputationally for our industry that it's… it isn't good and that if it as a practice kind of gains currency among the people in y'know outside of our industry that wanna close us down, um, they would have some ammunition with it I think.*

O'Riordan: *OK.*

Martin Mallett: *So I'm uncomfortable with it in that sense. I can't be uncomfortable with it legally because I'm not a lawyer and I can't be uncomfortable with it as a regulator because I'm not a regulator.*

O'Riordan: [overspeaking] *Yeah.*

Martin Mallett: *Maybe if you ask me the question on July 1 next year I'll have a different view because I'll be a regulator then, I'll be working for the regulator.*

O'Riordan: [overspeaking] *Yeah.*

Martin Mallett: *But I mean, you know, it's part of the murkier side of our business that, um, y'know, as I say in this changed environment for me doesn't fit uh, fit quite as well.*

O'Riordan: *No it doesn't Martin, and I mean we're coming, obviously y'know at UBS, actually, well for a Swiss bank it's a slight oxymoron, but we have to be squeaky clean these days and, and, and we have had such obvious problems with the regulators in one shape or another…*

Martin Mallett: *Oh, sure.*

O'Riordan: *… in the past five years so it's just a slight concern, but another thing if you think of the other side right Martin, say for example you are working within a bank, ok, and you do fixes on a regular basis, with a regular client base and you have, I don't know, let's say you've got six hundred dollar Canada to sell one day, well unless you go into the street and have a sniff to see what's happening, you're probably not gonna take on those six hundred on a regular basis, because you don't know the lie of the land.*

Martin Mallett: *Yeah I know, but I mean that's trying to justify murkiness on the basis of um, y'know, um of protecting both your P&L and that of the client.*

O'Riordan: *Mmm hmm.*

Martin Mallett: *Um y'know what you're describing there is that you could be landed with something which, without the mechan-, without this mechanism to be able to sort of suss out where the, where the other…*

O'Riordan: [overspeaking] *Yep.*

Martin Mallett: *... side is gonna be, um y'know you're risking the bank's P&L, you're risking the client's fill and you're possibly y'know risking injecting more volatility into the market…*

O'Riordan: [overspeaking] *Mmm hmm.*

Martin Mallett: *... "So surely this is a good thing to do" – y'know it's, it's a tenuous, y'know way of justifying something which...*

O'Riordan: *Oh I'm not justifying it...*

Martin Mallett: *Oh I know you're not, but I can see how someone might come to, y'know, come to the conclusion that really we need some facility or some mechanism whereby, um, we can sort of, y'know, we can, we can protect the interests of the bank, the client and the market in terms of reduced volatility by, by having something a little bit darker. I mean y'know this sort of behaviour, um is common practice in the equity market.*

O'Riordan: *Yep.*

Martin Mallett: *Um, it's not all transparent and lit there, y'know there are block trades that go through and you know an hour later and I'm sure market makers in the equity market sort of talk to each other, probably not on Bloomberg chats, but on the phone I would think…*

O'Riordan: *Yeah.*

Martin Mallett: *... and... y'know sort of suss it all out that way and you end up with a big flow going through, minimal impact. Um, but…*

O'Riordan: *Oh yeah, there's a thousand ways it will happen as well which we all… we've all got mobile phones etc, I mean we can all* [inaudible].

Martin Mallet: *Yeah yeah.*

O'Riordan: *We know that. But I was just wondering, I was just really curious as to what your standpoint would be on the issue because y'know the way it works now, it obviously works well and probably, I would say, you know the fixes are good, but my God Martin we don't always win on them and when you lose you lose handsomely. So, you know, it's not a... it's clearly a zero-sum game for somebody, but I would say it's probably a 60/40 ratio certainly from our experience here it's a 60/40 ratio, but overall it's good business and that's why we do it. But my view is that if they just y'know say right there can no communication with any other institution about fixes, well then why take a fix, why offer mid-market because you're under too much of a ...*

Martin Mallett: *Well quite and it may well be that, um, the practice economic- becomes uneconomic and y'know who suffers at the end of the day, the client suffers.*

O'Riordan: [overspeaking] *Right. Hammer…*

Martin Mallett: *Um that's actually where most of the cost of regulation is probably gonna end up any way.*

O'Riordan: [overspeaking] *Yeah.*

Martin Mallett: *Um but it's, y'know it's difficult because our market is still relatively lightly regulated.*

O'Riordan: [overspeaking] *Mmm Hmm.*

Martin Mallett: *Um, we have these mechanisms that we've created by which we dissipate risk between ourselves, um, and y'know that's all done in the spirit of minimising the impact on all three balance sheets, the market's the banks' and the customers'. Um, but it's not, it's not above board if you know what I mean.*

O'Riordan: [overspeaking] *Yeah, I know exactly what you mean.*

Martin Mallett: *It's still in that, it's still in that sort of shadowy darky murky area.*

O'Riordan: *Yeah, and y'know we basically had Compliance and some of the legal guys coming in to us saying, "Mmm, I'm not quite sure about this," and we, we actually had an incident in the Rouble, eh quite a while ago, I think…*

Martin Mallett: [overspeaking] *Yeah.*

O'Riordan: *… what maybe 18 months ago and our... sort of... how can you put it? Our internal affairs policeman here went in and he got access to the Bloomberg Chats and he noticed that there was a whole cartel of Rouble traders basically discussing what we're gonna do and what we're not gonna do next. So…*

Martin Mallett: *Yeah, it's tricky, it's tricky. I would just feel uncomfortable justifying it to the regulator…*

O'Riordan: [overspeaking] *Yeah.*

Martin Mallett: *… um, the way it's currently set up. So, maybe, I mean, maybe it's something we need to talk about at the JSC, both at our committee and the main committee at some point, I could easily put it on the agenda for April...*

O'Riordan: *That would be great. I would really love to know...*

Martin Mallett: *… and just get some views, because if other people are starting to feel, y'know their compliance people breathing down their neck or poring over their Bloomberg Chat reports, y'know the print-offs you can produce of that stuff, I mean, I think the LIBOR case is, is certainly relevant in terms of, um, raising it as an issue, because although it is quite different umm, y'know in terms of what I think it's setting out to achieve, to what has allegedly been going on in, in the interest rate markets, the process itself is still far from transparent and in that sense it's therefore difficult to justify, or not justify, it's difficult to be able to prove that what you're doing, uh, in trying to minimise those risks is actually in everybody's best interests, you know…*

O'Riordan: [overspeaking] *Yeah.*

Martin Mallett: *... and that's where it starts to become a question of y'know, of anti-competition and all this kinda stuff, y'know.*

O'Riordan: *Well, you're dead right and I think, Martin, it is a little on the murky side and basically I would actually love just to, if we could have a little topic about this, I'm really curious to hear what other people have to say...*

Martin Mallett: *Right, well make sure, let me, I'll, send a note to Lynn to put it on the agenda, but just in case it slips through make sure you remind me, and we'll have a session on it.*

O'Riordan: *Brilliant. That'll be great, what date in April is it Martin?*

Martin Mallett: *Oh, I don't know, you've put me on the spot there.*

O'Riordan: *I'll ask Lynn and I'll send an email.*

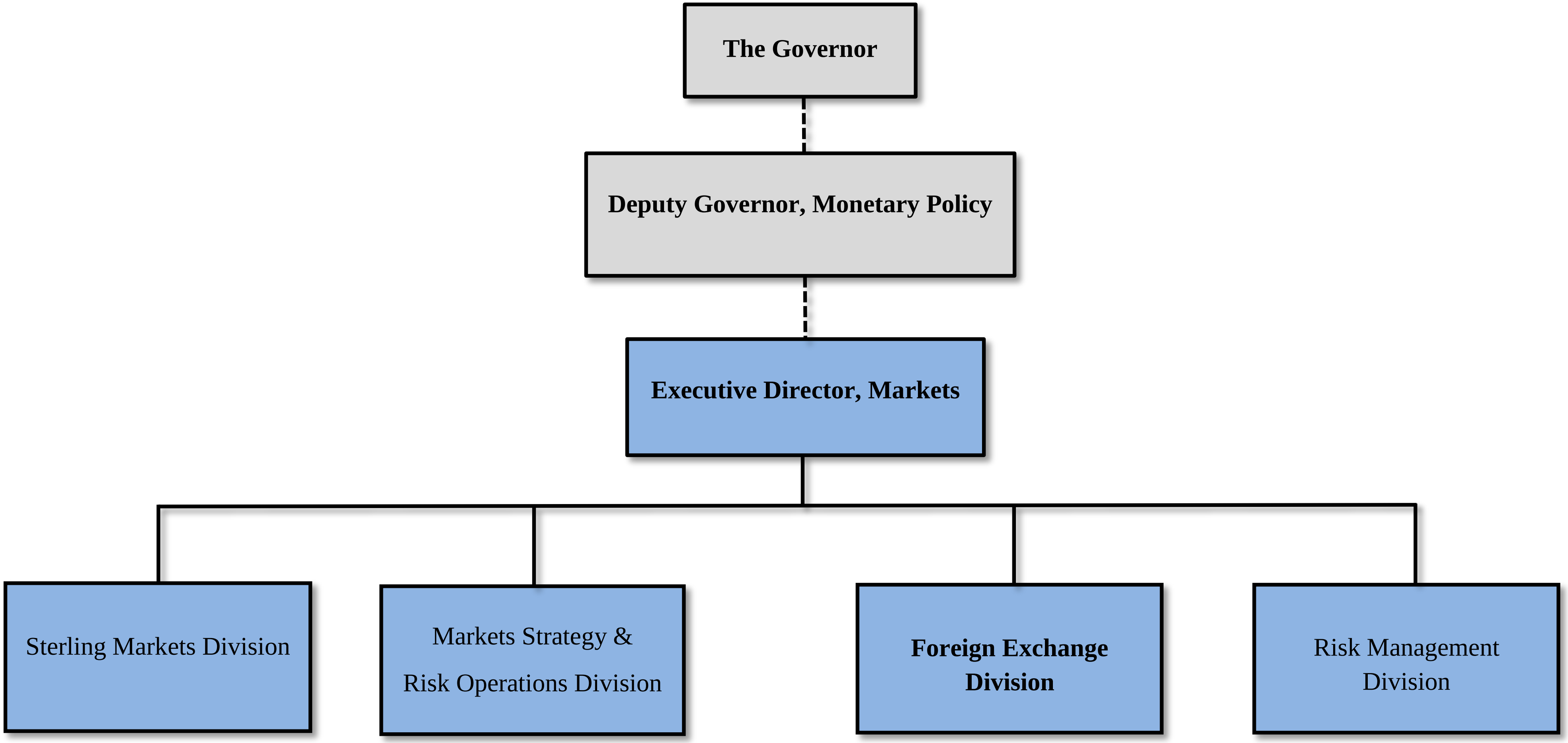
Martin Mallett: *Yeah send Lynn an email, she'll... Alright?*

O'Riordan: *Alright.*

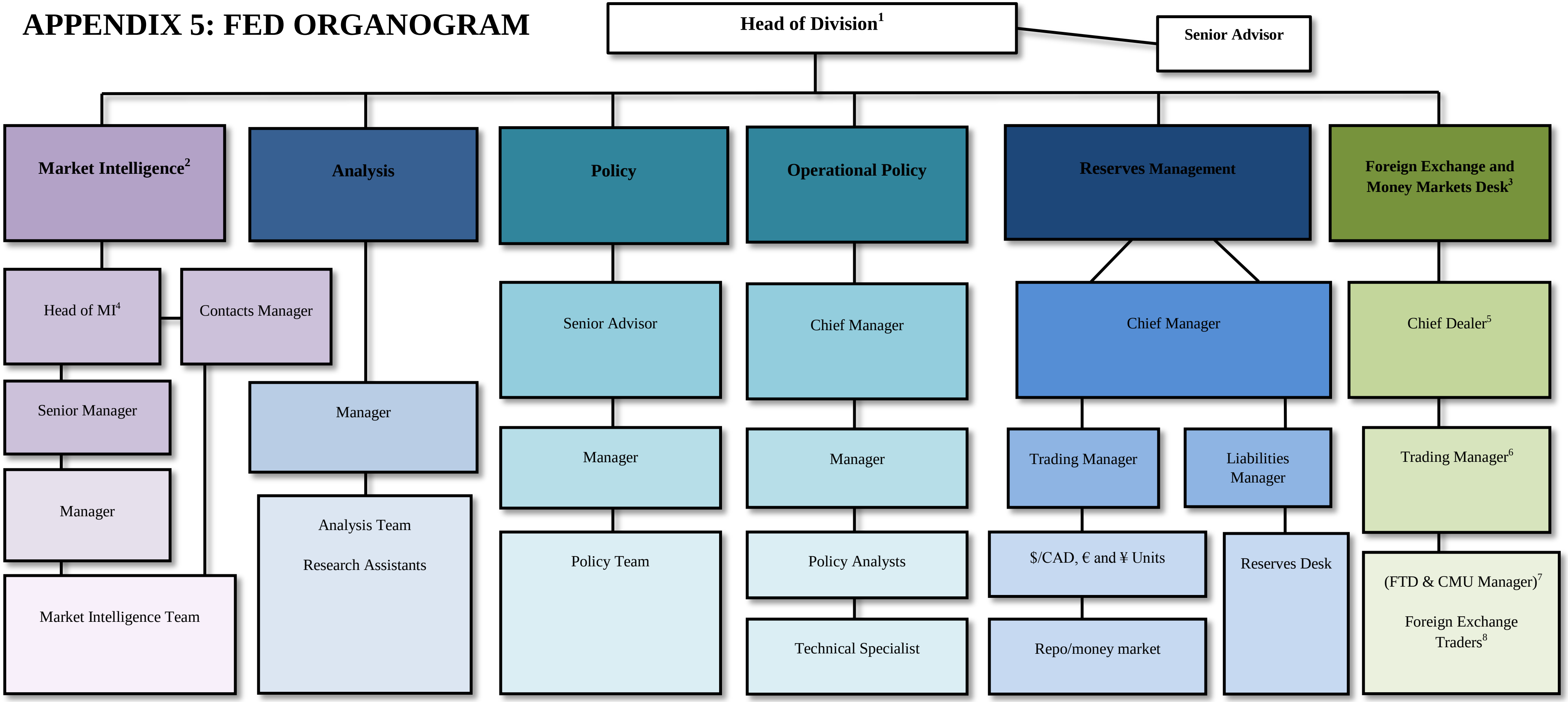
Martin Mallett: *Thank you. Bye now.*

APPENDIX 4: THE BANK'S MARKETS DIRECTORATE

This simplified organogram shows the Bank's Markets Directorate (in blue), and the location of the Foreign Exchange Division within it, during the period July 2005 to December 2013.



APPENDIX 5: FED ORGANOGRAM



Note: This structure chart shows the Foreign Exchange Division structure from July 2005 to 31 December 2013 only. However, to the extent that personnel have held their positions for a longer duration, this has been reflected in the date ranges below.

1. Paul Fisher (2002 – March 2009); Michael Cross (April 2009 – present).
2. The "Market Intelligence" (MI) team became a standalone team (as represented in this chart) in 2011. Prior to 2011, no Bank employees did solely MI, although many (e.g. Michael Cross and Christian Hawkesby, as Heads of MI pre-2011 (see note 4 below)) had MI roles in addition to their main roles.
3. The Foreign Exchange and Money Markets Desk was known as the Foreign Exchange Desk until May 2011.
4. Michael Cross (2005 – April 2009); Christian Hawkesby (April 2009 – February 2011); Chris Young (February 2011 – March 2012); Jonathan Rand (May 2012 – present).
5. Martin Mallett (2001 – present).
6. James O'Connor (2004 – present). Before he was Trading Manager, James O'Connor was Deputy Chief Dealer (approx. 2001 to 2004).
7. Andrew Shankland (August 2011 – present).
8. In addition to Martin Mallett and James O'Connor, the trading members of the Foreign Exchange Desk during the relevant period were: Andrew Shankland (pre-2005 – August 2011, when he became FTD & CMU Manager); Stuart Cole (pre-2005 – 2006); David Barley (pre-2005 – present); Patrick Campbell (pre-2005 – present); Robert Spillett (2008 – 2012); Chris Cox (2008 – present); John Henderson (2005 – 2008); Mika Inkinen (2006 – 2007); Alex Hutton (2013 – present).