



FAIR AND EFFECTIVE
MARKETS REVIEW

Fair and Effective Markets Review

Final Report
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Foreword

The Fair and Effective Markets Review was launched by the Chancellor of the Exchequer and the Governor of the Bank of England in June 2014 to reinforce confidence in the wholesale Fixed Income, Currency and Commodities (FICC) markets in the wake of the serious misconduct seen in recent years; and to influence the international debate on trading practices.

FICC markets are global in scope and size. To take just three examples, turnover in foreign exchange markets is some \$5 trillion a day; the global stock of corporate, financial and government bonds is nearly \$100 trillion; and FICC 'over-the-counter' derivatives amount to some \$620 trillion in notional terms. The scale and complexity of these markets can make them seem remote from most peoples' day-to-day lives. Yet they affect us all. They help determine the borrowing costs of households, companies and governments, set countries' exchange rates, influence the cost of food and raw materials, and enable companies to manage the financial risks they incur through investment, production and trade. They also support employment for many around the world, not least in the United Kingdom, which hosts a substantial share of these markets. So it is vital that they work well, and in the best interests of everybody.

These goals have been sorely tested in recent years. Attempted manipulation of benchmarks and market prices, misuse of confidential information, misrepresentation to clients and attempted collusion have led to huge fines, reputational damage, diversion of management resources and the reining in of productive risk taking. Market effectiveness has been impaired. And public trust has been severely damaged. Repeated attempts to draw a line under the issue have been undermined as further instances of past misconduct have come to light — something that continued during the life of this Review.

It was against this backdrop that we launched our public consultation in late October 2014. We heard from market users, intermediaries, infrastructure providers, national and international authorities, public interest groups and academics — many of them either based in, or representing organisations from, countries outside the United Kingdom. We undertook well over 200 bilateral meetings and phone conversations and spoke with nearly 800 people. We also held large-scale consultation events in London, Brussels, Washington, New York and Singapore. And we received nearly 1,000 pages of written submissions.⁽¹⁾ In this, as in every aspect of our

work, we were ably supported by a high-quality Secretariat drawn from staff across the Bank of England, FCA and HM Treasury,⁽²⁾ and led by Andrew Hauser, Director of Markets Strategy at the Bank.

This Report represents the culmination of the Review's work. It has three main purposes. First, it provides an analysis of the root causes of recent misconduct and other sources of perceived unfairness in FICC markets. Second, it evaluates the impact of the significant reforms already completed or under way. And, third, it makes recommendations to fill remaining gaps. Broader issues, such as how to boost the effectiveness and resilience of financial markets from a macro-economic and financial stability perspective, are beyond the scope of this Review. They are however being discussed by many other national and international bodies. They will also be central to the Open Forum to be held at the Bank of England in the autumn of 2015, which will bring together a wide range of stakeholders to draw these various strands together. The purpose of the recommendations in this Review is to enhance the fairness of FICC markets while also boosting their overall effectiveness, by increasing confidence and reducing risk premia. But they clearly need to be seen against the broader canvas of other ongoing reforms to the international financial system.

Our main policy proposals are set out on page 7. One important recommendation — that a further seven major UK FICC benchmarks be brought into the scope of UK regulation — has already been implemented, and came into force on 1 April 2015. Our remaining recommendations have been shaped around six key principles. The first four principles, which give rise to specific near-term actions to raise conduct standards, are:

1. **Individuals active in FICC markets should be more accountable for their actions;**
2. **Firms active in FICC markets should take greater collective responsibility for developing and adhering to clear, widely understood and practical standards of market practice, in regular dialogue with the authorities;**

(1) Available at: www.bankofengland.co.uk/markets/Pages/femrresponses.aspx.

(2) Geoffrey Coppins, Barry King and Sam Robbins (Deputy Heads of the Secretariat); Anoushka Babbar, Ashleigh Brigden, Nick Butt, Rhys Davies, Anthony Hanlon, Su-Lian Ho, Tanveer Hussain, Jan Lasik, Natalie Lovell, Analise Mercieca, Guy Morton, Edward Ocampo, Mathieu Vital, Sebastian Walsh, Matthew Wooderson and John Younger.

3. **The UK authorities should extend the regulatory perimeter, broaden the regime holding senior management to account and toughen sanctions against misconduct; and**
4. **International authorities should collaborate to raise standards in global FICC markets.**

But this is not enough. A key lesson of the financial crisis was that the 'hard' infrastructures supporting markets, and the 'soft' infrastructures (standards and norms) by which those markets operated, failed to keep pace with market innovation. To prevent that recurring, market participants and authorities need to work together in the years ahead:

5. **To promote fairer FICC market structures while also enhancing effectiveness; and**
6. **To ensure a more forward-looking approach to the identification and mitigation of conduct risks.**

The next few years offer a crucial opportunity for market participants to step forward and take responsibility for improving standards in FICC markets. We have been encouraged by the level of commitment to that project that we have encountered over the past year. The Review's independent Market Practitioner Panel, chaired by Elizabeth Corley (CEO of Allianz Global Investors) and with

senior membership drawn from across the full range of stakeholders, has provided particularly valuable input. But we should not be naïve about the challenge that lies ahead. Bilateral market discipline played little or no part in helping to maintain standards in the pre-crisis period — and few people we spoke to felt confident that would change in the period ahead. We must find more collaborative ways to harness the technical knowledge and innovation of market participants, while using the powers available to the authorities to hold firms to their responsibilities. If firms and their staff fail to take that opportunity, more restrictive regulation is inevitable.

This Report concludes the work of the Review itself. The real test comes next, in delivering the recommendations in both letter and spirit. Some of the Review's recommendations are for domestic implementation, by public authorities and market participants. But, given the global nature of FICC markets, several will require international discussion and co-ordination, including with the Financial Stability Board (FSB), the International Organization of Securities Commissions (IOSCO), and other national and international authorities. To ensure that momentum is maintained on the parts of the programme under our control, we will provide a full implementation update to the Chancellor of the Exchequer and the Governor of the Bank of England, as commissioners of the Review, by June 2016.



Charles Roxburgh
HM Treasury



Minouche Shafik
Bank of England



Martin Wheatley
Financial Conduct Authority

The Review's policy recommendations

Near-term actions to improve conduct in FICC markets:

1 Raise standards, professionalism and accountability of individuals

- a. Develop a set of globally endorsed common standards for trading practices in FICC markets, in language that can be readily understood, and which will be consistently upheld;
- b. Establish new expectations for training and qualifications standards for FICC market personnel, with a requirement for continuing professional development;
- c. Mandate detailed regulatory references to help firms prevent the 'recycling' of individuals with poor conduct records between firms;
- d. Extend UK criminal sanctions for market abuse for individuals and firms to a wider range of FICC instruments; and
- e. Lengthen the maximum sentence for criminal market abuse from seven to ten years' imprisonment.

2 Improve the quality, clarity and market-wide understanding of FICC trading practices

- a. Create a new FICC Market Standards Board with participation from a broad cross-section of global and domestic firms and end-users at the most senior levels, and involving regular dialogue with the authorities, to:
 - Scan the horizon and report on emerging risks where market standards could be strengthened, ensuring a timely response to new trends and threats;
 - Address areas of uncertainty in specific trading practices, by producing guidelines, practical case studies and other materials depending on the regulatory status of each market;
 - Promote adherence to standards, including by sharing and promoting good practices on control and governance structures around FICC business lines; and
 - Contribute to international convergence of standards.

3 Strengthen regulation of FICC markets in the United Kingdom

- a. Extend the UK regulatory framework for benchmarks to cover seven additional major UK FICC benchmarks — accepted and implemented by HM Treasury on 1 April 2015;
- b. Create a new statutory civil and criminal market abuse regime for spot foreign exchange, drawing on, among other things, work on a global code (see recommendation 4a);
- c. Ensure proper market conduct is managed in FICC markets through monitoring compliance with all standards, formal and voluntary, under the Senior Managers and Certification Regimes;
- d. Extend elements of the Senior Managers and Certification Regimes to a wider range of regulated firms active in FICC markets; and
- e. Improve firms' and traders' awareness of the application of competition law to FICC markets.

4 Launch international action to raise standards in global FICC markets

- a. Agree a single global FX code, providing: principles to govern trading practices and standards for venues; examples and guidelines for behaviours; and tools for promoting adherence. The Review strongly welcomes the recent announcement by central banks to work towards those goals;
- b. As part of that work, improve the controls and transparency around FX market practices, including 'last look' and time stamping;
- c. Explore ways to ensure benchmark administrators publish more consistent self-assessments against the IOSCO Principles, and provide guidance for benchmark users; and
- d. Examine ways to improve the alignment between remuneration and conduct risk at a global level.

Principles to guide a more forward-looking approach to FICC markets:

5 Promoting fairer FICC market structures while also enhancing effectiveness, through:

- a. Improving transparency in ways that also maintain or enhance the benefits of diverse trading models, including over-the-counter;
- b. Promoting choice, diversity and access by monitoring and acting on potential anti-competitive structures or behaviour; and
- c. Catalysing market-led reform held back by private sector co-ordination failures.

6 Forward-looking conduct risk identification and mitigation, through:

- a. Timely identification of conduct risks (and mitigants) posed by existing and emerging market structures or behaviours;
- b. Enhanced surveillance of trading patterns and behaviours by firms and authorities; and
- c. Forward-looking supervision of FICC markets.

Executive summary

1 The Review's consultation document⁽¹⁾ posed four key questions. First, what do 'fair' and 'effective' mean for Fixed Income, Currency and Commodities (FICC) markets? Second, where have fairness and effectiveness of FICC markets been deficient, focusing in particular on the root causes of recent misconduct? Third, to what extent are the necessary reforms already completed or under way? And, fourth, what gaps remain, and how should they be filled?

2 This summary addresses each of those questions in turn, drawing on responses to the Review's consultation and subsequent analysis. Supporting material, providing further detail on each of the four questions above by topic area, is provided in the body of this Report.

What do 'fair' and 'effective' mean for FICC markets?

3 To evaluate fairness and effectiveness, the Review has used the following definitions, described in more detail in Section 1.

4 **Fair FICC markets** are those which: (i) have clear, proportionate and consistently applied standards of market practice; (ii) are transparent enough to allow users to verify that those standards are consistently applied; (iii) provide open access (either directly or through an open, competitive and well-regulated system of intermediation); (iv) allow market participants to compete on the basis of merit; and (v) provide confidence that participants will behave with integrity.

5 **Effective FICC markets** are those which also: (i) allow end-users to undertake investment, funding, risk transfer and other transactions in a predictable way; (ii) are underpinned by robust trading and post-trade infrastructures enabling participants to source available liquidity; (iii) enable market participants to form, discover and trade at competitive prices; and (iv) ensure proper allocation of capital and risk.

Where was fairness and effectiveness deficient?

6 Judged against these definitions, FICC markets have historically demonstrated many important strengths. They have often delivered tight pricing and deep liquidity for more actively traded instruments, including government bonds,

standardised derivatives and major foreign currencies. And they have also facilitated trading in a wide range of less standardised assets, tailored to users' needs. Commitment of capital by market makers, trading as principal, has helped sustain liquidity in a number of secondary FICC markets, particularly for more bespoke assets, larger trade sizes, and during periods of market-wide stress. These positive characteristics were widely welcomed by end-users and other respondents to the Review's consultation.

7 At the same time, the misconduct seen in recent years has damaged trust and impaired market effectiveness. That has been particularly costly at a time when capital markets have been called on to play a bigger role in helping to fund the global economic recovery. Responsibility for these abuses lies both with firms and with the individuals involved, and their own standards of personal conduct. But, over and above this, misconduct has reflected a range of deeper root causes specific to particular FICC markets or business models, including:

- **Market structures** that presented opportunities for abuse, including: poor benchmark design; unmanaged conflicts of interest in intermediaries acting as both principal and agent, exacerbated by horizontal integration across diverse business lines; vulnerabilities to collusion; and thin markets for less liquid assets;
- **Standards of acceptable market practices**, particularly in bilateral over-the-counter (OTC) markets and less heavily (or un-) regulated instruments including spot FX, that were sometimes poorly understood or adhered to, short on detail or lacked teeth;
- **Systems of internal governance and control** that placed greater reliance on second and third lines of defence than on trading or desk heads, proved incapable of asserting the interests of firms and the wider market over those of close-knit trading staff, and failed to identify emerging vulnerabilities or ensure that conduct lessons learned in one business line were fully applied elsewhere;
- **Limited reinforcement of standards through bilateral market discipline** from sell-side and buy-side firms, or from end-users;

(1) www.bankofengland.co.uk/markets/Documents/femr/consultation271014.pdf.

- **Remuneration and incentive schemes** that stressed short-term returns over longer-term value enhancement and good conduct; and
- A **culture of impunity** in parts of the market, coloured by a perception that misconduct would go either undetected or unpunished.

8 Taken together, these factors contributed to a process of 'ethical drift', where unethical behaviour went unchecked, and hence became progressively more widespread and accepted as the norm. Some of the vulnerabilities were common across financial markets generally. But others appear to have been concentrated in FICC markets, reflecting the relatively heterogeneous range of instruments and participants, more decentralised market structures, greater cross-border activity, and, in some cases, lighter regulatory coverage.

9 Respondents to the Review also noted a range of other perceived deficiencies in the fairness and effectiveness of FICC markets which, although not as clearly linked to recent misconduct, were related to some of the same underlying factors outlined above. These included a perceived lack of transparency in some FICC markets, and reported deficiencies in the level of market access or choice available to end-users.

What has already been done to put this right?

10 Substantial progress has been made in identifying and addressing these deficiencies in recent years. Major enforcement actions have been carried out in the United Kingdom, United States, continental Europe and elsewhere. And there has been widespread reform both to regulation — through legislation such as the Market Abuse and European Market Infrastructure Regulations (MAR and EMIR) and the new Markets in Financial Instruments Directive and Regulation (MiFID2) in Europe and the Dodd-Frank Act in the United States — and to market and firm-level structures, systems and controls.

11 The design and oversight of **key FICC benchmarks** — the proximate source of many of the recent misconduct cases — has been overhauled. That process has included: the 2012 Wheatley reforms to Libor; the 2013 international IOSCO standards; the 2014 FSB reform packages for interest rate and foreign exchange benchmarks, now being implemented in major jurisdictions; the introduction of MAR in Europe, which will make benchmark manipulation a civil offence from 2016; and the prospective EU Benchmarks Regulation. The Review itself recommended in August 2014 that the UK regulatory framework originally applied to Libor, as well as criminal penalties for manipulation, should be extended to cover seven additional major FICC benchmarks.⁽¹⁾ Those provisions came into force on 1 April 2015.

12 **Transparency** in some FICC markets has improved, and is likely to improve further over time, reflecting a range of regulatory reforms, including: the progressive transfer of derivatives business on to exchanges or electronic platforms as a result of reforms agreed by the G20 in 2009; the extension in 2017 of MiFID2 transparency rules to a wide range of FICC assets; and initiatives to increase transparency in securitisation markets. There has also been heightened interest in industry-led initiatives to increase the use of agency-based, order-driven electronic trading platforms and other forms of transparency-enhancing technology (for example the use of techniques to identify holders of illiquid assets or estimate the fair value price of infrequently traded instruments). Over time that may help boost fairness and effectiveness for smaller trade sizes in more standardised assets, providing cheaper and faster access to more transparent and broader liquidity pools, with fewer principal/agent conflicts, less discretion and clearer rules.

13 Action against **anti-competitive behaviour** in FICC markets has been taken by competition authorities in Europe and elsewhere. In the United Kingdom, the FCA has been given new powers to enforce against breaches of competition law. Those powers sit alongside the FCA's existing competition objective, which the FCA meets by identifying and addressing areas where competition may not be working effectively. The FCA undertook a review of competition in wholesale markets, which concluded in February 2015, and subsequently began a market study into competition in investment and corporate banking.

14 Some **standards of market practice** have been clarified or strengthened. In March 2015, international foreign exchange committees agreed a new common 'global preamble' to national codes governing trading in foreign exchange, setting out shared high level principles for personal conduct, the handling of confidential information, and execution practices. In the European Union, MAR will extend the coverage of civil market abuse rules to a wider range of FICC markets from July 2016, and MiFID2 will extend and strengthen many conduct of business rules from 2017. Many financial firms have upgraded their internal guidance and training programmes on acceptable trading practices. And, in the United Kingdom, the Banking Standards Board has been established by leading firms to promote high standards of behaviour and competence across the UK banking industry.

15 The **framework for ensuring that remuneration is aligned with risk** has improved significantly. The FSB concluded in November 2014 that implementation of its international principles and standards for sound compensation practices had

(1) Specifically: the ICE Swap Rate (formally ISDAFIX), WM/Reuters London 4pm Closing Spot Rates, SONIA, RONIA, the LBMA Gold Price (formerly the London Gold Fixing), the LBMA Silver Price, and the ICE Brent Index.

been essentially completed. The United Kingdom's rules will be among the most comprehensive globally, reflecting among other things the recommendations of the Parliamentary Commission on Banking Standards (PCBS). The authorities have consulted on proposals for senior bank managers' bonuses to be deferred for periods of up to seven years (instead of the current three to five years), during which time they may be reduced or cancelled in the event of employee misbehaviour ('malus'). Variable remuneration already paid may also be 'clawed back' in certain circumstances. In 2014, firms used a combination of malus and significant reductions in current-year bonus pools to reflect fines for misconduct in FX and other markets.

16 Substantial efforts have been made to improve **firms' internal governance, accountability and control structures**. From March 2016, UK banks, building societies, credit unions and PRA-designated investment firms will be subject to new Senior Managers and Certification Regimes. These regimes will allocate responsibilities to specific senior individuals, including those at the very top of firms, and hold them directly accountable for failures in their areas of responsibility. Firms will also be responsible for certifying the fitness and propriety of their own staff (including traders). And, under proposed FCA rules, all staff (except those carrying out purely ancillary functions) will be required to follow a set of enforceable Conduct Rules.

17 Alongside these changes, sell-side firms have embarked on wide-ranging programmes of reform, running from senior executive and board levels (including an improved 'tone from the top', codes of conduct and values statements, board conduct committees, and metrics) through middle management (eg ethical and conduct training, peer reviews, 'balanced scorecards') to control structures (eg new reputational committees, reformed HR processes, and structured reviews of client relationships). Firms subject to misconduct fines or other identified failures have also been required to undertake remediation programmes by the FCA in the United Kingdom and regulators internationally.

18 Finally, a number of developments have increased individuals' perceptions of the **probability that misconduct will be detected, and the scale of punishment**. Large fines and other enforcement measures have underscored the commitment of public authorities to tackle wrong-doing. Sell-side firms have invested in larger compliance teams and are starting to develop more sophisticated forms of electronic surveillance of their own staff's trading and broader behaviours. Market participants report early signs of a greater willingness on the part of some firms to be open about the reasons for disciplining those found to have engaged in misconduct. Whistleblowing arrangements have been strengthened at some firms. And regulators will have access to progressively larger amounts of transaction data in many

FICC markets over the coming years from new reporting requirements under EMIR, MiFID2 and other new regulations.

Where are the remaining gaps?

19 Taken together, the changes listed above should deliver a substantial improvement in fairness and effectiveness over time. However, significant uncertainties remain: for example, on the final shape of regulation such as MiFID2 (discussed in Box 3 in Section 2); on the extent of lasting improvements to firms' systems of control; and on the efficacy and penetration of technological innovation. More profoundly, the Review identified a number of gaps that current reforms do not tackle. First, the professionalism and accountability of individuals in FICC markets remains too low and variable. Second, key FICC markets lack effective mechanisms for agreeing, promulgating and adhering to common standards of market practice. Third, gaps remain in the coverage of regulation. And, fourth, there is more to do to raise standards in global markets, including those for spot FX. Over the medium term, more forward-looking approaches are needed to develop fairer and more effective FICC market structures, and to identify and mitigate new or emerging risks.

20 These considerations provide the key headings for the Review's recommendations, outlined in more detail below. Assessing the impact of these changes is however complicated by the fact that important adjustments are also under way to the economics of FICC business models. In particular, intermediaries have reduced the amount of capital committed to OTC market-making, reflecting among other things heightened risk aversion, subdued market volatility, and post-crisis prudential regulatory measures required to improve the resilience of the financial system. Many respondents to the Review's consultation said they were concerned that these changes might permanently reduce the effectiveness of FICC markets.

21 It is unclear how large these effects will ultimately be. The reduction in liquidity across FICC markets has varied quite widely, with some reporting little change. Pre-crisis liquidity in some markets was in general too plentiful, causing sharp reversals or even closures during the adjustment phase, which harmed rather than enhanced effectiveness. And balance sheet capacity may increase in the future, if volatility normalises, if investors are willing to tolerate wider bid/offer spreads, or if other market participants, including the traditional buy-side, become more significant liquidity providers. A more complete analysis of these issues, and the broader implications for economic and financial stability, is beyond the scope of this Review, but is being conducted by other national and international bodies. They will also be central to the Open Forum to be held at the Bank of England in the autumn of 2015, which will bring together a wide range of stakeholders to draw these various strands together. The

focus of this Review has been to develop a package of measures designed to increase fairness while also enhancing effectiveness, through improved price discovery, higher market confidence and lower conduct risk premia.

Recommendations: near-term actions to improve conduct in FICC markets

1 Raise standards, professionalism and accountability of individuals

22 Many of those involved in recent enforcement cases were aware — and all of them should have been aware — that their actions were unacceptable. But raising standards consistently across FICC markets as a whole requires a focus on more than just the most egregious cases. Evidence gathered by the Review painted a broader picture in which there was insufficient attention in many firms to what conduct standards meant in practice, and excessive confidence on the part of individuals that the consequences of developing a poor conduct record in one firm could be avoided by moving to another. Respondents to the consultation were particularly concerned that the last of these problems might become worse when responsibility for appraising the fitness and propriety of staff in UK banks, building societies, credit unions and PRA-designated investment firms moves from the regulators to firms under the new Senior Managers and Certification Regimes. To tackle these issues, the Review has three recommendations:

- **1a: There should be a set of common standards for trading practices in FICC markets, written in language that can be readily understood, and which will be consistently upheld.** These would be most effective if developed and promulgated globally. Section 4.3.1 gives further detail.
- **1b: The new FICC Market Standards Board (FMSB) proposed in recommendation 2a should give guidance on expected minimum standards of training and qualifications for FICC market personnel in the United Kingdom, including a requirement for continuing professional development.** Section 5.2.3 sets out a blueprint for a possible framework.
- **1c: The FCA and PRA should consult on a mandatory form for regulatory references, to help firms prevent the 'recycling' of individuals with poor conduct records between firms, with a view to having a template ready for the commencement of the Senior Managers and Certification Regimes in March 2016. In due course, the FMSB should consider whether there is scope to reach an industry-wide agreement to disclose further information.** Section 5.1.3.3 discusses this issue.

23 The unprecedentedly large enforcement fines on firms in recent years have played an important role in focusing firms on conduct issues and tackling the culture of perceived impunity that prevailed in many firms in the pre-crisis period. A criminal conviction for conspiracy to defraud has also been secured in the United Kingdom in relation to Libor, and a trial and other investigations are under way in relation to FX and Libor manipulation. At the same time, respondents to the Review's consultation were concerned that firms might increasingly treat fines as costs of doing business, and encouraged the Review to explore ways of further increasing the focus on individuals. Two specific barriers are the currently limited scope of the UK criminal sanctions regime, and the length of sentence available for criminal market abuse convictions, which is lower than that for other comparable financial crimes. The Review therefore recommends:

- **1d: That the UK criminal sanctions framework for market abuse for individuals and firms be updated, through an extension to a wider range of FICC instruments (by including all of those covered under the Market Abuse Regulation); and**
- **1e: That HM Treasury introduce legislation to lengthen the maximum sentence for criminal market abuse from seven to ten years imprisonment, aligning it with that for fraud and bribery.**

24 Section 6.3.1 discusses the background to both recommendations in more depth. Recommendations 3c and 3d below will also play an important part in further strengthening individual accountability.

2 Improve the quality, clarity and market-wide understanding of FICC trading practices

25 One striking insight from recent enforcement cases was that policies, procedures and training in place within firms often appeared to give little or no practical guidance to traders or their internal supervisors about what principles, regulations and rules meant in practice. This issue arose in a wide range of areas, including the handling of conflicts of interest or confidential information, the use of electronic messaging services, and general trading conduct. These gaps reflected failings on the firms' part, and there is no doubt that the specific instances of behaviour in those cases involved clear breaches of regulatory rules. But firms' development of guidance material in response to these actions has lacked co-ordination. And respondents to the Review flagged a range of uncertainties about where the line between acceptable and unacceptable market practices lay, for example in the use of information, in the timing of hedging transactions, or in the categorisation of counterparties.

26 Whether there are genuine uncertainties will depend on the specifics of each case. In some areas, market uncertainties

may simply reflect gaps in understanding of existing regulatory rules. In others, they may reflect ambiguities in market practices that are either intrinsic to the trading in question, or arise because of changes in market structure or practice over time. Whatever the cause, the Review has concluded that FICC markets require stronger collective processes for identifying and agreeing standards of good market practice, consistent with regulatory requirements, that respond more rapidly to new market structures and trading patterns, apply to both traditional and new market players, and are more effectively monitored and adhered to within (and between) firms. Without these processes, there is a risk that FICC markets will fail to operate effectively, either slipping back into poor practices as memories fade, or adopting overly-conservative interpretations of standards that impair the functioning of markets. To tackle this issue:

- **2a: The Review calls on the senior leadership of FICC market participants to create a new FICC Market Standards Board (FMSB) with participation from a broad cross-section of global and domestic firms and end-users at the most senior levels, and involving regular dialogue with the authorities, to:**
 - scan the horizon and report on emerging risks where market standards could be strengthened, ensuring a timely response to new trends and threats;
 - address areas of uncertainty in specific trading practices, by producing guidelines, practical case studies and other materials depending on the regulatory status of each market;
 - promote adherence to standards, including by sharing and promoting good practices on control and governance structures around FICC business lines; and
 - contribute to international convergence of standards.

27 Initially established in the United Kingdom, the body should aim to have international reach through its private sector membership, and should over time seek opportunities to work with similar organisations and authorities in other jurisdictions. To be effective, its membership would need to be significantly broader than the existing UK Banking Standards Board (BSB), including a range of non-banking firms active in FICC markets such as broker-dealers, investment managers, infrastructure providers, corporate issuers and asset owners. The BSB could potentially provide some administrative services to the FMSB, but it is not for the authorities to determine the scope and commercial arrangements for these services. Further analysis of these and other issues is given in Section 4.3.2.

28 For the body to be effective, a number of tests will need to be met. Membership will need to be drawn from across the full range of market participants and end-users, avoiding dominance by any one group. Members will need to have sufficient authority to muster their institutions' endorsement of the body's outputs. And the body will need to demonstrate high levels of expertise in relevant markets, both in its board members and in its secretariat. There is no scope for the body to take the role of the regulators. But the intent would be to support the maintenance of an effective but proportionate standards regime for wholesale markets. To achieve that, the body will need to stay in close two-way contact with the authorities, when drawing up its work programme and producing statements of market practice.

29 Another important test will be whether effective mechanisms can be found to ensure market participants abide by the new body's market practice statements. Historically it was thought that bilateral market discipline — the threat of removing business from firms who fail to abide by market practices — would play a key role in this area. However, the Review found few market participants who felt either willing or able to act in this way (Section 2.4.2). Recommendations 3c, 3d and 4a involve ways to give greater teeth to voluntary market codes. But this is an area that will need to be kept under close review. If firms and their staff fail to take the opportunity to clarify market practices in an effective way, more restrictive regulation is inevitable.

3 Strengthen regulation of FICC markets in the United Kingdom

30 The UK regulatory regime for market abuse already covers activity in some FICC markets, and its scope will be extended with the introduction of the Market Abuse Regulation in 2016 (Section 6.3.1). The Review's recommendations focus on three areas: first, closing remaining gaps; second, strengthening the tools for ensuring the adherence of FICC market staff to market standards; and, third, increasing awareness of competition law.

31 Other than the WM/Reuters benchmark, the manipulation of which was made an offence as a result of the **Review's August 2014 recommendation (3a)**, spot foreign exchange markets remain outside the scope of UK market abuse legislation, and will continue to do so even after the introduction of the Market Abuse Regulation. Given the international scope of spot FX markets, it is important that the principles governing good conduct should be agreed globally, as set out in recommendation 4a below. In light of those discussions, however, the Review recommends that:

- **3b:** A new statutory civil and criminal market abuse regime should be created for spot foreign exchange, drawing on, among other things, the work of the international project to draw up a global foreign exchange code. The regime should be supported by a requirement on firms to keep records of orders and transactions, and report suspicious cases to the regulator; and should allow for the possible extension, with relevant consultation, to other OTC FICC markets outside the scope of the Market Abuse Regulation. Further detail is given in Section 4.3.3.

32 As described above, one of the biggest challenges with securing adherence to market codes of best practice has been their lack of effective 'teeth'. That will change under the new Senior Managers and Certification Regimes, which will hold traders and other staff in covered institutions personally accountable for observing 'proper standards of market conduct', which proposed FCA guidance indicates will tend to include compliance with relevant market codes. That should provide important support to existing codes, the output of the FMSB and the proposed global code for foreign exchange. The Review therefore notes that:

- **3c:** Proper market conduct should be managed in FICC markets through regulators and firms monitoring compliance with all standards, formal and voluntary, under the Senior Managers and Certification Regimes. Section 5.1.3.1 provides further background.

33 The Senior Managers and Certification Regimes currently apply only to UK banks, building societies, credit unions and PRA-designated investment firms, leaving a significant group of regulated FICC market participants, such as inter-dealer brokers and asset managers, out of scope. Respondents expressed a range of views on the merits of extending the scope of these regimes. After careful consideration, the Review has concluded that there is a case for extending elements of them to a broader range of firms active in FICC markets, in order to establish common standards and provide a robust and consistent implementation framework.

34 The elements to be extended would include: regulatory pre-approval and statements of responsibility for senior managers; certification of individuals with the potential to pose 'significant harm'; and enforceable Conduct Rules for individuals. The extension would also have the effect of substantially increasing the effectiveness of the mandatory regulatory references for firms outlined in recommendation 1c for staff moving between regulated buy-side and sell-side firms. The Review did not judge it proportionate to extend, beyond their existing scope, the additional provisions included in the Banking Reform Act which gave effect to a 'presumption of responsibility' (described further in Section 5.1.2). The Review therefore recommends that:

- **3d:** HM Treasury should consult on legislation to extend elements of the Senior Managers and Certification Regimes to a wider range of regulated firms, covering at least those active in FICC wholesale markets. Section 5.1.3.2 provides further background.

35 The Review's research has raised a number of questions about the role of competition in FICC markets. Some of the most serious instances of recent misconduct involved collusion by staff at rival firms. And some respondents to the Review's consultation and outreach highlighted areas in which firms might be inappropriately exercising market power, for example to limit access to new trading platforms. At the same time, respondents reported conditions in many FICC markets to be highly competitive, with increasing returns to scale allowing market makers to offer extremely tight pricing. New powers to judge on such issues have recently been given to the FCA, so it is timely for the Review to recommend that steps should be taken to:

- **3e:** Improve firms' and traders' awareness of the application of competition law to FICC markets, including through the communication by the FCA of material presented in this Report to authorised firms active in FICC markets, through firms' internal training programmes, and through the new guidance on FICC market qualifications and training to be developed by the FMSB. Section 2.4.2 and the Annex to this Report discuss this issue in more depth.

4 International action to raise standards in global FICC markets

36 One of the strongest messages from the Review's consultation was that global markets need global standards. At a time when misconduct fines have reached all-time highs, and increased reliance is being placed on capital markets to finance the economic recovery, the need to tackle misconduct at an international level has taken on a new significance. That message has been echoed by the FSB⁽¹⁾ and IOSCO.⁽²⁾ The Review has recommendations in three key areas: foreign exchange, benchmarks and remuneration.

37 Foreign exchange, and particularly spot FX, is the most global of all markets. Reflecting the challenge of devising a single global regulatory framework for a market that trades around the clock across multiple jurisdictions, standards in spot FX have historically been guided by voluntary sets of principles drawn up on a national basis, and focused as much on operational as on conduct issues. It became clear through recent enforcement cases that few firms had integrated the provisions of these codes into their internal control systems. The Review has two recommendations:

(1) www.financialstabilityboard.org/wp-content/uploads/FSB-Chairs-letter-to-G20-April-2015.pdf.

(2) <https://www.iosco.org/news/pdf/IOSCONEW5366.pdf>.

- **4a:** There should be a single global FX code, providing: a comprehensive set of principles to govern trading practices around market integrity, information handling, treatment of counterparties and standards for venues; comprehensive examples and guidelines for behaviours; and stronger tools for promoting adherence to the code by market participants. The Review strongly welcomes the recent announcement by central banks⁽¹⁾ to work towards those goals. To strengthen adherence further in UK markets, the Review recommends that these global principles should be drawn on to shape a new statutory market abuse regime for spot FX, as discussed above.
- **4b:** As part of that work, or otherwise, particular attention should be given to improving the controls and transparency around FX market practices where there may be scope for misconduct, including 'last look' and time stamping. Further information on these issues, including thoughts on how transparency might be improved more broadly, are given in Sections 2.4.1 and 4.3.3.

38 Second, although respondents to the Review's consultation widely praised the global efforts to reform many aspects of benchmark design and oversight, they noted the varied state of implementation of the voluntary IOSCO Principles for Financial Benchmarks by administrators. Relatedly, the Review has also concluded that more could be done to strengthen the degree of market scrutiny and discipline on benchmark design, including from benchmark users. The Review therefore recommends that:

- **4c:** The IOSCO Task Force on Financial Benchmarks should consider exploring ways to ensure that more consistent self-assessments against the benchmark Principles are published by administrators, and provide guidance for benchmark users, including the need for robust fall-back provisions. This recommendation is discussed in more detail in Section 3.3.

39 Finally, although substantial progress has been made in developing a range of tools for improving the alignment of remuneration with conduct risk, the effective application of those tools remains uneven, and the share of variable pay in overall compensation has fallen. The Review therefore recommends that:

- **4d:** The FSB should examine further ways to improve the alignment between remuneration and conduct risk at a global level. Section 5.4.3 sets out material as input into that discussion.

Principles to guide a more forward-looking approach to FICC markets

40 The preceding sections summarise the Review's main recommendations for near-term actions to raise standards in FICC markets. But one-off changes are not enough. A key lesson of the financial crisis was that more effective forward-looking mechanisms are also needed, involving both the authorities and market participants, to ensure that the 'hard' and 'soft' infrastructures supporting markets keep pace with future innovation and change. Identifying alternative ways to do that will be an important theme of the Open Forum. The next two sections consider these issues from the perspective of this Review.

5 Promoting fairer FICC market structures while also enhancing effectiveness

41 Many of the recent misconduct cases exploited vulnerabilities in aspects of FICC market structures. Some of those vulnerabilities, in particular those relating to the design of benchmarks, are being addressed. But others — for example those relating to the greater scope for market manipulation in thin markets for less standardised assets, conflicts of interest among those acting as both agent and principal (such as OTC market makers), and the potential adverse implications of increasing returns to scale — reflect more deep-seated aspects of FICC markets that are less susceptible to straightforward structural solutions. Historically, vulnerabilities of these kinds have been managed primarily through the application of regulatory rules and other public policy tools (such as competition policy). The recommendations summarised above are designed to strengthen those controls further. Substantial structural change is also under way in response to the regulatory and technological reform triggered by the financial crisis. It will be important to monitor these developments closely, and stand ready to act if they fail to enhance fairness and effectiveness.

42 Other than reducing vulnerability to misconduct, the guiding principles for designing fairer markets flow directly from the Review's definition of fairness: **transparency, open access and competition on the basis of merit**, allowing market participants and end-users to choose between alternative solutions. The challenge is to identify policy interventions that enhance one or more of these characteristics while also boosting market effectiveness. That goal is further complicated by the fact that the effectiveness of a given market structure depends on the end-user's needs. OTC market-making may be the most effective way to minimise execution risk for larger-sized transactions in less liquid assets. Conversely, those wishing to undertake smaller-sized transactions in relatively liquid or standardised

(1) <https://www.bis.org/press/p150511.htm>.

assets with substantial two-way trading interest may prefer to trade on anonymised electronic 'all-to-all' order-matching platforms or exchanges. For these reasons, no single model is likely to maximise both fairness and effectiveness for all users. So there is a good case for promoting a diverse range of models.

43 Against that backdrop, the Review has identified three important themes for the future evolution of FICC market structures. First, in markets where OTC trading remains the preferred model, authorities and market participants should **continue to explore the scope for improving transparency, in ways that also enhance effectiveness**. For markets in Europe falling within the scope of MiFID2, that will require careful calibration of regulatory transparency requirements to ensure they take due account of market-making and the economic reality of the markets in the instruments covered. For markets lying outside the scope of direct regulation, there may be scope to enhance transparency further. Section 2.4.1 outlines some principles that might be applied in FX markets. A number of organisations are considering the merits of market-led initiatives in other markets, for example the recent strategic review launched by the London Bullion Market Association. And there is scope for more consistent levels of transparency over the pricing and allocation methodologies used when issuing fixed income instruments. These and other topics could usefully be discussed at the upcoming Open Forum.

44 Second, **competition authorities including the FCA need to be alert to the potential for incumbents seeking to prevent the development of challenger technologies through anti-competitive structures or behaviour**. Cost pressures and reduced liquidity from some traditional providers have induced a substantial wave of innovation, both in markets where the use of advanced technology is less well-developed (such as fixed income) and where it is relatively mature (such as FX). But adoption of such technologies has sometimes been slow, even in markets where the underlying assets appear well-suited to such trading. In part that may reflect co-ordination failures among users, or a failure of specific technologies to provide the services that users need. But it may sometimes also reflect competitive impediments, including limitations on access to essential infrastructure, requirements for counterparties to identify themselves on what may be notionally anonymous platforms, or threats to withdraw liquidity. The FCA will maintain a watching brief on such obstacles, and stand ready to use its powers if needed.

45 Third, the **authorities should stand ready to help catalyse reform** where markets are unable to do so. A good example is the issue of the possible greater standardisation of corporate bonds in order to increase secondary market liquidity. Respondents to the Review's consultation, in

particular corporate issuers, were strongly opposed to centrally mandated standardisation of bond terms, noting that they wished to retain the right to choose how and when to issue debt in order to match their cash flows and the needs of investors. But it is less obvious that the potential benefits of alternative options for greater standardisation have been well set out in an independent way, and issuers may become more interested in the idea as interest rates normalise. Experience with the standardisation of other instruments, such as Credit Default Swaps, suggests that a market-led approach, catalysed by the authorities, may yield effective results. The Bank of England recently suggested one possible approach for establishing agreed principles for standardisation of terminology, documentation, settlement and trading protocols in its response to the European Commission's Green Paper on Capital Markets Union.⁽¹⁾

6 A more forward-looking approach to conduct risk identification and mitigation

46 As well as building fairer market structures over time, reducing the future incidence of misconduct also requires the early identification, and rectification, of emerging risks in market structures and behaviours. There are important roles here for both market participants and the authorities in three main areas.

47 First, more can be done to **scrutinise FICC market structures and behaviours for potential conduct risks**. In some cases these risks might be inherent in existing structures — as they were for example in Libor. As noted above, the Review recommends further scrutiny of the controls and transparency around FX market practices, including 'last look' and time stamping. Market participants also need to improve their ability to identify the root causes of misconduct, and apply those lessons to other business lines that may initially appear unrelated. And firms and authorities need to be alert to risks that may emerge from the use of new trading practices and structures. For example, new trading technologies may help reduce or remove the scope for some of the types of misconduct seen in recent years, and increase market effectiveness. But they may also introduce new challenges, including through opaque trading algorithms or protocols, or fragmentation of trading platforms and liquidity. The new FMSB could play an important role in highlighting such risks and identifying potential solutions in terms of market practice standards. Given the vibrant pace of technological innovation in fixed income markets, a 'White Paper' on the opportunities and challenges posed by these technologies from a conduct perspective would be particularly timely. The authorities will also continue to flag risks that they identify in the course of their regulatory, market operations and wider market intelligence activities.

(1) See page 11 of www.bankofengland.co.uk/financialstability/Documents/cmu/greenpaperresponse.pdf.

48 Second, more can be done to **identify potentially inappropriate trading patterns in FICC markets through effective and timely market surveillance**. An important part of the answer lies in greater focus within firms on trading oversight by desk heads, and innovative use of 'big data' and other advanced analytics to extract patterns from electronic communications, trading systems, financial ledgers and other behavioural data. But, as Section 6.3.4 discusses, FICC market participants also need to do more to ensure that they are meeting their obligations to report suspicious transactions to the regulator. The extended reporting requirements that come into force with MAR will require firms to report suspicious transactions and orders across a wider range of FICC markets regulated under MiFID2. The FCA will continue to take steps to ensure that these regimes are working effectively in these markets.

49 Third, there is an **important role for forward-looking supervision**. Enforcement investigations are costly and time-consuming for both regulators and firms. Those costs may be avoided, or reduced, where misconduct, or the potential for misconduct, can be identified earlier in the behavioural cycle. A key part of this responsibility lies with firms' senior management, something that will be reinforced by the Senior Managers and Certification Regimes. But, as Section 6.3.3 discusses, regulators can also deploy a variety of forward-looking supervisory and 'early intervention' actions, ranging from thematic reviews and 'deep dives' through to skilled persons reviews or the exercise of formal powers to require the temporary suspension of specific trading activities. A number of respondents to the Review's consultation said they would welcome greater proportionate use of such measures in FICC markets. The FCA recently set out its supervisory programme in its 2015/16 Business Plan. It will also respond in due course to the recommendations aimed at ensuring that regulators choose the most appropriate regulatory tools for the circumstances contained in HM Treasury's December 2014 Enforcement Review.

Conclusions and next steps

50 **Table C** in Section 7 gives the Review's recommendations in full, along with proposals about who might take the work forward. For the avoidance of doubt, no part of those recommendations, or any other part of the Report, constitutes formal guidance from the UK regulatory authorities.

51 The recommendations vary quite widely in nature. Some can be implemented relatively quickly, or are already under way. Others require further discussion, international negotiation or legislative change. Where implementation falls to the UK authorities, they will develop and consult on proposals in the normal way. The Review's terms of reference require that it should have regard to the impact of its recommendations on: the stability, efficiency and effectiveness of the financial sector, and its capacity to contribute to the growth of the UK economy in the medium and long run; the need to maintain vibrant competition in wholesale financial markets; the competitiveness of the UK financial and professional services sectors and the wider UK economy; and the resources needed for implementation. In the view of the Review's Chairs, the package of recommendations in this Report takes appropriate account of these considerations. But, where required, formal cost/benefit analyses will also need to be completed for legislative and other changes requiring public consultation.

52 To ensure that momentum is maintained on those recommendations that are under the control of the UK authorities, the Review's Chairs will provide a full implementation update to the Chancellor of the Exchequer and the Governor of the Bank of England by June 2016.

53 The Open Forum, to be held at the Bank of England in the autumn of 2015, will also provide an important opportunity for a broad range of stakeholders to discuss the recommendations in this Report, and the role they can play as part of building a wider, dynamic reform programme.

1 What do 'fair' and 'effective' mean for FICC markets?

1 This section defines the high-level characteristics of fair and effective FICC markets that guide the analysis and policy recommendations in the rest of this Report. A defining feature of FICC markets is that they typically involve professional counterparties, who do not require the same degree of regulatory protection necessary for retail customers. It is nevertheless vital that these markets also operate in the interests of the broader economy, in a fair and effective way.

2 The definition presented in the consultation document was well received by a wide range of key stakeholders, including end-users, market participants, national and international authorities, public interest groups and leading academics. The characteristics described in this section therefore differ only modestly from those presented in the earlier paper. The main changes are: highlighting that effective markets ensure proper allocation of capital and risk; stressing the importance of market resilience more explicitly; recognising the importance of proportionate standards of market practice; and flagging the role that choice plays in fair and effective markets. Box 1 discusses the interaction between the definition and the concept of liquidity — one of the most widely raised points in the consultation.

1.1 Defining 'fair'⁽¹⁾

3 The first characteristic of fair wholesale FICC markets is that market outcomes should result from **clear, proportionate and consistently applied standards of market practice**. That implies there should be good collective knowledge among market participants of the relevant codes, rules and other means of encapsulating acceptable market practices. It implies clarity about the responsibilities and duties of the parties involved. And it implies confidence that market participants will apply those standards consistently and rigorously in accordance with the objective categorisation of the parties to the transaction and the nature of their relationship. It does not imply that rules, codes and market practices should necessarily be uniform across all markets, participants and jurisdictions. Nor does it imply that they must be highly prescriptive in nature.

4 The second characteristic is that there should be appropriate levels of **transparency**, giving participants common access to the information necessary to allow them to verify with confidence that rules and practices are applied consistently. So, for example, there should be enough

'Fair' FICC markets are those which:

- (i) have clear, proportionate and consistently applied standards of market practice;
- (ii) are transparent enough to allow users to verify that those standards are consistently applied;
- (iii) provide open access (either directly or through an open, competitive and well-regulated system of intermediation);
- (iv) allow market participants to compete on the basis of merit; and
- (v) provide confidence that participants will behave with integrity.

'Effective' FICC markets are those which also:

- (i) allow end-users to undertake investment, funding, risk transfer and other transactions in a predictable way;
- (ii) are underpinned by robust trading and post-trade infrastructures enabling participants to source available liquidity;
- (iii) enable market participants to form, discover and trade at competitive prices; and
- (iv) ensure proper allocation of capital and risk.

meaningful post-trade transparency to allow a firm to verify that its broker has achieved satisfactory execution. More broadly, beneficial owners should have the means to verify that their agents have followed their instructions and mandates faithfully. This definition allows for the possibility that there may be instances — depending, for example, on market conditions or instrument characteristics — in which increases in the extent or timeliness of transparency beyond some point may reduce the effectiveness of a market.

(1) As in the Review's consultation document, the suggested characteristics of fair FICC markets draw among other things on the literature on 'organisational justice' (see, for instance, Greenberg, J (1987), 'A taxonomy of organizational justice theories', *The Academy of Management Review*, Vol. 12, No. 1, January, pages 9–22). This literature suggests that outcomes are typically perceived to be fair in the presence of procedural, informational, interpersonal and distributional justice.

Box 1

Fairness, effectiveness and liquidity

One commonly-raised issue in the consultation responses on the definition of fairness and effectiveness related to market liquidity, with several respondents arguing that liquidity should be a characteristic of effectiveness in its own right.

In a broad sense, market liquidity refers to the ease with which investors are able to transact in reasonable quantities of an instrument without discontinuity of price formation. The existence of markets that are sufficiently liquid and not prone to sudden closure matters both for issuers (who want to be able to borrow when required at competitive terms) and for investors (who want to be able to move smoothly in and out of positions).

The role of liquidity is a central part of characteristics (i) and (ii) of the Review's definition of effectiveness. However, the liquidity of secondary markets in a given instrument will depend on a range of factors — including the degree of standardisation of the instrument, the extent to which investors are willing to buy and sell the instrument (as

opposed to 'buy and hold'), and broader macro-financial conditions. There is therefore not a simple one-for-one relationship between liquidity and effectiveness.

This point can be illustrated with some simple examples. Relatively low levels of liquidity may not indicate that a specific market is structurally ineffective: for example, if instruments are highly bespoke, if supply and/or demand is highly price inelastic, or if there is widespread stress in financial markets because of an extreme geopolitical or other exogenous risk event. Equally, plentiful liquidity may not always indicate high market effectiveness. For example, many market participants now recognise that liquidity was oversupplied ahead of the recent financial crisis. That build-up of liquidity proved unsustainable and was followed by a severe retrenchment. So the unsustainably high levels of liquidity ultimately proved damaging, rather than supportive of, market effectiveness.

For these reasons, the definition of effectiveness refers to 'sufficient' levels of liquidity, 'where possible', for 'reasonable quantities' of an instrument.

5 The third characteristic is that there should be **open access** to FICC markets for all, either directly or through an open, competitive and well-regulated system of intermediation. This criterion implies that access to a market should be on terms that: (i) are reasonable and transparent; (ii) do not confer unfair advantage on large or otherwise incumbent firms; and (iii) allow, at a minimum, effective intermediated access for all. Evaluating such terms may nevertheless be far from straightforward in practice, and may vary depending on the market considered or the obligations of those firms seeking to participate in a market (for example, whether as a user or a market maker).

6 The fourth characteristic of fair markets is that fairness should be consistent with **competition on the basis of merit**, reflecting equality of opportunity rather than equality of outcome. This concept, similar to that used in competition policy, means that market participants who innovate successfully, leading to superior capabilities, relationships or processes, should be able to earn a return on that investment in the form of superior prices and allocations for a period, provided those outcomes are merit-based. Such a concept is necessary in order to ensure there are incentives for market participants to invest and innovate. Competition on the basis of merit also preserves the ability of market participants to choose between alternative solutions, allowing them to exercise their preferences and enforce market discipline where necessary. This criterion may on occasion be challenging to assess in practice, however. For example, firms may seek to

exploit an initially beneficial technology to establish a lasting incumbency position, preventing fair market entry by others, and preventing competition from delivering better outcomes (either in terms of prices, quality of service or choice) for end-users.

7 Finally, and importantly in light of the misconduct of recent years, fair markets are markets in which participants behave with **integrity**. Among other things, that means participants should be confident that they will not be subject to fraud, deception, disinformation, misrepresentation, manipulation or coercion. In particular, where one party acts for another, that other party's essential interests should be reasonably protected. It follows that attempts to manipulate market prices or benchmarks are wholly inconsistent with fair markets.

1.2 Defining 'effective'

8 First, effective FICC markets also allow end-users, borrowers, end-investors and their intermediaries to **undertake transactions** in a predictable way and in support of the broader non-financial economy, including: (i) the channelling of savings to investment; and (ii) risk transfer.

9 Second, to be effective, FICC markets must be underpinned by **robust trading and post-trade infrastructures** enabling participants to source available liquidity. That implies as an

outcome that markets should be sufficiently liquid and resilient to enable participants to transact in reasonable quantities (where possible without discontinuity of price formation). The appropriate degree of liquidity may however vary by instrument and over time; and more is not always better, as discussed in Box 1.

10 Third, effective FICC markets allow market participants to form, discover and trade at **competitive prices**, via a price discovery process reflecting the current and expected balance of supply and demand.

11 Fourth, effective FICC markets also ensure **proper allocation** of capital to productive uses, and proper allocation of risks to those well placed to bear them. The third and fourth characteristics of effectiveness both require markets to be free from collusion, coercion, unwarranted barriers to entry or other restraints on trade.

2 Microstructure and competition in FICC markets

1 The Fixed Income, Currency and Commodities (FICC) markets lie at the heart of the global economy. Most respondents to the Review's consultation felt that they were generally effective, and served the interests of their end-users. Some of the most serious cases of misconduct nonetheless exploited vulnerabilities in benchmarks and other aspects of FICC market structures, harming public trust and impairing market effectiveness. FICC markets have also faced a number of broader challenges, as discussed in the Executive Summary. So the case for structural reform requires careful attention.

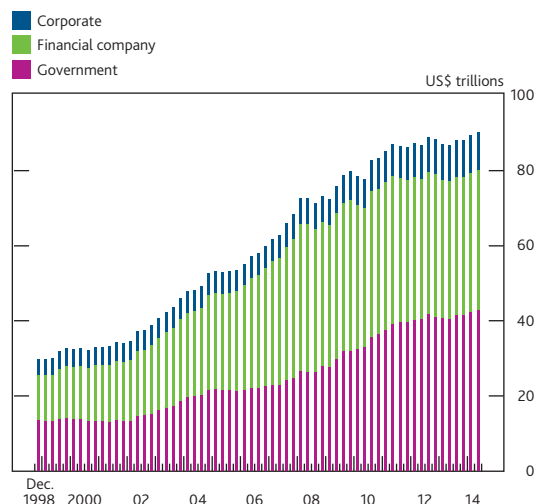
2 This section first considers the importance of FICC markets and how participants transact within them (Section 2.1). It then describes how the structure of these markets (including the effectiveness of competition within them) created opportunities for misconduct (Section 2.2), before summarising subsequent progress made to mitigate these vulnerabilities (Section 2.3). Section 2.4 assesses some of the challenges that remain, and sets out a number of principles to promote fairer FICC market structures while also enhancing effectiveness. Section 2.5 concludes by reviewing emerging challenges. The role played by FICC benchmarks is discussed in Section 3.

2.1 The role and importance of FICC markets in the economic and financial system

3 FICC markets help determine the borrowing costs of households, companies and governments, set countries' exchange rates, influence the cost of food and raw materials, and enable companies to manage financial risks associated with investment, production and trade. They are large in size, and highly diverse. To take just three examples, turnover in foreign exchange (FX) markets is some US\$5 trillion a day; the global stock of corporate, financial and government debt securities is nearly US\$100 trillion (**Chart 1**); and FICC 'over-the-counter' (OTC) derivatives amount to some US\$620 trillion in notional terms, or US\$20 trillion in market value (**Chart 2**). FICC markets also support employment for many around the world, not least in the United Kingdom, where a substantial share of these markets is based. So it is vital that they work both fairly and effectively.

4 Given this range of uses, FICC instruments are highly heterogeneous. Some are standardised and liquid — for example, developed economy currency pairs or government bonds. But many others are bespoke, designed to fit the

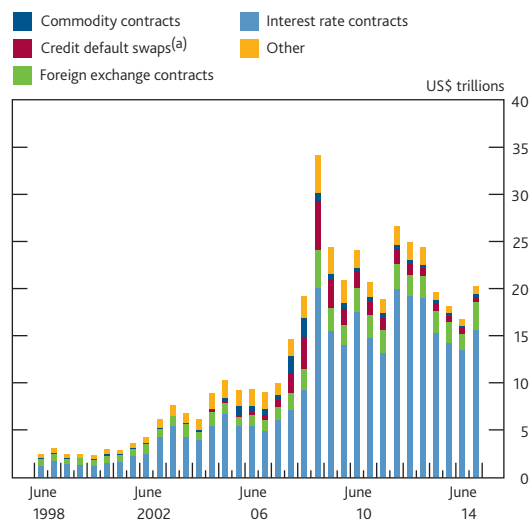
Chart 1 Global debt securities^{(a)(b)}



(a) Chart ends at June 2014.

(b) Total debt securities combine international and domestic debt securities. They are compiled from data reported to the BIS by central banks, including data sourced from national statistical offices.

Chart 2 Gross market value of OTC FICC derivative contracts



(a) CDS data start in December 2004.

particular funding or hedging needs and maturity profiles of borrowers or investors. In some cases, that customisation may take the form of variation of terms in otherwise relatively standard asset types — for example, variations in coupons or maturities in otherwise 'plain vanilla' corporate bonds or interest rate swaps. In others, the customisation may take

Table A Illustrative liquidity and standardisation characteristics of selected FICC instruments

	Typically less liquid	Typically more liquid
Typically more standardised terms/features	<ul style="list-style-type: none"> Single name CDS 	<ul style="list-style-type: none"> G10 government bonds Listed interest rate futures/options Market Agreed Coupon interest rate swaps General collateral repo (overnight) CDS indices G10 spot FX Listed FX futures and options Listed commodity futures/options
Typically fewer standardised terms/features	<ul style="list-style-type: none"> Corporate bonds Asset backed securities Synthetic collateralised debt obligations Structured notes and deposits Exotic derivatives 	<ul style="list-style-type: none"> Supranational bonds Agency mortgage-backed securities General collateral repo (term) Interest rate swaps Interest rate caps/floors/swaptions Covered bonds FX forwards/swaps/OTC options Physical commodities

Note: The table shows a highly simplified, judgemental categorisation of selected FICC instruments. The same broad product types can trade with either standardised and non-standardised terms (eg, Market Agreed Coupon interest rate swaps vs interest rate swaps) and complex products may become more standardised where industry consensus can be achieved (as happened with CDS contracts). Standardisation of contract terms is a pre-requisite for exchange trading. Almost any contract can be standardised, but where user demand for customisation is high, standardised contracts are rarer. Liquidity can also vary substantially over time within specific asset classes.

more exotic forms (for example, pre-payment provisions in mortgage and asset backed securities). **Table A** shows illustrative examples of FICC products classified according to their typical degrees of standardisation and liquidity.

5 Reflecting the diversity of FICC assets, there is also a range of ways in which participants choose to transact. **Figure 1** summarises the main trading models across major markets, and **Box 2** defines terms used throughout the section. Some instruments, including futures and options on short-term interest rates and commodities, are traded on multilateral trading venues such as exchanges. Trading on multilateral venues enables venue members (or smaller institutions who access the market indirectly via those members) to transact in standardised contracts, using fast and transparent trading systems, often linked to facilities allowing trades to be cleared through a central counterparty (CCP) rather than bilaterally. This method of conducting transactions is typically best suited to more liquid and standardised instruments where there is substantial continuous two-way trading interest (see top-right corner of **Table A**).

6 However, a significant share of FICC trading is conducted bilaterally with market makers, transacting on an OTC 'request for quote' (RFQ) basis, often via voice. This method

of trading is often favoured by end-users when finding a potential counterparty to a transaction is difficult, for example when trading in large size or in less standardised assets (see bottom half of **Table A**). OTC markets are often segregated quite sharply into separate 'dealer-to-dealer' and 'dealer-to-client' segments. The market has evolved in this way to allow market makers to service clients' needs while also being able to lay off risk among themselves in a way that maximises their ability to perform their market-making functions. OTC trades are 'information intensive', in the sense that: (i) pricing them effectively requires having information about the likely pattern and depth of future demand and supply; and (ii) they may have the capacity to move market prices against the end-user if transacted in a single block in markets lacking sufficient instantaneous depth to accommodate them. To meet those challenges, market makers specialise in gathering information about demand and supply, and provide temporary balance sheet capacity (or 'warehousing') to bridge between fluctuations in trade flows, making continuous two-way prices available to investors in return for compensation via a bid/offer spread.⁽¹⁾

7 Between the exchange and voice OTC trading models, a wide range of hybrid models have been developed in recent years. For example, alternative venues have sought to increase multilateral trading in the bond markets. And, while spot FX remains an OTC market, most trades are now executed through automated electronic single-dealer or multi-dealer platforms.

2.2 Potential links between structure and misconduct

8 Respondents to the Review cited many important advantages to the ways in which trading is undertaken in FICC markets, and said that in general they felt these markets served their needs well. At the same time, the design of certain FICC market structures may have exposed users of those markets to a number of misconduct risks that, if not properly managed, could harm fairness and effectiveness. Section 3 explains the role played by flaws in key FICC benchmarks, the proximate source of many of the recent misconduct cases. The rest of this section describes the wider benefits and risks of FICC market structures, and highlights examples of how the latter have crystallised.

9 The OTC market-making model, which remains central to many FICC markets, can allow end-users to transact smoothly in and out of large positions without excessive price volatility, even where the underlying instruments may be relatively illiquid or less standardised, across a range of market

(1) For a further analysis of the role of market makers, see the Committee on the Global Financial System report on 'Marking-making and proprietary trading: industry trends, drivers and policy implications': www.bis.org/publ/cgfs52.pdf.

Figure 1 Trading models by asset class⁽¹⁾

	Listed futures and options	Cash equities	Spot and forward FX	Government bonds	Interest rate swaps	Corporate bonds	Metric
Dealer to client channel (D2C)	• Dealer platforms • Voice	• Dealer platforms • Voice	• Dealer platforms • D2C platforms • All-to-all platforms • Voice	• D2C platforms • Voice	• D2C platforms • Voice	• D2C platforms • Voice	Share executed electronically ^(a)
Dealer	Agent	Principal or agent	Principal	Principal	Principal	Principal	Role
Dealer to dealer channel (D2D)	• Exchanges • Internal liquidity	• Exchanges • Internal liquidity	• All-to-all platforms • IDB platforms • Internal liquidity	• IDB platforms • Internal liquidity	• IDB platforms • Internal liquidity	• IDB platforms • Internal liquidity	Share traded electronically ^(a)
Total share of volume e-traded ^(b)	>80%	50%–70%	>80%	50%–60%	20%–30%	15%–20%	
Share traded electronically	 <10% share of trades ^(a) 10%–30% share of trades ^(a) >30% share of trades ^(a) >60% share of trades ^(a)						

Source: Oliver Wyman (based on BIS, Celent, Euromoney and Oliver Wyman proprietary data and analysis).

(a) Share of total trades (electronic plus voice) within channel.
 (b) Share of trade volume across all platform types.

conditions. It allows companies, financial institutions, and governments to tailor the terms of their bilateral contracts in order to manage their financial risk profile more precisely. And where central clearing is not available, it also gives counterparties certainty over their counterparty credit exposure in markets such as FX where there can be extended exposures related to settlement or other risks.

10 But at the same time market makers have to have effective controls in place to manage two key risks relating to how they manage the use of information:

- First, the need to take principal risk gives market makers an interest in future price movements that can benefit, but may also sometimes conflict with, the interests of their clients. This is because traditional market makers can (and frequently have to) trade simultaneously as a principal with their clients (eg when responding to a RFQ) and for themselves (eg when trading in markets to implement hedges and manage inventory). The co-existence of these roles, while intrinsic to the provision of market-making services, can also give rise to an incentive to trade against a customer’s interest, which in some cases has driven attempts at market manipulation. For example, the FCA fined one firm £26 million for failing to manage conflicts of interest between itself and its customers in relation to the Gold Fixing. The trader was also fined and banned from performing any function in relation to any regulated activity.⁽²⁾

- Second, the information that market makers gather as part of their role on market trends and customer demand enables them to provide customers with a number of beneficial services. But it may also be used to undertake transactions, or engage in other activities, which work against customer interests — for example, it may facilitate inappropriate ‘front running’, the practice of principal trading in possession of private client information with the aim of taking advantage of the anticipated price effect of a future order.

11 Some FICC markets, particularly for less standardised products like some corporate bonds, are relatively thin and trade infrequently. Small transactions can therefore potentially lead to large price movements as participants adjust prices that may have become out of date. Such market conditions may increase the scope for firms to manipulate markets by deliberately conducting transactions, either singly or in collaboration, which result in price changes favourable to their trading books.

12 The risks relating to information abuse are by no means unique to market makers. For example, interdealer brokers, acting as agents to a trade, will often have confidential information about order flow which could potentially be misused (for example, to win business) even though such firms normally do not take principal positions. Indeed, a number of

(1) The Review Secretariat is grateful to Oliver Wyman for assistance, including proprietary data, on some specific areas.
 (2) www.fca.org.uk/news/barclays-fined-26m-for-failings-surrounding-the-london-gold-fixing.

Box 2

Trading mechanisms in FICC markets

All-to-all platform

A multilateral system open to several classes of market participant which, in particular, allows buy-side firms to trade directly with other buy-side firms.

Central limit order book (CLOB)

A mechanism, often employed by exchanges and other multilateral trading systems, where trading counterparties disclose prices and volumes at which they are willing to buy and sell, and the system concludes transactions between them according to a pre-determined set of rules.

Electronic communication network (ECN)

An electronic trading system that facilitates a broad range of trading requirements including, for example, the automatic matching of buy and sell orders at specified prices. ECNs are often associated with the interdealer FX market.

Exchange

A traditional form of regulated multilateral trading system, often also associated with the primary issuance of securities. Exchanges are subject to a range of regulatory requirements relating to, for example: pre and post-trade transparency; non-discriminatory access; and monitoring and governance.

Interdealer broker (IDB)

A brokerage firm that acts as an intermediary between major dealers to facilitate trades.

Internalisation

The process by which customer and other trading interests are matched within a firm, often as part of that firm's single-dealer platform (SDP), rather than executed in the open market.

Market maker

A market participant who facilitates trading in a financial instrument by supplying (tradable) buy and sell quotes. Market makers may act as members of exchanges, though FICC markets more often rely on market makers trading on an OTC basis.

Multi-dealer platform (MDP)

A trading venue where liquidity is provided by many different market makers.

Multilateral trading venue/system

A marketplace for trading in financial instruments where multiple buying and selling trading interests come together to agree transactions.

Over-the-counter (OTC)

Transactions that are bilaterally negotiated between two market participants.

Request for quote (RFQ)

A mechanism for arranging transactions where customers ask one or more market makers to provide quotes for a financial instrument before agreeing to trade.

Single-dealer platform (SDP)

A trading venue which is owned by a bank or broker-dealer who acts as the sole market maker on that venue.

interdealer brokers were fined for involvement in the attempted manipulation of Libor.⁽¹⁾ Asset managers (which have grown significantly in size and influence in recent years) also have increasing informational advantages, reflecting the breadth and depth of their relationships across the dealer community, and in some cases significant investment in trading and information technology. Consequently, standards of market practice which address how information is used by both sell-side and buy-side firms are critical to ensure the fairness and effectiveness of markets. Box 10 in Section 4 considers the need for further guidelines and case studies in these and other areas.

13 The need to specialise in information gathering means that market-making has increasing returns to scale: a market maker that sees more trades in a particular market is more likely to possess the information needed to set more efficient prices. In the pre-crisis period, many firms on the sell-side sought to enhance those efficiencies further by engaging in

so-called 'horizontal integration' between market-making in cash products, derivatives and structured products, for example. This helped to provide users with a 'one stop shop' for a range of ancillary services and products. However, those returns to scale (combined with other factors that can potentially act as barriers to new entry) also mean that some areas of FICC markets can be characterised by elevated levels of concentration. In turn, increased concentration can facilitate collusion, as co-ordination is easier when there are fewer firms in the market. Attempted collusion between traders has been a feature in recent misconduct cases — for example the European Commission levied fines of €1.7 billion against two groups of firms for colluding to fix interest rate benchmarks.⁽²⁾

(1) www.fca.org.uk/news/icap-europe-limited-fined and www.fca.org.uk/news/press-releases/martin-brokers-uk-limited-fined-630000-for-significant-failings-in-relation-to-libor.

(2) http://europa.eu/rapid/press-release_IP-13-1208_en.htm.

14 The trend towards horizontal integration also provided scope for complex price differentiation between different combinations of products and different counterparties — using techniques such as bundling (the sale of two services together) or cross-subsidisation (when the margins on one service are used to enable another service to be provided at a lower price). Buying a set of services from the same provider over time can provide cost savings for customers, for example because firms do not need to invest in several relationships. However, it may also obscure the cost of the individual underlying services, making it harder for users to assess value; and it may act as a barrier to entry to potential competitors able to offer a subset of the individual services on superior terms.

15 To the extent that the market-making model relies on bilateral price discovery and execution (historically often by phone), transparency can sometimes be limited. To a substantial degree, the lack of pre-trade transparency (the publication of orders and quotes in advance of trading) and/or post-trade price transparency (the publication of prices and volumes after trades have occurred) reflects users' desire to undertake large transactions without their trading strategies being revealed to the market. The ability to trade in this way was one of the key strengths highlighted by end-users in responses to the Review. But it also means that pricing for the same instrument may differ across counterparties and market segments in a way that is hard or impossible for counterparties to assess. This can exacerbate informational asymmetries. And it may allow individual traders to exploit conflicts of interests while facing lower risks of being detected by authorities, counterparties, or their own firms' internal control functions. As discussed elsewhere in this Report, confidence that wrongdoing was unlikely to be exposed may have led to a progressive slippage in conduct standards.

16 It has historically been assumed that market discipline would play a primary role in policing conduct and ensuring effective competition in FICC and other wholesale markets. Buy-side firms and end-users who felt their interests had been harmed would withdraw or curtail their business from counterparties they suspected of abuse; and knowledge of that potential reaction would help to incentivise appropriate market conduct. FCA-regulated firms are also expected to inform the regulator if they detect misconduct. But while some of the largest investors and corporates told the Review they could still exercise market discipline when required, others felt the scope to do so was limited, citing increased concentration on the sell side, the need to maintain relationships with horizontally-integrated banks or the intrinsic difficulty of detecting market abuse. This issue is discussed further in Section 2.4.2.

17 Although the risks above are described primarily in the context of OTC market-making, other forms of trading

structures also give rise to a number of potential vulnerabilities to misconduct. For example, trading on all-to-all venues using 'central limit order books' (CLOBs) typically requires participants to publish details of their trading interest (how much they are committed to buy and sell, and at what price) on the venue. That gives rise to at least two potential risks. First, some participants may post trading interest without any intention to transact, cancelling that interest if the market price approaches it. This practice, which has a number of specific variants including 'spoofing' or 'layering', involves creating a false impression of supply and demand to induce a short-term price move from which unscrupulous venue participants can profit. Algorithmic or high frequency trading, where interest can be posted and cancelled in milliseconds, may increase the vulnerability of CLOB venues to such behaviour. A second risk is information leakage, leading prices to rise or fall in anticipation of further similar transactions coming through the market (this is a particular risk for large transactions or transactions in illiquid assets). For these reasons, there is no one trading structure that is uniquely less vulnerable to misconduct.

2.3 Progress in addressing structural issues

18 Few of the vulnerabilities in market structure described in the previous section are new. Well-managed market-making businesses have long understood the need to have controls in place to prevent the abuse of conflicts of interest, confidential information, or market power. Similarly, sophisticated investors have long known the importance of handling information about future orders carefully. In addition, regulators have set out clear standards relating to the management of conflicts of interest. The FCA Handbook, for example, requires firms to: take all reasonable steps to identify conflicts; operate effective arrangements to prevent damage to clients' interests; and (as a last resort), where conflicts may still exist, and the arrangements to manage them are not sufficient to prevent damage to clients, disclose them to clients.

19 Some firms have introduced physical separation of certain functions to help control the flow of sensitive information and manage potential conflicts of interest (for example, locating primary syndication and secondary market bond traders on different floors). In the United Kingdom, administrators and submitters to regulated benchmarks are subject to a number of requirements (highlighted in Section 3), including the need to have effective governance arrangements in place to manage conflicts of interest around the benchmark setting process. And the Financial Stability Board (FSB) report on FX benchmarks recommended that banks establish and enforce internal systems and controls to address potential conflicts of interest arising from managing customer flow.⁽¹⁾

(1) www.financialstabilityboard.org/wp-content/uploads/r_140930.pdf.

20 In addition to these existing controls and requirements, a number of recent regulatory reforms are driving further changes to FICC market structures that could help tackle these vulnerabilities, improving fairness and hence effectiveness:

- **The design and oversight of key FICC benchmarks has been overhauled** — as discussed in Section 3.
- **Increased transparency:** a number of regulatory changes are likely to improve transparency in many FICC markets over time. There will be a progressive transfer of derivatives business onto exchanges or electronic venues as a result of reforms agreed by the G20 in 2009 (implemented in Europe through EMIR and MiFID2, and in the United States through the Dodd-Frank Act). In Europe, the MiFID rules relating to pre and post-trade transparency will be extended in 2017 to a wider range of FICC assets (see Box 3). The EU Regulation on Energy Market Integrity and Transparency (REMIT) for wholesale energy markets, which came into force in December 2011, requires, among other things, energy market participants to provide records of transactions to a registered reporting mechanism, along with timely public disclosure of inside information. And there have been a number of initiatives to increase transparency in securitisation markets. For example, the Bank of England and the European Central Bank (ECB) have introduced loan-level information requirements as part of their collateral eligibility criteria in recent years. As part of a joint Discussion Paper they also welcomed ongoing work by the European Securities and Markets Authority (ESMA) to seek further improvements in disclosure of transaction documentation and performance information.⁽¹⁾
- **Improved access to, and standards on, FICC market trading venues:** the introduction under MiFID2 of a new type of venue category, the ‘Organised Trading Facility’ (OTF), should result in some of the more liquid FICC markets trading on regulated venues in the future, including some corporate bonds, many government bonds and all standardised derivatives subject to the G20 trading obligations. Participants in these markets will be covered by rules covering non-discriminatory access and venue neutrality (in addition to the increased transparency requirements described above). The extent to which MiFID2 achieves its stated goals will however depend on the final calibration of the measures, and practical implementation (see Box 3).
- **Oversight of anti-competitive behaviour:** international authorities have taken action to tackle the potential for anti-competitive behaviour in FICC markets. In the United Kingdom, the FCA’s regulatory toolkit was extended on 1 April 2015 to include powers to enforce against breaches of competition law.⁽²⁾ These powers sit alongside the FCA’s existing competition objective, which the FCA

meets by identifying and addressing areas where competition may not be working effectively. Taken together, they significantly strengthen the FCA’s ability to ensure competitive markets for financial services, and put the FCA in a better position to engage with European competition authorities to address cross-border issues. The FCA undertook a review of competition in wholesale markets, which concluded in February 2015. Based on the findings of that review, the FCA has begun a market study into competition in investment banking and corporate banking services, focusing on the impact of transparency and bundling on competition in debt and equity capital markets and merger and acquisition services.⁽³⁾ It has also announced plans to commence a market study on asset management in 2015/16.

- **Resilience of financial firms:** a number of prudential regulations are in the process of being introduced to improve the resilience of financial firms, including many of those playing a key role in FICC markets. The third Basel Accord (Basel III), which is implemented in Europe via the Capital Requirements Directive (CRD IV), contains a number of measures including revised trading book capital requirements to ensure adequate capitalisation of positions that cannot be exited quickly, and a leverage ratio, a non-risk-weighted capital requirement that ensures banks have a minimum amount of capital relative to their overall exposures. In the European Union a new liquidity coverage requirement will be introduced from October 2015, and work is underway on measures to ensure that firms have sufficient stable funding sources. Some of these measures are not due to be fully implemented for several years — for example, in Europe, the Net Stable Funding Ratio and the leverage ratio requirement will not be introduced until 2018. But the impact of these measures has in many cases already been anticipated and reflected in market behaviour. And in the United Kingdom, the Financial Policy Committee (FPC) intends to recommend the introduction of a leverage ratio requirement for UK globally systemically important banks and other major domestic UK banks and building societies as soon as practicable to avoid the emergence of financial stability risks over the coming years.

21 By returning the cost of liquidity and capital to more sustainable levels, this last set of regulatory measures should make some of the major firms in FICC markets more resilient, which in turn should mean markets are less prone to sudden disruptions caused by problems at an individual institution, increasing their effectiveness. But market participants report that liquidity in some FICC markets is lower than it was before

(1) www.bankofengland.co.uk/publications/Documents/news/2014/paper300514.pdf.

(2) These competition functions will be discharged in concurrency with the Competition and Markets Authority (CMA).

(3) www.fca.org.uk/news/fca-publishes-terms-of-reference-investment-corporate-banking-market-study.

the financial crisis, and have argued that these regulations have contributed to that. Whether that implies an overall reduction in fairness and effectiveness is less clear. The reduction in liquidity across FICC markets has varied quite widely, with some markets experiencing little change. Pre-crisis liquidity in some markets was in general too plentiful, causing sharp reversals or even closures during the adjustment phase, which harmed rather than enhanced effectiveness. And liquidity provision may increase in the future, for example, via an increase in profitability if volatility returns to more normal levels, if investors are willing to tolerate wider bid/offer spreads, or if other market participants, including the traditional buy-side, become more significant liquidity providers. A more complete analysis of these issues, and the broader implications for economic and financial stability, is beyond the scope of this Review, but is being conducted by other national and international bodies, and will be central to the Open Forum to be held at the Bank of England in Autumn 2015.

22 Finally, there have also been a number of technological developments within firms that, while not directly motivated by reducing misconduct, may nevertheless help to boost the fairness and effectiveness of FICC markets. For example, in light of a decline in revenues from FICC trading (due to the exceptionally low volatility seen across a range of markets in recent years, lower economic activity more broadly and the impact of the regulatory reforms described above) many market makers have made adjustments to their businesses. Some have simplified their product portfolios and focused more on clients they consider to be core. There has also been widespread interest in ways of reducing operating costs over the medium term, for example through the use of more automated trading processes like 'straight-through processing', which enables trading to be conducted electronically without manual intervention, and investment in innovative platforms that seek to match trading interest without the need for dealer intermediation. These methods can help make trading execution more transparent (by making price information more easily available to a wider group of participants) and efficient by lowering firms' operating costs (which should lead to more competitive prices). There has also been heightened interest in industry-led initiatives to increase the use of order-driven electronic trading platforms and other forms of technology (for example the use of techniques to identify holders of illiquid assets or estimate the fair value price of infrequently-traded instruments). Box 5 describes some of the drivers behind the development of these technologies.

2.4 Structural changes to boost fairness and hence effectiveness

23 Taken together, the regulatory and technological changes to benchmarks, transparency, access, resilience, oversight of anti-competitive behaviour and innovative trading platforms should, over time, deliver material improvements in the fairness, and hence effectiveness, of FICC market structures. Much of that reform remains in train, however — so it will be some time before the scale of any improvement is clear. It will be important for the authorities to monitor these developments closely, and stand ready to act if they fall short. But with so much change underway, the Review has decided not to recommend using regulatory or legislative tools to bring about further major structural reform at this stage.

24 Market structures evolve constantly, however, and the authorities also have an important role in guiding future changes through both formal and less formal means. Other than vulnerability to misconduct, the guiding principles for designing fairer markets flow directly from the Review's definition of fairness: **transparency, open access and competition on the basis of merit**, allowing market participants and end-users to choose between alternative solutions. The challenge is to identify interventions that enhance one or more of these characteristics while also boosting market effectiveness. That goal is further complicated by the fact that the effectiveness of a given market structure in general depends on the end-user's needs. OTC market-making may be the most effective way to minimise execution risk for those seeking to trade in large size or less liquid assets. Conversely, those wishing to trade in smaller size in relatively liquid or standardised assets may prefer to trade on anonymised electronic all-to-all order-matching platforms or exchanges. For these reasons, no single model is likely to dominate. So there is a good case for promoting a diverse range of models. This section identifies three key themes to guide that future evolution:

- In markets where OTC trading remains the preferred model, authorities and market participants should continue to explore the scope for improving transparency, in ways that also enhance effectiveness. (Section 2.4.1)
- Competition authorities, including the FCA, need to be alert to the potential for incumbents seeking to prevent the development of challenger technologies through anti-competitive structures or behaviour. (Section 2.4.2)
- Authorities should stand ready to help catalyse reform where markets are unable to do so. (Section 2.4.3)

25 These themes are reviewed in turn below, drawing on current developments and challenges within FICC markets as well as specific examples identified in responses to the Review's consultation.

Box 3

The implications of MiFID2 for European FICC markets

The Markets in Financial Instruments Directive (MiFID) is the overarching framework for many aspects of market regulation in the European Union. It sets out rules determining how investment firms must behave when dealing with clients and other market participants, and governs the operation of exchanges and other trading venues. The original Directive (often referred to as 'MiFID1') came into force in 2007 and was primarily focused on increasing transparency and competition in the equity markets. A major revision of the MiFID framework was agreed in May 2014, significantly amending the original Directive and introducing a new Regulation. The new regime, known as 'MiFID2', will be implemented in January 2017 and focuses much more heavily on FICC markets. This box summarises the main measures affecting FICC markets, and their potential implications for fairness and effectiveness.

1 Trading venue requirements

MiFID sets out several regulatory categories which aim to capture forms of trading that bring multiple parties together to conduct transactions in financial instruments (known as 'trading venues'). The broad objective of MiFID is to support competition and choice between business models, while establishing a number of common requirements aimed at ensuring venues operate fairly and effectively. These requirements include: pre and post-trade transparency; transparency of execution protocols; rules for admission of instruments to trading; non-discriminatory access to venues; management of conflicts of interest; and monitoring and governance requirements.

MiFID1 established two categories of multilateral trading venue: 'Regulated Markets' (RMs) and 'Multilateral Trading Facilities' (MTFs). The former category was designed to capture traditional exchanges, while the latter was designed to improve competition by providing for the authorisation of challenger venues. Although both categories applied to all relevant financial instruments, the majority of trading venues established under the MiFID1 framework covered equities. Most trading in FICC assets remained outside these trading venues either because transactions were arranged bilaterally, or because they were arranged multilaterally through systems that did not fit the RM or MTF categories.

To address this latter case, MiFID2 will introduce a new venue category, known as the 'Organised Trading Facility' (OTF), in particular for FICC markets. OTFs are venues where the operator takes an active role in sourcing liquidity and managing the trade matching process between market

participants, and will encompass venues ranging from interdealer brokers to new derivatives trading platforms. As a result, many of the more liquid FICC markets will, in future, trade on MiFID venues, including some corporate bonds, many government bonds and all standardised derivatives subject to the G20 trading obligation (see below).

The extension of venue requirements has the potential to contribute to the fairness and effectiveness of these markets in a number of ways. Three of the most significant cover:

(i) Transparency

MiFID2 will extend pre and post-trade transparency requirements to FICC markets. These obligations will apply to all multilateral trading venues (RMs, MTFs and OTFs) and organised forms of bilateral trading conducted by 'Systematic Internalisers' (including, for example, large OTC market makers).

The MiFID2 transparency regime has the potential to enhance the fairness and effectiveness of FICC markets considerably, as many respondents to the Review's consultation noted.

However, care is required in its implementation. For example, applying transparency requirements to large transactions or transactions in illiquid instruments can make it harder for market makers to trade such instruments with their clients without suffering a price movement when they hedge the position taken onto their book. In such situations, market makers may have to widen spreads to price in this risk, reducing market effectiveness for end-users. The MiFID2 framework seeks to address this issue by introducing:

- (i) waivers from pre-trade transparency requirements for illiquid assets and transactions that are 'large-in-scale'; and
- (ii) deferrals for post-trade reporting in similar cases.

This approach provides a sensible way to improve the fairness of FICC markets without compromising their effectiveness. However, as many responses to the Review highlighted, the success of this approach will be critically determined by the calibration of the waivers and deferrals.⁽¹⁾ A number of factors will need to be taken into account. First, it is important to ensure that the classification of liquid instruments accurately reflects the economic reality of the market for those instruments, and does not seek (for ease of implementation or otherwise) to force assets into the liquid category if they do not belong there. Second, the MiFID framework makes clear that waivers for the 'size specific to the financial instrument' should be set so as not to 'expose liquidity providers to undue risk'. To be effective, these waiver levels must take due account of market-making, and not be set according to distributional analysis of transaction sizes in a way that

(1) These are covered in draft implementing regulations currently being developed by the European Securities and Markets Authority (ESMA).

ignores the potential impact that disclosure could have on liquidity provision. Finally, at a more general level, MiFID2 aims to introduce a more ambitious system of transparency than has ever been previously implemented in FICC markets. It is therefore essential that the regime is regularly reviewed.

(ii) Open access

MiFID2 will extend non-discriminatory access requirements to FICC trading venues classed as OTFs. Many FICC markets have a two-tier structure of separate dealer-to-dealer and dealer-to-client markets. Dealer-to-dealer markets exist to allow market makers to lay off risk among themselves in a way that maximises their ability to perform their market-making functions. But it is important to ensure that access to these markets is appropriate, and free from artificial barriers. Access criteria should only exclude participants where absolutely necessary to ensure the effective functioning of the market. Open access requirements should help to remove unnecessary barriers, and support moves to more all-to-all trading. However, much will depend on how the MiFID framework is applied in practice. Several responses to the Review's consultation highlighted recent experiences in the United States, in which certain classes of market participant felt they had been excluded from being able to access the new category of 'Swap Execution Facilities'. If the move to OTFs is to be successful in broadening access within FICC markets, it will be necessary for supervisors to monitor OTFs actively to ensure that venues do not introduce or maintain access criteria that serve to exclude market participants unnecessarily.

(iii) Venue neutrality

MiFID2 will also introduce strong requirements on venue operators to prevent or manage conflicts of interest, including banning operators from most forms of dealing against their own capital within the system. The rules should act as a strong safeguard against the incentive for operators to profit from information concerning trading flow at the expense of participants within their trading systems. However, the prevention of dealing against own capital will not address all conflicts an operator may face. Where FICC markets follow a similar trajectory to the equity markets and move to more trading on independently-run venues, it will be important to ensure that new biases are not introduced — for example venues unfairly favouring market participants who place the largest number of orders.

2 Implementation of the G20 trading obligation

At the Pittsburgh summit of 2009, G20 leaders agreed to a range of measures designed to address risks associated with the OTC derivatives market. Most of the measures concerning the clearing of standardised OTC derivatives were implemented in the EU via the European Market Infrastructure Regulation (EMIR). However, the final limb of the G20

commitments — the obligation, where appropriate, to trade liquid, standardised derivatives on electronic trading venues — will be implemented by MiFID2. The trading obligation should serve to improve both the fairness and effectiveness of the markets for standardised derivatives. However, it is essential that a co-ordinated approach is taken to implementing the obligation, given the international character of the derivatives markets and the risks of fragmentation that could occur if jurisdictions implement the obligation differently.

3 Non-discriminatory access between trading venues and central counterparties (CCPs)

MiFID1 introduced principles of non-discrimination concerning market participants' rights to access trading venues and CCPs. MiFID2 will extend this policy by introducing rights for trading venues to access CCPs on non-discriminatory terms, and converse rights for CCPs to access trading venues. This new measure seeks to ensure that market participants are not bound to particular clearing or trading infrastructures when they trade certain assets. The Review considers that this measure will bring important benefits to the effectiveness of markets for cleared FICC instruments, notably exchange-traded derivatives and derivatives subject to the G20 trading obligation.

4 Conduct of business requirements

MiFID2 will extend conduct of business requirements to a wider range of market participants. Whereas previously there had been a presumption that the most sophisticated wholesale market participants could take care of their own interests, this shift under MiFID2 highlights the recognition that conduct risks can affect the integrity of the market as a whole and should not be judged solely at the level of individual participants. MiFID2 extends a number of obligations for investment services provided to sophisticated market participants, known as 'eligible counterparties', including: (i) a high level principle for firms to act honestly, fairly and professionally and to communicate with eligible counterparties in a way that is fair, clear and not misleading; (ii) the application of information requirements when firms provide investment services to eligible counterparties; and (iii) requirements to report to eligible counterparties periodically on services provided.

MiFID2 also introduces new requirements for firms executing client orders. These requirements increase the level of firm and execution venue disclosure, take steps to prevent firms from receiving remuneration from routing client orders to particular trading or execution venues and prescribe more detail to be provided in their execution policies. These changes should enhance end-investors' ability to monitor the order routing and execution arrangements of brokers and asset managers, and also provide tools for monitoring principal trading and other OTC activity.

5 Other measures

MiFID2 contains a number of other measures which will, to some extent, impact on FICC markets. New rules on algorithmic and high frequency trading seek to improve the stability of markets, and reduce opportunities for unfair practices (Section 2.5 explores the future implications of algorithmic trading for FICC markets). Transaction reporting requirements to regulators will be extended to all MiFID financial instruments traded on regulated trading venues, including when those assets are traded OTC. Given the creation of the OTF category, this will mean that more FICC assets are subject to reporting requirements which will

allow regulatory authorities to monitor more effectively against market abuse, as discussed in Section 6. Finally, position limit and position management controls will be introduced for commodity derivatives traded on venues. These provisions aim to improve the fairness and effectiveness of commodity markets, by introducing systems to help prevent the occurrence of 'short squeezes' (price spikes caused by shortages of supply near the expiry date of a futures contract).

2.4.1 Enhancing transparency in ways that maintain FICC market effectiveness

26 Improved transparency, where it is sensitive to the liquidity and size characteristics of trading, can improve price discovery, liquidity provision, trading surveillance and the monitoring of best execution. That principle is embedded in the MiFID2 framework, which will extend pre and post-trade transparency requirements to a range of regulated FICC markets, the opportunities and challenges of which are discussed in Box 3. But there may also be scope to enhance transparency in markets lying outside the scope of this regulation. The Review's consultation highlighted a number of areas where, at a minimum, further market-led improvements would be desirable, three of which are highlighted here:

- (a) 'last look', time stamping and other trading practices in FX markets;
- (b) the trading of some of the more liquid and standardised physical commodities; and
- (c) the allocation of primary bond issuance.

Enhanced transparency around 'last look', time stamping and other trading practices in FX markets

27 In some important aspects, FX markets are highly transparent. FX is the most well developed electronic market in the FICC landscape (see Figure 1), significantly enhancing pre-trade transparency. The proliferation of electronic venues and the growth of non-bank financial counterparties (including high frequency traders) as potential liquidity providers has, however, created a fragmented market structure, increasing complexity. More informed market participants typically use liquidity aggregation technologies and sophisticated order execution strategies to connect to various pools of liquidity. But the market's complexity can increase pre-trade search costs for participants who do not have access to these technologies. The availability of post-trade transparency is variable: for example, inter-dealer multilateral trading venues

provide post-trade price transparency; but in dealer-to-client bilateral markets, post-trade transparency can be low.

28 Several market participants and third-party service providers have sought to address this by offering so called 'transaction cost analysis' tools — which seek to assess any slippage between prevailing market prices and a customer's actual execution level. This can be challenging in an OTC market with no single source of 'best price'. However, several independent price sources are now available, which aggregate pre-trade order books across multiple electronic platforms.

29 There is scope to improve transparency further in ways that do not harm the effectiveness of FX markets. In particular, the Review has identified a number of trading practices where, at a minimum, more consistent transparency is required to ensure that market participants and authorities have sufficient information to make informed judgements about these practices.

30 First, there are inconsistent practices around the provision of information about order execution in spot FX transactions. In particular, although it is common in wholesale markets to provide 'time stamps' showing the precise execution time of each transaction, it is not universal. In part that may reflect the fact that institutional investors have not always demanded them. When managing diverse multi-currency securities portfolios, asset managers or their clients sometimes outsource FX trades related to routine trade settlements and income distributions *en bloc* to the end investor's custodian bank. As these typically result in a large number of smaller trades every day, the prices achieved have not always been scrutinised on a trade-by-trade basis. However, the absence of time stamps provides potential opportunities for abusive practice — for example, if rates on trades not confirmed until the end of the day were consistently skewed towards the inferior end of the day's trading range. The Review has concluded that there should be greater transparency concerning information relevant to the execution of orders and, in particular, that time stamps showing the point of

execution should always be provided, to minimise the scope for any such practices. Section 4.3.3 sets out how standards on time stamping might be delivered through the new global code, and in time formal regulation.

31 Second, the practice of **'last look'** gives market makers — whether using voice-based or algorithmic trading — a final opportunity to reject an order after a client commits to trade at a quoted price. This practice was developed to provide protection against unanticipated market movements and predatory trading practices, while allowing market makers to maintain tight bid-offer spreads for their clients. However, the Review shares the concerns raised in several responses to the consultation that last look, in its current form, could also potentially be abused by market makers, either by asymmetrically accepting or rejecting orders based on market moves after the order is placed, or by using the order to inform other trading activity prior to acceptance. At a minimum, further transparency measures are required to ensure market participants are sufficiently informed about how last look is employed in practice. Section 4.3.3 recommends that the new international standards process on FX markets should also set out clearer standards on the use of last look, including whether it should remain an acceptable market practice.

32 The third practice is the increased use of **'internalisation'**, where market makers match trades across their own books rather than through an external broker. Most market participants responding to the Review agreed that internalisation may enhance market effectiveness to the extent that it enables tighter pricing for clients. However, the lack of transparency associated with internalisation could limit the ability of clients to assess the quality of execution they

receive. Further transparency measures would help to evidence the fairness of the order execution process and the efficiency of the client's resulting execution.

33 There is scope to improve transparency in relation to these and other trading practices through a market-led initiative to provide a combination of public and bilateral disclosures. However, given that spot FX is a global market, those changes will only be fully effective if they are adopted across the market in a consistent way. The recently-announced work programme to develop an enhanced set of global standards for FX, discussed further in Section 4.3.3, offers a good platform to consider these issues. As an input to that process, Box 4 describes a high level framework which, suitably developed, could be adopted by market participants to enhance transparency through the use of targeted metrics.

Market-led improvements in post-trade transparency in commodities markets

34 There may also be scope for market-led initiatives to increase post-trade transparency in certain liquid, standardised physical commodities markets. For example, the Market Practitioner Panel noted in its response to the Review that for some of the more liquid, standardised physical markets (such as gold bullion trading) 'availability of post-trade reporting would provide an understanding of liquidity, help to dispel some concerns over information abuse, work towards levelling the playing field and allow for more reliable benchmarks to be constructed'. Similar points were raised by the London Bullion Market Association (LBMA), which argued that the precious metals market should report transaction data anonymously. The LBMA has subsequently launched a review to identify opportunities to increase transparency and liquidity in the gold market, including potentially through the development of an

Box 4 Enhancing the transparency of spot FX trading practices

While pre-trade price transparency in spot FX is generally strong, transparency of trading practices is less consistent. For example, it can be difficult for market participants to assess: how orders have been handled once received; whether matching methodologies favour particular styles of trading; whether algorithms deliver expected outcomes; or whether venue rulebooks are faithfully enforced. In some cases, information on these issues is already provided. But approaches are inconsistent, and due diligence of trading practices can be particularly challenging in a global market with a diverse pool of inter-connected trading venues.

This box explores ways in which further light might be shone on these practices in ways that do not harm the effectiveness of FX markets, through market-led initiatives. Suitably chosen metrics, either publicly or bilaterally disclosed, could allow customers to make more informed choices about their execution strategies, and also allow internal stakeholders or public authorities to assess conduct standards. They could also be implemented without full post-trade transparency of prices and volumes in the form of a consolidated tape, something which could be both challenging to implement in a fully global market and would not, in isolation, necessarily shed light on all types of potentially problematic trading practices. Work to develop such metrics could be taken forward in the context of the work programme to develop an enhanced set of global standards for FX.

Evaluating current trading practices

The following are examples of metrics that might be explored to throw light on current trading practices such as those discussed in the main text:

- **Fill rates** (the percentage of orders executed where a quote is hit by a client) and the **elapsed times between the orders' receipt and its execution/rejection** could help evidence the integrity of a market maker's order handling process when they use 'last look'.
- **Time stamps for all trade executions** could facilitate customer due diligence on the efficiency and fairness of trade executions and demonstrate adherence to clear standards of market practice and integrity.
- Summary data on the **concentration of counterparty types** on electronic trading platforms (where information is available) could evidence the fairness and effectiveness of venue matching rules to their users. For example, a measure that suggested orders were often matched against particular types of counterparties might be evidence of matching mechanisms which favoured such counterparties.
- **Recording of independent, external price comparators** when market makers internalise agency flows could help evidence the efficiency and fairness of trade executions.

Developing a more general framework

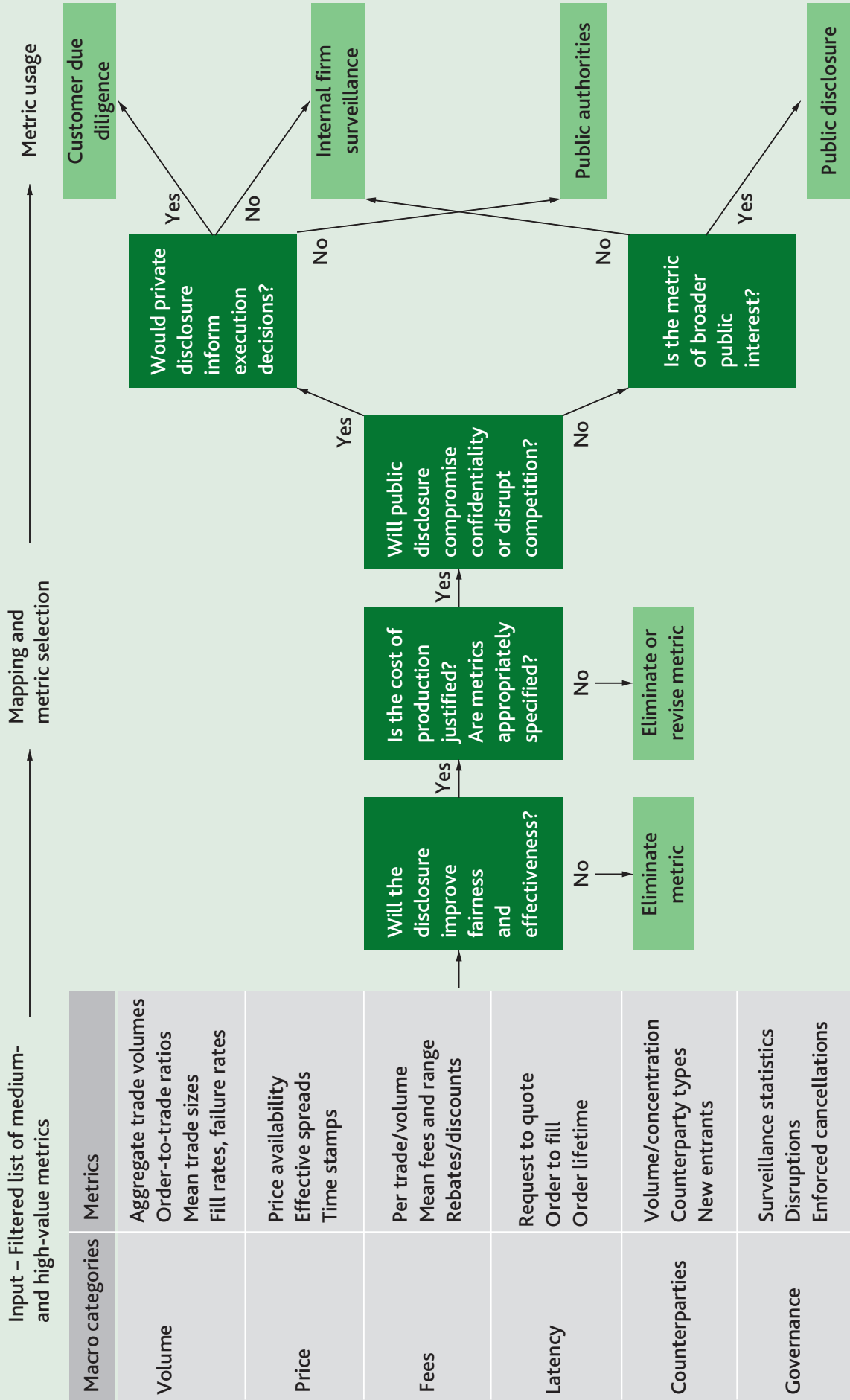
The above are only examples of metrics which could shed light on a few specific aspects of current FX trading practices. To evidence fair and effective practices in a more forward-looking way — a key theme of the Review — a methodology for identifying additional, relevant metrics to supplement existing disclosures would be required. Recognising that data collection and promulgation is costly, careful consideration would be required to select practical and effective metrics.

The steps outlined below describe a process that could be followed to do this:

1. **Categorisation by services provided:** The potential range of meaningful metrics will vary depending on the role a market participant is performing, and the trading practices associated with each of the services they provide. For example, different metrics could apply to: (a) operators of multilateral trading platforms; (b) brokers who provide market access across platforms, including via algorithmic trading; and (c) market makers (including non-bank liquidity providers). Where participants provide multiple services, for example where a market maker also works orders on behalf of clients, metrics relevant to each function would be appropriate.
2. **Mapping vs fair and effective characteristics:** Having categorised market participants, the next task would be to identify market practices where meaningful disclosures might enhance fairness without harming effectiveness. One way to do this would be to map the services provided by each type of participant against relevant characteristics of fairness and effectiveness, such as those set out by this Review.
3. **Metric selection and alignment:** To identify potentially relevant metrics for each type of participant and market practice, a selection process would need to consider: the scope of metrics required (in order to assess relevant practices without unnecessary overlap); their level of impact versus the practicality of their production; the appropriate level of aggregation; and any standardisation judged necessary to facilitate comparisons across venues and participants.
4. **Metric usage assessment:** Appropriate metrics, and their level of granularity, would vary depending on the recipient and the intended use of the information. Full public disclosure lies at one end of the spectrum. Alternatively, metrics could be provided privately for the following uses: customer due diligence, internal firm surveillance, and/or use by the public authorities.
5. **Proof of effectiveness:** Finally, historical examples of abusive practices could be used to test whether the proposed metrics would have been effective at identifying or discouraging the selected cases of market misconduct.

Figure 2 gives a hypothetical illustration of how such a high-level framework might be applied. The usefulness of such an approach would require further consideration, for example as part of the international work to develop global standards and principles.

Figure 2 Hypothetical decision tree for metric selection and usage



OTC trading platform or exchange service.⁽¹⁾ The Review is supportive of the broad goal of enhancing transparency — though the specific models for achieving this should be subject to careful consultation with a wide range of market participants and end-users.

Transparency of the corporate bond issuance process

35 The perceived fairness and transparency of primary corporate bond issuance was raised in a number of responses to the Review. A range of market participants including buy-side, sell-side and issuing firms noted that large investors tended to receive the largest allocations on new issues. Some felt this was justified by their role as valued long term investors, but small investors typically reported feeling disadvantaged. Some buy-side firms also raised concerns about the criteria by which the tail of smaller lots were sometimes allocated.

36 Judgements about bond allocations must ultimately lie with the debt issuer. But more consistent levels of transparency over the criteria used by bookrunners⁽²⁾ to decide on allocations, and suitably aggregated *ex post* data on allocation outcomes, may help to improve perceptions of fairness, and also thereby enhance effectiveness. While the International Capital Markets Association (ICMA) provides non-binding guidance on best practice in the book building process⁽³⁾ and some bookrunners produce distribution reports, there is no requirement for firms to do so, and reports are not standardised. In its response to the Review's consultation, The Investment Association called for consistent public disclosure of geographical location, and type, of investors and other information which would allow greater scrutiny of allocations. By contrast, only a minority of the Market Practitioner Panel supported a greater level of transparency on allocations. There was support though for greater scrutiny of orders and allocations by bookrunners (including by internal audit) from both the Market Practitioner Panel and ICMA.

37 Firms issuing fixed income instruments should have access to a wider range of options for allocation. One means of increasing transparency, raised by the consultation document, is the use of auctions. The transparency of the corporate bond allocation process will be assessed as part of the FCA's market study of investment and corporate banking.⁽⁴⁾

2.4.2 Promoting effective competition and market discipline

38 Cost pressures and reduced liquidity from some traditional providers have induced substantial innovation both in markets where the use of advanced technology is relatively novel (such as fixed income) and where it is relatively mature (such as FX). Adoption of such technologies — discussed in Box 5 — has sometimes been slow, however, even in markets where the underlying assets appear well suited to such trading. In part that may reflect co-ordination failures among users, or a

failure of specific technologies to provide the services that users need. But it may sometimes also reflect competitive impediments.

39 Respondents to the Review also identified other areas where they perceived competition might not be operating effectively. These included: the pricing of investment banking services, including the fees paid on corporate bond issuance; the awareness of how competition law applies to FICC markets; and the effectiveness of market discipline in ensuring competitive outcomes and good standards of market conduct.

Fair and open access to diverse trading structures

40 An increase in the use of transparent, anonymised, all-to-all electronic trading venues is likely to improve fairness and effectiveness in markets for liquid and standardised assets, including through increasing choice for market users. A range of FICC instruments already trade on exchanges, such as commodity, interest rate and gilt futures, and some CDS contracts (such as indices). Other relatively standardised assets might also be amenable to a move to greater all-to-all trading. But there are a number of challenges to more rapid adoption.

41 The emergence of such trading structures may challenge the informational advantages at the heart of the market-making model. And that could lead to responses by incumbent market makers which seek to restrict effective competition. As more of these venues move into the regulated space (as a result of MiFID2 and the Dodd-Frank Act⁽⁵⁾), it will be important to ensure that regulatory requirements for non-discriminatory access are appropriately applied to ensure effective competition to these markets. In the Review's outreach, respondents described observing a number of techniques to limit access, including for example the use of high access fees to limit the access of the buy-side to inter-dealer broker platforms, threats to remove liquidity unless certain platforms were (or were not) used, or limits (or conventions) on the number of dealers from whom investors could request on-platform quotes.

42 The requirement of 'post-trade name give-up' set out in the operating rules of some venues (ie disclosing the name of a counterparty to a market maker once a trade is agreed) may be necessary when parties to a trade need to manage their

(1) www.lbma.org.uk/blog/lbma_media_centre/post/lbma-launches-strategic-bullion-market-review.

(2) Bookrunners are banks involved in the primary issuance process who aim to ensure new issues are executed effectively while meeting the requirements of the issuer in terms of size, pricing and distribution.

(3) Covering, for example, discounting or removal of inflated orders and best practice on exercising judgement during allocations (Appendix B, ICMA Primary Market Handbook).

(4) www.fca.org.uk/your-fca/documents/market-studies/ms15-1-1-investment-and-corporate-banking-market-study-tor.

(5) In particular, the Dodd-Frank trading obligation and impartial access requirement.

Box 5

Innovations in fixed income and FX markets

Recent years have seen substantial innovation in FICC markets, aimed at reducing one or more of the costs that typically arise when entering into a transaction:

- **Search costs:** the time and effort associated with finding a counterparty that is willing to trade;
- **Intermediation costs:** the fees and/or spreads paid to market makers or venues; and
- **Execution costs:** the extent to which the user bears the price risk from any market impact of the trade.

This box describes a number of those innovations, many of which have occurred in fixed income or FX markets. Some reduce more than one of the costs listed above.

Reducing search costs

Search costs in OTC markets can be reduced by enabling firms to request quotes from multiple dealers simultaneously on an electronic trading venue backed by multiple market makers. Such multi-dealer platforms are not new but save time (relative to contacting several dealers in turn), ensure that multiple quotes obtained remain comparable (as all quotes are current) and promote competition between liquidity providers.

However, in OTC markets for heterogeneous assets, buy-side firms may not always be able to identify which market makers would be willing to trade in a particular instrument. To address this issue, some firms have been developing new information protocols enabling market makers to share the status of their inventories and their readiness to trade automatically with selected firms.

Another innovation has been to create logs of unexecuted indications of interest on electronic trading venues. Such features provide a database of participants' intentions to trade and may reduce search costs by tapping into latent liquidity.

Alternative approaches to reducing search costs include developing 'hybrid' trading models where liquidity is concentrated through time-limited trading sessions, or periodic auctions, focused on specific instruments or securities.

Reducing intermediation costs

Several providers have sought to address the costs of intermediation. For more standardised and liquid FICC instruments such as spot FX, some trading venues replicate parts of the equity trading model, including anonymous trading on central limit order books.

For instruments that trade infrequently, other trading venues try to address the pricing difficulty that arises by using large data sets to estimate what are described as 'fair value' prices based on past trades and comparable financial instruments. Making these price estimates available on screen to market participants may help to alleviate some of the barriers to order-driven all-to-all markets in less liquid FICC markets.

Finally, some firms have developed solutions to enable the buy-side to bypass the sell-side altogether, for instance by developing order matching engines in buy-side only liquidity pools.

Reducing execution costs

Attempting larger or otherwise less standard transactions on venues where orders are visible to multiple counterparties can lead to 'information leakage', moving market prices adversely and creating so-called 'execution slippage'. A number of solutions have emerged to address such risks.

Large market makers in FX markets have developed internalisation engines enabling their counterparties to find matching trades within the dealer's order book, thereby avoiding wide disclosure of their trading interest, and potentially also reducing intermediation costs. Section 2.4.1 discusses broader transparency challenges with such approaches.

In addition, algorithmic execution strategies have been offered to buy-side firms by their brokers or specialised vendors to reduce execution costs. These strategies are designed to minimise execution cost by splitting orders and executing these across multiple trading venues. Market impact can also be reduced by algorithms taking into account and anticipating the typical trading volumes associated with the instrument traded.

counterparty risk, but is more questionable as a practice when trades are centrally cleared. In the latter case, the retention of post-trade name give-up may act as a barrier to entry to some classes of market participant who need to protect information about their trading strategies. Limitations on venue access may occasionally be necessary to ensure effective market function. But in some cases it can be hard to identify any such justification. The preliminary conclusion by the European Commission that a range of parties infringed competition law by colluding to prevent exchanges from entering the CDS market underscores the potential vulnerabilities as well as the seriousness of such restrictions (see case study 4 in the Annex).

43 The FCA will maintain a watching brief of potential obstacles to the development of all-to-all trading and other innovations, including the possibility of competitive abuse by firms (or their staff) that occupy existing dominant positions, and will stand ready to use its appropriate competition or regulatory powers, including open access requirements under MiFID2 (see Box 3) if required.

Pricing and sale of investment banking services

44 A number of responses to the Review's consultation raised the practices of bundling, cross-selling or cross-subsidisation of products or services in FICC markets. Despite the possible advantages from purchasing bundled services, some respondents noted that the practice may reduce choice in some circumstances, as it may limit their ability to switch providers for just one service (such as bond issuance), especially if banks demand exclusivity. The issues may be exacerbated for smaller clients, which only have a relationship with one bank and have relatively less bargaining power than larger firms.

45 The use of cross-subsidisation or bundling may also potentially affect the level of fees charged on corporate debt issuance. The Association of Corporate Treasurers (ACT) noted to the Review that some firms may face difficulty in switching to alternative providers due to market concentration or certain types of market practice that reduce choice. And the Market Practitioner Panel thought that *reducing* the number of bookrunners to one or two (compared with the usual three to five used currently in the sterling corporate bond market) might actually help to improve competition and reduce fees, by providing issuers with greater flexibility to choose alternative bookrunners in a concentrated market.

46 As noted earlier in this section, the FCA has begun a market study into competition in investment and corporate banking which will cover bundling and cross-subsidisation of investment bank services.

Improving awareness of competition law in FICC markets

47 There is a well-developed body of competition law in the United Kingdom and at EU level — and the evidence presented in recent enforcement cases suggests that most of those involved were aware that their behaviour was inappropriate. However, collusion can have a highly damaging effect on the integrity of FICC markets, and consultation responses and the Review's analysis and outreach suggest there are shortcomings in the understanding of the extent and power of competition law. For example, firms and staff should be aware that:

- there have been a number of successfully prosecuted competition cases in FICC markets including: cartels related to interest rate derivatives and commodities; disclosure of confidential pricing information; abuse of market power via discriminatory behaviour; and limiting the supply of services to customers;
- competition law covers all market segments and firms;
- breaches can have very serious consequences for individuals (who may face a maximum 5 year custodial sentence and/or an unlimited fine) as well as firms (which can be fined up to 10% of their annual group global turnover); and
- businesses and individuals that come forward to report their own involvement in a cartel may have their financial penalty reduced or avoid a penalty altogether under the Competition and Markets Authority leniency programme.

48 The Review recommends that steps should be taken to:

- **3e: Improve firms' and traders' awareness of the application of competition law to FICC markets, including through the communication by the FCA of material presented in the Annex of this Report to authorised firms active in FICC markets, through firms' internal programmes, and through the new guidance on FICC market qualifications and training to be developed by the FMSB.**

Strengthening market discipline in FICC markets

49 As highlighted in Section 2.2, one of the most disappointing findings of the Review has been that market discipline over standards of conduct appears to have been weak or even non-existent in many FICC markets. Some larger buy-side institutions said they had the capacity in principle to move business if irregularities were detected, or to report misbehaviour to a sell-side firm's compliance department. But many firms reported being either unable or unwilling to do so, saying they focused their monitoring of counterparty performance on a narrow range of metrics, often related primarily to pricing. A number of possible reasons for weak market discipline include:

- the limited choice of alternative counterparties, reflecting increased concentration and reduced balance sheet capacity on the sell-side, and the fairly widespread incidence of historic misconduct in some recent cases;
- a potential tension between moving business to send a clear signal on conduct standards and the need to maintain relationships with a range of counterparties to ensure best execution in accordance with fiduciary duties, sometimes combined with the fear of possible retaliatory action;
- reported difficulties of detecting when abuse or misconduct had occurred, due to limited post-trade transparency in some FICC markets, and the investment needed to develop appropriate monitoring tools;
- limited incentives on buy-side firms to monitor misconduct actively, given the limited share of transaction costs in their overall cost base, the linking of fund management fees to performance against industry-wide benchmarks, and/or limited pressure from end-investors to investigate such practices;⁽¹⁾ and
- the possibility that some on the buy-side might be subject to conflicts between their clients' interests and their relationship with their sell-side counterparties.

50 Taken together, these explanations suggest that there are serious grounds for concern that bilateral market discipline is not providing a sufficiently powerful check on market misconduct.

51 Some respondents to the consultation suggested that there might be room for greater co-ordination by the buy-side on this issue, for example via relevant committees of buy-side trade associations. Some reported increased activism by some end-investors, who were asking fund managers to sign up to their own codes of conduct. And obligations on firms to report suspect transactions to the FCA will shortly be extended to a wider range of FICC markets as discussed in Section 6.3.4.

52 The Open Forum to be held at the Bank of England in Autumn 2015 will provide an opportunity to discuss more innovative ways in which market discipline might be improved over time. The Review's recommendations have nevertheless been informed by the current perceived weakness of market discipline. If firms and their staff fail to take those opportunities, more restrictive regulation is inevitable.

2.4.3 Catalysing market-led reform that may be held back by co-ordination failures

53 In some cases the main impediment to changes in market structure may be the absence of a ready means for users to co-ordinate on a preferred way forward. For example, like

other forms of network, potential users of a new all-to-all platform may only be willing to incur the cost of joining if they know that others will also do so, in particular those willing to provide liquidity. Differences of view about preferred technologies or trading protocols may impede that process. Although the co-existence of a large number of rival products can be healthy in terms of innovation, the fixed costs of evaluating and connecting to multiple platforms can be prohibitive, particularly for smaller market participants and the buy-side. And the consequences in terms of fragmented liquidity may impede the development of a viable marketplace.

54 Wide adoption of all-to-all trading may be facilitated by OTC bilateral and all-to-all trading running jointly and in parallel in some markets. For example, some venues are offering all-to-all trading platforms alongside dealer-to-client and dealer-to-dealer options with the intention of encouraging market makers to participate on new platforms, helping them gain critical mass. The extent to which market makers deal on all-to-all venues will be influenced by the trading revenue that they can earn from participation on such venues, the ownership structure or sharing of revenue (subject to ensuring venue neutrality), and the extent to which the buy-side use such venues.

55 In other cases, realising the full economic benefits of secondary markets may require agreement on more fundamental changes to the nature of the underlying assets, and particularly the degree of their standardisation (illustrated in **Table A**). Standardisation, by concentrating liquidity, removing bespoke features and aligning terms may make instruments more amenable to all-to-all trading, benefiting secondary market function and pricing. Initiatives in FICC derivatives markets show that standardisation can be market-led. For example, in 2009 the International Swaps and Derivatives Association (ISDA) oversaw industry-wide standardisation of single-name CDS contracts and conventions, including through: centralising decisions over credit events; reducing the number of restructuring clauses; and establishing fixed coupons and standardised accruals (which facilitates netting of derivative positions). And in 2013 ISDA published standardised interest rate swap confirmation and terms (so-called 'Market Agreed Coupon' or MAC swaps). Standardisation can also have advantages in non-derivative markets, as seen for example with the establishment of large, highly liquid benchmark issues in government bond markets, including gilts.

(1) Consistent with this, the FCA noted in its recent Wholesale Sector Competition Review that end-investors may not be able to assess effectively whether they are getting value for money from asset managers and that asset managers may not have sufficient incentives or ability to control costs incurred along the value chain. See www.fca.org.uk/news/fs15-02-wholesale-sector-competition-review-2014-15.

56 Corporate debt instruments typically remain less highly standardised. Although some of the largest issuers of corporate bonds have followed the lead of governments and also concentrated issuance in a small number of maturities, in general corporate bond markets remain highly heterogeneous. That reflects a deliberate choice by issuers, who value being able to choose the terms of their debt to match both their underlying cashflows and the requirements of investors (who often want to match the bonds against their own liabilities and hold them to maturity). The consequence of this is that secondary market liquidity in many corporate bonds can be very low, with turnover often falling to near-zero at times.

57 This state of affairs may suit the interests of traditional issuers and investors. Responses to the Review's consultation and outreach, in particular from corporate issuers, were strongly opposed to the centrally-mandated standardisation of bond terms. Respondents said they saw no case for being required to issue debt less well-suited to their cashflow needs in return for benefits in terms of the ability to trade in secondary markets that were seen as likely to be modest at best. That view may have been strengthened by the currently very favourable market conditions for debt issuance. The lack of greater standardisation does however have a number of consequences. First, thin secondary market liquidity can make it harder to price new issuance effectively and may lead to higher issuance costs. Second, it may impede the ability, or raise the costs, of smaller and medium sized firms bringing their debt to market. And, third, it may be impeding the development of a richer investment base, not least by holding back the development of alternative trading venues.

58 The Review has concluded that there is no case for enforced standardisation. But there is a case for a richer and better informed market-wide debate about the costs and benefits of alternative market-led solutions. A fuller assessment would need to examine, among other things, the extent to which standardisation could broaden the investor base and lead to greater secondary market activity, the likely impact of this on issuers' pricing, and how these factors may change as interest rates normalise. It could consider how standardisation might interact with recent innovations that seek to reduce the trading costs for less standardised or illiquid instruments (as discussed in Box 5). And it could consider the different dimensions that standardisation might take place across, including: documentation (including prospectuses); the minimum size and increments of issuance; re-opening (or tapping) of existing bonds to concentrate issuance into a smaller number of large benchmarks; standardising terms (such as 'make-whole' call options) and settlement and trading protocols; and aligning coupon and payment dates with those on derivative instruments. Some of these may be more amenable to market-led change than others.

59 To be effective, discussions would need to take place across a broad range of market participants and end-users, catalysed as appropriate by public authorities — as suggested by the Market Practitioner Panel and Association of Corporate Treasurers (ACT) in their responses to the Review's consultation. The Bank of England recently suggested a possible process for collective consideration of principles for standardisation of terminology, documentation, settlement and trading protocols in its response to the European Commission's Green Paper on Capital Markets Union.⁽¹⁾

2.5 Tackling new and emerging structural conduct risks

60 Innovation in FICC markets is welcome, and some of the new technologies described in the previous section and Box 5 may offer material gains in terms of fairness and effectiveness. However, they may also create opportunities for new forms of misconduct, and change the nature of trading and risk sharing.

61 Many of these issues have already been experienced in other markets. And some regulatory steps have already been taken. For example, MiFID2 will introduce a range of new rules on algorithmic and high frequency trading, which aim to improve the stability of markets and reduce opportunities for unfair practices. All firms employing algorithmic trading techniques will be required to apply robust systems and controls and keep audit trails on all placed orders. Those algorithmic traders employing 'market-making' strategies will be required to remain in the market for fixed proportions of the trading day. Firms employing high frequency trading strategies, based on latency (the speed at which information is processed and trades are executed), will also require specific authorisation by regulators. A range of obligations will apply to trading venues, including the introduction of circuit breakers, minimum tick sizes and caps on the number of unexecuted orders that participants may place. And venues will also be subject to requirements to ensure that their fee structures do not contribute to disorderly trading or market abuse.

62 However, while these rules will apply to many FICC instruments and should help improve the fairness and effectiveness of those markets, not every instrument is covered (for example, spot FX). In addition, new vulnerabilities may emerge in the future. The Review therefore recommends that greater attention be given to these issues in coming years, both by market participants and by the authorities. The precise nature of these vulnerabilities will depend on asset types and trading structures, but particular areas for attention include:

(1) See page 11 of www.bankofengland.co.uk/financialstability/Documents/cmu/greenpaperresponse.pdf.

Box 6

The 15 January 2015 events in FX markets

As shown in **Figure 1**, the majority of spot and forward FX trading now takes place on electronic platforms — including single-dealer, multi-dealer and all-to-all venues. This has contributed to broadening market access, improving choice, reducing costs and enhancing transparency. But high-speed electronic financial markets can also be vulnerable to new risks. Some of these vulnerabilities were highlighted by the events on 15 January 2015 — when the Swiss National Bank (SNB) removed the official ceiling on the exchange rate between the euro and the Swiss franc⁽¹⁾ — though it is also clear that no market structure would have emerged unscathed from such an event, given the size and unanticipated nature of the adjustment.

The first vulnerability highlighted was the **speed with which firms can accumulate losses** when they depend on automated high frequency pricing algorithms to make markets. A number of banks reported significant losses on trades following the announcement, as large exchange rate movements occurred between the time that orders were filled on systems serving clients and the time the resulting risk positions were offset (typically on the electronic communication networks (ECN) that sit between market makers in the FX market). These losses may have been exacerbated by the potential pricing inflexibility of some automated models used to transact with clients.

The second vulnerability highlighted was that a **multiplicity of prices displayed on-screen is not always a guarantee of continuously executable liquidity**. A number of banks

suspended trading on their main single dealer FX platforms when exposures from selling uncovered Swiss francs exceeded stop loss limits or other safeguards. A short time later, liquidity also became impaired in the interdealer market as the suspension of trading on single dealer platforms interrupted the flow of price data upon which ECNs can depend. When liquidity on ECNs became thinner, it is possible that the pricing algorithms used by banks further adjusted to reflect declining ability to hedge positions in the interdealer market. Interdependencies in the price formation process in high speed electronic markets might have given rise to feedback loops which further accelerated the speed at which liquidity dried up across all types of electronic trading venues.

Finally, **more diverse markets may be more resilient** — electronic platforms may need support from other trading mechanisms in order to recover liquidity following a substantial shock. After approximately an hour, liquidity progressively improved in the euro/Swiss franc market, beginning when market users reverted to more traditional methods of sourcing of liquidity such as voice trading.⁽²⁾ This might also have helped stabilise ECNs, where liquidity recovered and trading volumes increased over the course of the day. That market participants were able to trade again more or less normally within an hour after the SNB's announcement shows the resilience of the foreign exchange market. But it also highlights the importance of diversity in trading methodologies.

(1) See www.snb.ch/en/mmr/reference/pre_20150115/source/pre_20150115.en.pdf.

(2) See www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2015/q1.pdf, page 79 for more details on these events.

- Algorithmic trading may reduce the scope for misconduct along one dimension (by reducing the scope for human discretion in trading decisions) but may also create risks to the effectiveness of markets, as recently discussed for example by Simon Potter of the Federal Reserve Bank of New York.⁽¹⁾ No market structure could reasonably have expected to have emerged unscathed from the volatility that followed the Swiss National Bank's removal of the Swiss franc peg in January 2015. But the response of the FX markets nonetheless highlighted some of the ways in which the authorities' understanding of market behaviour is likely to have to adjust with the increased use of electronic trading strategies, as discussed in Box 6.
- Further reductions in latency may also require innovative tools to ensure fairness for all participants. Firms that invest in faster trading technologies are likely to benefit from better execution. This is not a new development, and is often consistent with competition on the basis of merit.⁽²⁾

But as the Market Practitioner Panel noted in its consultation response, the costs of some new technologies risk creating barriers to entry. Alongside the regulatory requirements of MiFID2, part of the answer may lie in new trading approaches such as 'heartbeat' matching (where orders are matched at pre-determined intervals), periodic auctions or 'speed bumps' (randomised delays which provide incentives for high frequency trading only up to a point) which in a variety of ways aim to refocus competition on price rather than solely on latency.

- While the emergence of multiple platforms may increase choice it may also impose costs, including the cost of the technology needed to connect to multiple venues. There is

(1) www.newyorkfed.org/newsevents/speeches/2015/pot150413.html.

(2) For example, the FCA wholesale sector competition review 2014–15 found that co-location (the practice of trading venues enabling firms to place their servers close to the trading venue) was generally welcomed by respondents who noted that it has levelled the playing field for market participants requiring reduced latency.

scope for such developments to occur in a range of FICC markets, including those with lower levels of secondary market trading such as corporate bond markets.

- Innovations in trading technology can also lead to the proliferation of order types and related incentive structures. Fees and rebates may incentivise certain types of trading behaviour which are inconsistent with fair and effective markets and may create scope for misconduct.

63 The proposed FICC Market Standards Board (FMSB) (described in Section 4.3.2) could play an important role in

highlighting such risks and identifying potential solutions in terms of market practice standards. Given the vibrant pace of technological innovation in fixed income markets, a 'White Paper' on the opportunities and challenges posed by these technologies from a conduct perspective would be particularly timely. The authorities will also continue to flag risks that they identify in the course of their regulatory, market operations and wider market intelligence activities.

3 FICC benchmarks: achieving robust global standards

3.1 Where was fairness and effectiveness deficient?

1 Many recent misconduct cases in FICC markets involved attempts to manipulate key benchmarks. Benchmarks play a particularly important role in many FICC markets, because the combination of periodic illiquidity and/or a predominantly bilateral trading model means they lack a single, widely available, real-time traded market price. In such markets, benchmarks that aggregate disparate prices or quotes can therefore help to reduce information asymmetries between dealers and the buy-side, and provide crucial reference rates for use in financial contracts. That in turn helps to encourage market participation by a wide range of less informed agents, lowers transaction costs and enhances liquidity, improving the effectiveness of these markets.⁽¹⁾

2 Given those public good characteristics, attempts at benchmark manipulation can have significant social costs. Responsibility for that misconduct lies in the first instance with the individuals and firms involved. However, recent misconduct also highlighted key vulnerabilities in the design and governance arrangements of FICC benchmarks. In many cases, those vulnerabilities can be traced back to design decisions originally made in an attempt to compensate for a lack of centrally available prices in over-the-counter (OTC) markets. But the arrangements that may have once been adequate for relatively small-scale usage failed to keep pace with the significant increase in scale and diversification of their usage and developments in the underlying markets. This created opportunities for abuse or misconduct that were unlikely to have been as evident when the benchmarks were first created. Three specific examples illustrate this point:

(i) An important vulnerability with **Libor** was its submission-based design. That was originally introduced to deal with periodic illiquidity in the underlying unsecured interbank market. However, as the unsecured interbank market became progressively thinner during the crisis, submissions to the benchmark became increasingly reliant on judgement rather than transactions, and thus more vulnerable to attempted manipulation by panel banks. Compounding this vulnerability, the use of Libor had broadened over time from credit products (eg loans and money market instruments) into much larger interest rate derivatives markets (such as swaps, options and forwards), even though a substantial part of this market would arguably have been better served with a near

risk-free reference rate, rather than one incorporating bank credit risk. This widening of use exacerbated conflicts of interest within panel banks, and some misconduct cases involved inappropriate influence being exerted on Libor setters by their bank's derivatives traders, who had incentives to attempt to move the fixing in order to profit from contracts referencing the benchmark. The attempted manipulation of Libor, Euribor and other interbank rates affected every major financial centre and has so far resulted in total fines on institutions of around US\$9 billion by US, UK and European regulators.

- (ii) In the foreign exchange market, the key **WM/Reuters** (WM/R) benchmarks are, at least for the most widely used currencies, based on actual trades, supported by executable bids and offers extracted from electronic trading systems. Their design vulnerabilities were therefore quite different in nature from Libor. Instead, it was the combination of a narrow one-minute calculation window and the practice of netting off agency trades ahead of the 4pm WM/R FX fix, originally undertaken to mitigate balance sheet risks, which gave traders (in collusion with traders at other firms) a tool to attempt to manipulate market prices. Fines of more than US\$10 billion have been imposed on seven banks by global regulators to date.
- (iii) Several precious metals benchmarks, including the **Gold and Silver fixes** based in London, were historically calculated using an auction undertaken via a conference call of participating members. However, this process lacked sufficient transparency and relied on a small number of contributors, which meant there was greater potential for any given trader to influence the fix. This vulnerability crystallised in the gold market, when the Financial Conduct Authority (FCA) fined one firm £26 million after an options trader deliberately placed orders during the fixing window with the intent of manipulating the benchmark below a certain price to avoid having to make a payment to one of the bank's customers.⁽²⁾

(1) See Duffie and Stein (2014), 'Reforming Libor and Other Financial-Market Benchmarks', and Duffie, Dworczak and Zhu (2014), 'Benchmarks in Search Markets', for further analysis of the role of benchmarks in OTC markets.

(2) www.fca.org.uk/news/barclays-fined-26m-for-failings-surrounding-the-london-gold-fixing.

Box 7 Implementation of the Review's August 2014 benchmark recommendations

In August 2014, as an interim output, the Review recommended to HM Treasury that the scope of the UK regulatory framework for benchmarks originally implemented in the wake of the Libor misconduct scandal should be extended to cover the following seven major UK-based FICC benchmarks:⁽¹⁾

- **SONIA** (Sterling Overnight Index Average) and **RONIA** (Repurchase Overnight Index Average), key reference rates for overnight index swaps in sterling;
- **LBMA Gold Price (formerly the London Gold Fixing)** and the **LBMA Silver Price (formerly the London Silver Fixing)**, which determine the price of gold and silver in the London market;

- **WM/Reuters London 4pm Closing Spot Rate**, the dominant global foreign exchange benchmark;
- **ICE Brent Index**, the crude oil futures market's principal financial benchmark; and
- **ICE Swap Rate (formerly known as ISDAFIX)**, the principal global benchmark for swap rates and spreads for interest rate swap transactions.

After public consultation, the UK Government accepted the Review's recommendations, and the legislation became effective on 1 April 2015, meaning that these benchmarks are now subject to FCA authorisation and regulation and it is a criminal offence to manipulate them. This represents an important additional step in ensuring consumers and market participants are protected against the risks associated with major UK benchmarks.

(1) www.bankofengland.co.uk/markets/Documents/femraug2014.pdf.

3 In principle, these design weaknesses could have been managed by effective controls within firms on (a) the governance of benchmark submissions and (b) acceptable trading practices around fixes. In many cases, however, those controls were absent or ineffective. Similar issues applied in terms of benchmark administrators, who in several cases failed to ensure that their fixing methodologies, internal controls, transparency and governance arrangements were appropriate. Those weaknesses were further compounded by a lack of effective market discipline from users of benchmarks, who appear in some cases to have been unable or unwilling to ensure that they were using benchmarks that were fit for purpose. In part, that reflected a lack of alternative benchmarks and/or a lack of transparent data or information from administrators on how benchmarks were constructed.

3.2 What has already been done to put this right?

4 In light of these weaknesses, there has been concerted action, both in the United Kingdom and internationally, to reform the design and regulation of key FICC benchmarks.

Initiatives in the United Kingdom

5 A framework of legislation for financial market benchmarks was introduced in the United Kingdom following the 2012 Wheatley Review of Libor.⁽¹⁾ The legislation subjected administrators of, and submitters to, specified benchmarks to a number of regulatory requirements to ensure the integrity of the submission process, including the identification of potential conflicts of interest and the implementation of robust governance and oversight arrangements.⁽²⁾ Authorised

firms may face a range of sanctions if they breach any of the FCA's rules and principles — including financial penalties, suspensions and censures. The Financial Services Act 2012 also introduced a new criminal offence of manipulating a 'relevant benchmark': individuals found guilty face up to seven years in prison.

6 This legislation was initially applied to Libor, reflecting its systemic importance in financial markets. It was subsequently extended to seven other benchmarks, following a recommendation from this Review (see Box 7).

7 The administrators of many of the regulated benchmarks have introduced, or are in the process of introducing, important methodological improvements, complementing the UK authorities' actions to bring the benchmarks into the scope of regulation. These changes, described in more detail in **Table B**, include: moving from submission to transactions-based structures wherever possible; broadening the range of transactions on which benchmarks are based (including through widening fix windows); expanding the number of contributors; introducing more transparent pricing methodologies (including auctions); and enhancing fall-back provisions where primary input data are insufficient or unavailable. In addition, the Bank of England and the FCA are in discussion with the Wholesale Market Brokers Association regarding the future evolution of SONIA and RONIA. As part of that initiative, the Bank has announced it will collect data on sterling overnight deposit transactions from banks and

(1) www.gov.uk/government/uploads/system/uploads/attachment_data/file/191762/wheatley_review_libor_finalreport_280912.pdf.

(2) Formally set out in the 'MAR 8' section of the FCA Handbook: <http://fshandbook.info/FS/html/FCA/MAR/8>.

building societies active in sterling money markets. These data should play an important role in providing a firmer foundation for an overnight unsecured benchmark in future.⁽¹⁾

8 The ownership of several regulated benchmarks has passed to new, dedicated administrators in recent years. These administrators, whose business models seek to monetise the value of benchmark data, have incentives to invest in the systems, controls and governance required for regulated benchmarks. However, the Review's Market Practitioner Panel noted in its consultation response that there was a risk that benchmark administrators may also refuse to grant access to a benchmark or charge unreasonable or discriminatory fees. In response to similar concerns raised during its consultation on the implementation of the Review's 2014 benchmark recommendations, the FCA launched a consultation in June on a proposal to introduce a requirement for regulated benchmark administrators to provide their regulated benchmarks at fair, reasonable and non-discriminatory ('FRAND') prices.⁽²⁾

9 Finally, as foreshadowed in its 2014/15 Business Plan, the FCA is undertaking a forward-looking thematic review into how firms can reduce the risk of traders manipulating benchmarks. The review will assess whether firms have learnt lessons from Libor and other recent misconduct involving benchmarks, and assess the progress made within firms to establish adequate controls on traders' behaviour and activity, in particular around the identification and management of conflicts of interest. The FCA expects to report its findings in Summer 2015.

Initiatives by international authorities

10 Following on from the reforms to Libor, an International Organization of Securities Commissions (IOSCO) task force — initially co-chaired by the FCA and the Commodity Futures Trading Commission — developed and published in July 2013 an internationally agreed set of Principles for Financial Benchmarks (the 'Principles') that apply to benchmark administrators and submitters.⁽³⁾ The Principles cover four main areas:

- **Governance:** covering the integrity of the benchmark determination process and conflicts of interest;
- **Quality of the benchmark:** covering benchmark design, the importance of having robust input data and the transparency of benchmark determinations;
- **Quality of the methodology:** covering the calculation methodology of benchmarks, how such methodologies are updated, and the role of submitters; and
- **Accountability:** covering complaint handling, auditing, and co-operation with regulatory authorities.

11 IOSCO asked benchmark administrators to disclose the extent of their compliance with the Principles publicly by July 2014 and annually thereafter. In February 2015, it published a review of implementation, based on the responses to a questionnaire sent to an anonymised sample of administrators of 36 benchmarks across a range of regions and asset classes.⁽⁴⁾ It also considered any information which the administrators had published, such as statements of compliance and methodologies. That review indicated that widespread efforts had been made to implement the Principles by the majority of the administrators surveyed. However, the Task Force also concluded that further steps might need to be taken by IOSCO in the future although it was too early to determine what those steps should be (see Section 3.3).

12 In a previous workstream, mandated by the G20, IOSCO also published a set of principles for Oil Price Reporting Agencies in October 2012 to enhance the reliability of oil price assessments referenced in derivatives contracts.⁽⁵⁾ In a subsequent progress review,⁽⁶⁾ IOSCO concluded that the four principal price reporting agencies had made good progress to date. A further update will be made in the second half of 2015.⁽⁷⁾

13 Complementing IOSCO's work, the international community also initiated reforms to improve the integrity of some of the most significant global financial benchmarks in the fixed income and foreign exchange markets.

14 First, in July 2014, an Official Sector Steering Group convened by the Financial Stability Board (FSB) and chaired by the FCA and the Federal Reserve Board published a report that included two key recommendations to reform major interest rate benchmarks.⁽⁸⁾ The first recommendation was that existing benchmarks based on unsecured bank funding costs (including Libor, Euribor and Tibor) should be strengthened by underpinning them to the greatest extent possible with transactions data. In the United Kingdom, the administrator of Libor, ICE Benchmark Administration, plans to launch a formal consultation in Summer 2015 on detailed proposals to implement this (as outlined in **Table B**). The administrators of Euribor (the European Money Markets Institute) and Tibor (the Japanese Bankers Association) are taking similar steps to strengthen those benchmarks. Australia, Canada, Hong Kong, Mexico, Singapore and South Africa are also reforming their equivalent rates.

(1) See Salmon (2015), 'Remarks given at the first meeting of the Working Group on Sterling Risk-Free Reference Rates'; www.bankofengland.co.uk/publications/Documents/speeches/2015/speech811.pdf.

(2) www.fca.org.uk/your-fca/documents/consultation-papers/cp15-18.

(3) www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf.

(4) www.iosco.org/news/pdf/IOSCONEWS368.pdf.

(5) www.iosco.org/library/pubdocs/pdf/IOSCOPD391.pdf.

(6) www.iosco.org/library/pubdocs/pdf/IOSCOPD448.pdf.

(7) In collaboration with the International Energy Association, International Energy Forum and the Organization of Petroleum Exporting Countries.

(8) www.financialstabilityboard.org/wp-content/uploads/r_140722.pdf.

Table B Recent improvements in the design of UK-based FICC benchmarks

Benchmark	Current administrator	Methodology changes (implemented or planned)	Benefits from the changes
Libor	ICE Benchmark Administration	<ul style="list-style-type: none"> Administrator launched a consultation in October 2014, and will publish a further consultation in Summer 2015, on proposals to: <ul style="list-style-type: none"> expand the range of transactions eligible to be used as the basis of submissions to include a wider range of funding sources and counterparties; allow submitters to take account of all transactions that have occurred since their Libor submission on the previous day (not just those that occur around 11am each morning); and implement a 'waterfall' of calculation methodologies (transactions, interpolation/extrapolation, and then expert judgement). On 15 February 2015 the administrator widened the window used to calculate benchmark rates from 1 to 5 minutes, and incorporated more trade and order data feeds into the benchmark calculation. 	<ul style="list-style-type: none"> Should increase the extent to which the benchmark is underpinned by actual transactions, reducing the need for subjective or expert judgement, and thus reducing opportunities for manipulation. Waterfall approach will help to underpin the availability of the rate, including in times of market stress, by addressing the risk of low transaction volumes.
WM/Reuters 4pm London Closing Spot Rate	WM Company	<ul style="list-style-type: none"> On 15 February 2015 the administrator widened the window used to calculate benchmark rates from 1 to 5 minutes, and incorporated more trade and order data feeds into the benchmark calculation. 	<ul style="list-style-type: none"> Reduces opportunities for manipulation. Increases the range of FX trades captured during the fixing window, giving a more representative and resilient fix.
SONIA, RONIA	Wholesale Market Brokers' Association	<ul style="list-style-type: none"> The rates, volumes and trade times of individual brokered trades used to determine the benchmark were made publicly available from 30 April 2015. Plans to expand the range of eligible transactions that form SONIA to include bilateral as well as brokered trades, through direct data collection from UK banks and building societies active in sterling money markets. 	<ul style="list-style-type: none"> Increases the transparency of the rates that determine the benchmarks. A meaningful increase in transaction volumes will enhance robustness and reduce risk of manipulation.
ICE Swap Rate (previously ISDAFIX)	ICE Benchmark Administration	<ul style="list-style-type: none"> Transitioned on 1 April 2015 to a rate based on tradable quotes sourced from regulated electronic trading venues (previously a submission-based rate, using inputs from a panel of banks). 	<ul style="list-style-type: none"> Benchmark calculation no longer requires use of subjective or expert judgment.
LBMA Gold Price (previously the London Gold Fix)	ICE Benchmark Administration	<ul style="list-style-type: none"> Transitioned on 20 March 2015 to an electronic auction process (previously a conference call based auction methodology). Expanded the number of direct participants involved in contributing to the price from four to seven. 	<ul style="list-style-type: none"> New calculation process is more transparent (aggregated bids and offers are published on-screen in real-time) and independently administered. Reduces ease of manipulation or collusion.
LBMA Silver Price (previously the London Silver Fix)	Thomson Reuters	<ul style="list-style-type: none"> Transitioned on 15 August 2014 (previously a conference call based auction methodology) to an electronic auction process. Expanded the number of direct participants currently involved in contributing to the price from three to six. 	<ul style="list-style-type: none"> New calculation process is more transparent and independently administered. Reduces ease of manipulation or collusion.

15 The Group also recommended that alternative near risk-free reference rates, better suited to certain financial transactions (including many of those involving derivatives), should be developed to improve market choice. In response, the Federal Reserve has initiated a committee of market participants to identify a set of suitable near risk-free rates for dollar markets and formulate a suitable adoption and implementation plan.⁽¹⁾ The Bank of England has launched a similar initiative for sterling markets,⁽²⁾ as have the Bank of Japan and the Japanese Financial Services Agency for yen markets.⁽³⁾ Other international authorities are also developing implementation plans. Progress in implementing these recommendations is being monitored by the FSB; an interim report will be published in July 2015 and a further progress report is planned for July 2016.

16 Second, the FSB Foreign Exchange Benchmark Group (FXBG), co-chaired by the Reserve Bank of Australia and the Bank of England, published fifteen recommendations in September 2014 relating to: the calculation methodology of the WM/R benchmark; market infrastructure for the execution of fix trades; the behaviour of market participants around the time of the WM/R benchmark; and the production of central bank reference rates.⁽⁴⁾ Good progress has been made in implementing a number of the recommendations: enhancements have been made to the WM/R benchmark (see **Table B**); there are a number of initiatives in the marketplace to provide independent fix execution and netting; and foreign exchange committees around the world published a shared set of global principles covering trading in FX markets in March 2015 (see Section 4.2).

17 However, the FXBG has noted that there is still scope for further progress in some areas, particularly the pricing and execution of the fix business within institutions.⁽⁵⁾ The regional foreign exchange committees have therefore been asked by the FSB to report on progress in implementing these recommendations in their jurisdictions by 31 July 2015, and the FSB will then publish an assessment of progress ahead of the G20 Leaders' Summit in November 2015.

18 Third, to inform both of these FSB workstreams, IOSCO completed reviews of the progress made by Libor, Euribor, Tibor and the WM/R 4pm Closing Spot Rate against the IOSCO Principles.

19 Finally, work is ongoing in the European Union to develop legislation to regulate the provision of benchmarks in the European Union. The legislation is currently being considered by the European Parliament and the Council of the European Union, and once this legislation comes into force, it will replace the UK regulatory framework (but not the UK criminal framework). The proposed Regulation is expected to cover all benchmarks administered in Europe that are referenced in financial contracts and instruments, with additional requirements reserved for benchmarks that are

deemed 'critical'. It will also address the treatment of benchmarks produced outside the European Union (third-country benchmarks), allowing their use in the European Union only if equivalence conditions are met. In their deliberations, the Council of the European Union and the European Parliament have suggested supplementing the European Commission's original equivalence requirement with recognition and endorsement regimes through which individual third country benchmarks can continue to be used if full equivalence cannot be determined.⁽⁶⁾

20 The manipulation and attempted manipulation of benchmarks will also be covered as a civil offence under the EU's Market Abuse Regulation (which will apply from July 2016).⁽⁷⁾

21 In addition to weaknesses in benchmark design and governance, recent misconduct also highlighted uncertainties over acceptable trading practices around fixes. A number of bodies have been considering ways in which the robustness of these practices might be improved. For example, the US Treasury Market Practices Group formed a working group in 2014 to improve understanding of the use of a range of reference rates in the US Treasury, agency debt and agency MBS markets and consider potential best practices that could apply to market activity related to these benchmarks.⁽⁸⁾ Trading practice around benchmarks would also be an important topic for the new FICC Market Standards Board proposed by the Review (see Section 4.3.2).

3.3 Where are the remaining gaps?

22 The workstreams described in Section 3.2 represent a substantial package of reform by public authorities and firms globally, and should, once completed, bring about a material improvement in the fairness and effectiveness of benchmarks used in FICC markets. That message was strongly endorsed in responses to the Review's consultation. Nonetheless, there are two key areas where the Review recommends that additional steps be taken.

3.3.1 Maintaining the push towards compliance with the IOSCO Principles

23 The IOSCO Principles provide a strong framework within which to achieve acceptable benchmark standards

(1) www.newyorkfed.org/arrc/.

(2) www.bankofengland.co.uk/publications/Documents/speeches/2015/speech811.pdf.

(3) www.boj.or.jp/en/paym/market/sg/index.htm.

(4) www.financialstabilityboard.org/wp-content/uploads/r_140930.pdf.

(5) See the speech by Guy Debelle, (Assistant Governor (Financial Markets) of the Reserve Bank of Australia) on 12 February 2015; www.bis.org/review/r150213c.htm.

(6) The precise criteria for designation as a 'critical' benchmark and the details of the equivalence, recognition and endorsement regimes remain under negotiation.

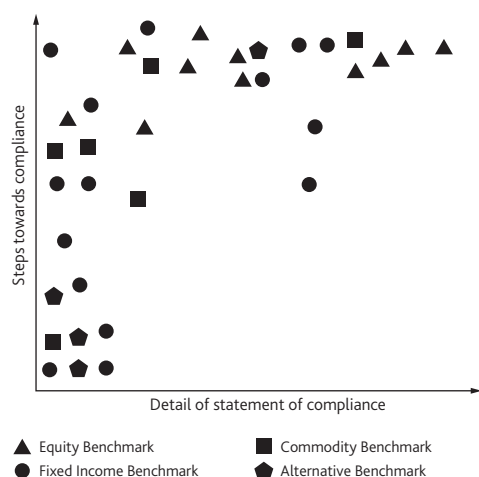
(7) Box 21 in Section 6 summarises the scope of the civil and criminal market abuse regimes in the United Kingdom.

(8) See meeting minutes from June 2014 onward, available at www.newyorkfed.org/TMPG/meetings.html.

internationally. The progress that many benchmark administrators have made toward implementing these standards, as highlighted in the recent assessment by IOSCO, is therefore welcome.

24 However, further effort is needed to ensure that the Principles are more consistently implemented, a point noted by many respondents to the Review's consultation. IOSCO's implementation report highlighted that progress varied significantly by asset class (**Chart 3**). The quality of the published disclosures was also variable, with some statements less than a page long. Less than half of the fixed income and commodities benchmark administrators surveyed reported full or broad compliance. By comparison, almost all equity benchmark administrators reported that they met these standards. In part, that difference may reflect the fact that around a third of the commodity and fixed income benchmarks reviewed had either recently transitioned to a new administrator, or were in the process of doing so. By contrast, there were no examples of transition with the equity benchmarks reviewed. Many affected administrators stated that they would be conducting assessments of compliance once the transition was complete.

Chart 3 Steps towards compliance and detail of compliance statement for the benchmarks reviewed by IOSCO



Source: IOSCO Review of the Implementation of IOSCO's Principles for Financial Benchmarks (February 2015).

25 The Review welcomes IOSCO's work to raise the standards of benchmark administrators to those set out in the IOSCO Principles, and recommends that :

- **4c: the IOSCO Task Force on Financial Benchmarks should consider exploring ways to ensure that more consistent self-assessments against the benchmark Principles are published by administrators.**

3.3.2 Clarifying the role and responsibilities of benchmark users

26 As noted in Section 3.1, there can be sometimes quite marked mismatches between the purposes for which specific

FICC benchmarks are used, and the purposes for which they were designed. For example, recent FSB reports highlighted:

- that the users of some financial instruments (for example, most cleared interest rate derivatives) would have been better served if the instrument had been priced using a risk-free or near risk-free reference rate, rather than one that incorporated a bank credit risk component (like Libor); and
- that asset managers, including those who passively tracked benchmarks, might not be getting best execution by transacting at the FX fix.

27 There are a number of reasons why users of FICC markets might have chosen benchmarks that were imperfectly matched with their risk exposures, or exposed them to higher costs. In some cases, the potential mismatch may not have been particularly evident, given the sometimes limited transparency over benchmark methodologies in the past. In other cases, better matched alternatives may simply not have been available, or transition costs may have been judged too high.

28 Proactive user engagement is nonetheless critical to the successful completion of ongoing reforms. In particular, appropriate due diligence from benchmark users can help to facilitate market discipline by encouraging competition and innovation among benchmark administrators. Examples include: where asset managers or financial advisors, acting as fiduciaries, exercise discretion in selecting a market index as a performance reference for a fund; where index providers use rate fixings in their calculation of market indices; or where asset managers elect to place orders with broker dealers at fixing levels.

29 The IOSCO Principles provide valuable guidance for benchmark administrators and submitters. However, they do not provide any guidance for users. The Review therefore recommends that:

- **4c: the IOSCO Task Force on Financial Benchmarks should review the use of benchmarks and consider supplementing its work on the Principles with a set of guidance for users of benchmarks.**

30 This could cover, for example, the need for users to:

- regularly review whether benchmarks being used are well suited to the user's requirements, and in particular that the characteristics of the benchmark appropriately match the risk profile of the underlying assets or liabilities;
- have robust contingency plans to deal with the potential interruption or discontinuation of a benchmark, including through fall-back provisions;

- conduct appropriate due diligence on transactions executed at benchmark fixes in order to satisfy best execution requirements;
- take an active interest in the design and ongoing development of benchmarks being used (eg through providing feedback on public consultations by benchmark administrators, and through participation on user and oversight committees, as appropriate); and
- consider whether the administrators of benchmarks being used have taken appropriate steps to comply with the IOSCO Principles.

31 The work could usefully build on examples of existing guidance highlighted by some of the respondents to the Review's consultation, including the guidance for users in the

ESMA/EBA Principles for Benchmark-Setting Processes in the EU⁽¹⁾ and ESMA's UCITS guidelines regarding benchmark use that apply to relevant asset managers in Europe.⁽²⁾

32 Finally, the Review's Market Practitioner Panel also suggested the creation of a global database of FICC benchmarks. This could centralise information relating to: administrators; level of IOSCO compliance; nature of the benchmarks; and metrics on their usage. Although some large firms already compile aspects of these data relevant to their own businesses, a widely accessible database could have material public benefits in assisting benchmark users in undertaking adequate due diligence on the benchmarks they use, supporting the aims of the recommendation to IOSCO above. The Review would welcome market-led initiatives to take this idea forward.

(1) www.esma.europa.eu/system/files/2013-659_esma-eba_principles_for_benchmark-setting_processes_in_the_eu.pdf.

(2) www.esma.europa.eu/content/Guidelines-ETFs-and-other-UCITS-issues.

4 Improving standards of market practice in FICC markets

1 As set out in Section 2, many wholesale FICC markets remain based around over-the-counter (OTC) market makers, trading as principal. This model has a number of advantages for end-users, allowing them to trade in large sizes or in less intrinsically liquid assets with a high degree of certainty. But it also poses potential misconduct vulnerabilities in terms of conflicts of interest, potential abuse of confidential information and market manipulation. None of these are new issues, and can potentially be well controlled through effective conduct standards, allowing the benefits of the market maker system to be retained. But if markets are to be fair and effective, those standards need to be sufficiently clear, well understood, up to date, and adhered to by market participants — and there is evidence that at least some of those tests were not met in some major OTC FICC markets in recent years. More recently, some market participants have noted heightened uncertainty about where appropriate standards lie, potentially impairing the effectiveness of those markets.

2 FICC markets are now moving to a more diverse range of trading structures, as discussed in Section 2. Some of those structures may be less vulnerable to some of the misconduct vulnerabilities posed by OTC markets. But they will pose other, new challenges for market participants and regulators. And the OTC model will continue to play an important role in many FICC markets. This section sets out recommendations for a range of international, market-led and regulatory actions to ensure that FICC market standards keep pace with changing market conditions and have stronger clarity and 'teeth', allowing FICC markets to operate more fairly and effectively.

4.1 Where was fairness and effectiveness deficient?

3 Many of the recent cases of FICC market misconduct occurred in OTC markets. The November 2014 enforcement actions highlighted multiple cases of attempted manipulation in the OTC spot FX markets. And OTC derivatives were at the heart of cases involving attempts to manipulate Libor, Euribor and the London Gold Fix. Historically, OTC markets have been subject to less intensive regulation for market abuse and other forms of market conduct, for two reasons. First, it is harder to define concepts such as market abuse when there are multiple bilateral prices, rather than a single price as there is on a centralised venue or exchange. For that reason, detailed market abuse legislation has historically focused predominantly on transactions that take place on regulated

exchanges. Second, the predominantly wholesale nature of most OTC markets means there are fewer retail customers to protect, and a stronger public interest in ensuring efficient price discovery and liquidity.

4 Despite these considerations, most key OTC market participants are nevertheless subject to considerable regulatory oversight. In particular, all firms operating in the United Kingdom and authorised by the FCA or the PRA are subject to the Principles for Businesses⁽¹⁾ — including in particular Principles 1 ('a firm must conduct its business with integrity'), 3 ('a firm must take reasonable care to organise and control its affairs responsibly and effectively, with adequate risk management systems') and 5 ('a firm must observe proper standards of market conduct'). These Principles are regulatory rules which apply in relation to all regulated activities, and to unregulated activities in other limited circumstances. When engaging in regulated activities, firms will also be subject to the overarching conflicts of interest requirements in the FCA Handbook in their dealings with clients and counterparties. For professional clients the conduct of business rules, including client order handling and best execution, may also apply. Conduct in a number of less heavily regulated OTC markets is covered by the principles-based guidance set out in voluntary market codes, such as the UK Non-Investment Products (NIPs) Code,⁽²⁾ which applies to sterling, FX and bullion wholesale deposits, and spot and forward FX and bullion.

5 All of the FICC market enforcement actions brought against firms in the United Kingdom involved clear-cut breaches of one or more of the Principles for Businesses. They also clearly contravened the provisions in the NIPs Code, in markets where that Code applied. At the same time, respondents to the Review noted that, given the high level nature of both the Principles and the provisions in the Code, the findings of the enforcement cases provided only limited forward-looking guidance to appropriate market standards in circumstances involving less extreme forms of behaviour, or in areas not covered explicitly by the enforcement findings. The high level nature of these standards may also partly explain (though in no way excuse) why firms in OTC markets appeared to do so little to translate both formal regulatory requirements and the content of market codes into operational internal guidelines for traders. Market codes such as the NIPs Code also lacked

(1) <https://fshandbook.info/FS/html/FCA/PRIN/2/1>.

(2) www.bankofengland.co.uk/markets/Documents/forex/fxjsc/nipscode1111.pdf.

effective mechanisms for ensuring signatories to the codes adhered to their terms in practice.

6 There are strong reasons for maintaining a principles-based approach to regulation, both in terms of allowing flexibility to respond to changes in market structure and practice, and to avoid the vulnerability of overly detailed rules to 'gaming' behaviour. Nonetheless, respondents to the Review felt that there was a pressing need to identify more effective mechanisms to deliver: (i) better ways to keep market practices up to date as markets evolved; (ii) greater clarity and understanding of market-wide standards for trading practices in FICC markets; and (iii) stronger adherence by firms and their staff to those standards. In some cases, this may require formal regulation. But in many cases, the Review has concluded that it needs to be guided or led by some combination of market participants and regulators.

4.2 What has already been done to put this right?

7 Conduct standards in UK and other European FICC markets will be materially affected by the introduction of the Market Abuse Regulation (MAR) in 2016, and the revised Markets in Financial Instruments Directive and new Markets in Financial Instruments Regulation (MiFID2) in 2017.

8 As set out in Box 3 in Section 2, MiFID2 is expected to have a significant impact on the fairness and effectiveness of FICC markets. Although many of the new measures target market structure, the new regulatory framework will also affect the application of conduct standards across FICC markets. The creation of the new 'Organised Trading Facility' (OTF) category, in particular, will help to address some of the difficulties of applying conduct standards to OTC markets, by creating a venue category that can accommodate some current forms of OTC trading. For example, markets for standardised derivatives and many liquid fixed income instruments that were traditionally traded OTC are expected to trade on OTFs in future, meaning that rules governing trading venues will apply in those markets.

9 MiFID2 will also strengthen the conduct of business framework for wholesale business, in particular regarding the treatment of the most sophisticated market participants, known as 'eligible counterparties'. A new high level principle will be introduced requiring investment firms to 'act honestly, fairly and professionally and communicate in a way which is fair, clear and not misleading, taking into account the nature of the eligible counterparty and its business',⁽¹⁾ and transactions with eligible counterparties will become subject to certain client reporting requirements. The best execution regime will also be enhanced by various measures including new transparency requirements designed to provide greater

information on the quality of execution on venues. These changes will serve both to strengthen conduct standards and broaden the range of trading situations in which those standards apply.

10 MAR will extend the coverage of market abuse provisions in FICC markets. The new regime will apply to all instruments traded on regulated trading venues, whereas current market abuse provisions only apply to the narrower category of instruments admitted to trading on regulated markets. In practice, this means that a greater range of FICC instruments will be covered. As set out in Box 21 in Section 6, the regime will also widen the scope of offences where behaviour in financial instruments affects spot commodity markets and create a new civil offence of benchmark manipulation. Several of the historic cases of misconduct in fixed income instruments that were, at the time, outside the scope of market abuse rules, would have been directly captured had the new regime already been in force. That includes cases related to Libor and repo rate manipulation,⁽²⁾ a 2005 case involving manipulation of government bonds,⁽³⁾ and a 2012 case involving inappropriate disclosure of sensitive information relating to an unlisted corporate bond.⁽⁴⁾ The EU Regulation on Energy Market Integrity and Transparency (REMIT) has also established market abuse standards for wholesale energy markets.

11 Central banks have also begun the process of drawing up more detailed common standards for FX, including spot transactions which lie outside the scope of MiFID2, MAR and other global securities regulation. The 'Global Preamble: Codes of Best Market Practice and Shared Global Principles' was released by global FX committees in March 2015,⁽⁵⁾ and makes an important start in helping to improve the fairness and effectiveness of foreign exchange markets. These common principles cover personal conduct, confidentiality and market conduct, and policies for execution practices, and apply as an extension to the different national codes that exist. Compared with most previous existing national FX codes, the new standards are substantially clearer on what constitutes acceptable and unacceptable behaviour in the markets, especially on issues concerning the appropriate handling of information, and trading, in relation to client orders. They also aim to improve adherence, by including provisions for firms to: embed relevant FX codes within internal systems and controls; train individuals in their understanding of the code; establish whistleblowing procedures; and link remuneration to conduct.

(1) Article 30(1) of the Directive <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0065&from=EN>.

(2) For example, www.fca.org.uk/news/lloyds-banking-group-fined-105m-libor-benchmark-failings and <https://www.fca.org.uk/your-fca/documents/final-notices/2013/fca-final-notice-2013-rabobank>.

(3) www.fsa.gov.uk/pubs/final/cgml_28jun05.pdf.

(4) www.fsa.gov.uk/static/pubs/final/nicholas-kyrios.pdf.

(5) www.bankofengland.co.uk/markets/Documents/forex/fxjsc/globalpreamble.pdf.

12 Following publication of the Global Preamble, the Review worked with representatives of the global FX Committees to extend the work into a single, global FX code of conduct standards and principles, with stronger tools for promoting adherence. On 11 May 2015, the Bank for International Settlements' (BIS) Economic Consultative Committee announced its intention to take this work forward, as part of the wider official international effort on market conduct co-ordinated by the Financial Stability Board.⁽¹⁾ Further details are provided in Section 4.3.3.

4.3 Where are the remaining gaps?

13 The developments outlined above are likely to lead to significant improvements to market practice. But the Review has concluded that there is substantially further to go to achieve the goals identified by respondents to the consultation. In particular, further work is needed to:

- (i) **Provide better means of keeping market practices up to date as markets evolve** — more permanent market-based mechanisms for scanning the horizon for potential new risks and vulnerabilities, and responding to them, are required;
- (ii) **Provide greater clarity and understanding of market-wide standards for trading practices in UK FICC markets** — in some areas, the primary need is for wider and clearer communication of existing standards in terms that traders cannot claim to have misread or misunderstood; in others (such as spot FX), there is scope for greater specification of standards; some markets would benefit from greater provision of 'real life' case studies in areas where uncertainties are genuinely large and potentially detrimental to the effective operation of those markets; and there should be more effective training and qualifications; and
- (iii) **Develop stronger adherence by firms and their staff to relevant standards** — firms need to develop more effective processes to fulfil their internal responsibilities and ensure adequate incentives and controls; and there need to be more effective formal and informal mechanisms to ensure standards have 'teeth'.

14 These considerations apply to some degree across all markets, but in different ways. In regulated markets, ownership of standard setting and enforcement of those standards lies unambiguously with the relevant regulator, although market participants can still help to describe good and bad market practices for both trading and conduct control, and help scan the horizon for uncertainties and new risks. In less heavily regulated markets, market participants have a correspondingly larger role to play.

15 The remainder of this section outlines three sets of recommendations designed to meet these objectives. The first is a set of common high level standards for trading practices across FICC markets, written in language that can be readily understood, which the Review recommends would be most effective if developed and promulgated globally. The second is a proposal for a permanent FICC Market Standards Board to analyse and report on emerging conduct vulnerabilities, address areas of uncertainty in specific trading practices, promote adherence to standards and contribute to international convergence of standards. And the third supports the recently announced international initiative to develop ambitious global standards for FX markets, and proposes that these standards should be used to shape UK market abuse legislation to promote effective adherence in domestic markets. Recommendations to give market codes greater 'teeth' by tying compliance to the Senior Managers and Certification Regimes, and to enhance FICC market training and qualifications are discussed in Sections 5.1 and 5.2 respectively.

4.3.1 High level FICC market standards in language that can be readily understood

16 Market standards can be set by high level principles and/or more detailed rules. The advantage of high level principles is that they are concise, adjust to market developments and allow for innovation. However, their application to market practice does require judgement, by both regulators and firms, and this may create uncertainty among market participants about how the principles apply to particular issues. Detailed rules by contrast are more precise and so there is less scope for uncertainty about their application. However, their precision means that they may hinder innovation, may need to be regularly updated to address new developments in markets, and can incentivise 'gaming' behaviour. As a result there can sometimes be a tendency for rule books to become increasingly long, legalistic and complex over time. Neither extreme is ideal in a trading context: high level principles, on their own, may provide insufficient practical detail; detailed rulebooks risk not being comprehensible to individual traders.

17 In practice, regulators seek to achieve a workable balance between these two extremes. But approaches can nevertheless vary significantly across markets and across jurisdictions. Firms may also differ widely in how they translate principles and rulebooks into operational standards for their traders. In some cases, highlighted in recent enforcement findings, firms did little or nothing. More recently, firms have been more actively drawing up internal guidance — but their approaches have tended to lack co-ordination. The risk is that, taken together, the guidance available internally to traders will become ever more detailed

(1) www.bis.org/press/p150511.htm.

and inconsistent, reducing rather than enhancing standards while also impeding market effectiveness.

18 Detailed rules will continue to have their place. But one of the Review's most striking findings has been that, although the specific aspects of individual misconduct may have varied substantially across traders, firms and markets, the underlying behaviours were remarkably similar in many cases and relatively straightforward to describe. The Review has therefore concluded that there is a strong case for drawing up a common set of standards, designed to articulate the core objectives of principles and rules in practical terms that are relevant to the key behaviours that individual traders in wholesale markets should uphold in their interactions with clients and counterparties. These high level standards should be drafted in a concise self-standing form, in language that can be readily understood.

19 Box 8 lists the trading behaviours, positive and negative, that came up most frequently in the Review's market outreach and its analysis of misconduct cases. They can be grouped around three main themes. First, the bilateral relationships between firms and their counterparties or clients. Second, the duty of all market participants to uphold market integrity, covering the practices of market abuse that have been at the centre of many of the recent FICC misconduct cases. And, third, the need to reinforce competition law as it applies to wholesale FICC markets.

20 Experience from other markets, jurisdictions and wholesale misconduct cases may suggest further examples. It would also be important to ensure that standards are consistent with existing regulatory rules and principles, while maintaining a high premium on the brevity, clarity and simplicity needed to ensure they have wide purchase. Given the international character of many FICC markets, the Review has concluded that such a set of standards would be most effective if developed by an international body. The Review therefore encourages the International Organization of Securities Commissions (IOSCO) to develop and promulgate an international set of expectations for trading practices in wholesale FICC markets. The Review recommends that:

- **1a: There should be a set of common standards for trading practices in FICC markets, written in language that can be readily understood, and which will be consistently upheld.**

4.3.2 A new FICC Market Standards Board

21 Responses to the consultation and the Review's own analysis suggest that there has often been a lack of market-wide agreement on the standards of market practice implied by regulations and market codes. While there can be no excuse for the failures of individuals or firms to adhere to these requirements, the absence of a common understanding

Box 8

Trading behaviours in wholesale FICC markets

Behaviours that should be upheld by participants in wholesale FICC markets might include:

- Acting honestly, fairly and professionally when dealing with clients or counterparties.
- Communicating with clients (including counterparties) fairly, clearly and in a way which is not misleading.
- Taking all appropriate steps to identify and to prevent, or manage fairly and effectively, any relevant conflict of interest.

Behaviours that are unacceptable might include:

- Colluding to manipulate markets or seeking to mislead market participants.
- Engaging in trading behaviour that gives a misleading impression of the available supply of, or demand for, a financial instrument or secures the price at an artificial level.
- Engaging in behaviour that has the effect of manipulating a benchmark.
- Spreading rumours that are known to be false.
- Improperly disclosing or trading on the basis of market sensitive information.
- Misusing client information or committing any act that would constitute a breach of client confidentiality.
- Front running a client order.

on certain issues of trading practice contributed to a drift in standards of behaviour over time. This proved to be especially serious in markets without direct regulation, where codes provided very little guidance on acceptable market practice, were updated infrequently, and had no mechanisms to give them 'teeth'. However, cases of misconduct in some regulated FICC assets also suggested there was sometimes a lack of understanding of the standards that should apply. At a minimum, this points to a communication challenge in ensuring that market participants are aware of the regulations that apply to them.

22 Difficulties particularly tend to arise where complex, technical trading practices exist which involve conflicts of

Box 9

Examples of guidelines and case studies drawn from existing codes

The Review envisages that two main types of material could be used to raise standards in relation to specific trading practices: guidelines and case studies. The following are examples of guidelines and case studies that are currently used within various international market codes:

Guideline 1: Managing large positions with care (taken from the US Treasury Market Practices Group's 'Best Practices for Treasury, Agency Debt, and Agency Mortgage-Backed Securities Markets')⁽¹⁾

Market participants with large short positions should make deliveries in good faith. Market participants with a particularly large short position in an issue should be sure that they are making a good-faith attempt to borrow needed securities in order to make timely delivery of securities. Market participants should avoid trading strategies designed to profit from settlement fails. Examples of this type of behavior include the practice of selling short a security in the repo market around or below zero percent, and selling a dollar roll around or below zero per cent, with little expectation of being able to obtain the security to make timely delivery. In cases where transactions are subject to a fails charge, different thresholds for profiting from such behavior may be relevant.

Guideline 2: Handling material non-public, price sensitive information (taken from the Singapore Foreign Exchange Market Committee's 'The Singapore Guide to Conduct & Market Practices for Treasury Activities')⁽²⁾

Dealers and Brokers must exercise extreme care when in possession of material non-public, price sensitive information in relation to the financial instruments covered by this Guide. Subject to applicable laws and internal policies and procedures, when in possession of such information Dealers and Brokers must

interest for the participants involved. The Review raised a number of such issues in its October 2014 consultation,⁽¹⁾ including: the lack of clarity over trading relationships between dealers and end-users; the distinction between legitimate trading activity and illegal 'front-running'; the distinction between legitimate trading activity and market manipulation; standards for external communication of market activity; standards for internal communication of market activity; and the lack of granular market-wide standards for client suitability. There was widespread support from consultation respondents for further clarification of these issues. The nature of the clarification needed, however,

ensure that they do not deal for their own account or the account of the institution which they represent, or induce another party to so deal, on the basis of such information. For the avoidance of doubt if a Dealer or Broker is working a pending order from a client in relation to a particular instrument covered by this Guide and which could have a significant impact on the price of that instrument, the knowledge of that order would constitute material non-public, price sensitive information for the purposes of this Guide.

Case Study: Execution of orders, etc. (taken from the Tokyo Foreign Exchange Market Committee's 'Code of Conduct: Guidelines of Foreign Exchange Transaction (2015 Edition)')⁽³⁾

In the following, 'OK' denotes an acceptable market practice and 'NG' denotes an unacceptable market practice.

- *When receiving an order to sell 100 million USD from a counterparty, a dealer, in advance of executing the counterparty's order, sold USD for his/her own position at the same or more advantageous price.*

NG → Selling USD by the dealer impaired the counterparty's interest.

- *When receiving an order to sell USD, a dealer quotes an execution rate different from the market coverage level of the dealer.*

OK → It is acceptable to reflect the cost and market risk taken by banks/other financial institutions in an execution rate.

- *A dealer quoted rate significantly diverged from the prevailing market level for the purpose of executing a stop loss order.*

NG → Stop loss orders must not be executed malignantly against clients' interest.

(1) www.newyorkfed.org/tmpg/bestpractices_040414.pdf.

(2) www.sfemc.org/pdf/Singapore_Blue_Book.pdf.

(3) www.fxcomtky.com/coc/code_of_conduct_e2015.pdf.

differed from issue to issue. Some respondents pointed to cases where they felt there was a need for **guidelines** to determine where the line lay between acceptable and unacceptable market practice. Others pointed to the need to communicate better the standards that already existed. In such situations, they felt that **case studies** which sought to explain (but not define) acceptable market practices through practical examples could perform a useful role in improving the practical application of standards. Box 9 presents

(1) Box 7 in www.bankofengland.co.uk/markets/Documents/femr/consultation271014.pdf.

examples of guidelines and case studies drawn from various international codes.

23 It would be neither practical nor desirable for regulatory authorities to provide guidance on how principles should apply in all market situations. To reduce the likelihood of a recurrence of the cases of misconduct that have occurred in recent years, it is essential that the market also takes greater responsibility for raising standards of behaviour itself. FICC markets require stronger collective processes for identifying and agreeing standards of market practice, consistent with regulatory requirements, that respond more rapidly to new market structures and trading patterns, apply to traditional and new players, and are more effectively monitored and adhered to within (and between) firms. The Review therefore supports the proposal in the Market Practitioner Panel's consultation response for the establishment of a new market-led body to address issues of market practice.

24 Several market standard-setting bodies have been established in other markets and other jurisdictions in recent years, and have been successful in raising standards, including the US Treasury Market Practices Group⁽¹⁾ and the Hedge Fund Standards Board.⁽²⁾ Drawing on some of the features of these groups, a new 'FICC Market Standards Board' could be created to address a number of gaps in the current approach to standards of market practice in wholesale FICC markets.

25 First, regulatory approaches to standard setting often struggle to keep pace with market developments. A new body could help to bridge this gap by analysing emerging vulnerabilities in trading practices that are identified by market practitioners in the course of their work. Such analysis would promote awareness of issues, and, where necessary, help to inform work on new standards to address these issues.

26 Second, the style and structure of current regulatory and other standards sometimes makes it difficult for market practitioners to understand how the standards apply to specific market practices. Provided it maintained a regular dialogue with regulatory authorities, a new body could perform a useful role in producing written materials which explain good trading practices, through guidelines and case studies, in areas where market participants perceive there is less understanding of how standards should apply in practice. Box 10 gives examples of specific trading practices that a new body might address.

27 Third, the way in which firms ensure standards are followed currently varies across the market. It is important that firms retain full responsibility for their own governance. However, a new body could help to reinforce adherence to standards, by acting as a forum for sharing good practice on issues relating to governance, controls and incentives. Section 5.3 sets out a number of themes in this area identified

to the Review. As set out in Section 5.2, a new body could also give guidance on expected minimum standards of training and qualifications for wholesale FICC market participants. Finally, it could also help to co-ordinate market input into several ongoing and prospective international standard-setting initiatives.

28 The Review has therefore concluded that a FICC Market Standards Board (FMSB), with a membership drawn from a wide range of market participants, could serve a useful purpose in improving standards of market practice. However, to be effective, such a body would need to adhere to a number of principles:

- (i) It should maintain a regular dialogue with relevant regulatory authorities and put in place appropriate governance structures to ensure that both its work programme and the materials it produces take into account relevant regulatory standards and initiatives.
- (ii) Its membership should comprise a balanced representation of all types of market participant, including buy-side firms, sell-side firms, infrastructure providers, corporate end-users and independents.
- (iii) Its members should be senior business leaders with extensive experience of FICC markets, who should represent their own views rather than those of their firms.
- (iv) Its members should have sufficient authority to engage their firms' senior management to marshal resources to support the FMSB's activities, and to muster their institutions' endorsement of proposed recommendations.
- (v) It should be supported by a high quality, technically able secretariat.

29 Although it is important that the FMSB should be run by market participants, the UK authorities stand ready to assist in the creation of the body, including through involvement in the appointment of its first Chair. The Review expects that the FMSB would be initially established in the United Kingdom. However the body should aim to have international reach through its private sector membership, and should over time seek opportunities to work with similar organisations and authorities in other jurisdictions. The relationship of the FMSB with the existing UK Banking Standards Board (BSB) will also be important. On the one hand, it is clear that the membership of the FMSB would have to be significantly broader than the BSB in order to represent all FICC market participants fairly. However, there may be scope for co-working on some issues of common interest to both

(1) www.newyorkfed.org/tmpg.

(2) www.hfsb.org.

Box 10

Examples of trading practices where further guidelines and case studies could help improve and clarify standards

The Review has identified a number of key trading practices where problems can occur if they are not managed appropriately. The issue at the heart of many of these practices is the conflict of interest that arises where a principal has an agency, fiduciary or other duty owed to its client. There is a general duty to manage conflicts, introduced by regulation to promote market integrity and market confidence. Whenever a principal makes an undertaking to a client or counterparty (for example by taking an order), it should be clear that the principal has a responsibility to act in the interests of that client or counterparty to the extent of the undertaking given. However, in situations where the principal has to take on risk to execute that undertaking, they must also manage those risks. Although a trader must always exercise their judgement in managing such a conflict of interest, there are a number of recurring practices where standards could be raised.

In relation to the following issues, the Review recommends that case studies are developed in relation to regulated activities and that specific guidelines and case studies are developed elsewhere to illustrate acceptable market practice and to show where a fair balance lies.

Trade-At-Close orders in the gilts market

The Review heard from several stakeholders that there might be potential conflicts of interest and a lack of clarity around standards that might apply in the execution of orders which target published reference prices in particular gilts. In many respects, these issues echo the difficulties that have arisen in relation to benchmark targeting in other markets, especially where a principal dealer undertakes to guarantee trade execution at the fixing price, and therefore has to fairly balance the assumption of that principal risk versus hedging it without moving the market price to the detriment of the client. The Review recommends that materials are developed to guide acceptable market practices in relation to the execution of such orders in the gilts market.

Stop loss orders

Stop loss orders are designed to protect market participants from adverse price movements, by executing a market order to close a position when a pre-determined market price is reached. However, a number of challenges exist to ensuring such orders are managed fairly and effectively in principal markets where no central limit order book exists, including how to measure when an order is triggered and how the order

should then be executed. As a 'proof of concept', the Review's Market Practitioner Panel has recently analysed some of the conduct risks associated with stop loss orders in the FX market (see Box 11).

Hedging barrier and digital options

The Review's consultation document raised the issue of 'defending' or 'triggering' barrier or digital options. Deliberate attempts to manipulate an underlying instrument in order to influence the payout of an option should be considered unacceptable practice. However, there are cases where reasonable hedging practices may, if not carefully managed, come close to having the effect of a manipulative transaction. Specifically, where an option trader seeks to unwind a hedge position near a barrier/digital event, there is a risk that they could cause a market move that has adverse consequences for their client (either triggering a negative payout, or preventing a positive payout). Further materials on this issue could serve both to improve understanding of the precise situations in which a conflict can exist, and also show how to manage that conflict in an appropriate fashion (for example by showing how traders might place orders to unwind a hedge, while minimising the likely market impact of their trading actions).

'Market colour'

'Market colour' refers to the practice of dealers providing commentary and opinion on current market developments to clients. If appropriately provided, market colour can help the market to operate effectively by providing information that allows clients to find liquidity and dealers to price risks accurately. However, beyond a certain level of disaggregation, such information can unfairly affect the market participants to whom the information relates. Further materials are needed to show examples of where 'market colour' is acceptable and where it crosses the line into unacceptable disclosure of market sensitive information.

'Mark-up'

In the foreign exchange markets, it is conventional for firms to charge for execution services through the addition of a 'mark-up' to the price given to clients. While it may be acceptable for firms to charge for services in this way, the use of mark-up can exacerbate conflicts of interest in situations where a firm executes client orders against its own capital, or where there is a lack of transparency over orders filled in the market on a pure agency basis. The Financial Stability Board's FX Benchmark Group has called for more transparent charging around benchmark fix transactions.⁽¹⁾ Further materials are needed to ensure that charging for FX transactions, more generally, is consistent with clients' expectations of the services being provided to them.

(1) www.bis.org/review/r150213c.htm.

bodies. The BSB could also potentially provide some administrative services to the FMSB, though it is not for the authorities to determine the scope and commercial arrangements for these services. To take this work forward:

- **2a: The Review calls on the senior leadership of FICC market participants to create a new FICC Market Standards Board (FMSB) with participation from a broad cross-section of global and domestic firms and end-users at the most senior levels, and involving regular dialogue with the authorities, to:**
 - scan the horizon and report on emerging risks where market standards could be strengthened, ensuring a timely response to new trends and threats;
 - address areas of uncertainty in specific trading practices, by producing guidelines, practical case studies and other materials depending on the regulatory status of each market;
 - promote adherence to standards, including by sharing and promoting good practices on control and governance structures around FICC business lines; and
 - contribute to international convergence of standards.

30 In order to illustrate the role that a new body could perform in raising market standards, the Market Practitioner Panel analysed the specific conduct vulnerabilities that exist in relation to the execution of stop loss orders. A summary of this analysis is shown in Box 11.

4.3.3 Spot FX: a new global code, and new market abuse legislation in the United Kingdom

31 The creation of the new Global Preamble represents an important first step towards more harmonised standards across the international foreign exchange markets. But in view of the scale of misconduct that has come to light, substantial further work is needed to raise standards in FX markets: greater convergence is needed on the standards that apply in different jurisdictions; further requirements on individuals, firms and venues are needed to address key conduct vulnerabilities; and conduct standards need stronger 'teeth'.

32 Historically, national FX market committees, including in the United Kingdom, have drawn up separate codes covering their home jurisdictions. While there may be reasonable grounds for favouring national approaches to specific local operational issues, recent enforcement actions have shown that conduct issues have important similarities across jurisdictions. The Global Preamble acknowledged and acted on this by creating an initial set of shared principles that will be applied by all major currency centres. It should however be possible to extend this process further, to develop a single,

global FX code containing a complete set of conduct standards and principles.

33 In developing the Global Preamble into a single global code of conduct standards, a number of issues need to be addressed. First, the code will need to establish common standards and principles to promote market integrity in FX markets. Recent cases of misconduct have exhibited many behaviours that would constitute market manipulation in regulated markets, including attempts to secure an artificial price and attempts to manipulate benchmarks. However, most existing FX codes do not set explicit standards concerning such behaviours. The global code should therefore develop standards and principles concerning manipulative behaviour that are relevant to FX markets, and also provide worked examples and guidelines to illustrate practices that are consistent or inconsistent with those standards. Second, the code should further develop standards on the handling of price sensitive information, including guidelines on the appropriate communication of 'market colour' and guidelines on the types of market sensitive information on the basis of which it would be inappropriate to trade. Third, the code should set standards for the treatment of clients and counterparties. This section of the code should address issues such as the prevention and management of conflicts of interest, especially concerning mixed principal and agent roles. Finally, the new code should establish standards for trading venues in FX markets, covering issues such as the management of risks introduced by high frequency trading and standards of transparency.

34 Section 2.4.1 proposed a possible framework for evaluating ways to enhance transparency around trading practices in the spot FX markets. Those transparency measures and, where necessary, additional controls could potentially form the basis of a number of standards within the global FX code, particularly those concerning the treatment of counterparties and standards for trading venues. Two issues, in particular, should be addressed by the code:

- First, as discussed in Section 2.4.1, the absence of **'time stamps'** on some client orders can make it difficult for investors to assess the efficiency of their FX executions, creating potential opportunities for abusive practice. The Review has concluded that time stamps should always be provided. Given the international character of FX markets, discussions around the global code would offer the most effective mechanism for establishing consistent standards on time stamping, including any practical challenges that may arise. But in light of those discussions, regulatory steps are also sensible, as part of a broader statutory market abuse regime discussed later in this section.
- Second, the code should address the practice of **'last look'**, which gives market makers a final opportunity to reject an

Box 11

Market Practitioner Panel analysis of conduct risks associated with stop loss orders

In order to provide a 'proof of concept' of the style of analysis that a future FICC Market Standards Board might perform, the Review's Market Practitioner Panel (MPP) recently undertook work on the conduct risks associated with stop loss orders in the FX market. While further work is needed to finalise this analysis, this box summarises the MPP's initial findings and some of the lessons learnt from the exercise.

What is a stop loss order?

A stop loss order is an order triggered when a reference price reaches a certain pre-determined level. They may be intended for execution during the day, overnight, or until executed or cancelled. The key types of stop loss order are:

Bid/offer stop	The order is triggered when the market bid (offer) price reaches the level indicated by the bid (offer) stop order.
All taken/given next stop	The order is triggered when the market is no longer offered (in the case of a buy stop) or bid (in the case of a sell stop) at the level indicated by the order.
One touch stop	The order is executed if the trigger level trades in the market.
At price stop	The order is typically a 'one touch stop' where the dealer will guarantee, under normal market conditions, that the order fill will not exceed the level of the order.

Although stop loss orders are used in many financial markets, a number of specific challenges can be identified in relation to managing them in FX markets. The OTC structure of the FX market means that key aspects of stop loss orders are sometimes more difficult to observe and to act upon than similar orders in markets where a Central Limit Order Book exists.

Vulnerabilities of stop loss orders

The MPP identified a number of potential vulnerabilities around the use of stop loss orders. For example, there is a risk that the key terms of an order are insufficiently documented, increasing the likelihood of disputes over whether an order was appropriately managed. To mitigate this, the precise trigger reference price for a currency pair needs to be clearly specified, indicating whether the price to be used is sourced from an external venue, the dealer's own calculation or a combination of the two. In addition, the order execution instructions (post trigger) also need to be clear, setting out, for example, whether the order will be executed to target best price using the dealer's discretion or an algorithm, or whether the dealer guarantees the price at which the order is filled in advance.

The practice of 'pre-hedging' a stop loss order can also create risks that the customer is treated unfairly. For example, the dealer may believe it is appropriate to place an order in the market before the stop loss is triggered to manage his/her position. However, this practice introduces the risk that the dealer's hedging actions precipitate a market movement that triggers the stop loss order, when it may otherwise not have been hit.

Another challenge identified is that stop loss orders potentially provide principal traders with an incentive to move markets to trigger a stop loss event abusively with information relating to stop loss orders being inappropriately shared between traders.

A further risk the MPP identified relates to the pricing of stop loss orders; where the charges for stop loss orders are not transparent, there is a risk that dealers may engage in practices that are, or are perceived to be, unfair to the customer. Greater transparency and clarity can therefore help to increase trust and confidence.

Next steps and lessons learnt

Based on this initial analysis of the risks, the MPP's work suggests that there is scope for the creation of a range of enhanced standards related to stop loss orders to create consistency and to reduce these risks. These new standards would vary in granularity. At the more general level, guidelines could be created to establish, for example, that market participants should not deliberately enter into transactions with the intention of triggering a stop loss order. Below that, case studies could be used to illustrate good practice in the management and execution of specific types of stop loss order.

While further work is needed to finalise the analysis, the process so far has demonstrated the value that market practitioner input could have in identifying and resolving areas of uncertainty in the future. It has also highlighted a number of practical challenges. First, the process demonstrated the need to achieve the right number, level of seniority, and breadth of market participants within the working group. It proved important to have a group that was not too large, which involved a mix of both senior figures and specialists. Second, the group had to overcome legal and competitive challenges to facilitate the sharing of firms' internal guidance on trading practices. Finally, it was important for the group to engage with regulatory authorities at points during the process, given ongoing supervisory work on related issues. The lessons learnt from this exercise should be used to inform the development of working groups within a future FMSB.

order after a client commits to trade at a quoted price. As set out in Section 2.4.1, this practice developed out of the need to protect market makers against unanticipated market movements and predatory trading practices. However, in its current form, it can potentially be abused by market makers, either by asymmetrically accepting or rejecting orders based on market moves after the order is placed, or by using the order to inform other trading activity prior to acceptance. In addition to the transparency measures discussed in Section 2.4.1, the global code should also set out clearer standards on the use of last look, including whether it should remain an acceptable market practice.

35 Establishing a common set of standards should form one part of the process. However, it will be equally important to ensure that the new standards have 'teeth'. As a global code is developed, there is therefore also a need for parallel processes to ensure firms have properly implemented standards. And a range of further tools should be developed to deal with breaches of the standards. A significant problem with adherence to standards, historically, has been the lack of effective market discipline (see Sections 2.2 and 2.4.2). New tools could be developed to enhance market discipline, including through the roles central banks play within the FX markets. Such tools might include linking code adherence to trading relationships between FX market participants, or the loss of membership of an FX committee in the event of a serious breach of the code. The Review therefore recommends:

- **4a: There should be a single global FX code, providing: a comprehensive set of principles to govern trading practices around market integrity, information handling, treatment of counterparties and standards for venues; comprehensive example and guidelines for behaviours; and stronger tools for promoting adherence to the code by market participants.**
- **4b: As part of that work, or otherwise, particular attention should be given to improving the controls and transparency around FX market practices where there may be scope for misconduct, including 'last look' and time stamping.**

36 The Review strongly welcomes the recent announcement by central banks to work towards the goal of a single global code along lines similar to those set out here. That work programme is expected to run until May 2017, and the Bank of England will play a full role in all aspects of the project. Once this work is complete, the Bank will review the NIPs Code to see which elements are still needed. As far as possible, the new global code should replace the sections of NIPs which set conduct standards for FX markets. However, there may still be a need to retain sections of the NIPs Code that deal with

other issues and other markets. Should it be necessary to retain a local code for aspects of the FX market or other UK non-investment products, the Review recommends that the code is updated to follow a similar structure to that of the new global FX code, cascading from core principles through to guidelines and case studies to illustrate good and bad market practices.

37 Given the global scope of spot FX markets, it is important that the principles governing good conduct should be agreed globally. In view of the seriousness of recent misconduct, however, the Review recommends that those globally agreed principles should be used to shape a new statutory market abuse regime for spot FX in the United Kingdom, to maximise the protections against market abuse. As discussed earlier in this section, the new European Market Abuse Regulation (MAR), which will apply from July 2016, will cover many of the types of abuse that have occurred across most of the FICC markets. But spot FX, as an asset class, is not directly covered by MAR. So, although some of the behaviours witnessed in the recent FX cases might be caught where behaviour in the spot FX market affects a financial instrument (such as an FX derivative) or a benchmark, others which relate exclusively to the spot FX market — including front running client orders and other forms of market manipulation — will not.

38 MAR will also not cover other financial instruments which trade exclusively OTC, and where the OTC instrument has no impact on the price of a financial instrument that is traded on a MiFID-regulated trading venue. The number of such markets will fall considerably as a result of the increased number of regulated trading venues expected following the implementation of MiFID2. However, there may be cases where an organised market exists for a financial instrument, even though none of the transactions occur on a regulated trading venue. The Review therefore recommends that a future regulatory framework for market abuse retains the flexibility to cover such markets, if a need is identified, and following appropriate consultation.

39 These objectives could be achieved by the creation of a new standalone legislative regime that could be applied to spot FX and, as required, any other OTC FICC instruments specified via secondary legislation. The regime should, at a minimum, cover a similar range of behaviours as those covered under MAR⁽¹⁾ and also include parallel criminal offences. But some adjustment may be needed to take account of differences between the instruments and markets

(1) MAR offences cover: insider dealing; unlawful disclosure of inside information; behaviour that gives a false or misleading impression of the available supply of, or demand for, a financial instrument or secures the price at an artificial level; behaviour that affects the price of a financial instrument by employing a fictitious device or any other form of deception or contrivance; dissemination of information through the media or other means which gives a false or misleading impression as to the supply of, or demand for, a financial instrument or secures the price at an artificial level; and benchmark manipulation.

covered by this regime and the existing market abuse regime, which focuses more on securities and their derivatives. In particular, the definition of 'inside information', which covers price sensitive information relating to a security or the issuer, will have to be appropriately adapted for use in the FX markets. The precise definition of the offences should be informed by relevant sections of the new global FX code, as soon as these standards are developed.

40 In view of the very large volumes of transactions involved, and the practical challenges that would pose to the building of a real-time reporting regime, the Review recommends that the regime should be supported by a requirement on firms to keep

records of orders and transactions, together with a requirement to report suspicious transactions and orders to the regulator. Subject to work on relevant standards within the global FX code, the regime should also include a requirement to report details of executed orders to clients at their request, including time stamps. The Review therefore recommends:

- **3b: A new statutory civil and criminal market abuse regime should be created for spot foreign exchange, drawing on, among other things, the work of the international project to draw up a global foreign exchange code.**

5 Raising standards of professionalism in FICC markets

1 The misconduct seen in recent years exposed serious shortcomings in professionalism in at least some parts of FICC markets, particularly at the level of trading desks. The Review's consultation identified widespread support for tackling those shortcomings, including through greater individual accountability, strengthened qualifications, stronger governance structures and better-aligned incentives.

2 This section is split into four separate subsections focusing on the ways in which each of these objectives can be delivered. Section 5.1 includes recommendations for: giving non-statutory market codes and guidelines 'teeth'; improving individual accountability by extending elements of the Senior Managers and Certification Regimes to a wider range of regulated firms active in FICC wholesale markets; and introducing a mandatory form for regulatory references to help prevent the 'recycling' of individuals with poor conduct records between firms. Section 5.2 focuses on establishing new training and qualifications expectations for FICC market personnel in the United Kingdom. Section 5.3 sets out some of the most important priorities for market practitioners in sharing and promoting good practices on control and governance structures around FICC business lines, and the role that the FICC Market Standards Board proposed in recommendation 2a might play. And Section 5.4 looks at ways to improve the alignment between remuneration and conduct risk.

5.1 Improving accountability; and preventing the 'recycling' of staff with poor conduct records

5.1.1 Where was fairness and effectiveness deficient?

3 The years prior to the financial crisis were characterised by three key trends, all of which materially reduced the ability or willingness of firms in financial markets to uphold strong standards of market conduct:

- (i) Senior managers became increasingly remote and unaccountable for the maintenance of standards in day-to-day trading operations. That reflected a range of causes, including the increasing scale and breadth of firms' trading operations, and the progressive delegation of responsibility for oversight to firms' second and third lines of defence, and to regulators. A particular aspect of this last factor in the United Kingdom was that firms relied largely on the Financial Conduct Authority's (FCA)

predecessor, the Financial Services Authority (FSA), to assess individuals' fitness and propriety to perform their roles, under the Approved Persons Regime (APR).

- (ii) Senior managers faced few apparent consequences for failing to ensure that their teams upheld appropriate standards of market practice. That was particularly true in less regulated markets, where practices were governed by voluntary codes which lacked 'teeth'.
- (iii) There was an increasing shift in power within firms and their management teams towards trading staff, reflecting the factors outlined above and the high profitability of trading desks.

4 These trends were apparent in many of the recent FICC enforcement investigations. For example, FCA enforcement notices in relation to the attempted manipulation of Libor identified weak or non-existent oversight of trading staff in banks and brokers, and a lack of clearly defined individual responsibilities. FCA enforcement notices on misconduct in foreign exchange (FX) markets showed that voluntary codes in FX and other markets had not been translated into meaningful internal guidance within firms. And trading staff in different firms attempted to collude in order to manipulate markets, against the interests both of the markets at large and, in some cases, their firms.

5.1.2 What has already been done to put this right?

5 The UK authorities have taken significant steps to improve governance and accountability within UK-regulated firms. Assessing the adequacy of governance in firms is now a fundamental part of the Prudential Regulation Authority's (PRA's) and FCA's supervisory approach, and the regulators regularly review the fitness and propriety of the most senior individuals in authorised firms.

6 There has also been significant legislative reform. The Parliamentary Commission on Banking Standards (PCBS) argued that the APR had failed to set clear expectations for individuals performing critical roles in banks, and recommended strengthening the accountability of bankers and their incentives to behave appropriately by shifting governance responsibilities from the regulators to firms, accompanied by stronger and more focused approval and

(1) www.parliament.uk/documents/banking-commission/Banking-final-report-volume-i.pdf.

enforcement powers for the regulators with respect to senior individuals.⁽¹⁾ In response, the Senior Managers and Certification Regimes (SM&CR) were introduced by the UK government through the Banking Reform Act 2013. The regulators have published final and near-final rules⁽¹⁾ on elements of the regimes in response to their July 2014 consultation.⁽²⁾ The remaining final rules are expected to be published over the coming months, and the SM&CR will come into force in March 2016.

7 The **Senior Managers Regime** will focus regulatory attention on a smaller set of senior individuals than the APR, limiting regulatory pre-approval to the most senior individuals in banks, building societies, credit unions and PRA-designated investment firms, known collectively as 'Relevant Authorised Persons' (RAPs). As part of the regulatory pre-approval, firms will be required to submit 'Statements of Responsibilities' setting out the areas for which a prospective senior manager will be responsible. This should ensure that in the event of misconduct, there are clear lines of accountability. Individuals approved by the regulators as senior managers will continue to be registered on the regulators' public register. The Senior Managers Regime includes a 'presumption of responsibility', under which senior managers in RAPs are held to be responsible for regulatory breaches in their areas of responsibility unless they can demonstrate to the satisfaction of the relevant regulator that they took reasonable steps to prevent such breaches.

8 The **Certification Regime** recognises that some individuals below senior managers, including traders, nevertheless have the potential to pose 'significant harm' to the firm or its customers. The Banking Reform Act introduces requirements for RAPs to take responsibility for ensuring that such individuals are fit and proper on an ongoing basis, and to certify that this is the case at least annually. Regulators will not approve these appointments. The regulators' rules will require a senior manager to be formally responsible for the firm's compliance with its obligations under the Certification Regime.

9 Enforceable **Conduct Rules** under the SM&CR, as outlined in Box 12, will also apply to a wide set of individuals within each RAP. The new Conduct Rules will build on the Statements of Principle and Code of Practice for approved persons under the APR. If an individual breaches a Conduct Rule, the regulators may choose to take enforcement action against that individual. The regulators propose that the Conduct Rules should apply to all senior managers and certified persons. In addition, the FCA proposes to apply the Conduct Rules to all other employees of relevant firms except staff carrying out purely ancillary functions. Such firms will also be required to notify the regulators of actual or suspected breaches of any Conduct Rule, and of any disciplinary action relating to a breach of the Conduct Rules by senior managers, certified staff and relevant employees.

10 The PRA also proposes to introduce a new regulatory framework for individuals in insurance firms. The proposed **Senior Insurance Managers Regime (SIMR)** incorporates aspects of the SM&CR within the existing legislative framework for insurers.⁽³⁾ The SIMR will require insurance firms to adopt clearer governance arrangements, and set clearer allocations of responsibilities and accountabilities for senior managers, in a manner similar to the SM&CR, but without the 'presumption of responsibility'. Senior managers will require supervisory approval in order to perform Controlled Functions or Senior Insurance Manager Functions. The SIMR also takes into account the EU Solvency II Directive measures relating to governance and fitness and propriety, where — similar to the Certification Regime under the SM&CR — insurers will be required to make their own assessments of fitness and propriety in relation to a wide range of individuals, including those who do not perform a Controlled Function or a Senior Insurance Manager Function, but still perform a key function within their firm. The SIMR is also expected to align the Conduct Rules with those under the SM&CR, but with an additional Conduct Rule relating to the advancement of the PRA's insurance objective.

11 Implementation of the SM&CR will mean that a significant group of staff in banks and other relevant firms, including many types of traders, will no longer be subject to regulatory pre-approval, but will instead have to be certified by firms. In addition, some groups of staff who previously did not fall within the scope of the APR will now fall within the scope of the Certification Regime, so firms will be required to assess and certify them as fit and proper.

12 The PRA and FCA consultations recognised that it was important for firms to have access to relevant information about an individual's prior conduct record from past employers to inform their certification decisions. Unless this information were available to a new employer, individuals with poor conduct records — so-called 'rolling bad apples' — would be able to move between firms undetected. To address this problem, rules proposed by the PRA and FCA under the SM&CR will require firms to obtain, and to provide, so-called 'regulatory references' to one another when seeking to employ an individual in a role that requires certification or pre-approval. These references must include, among other information, details of any disciplinary action taken in the past five years to address a breach of the Conduct Rules.

5.1.3 Where are the remaining gaps?

13 The introduction of the SM&CR and the SIMR should substantially improve accountability. The Review has however concluded that the SM&CR can be used to help strengthen

(1) www.fca.org.uk/static/documents/consultation-papers/cp15-09.pdf; and www.bankofengland.co.uk/pradocuments/publications/cp/2015/cp715.pdf.

(2) www.fca.org.uk/static/documents/consultation-papers/cp14-13.pdf.

(3) www.bankofengland.co.uk/pradocuments/publications/cp/2014/cp2614.pdf.

standards in FICC markets further in three ways: first, by using the regime to give stronger 'teeth' to voluntary codes; second, by extending its application more widely across FICC markets; and third, by mandating a more specific form for regulatory references to minimise the risk of 'rolling bad apples'. The next subsections consider each point in turn.

5.1.3.1 Using the Senior Managers and Certification Regimes to give 'teeth' to voluntary codes

14 Under the SM&CR, regulators will be able to hold individuals to account for conduct failings and require all traders and other relevant individuals to comply with the five proposed individual Conduct Rules outlined in Box 12. Individuals will be personally accountable for any breach of a Conduct Rule, providing a strong incentive for individuals to achieve higher standards of market conduct.

Box 12

Proposed individual Conduct Rules

Rule 1: You must act with integrity.

Rule 2: You must act with due skill, care and diligence.

Rule 3: You must be open and co-operative with the FCA, the PRA and other regulators.

Rule 4: You must pay due regard to the interests of customers and treat them fairly.

Rule 5: You must observe proper standards of market conduct.

15 The proposed Conduct Rules will also give regulatory support to market codes and guidelines. The FCA's proposed guidance in relation to Conduct Rule 5 indicates that compliance with the FCA Code of Market Conduct⁽¹⁾ or relevant market codes and exchange rules will tend to show compliance with Conduct Rule 5. This will provide helpful 'teeth' to non-statutory market codes and guidelines, for example the proposed global FX code discussed in Section 4.3.3, and future materials that might be developed by the proposed FICC Market Standards Board (FMSB). More generally, it will help to ensure that firms adhere to clear standards of market practice and encourage employees to behave with greater integrity — two of the characteristics of fair and effective markets identified by the Review.

16 Proposed guidance from regulators on the implementation of the SM&CR also indicates that firms should ensure that senior managers, certified staff and relevant employees subject to the individual Conduct Rules have a deep understanding of the practical application of the specific rules

which are relevant to their work. For example, individuals subject to certification will be required to undertake 'suitable training' and 'have an awareness and broad understanding of [the FCA Conduct Rules]'. Box 15 in Section 5.2 outlines a high-level blueprint for FICC market training and qualification standards, which could make an important contribution towards the fulfilment of this requirement.

17 To support the existing codes and output of the FMSB, the Review notes that:

- **3c: proper market conduct should be managed in FICC markets through regulators and firms monitoring compliance with all standards, formal and voluntary, under the Senior Managers and Certification Regimes.**

5.1.3.2 Extending the scope of the Senior Managers and Certification Regimes

18 A significant group of regulated FICC market participants, active in both the primary and secondary FICC markets, such as interdealer brokers and asset managers, are currently out of scope of the SM&CR. The Review's consultation included a question on whether the SM&CR, or some variant of it, should be extended to this wider group.

19 Responses to the consultation were mixed on this issue. In general, firms already covered by the regimes argued that they should be extended, while those not covered argued that they should not. The Review's Market Practitioner Panel (MPP) noted that views on this issue differed between its members but argued that, on balance, time should be given to assess the effects of the incoming regime before considering an extension. A minority of members noted that, in the longer term, consideration should be given to appropriate adaptation followed by potential extension.

20 Some respondents argued that an extension would raise standards and accountability across all FICC market participants, bringing a level playing field across all firms. Similar level playing field arguments have also been advanced by former members of the PCBS.⁽²⁾ Firms also argued that an extension would prevent any gaps or overlaps that may arise from running three⁽³⁾ regimes in parallel and bring in a more aligned approach for groups with multiple business functions.

21 After careful consideration, the Review has concluded that there is a case for extending elements of the SM&CR to a broader range of regulated FICC market participants. The elements to be extended would include: regulatory

(1) FCA Code of Market Conduct (MAR 1), <https://fshandbook.info/FS/html/handbook/MAR/1>.

(2) www.parliament.uk/documents/commons-committees/treasury/Statement_by_former_Members_of_PCBS.pdf

(3) Viz., the Senior Managers and Certification Regimes, the Senior Insurance Managers Regime, and the Approved Persons Regime.

pre-approval and 'Statements of Responsibility' for senior managers; certification of individuals with the potential to pose 'significant harm' to a firm or its customers; and enforceable Conduct Rules for individuals. The Review did not judge it proportionate to extend, beyond their existing scope, the additional provisions included in the Banking Reform Act which gave effect to a 'presumption of responsibility' in the event of regulatory breaches in RAPs.

22 There are a number of reasons for this proposed extension:

- (i) recent FICC market misconduct was not limited to banks. For example, a number of interdealer brokers were involved in the manipulation of Libor;⁽¹⁾
- (ii) non-banks are becoming increasingly important players in FICC markets;
- (iii) as outlined above, the SM&CR will be an important means for giving market codes greater 'teeth' in the United Kingdom. Extending the Conduct Rules to a wider range of regulated firms active in FICC markets would emphasise that traders and other individuals in those firms are personally responsible for observing proper standards of market conduct; and
- (iv) regulatory references required under the SM&CR can be an effective tool to minimise the risk of 'rolling bad apples' and should therefore be a requirement for a wider range of regulated FICC firms.

The Review therefore recommends that:

- **3d: HM Treasury should consult on legislation to extend elements of the Senior Managers and Certification Regimes to a wider range of regulated firms, covering at least those active in FICC wholesale markets.**

23 This recommendation would need to be subject to consultation. Among other things, that consultation would need to consider the precise scope of the extension and the exact makeup of an expanded regime. Any extension should apply to authorised firms that are active in FICC markets, but are currently out of scope of the existing regimes. That would include: MiFID investment firms, including asset managers and interdealer brokers; hedge funds under the EU Alternative Investment Fund Managers Directive (AIFMD); and fund managers under the EU Undertakings for the Collective Investment of Transferable Securities Directive (UCITS). HM Treasury and the FCA may also want to consider whether firms active in financial markets other than FICC markets should also be included, but that is outside the scope of this Review.

24 The Review also considered the new criminal offence relating to a decision causing a financial institution to fail,

included in the Banking Reform Act. This new offence, which was recommended by the PCBS, reflects concerns that the consequences for the UK economy of the failure of a major bank, building society or PRA-regulated investment firm might be so grave that there could be circumstances in which it might be justified to bring criminal proceedings against a senior manager whose reckless decisions had directly led to that failure. This offence is directed to prudential stability concerns and not to issues of market conduct, reflecting the fact that the consequences of some firm failures are potentially detrimental to the UK economy and taxpayers. As with any criminal case, the burden of proof would be on the prosecution to prove the charges beyond a reasonable doubt. There are a series of tests that have to be met before any such prosecution could be brought:

- (i) the senior manager is involved in taking a decision that causes the institution to fail;
- (ii) at the time the decision is taken, the senior manager is aware of a risk that implementation of the decision could cause the institution to fail; and
- (iii) in all the circumstances, the senior manager's conduct in relation to the taking of the decision falls far below what could reasonably be expected of a person in his or her position.

25 The Review has not identified a case to extend this offence to other institutions simply because they are active in the FICC markets, where their failure would not pose a systemic and prudential threat to public funds and the economy.

5.1.3.3 Tackling 'rolling bad apples'

26 Respondents to the Review's consultation and market outreach expressed particularly strong views about the need for further action to be taken to prevent the 'recycling' of individuals with poor conduct records between firms: the so-called 'rolling bad apples' problem outlined earlier in this section. Similar concerns have also been expressed in other jurisdictions — for example, the Reserve Bank of Australia's submission to the Review notes the merits of adopting a global approach to the problem; and President William Dudley of the Federal Reserve Bank of New York raised the issue in a speech in October 2014.⁽²⁾

27 Firms report that it has become increasingly difficult to acquire information on individuals' conduct records from previous employers through the use of employment references. In part, that is said to reflect increased concerns on the part of firms about the risks of legal challenge from

(1) www.fca.org.uk/news/icap-europe-limited-fined; www.fca.org.uk/news/two-former-senior-executives-of-martin-brokers-fined-and-banned; and www.fca.org.uk/news/press-releases/martin-brokers-uk-limited-fined-630000-for-significant-failings-in-relation-to-libor.

(2) www.newyorkfed.org/newsevents/speeches/2014/dud141020a.html.

employees who feel they have been unfairly described. But in part, it also reflects the increasing tendency to reach 'compromise' or 'settlement' agreements as part of negotiated exits with employees, under which firms agree to limit the scope of information released in references. That challenge is further heightened when individuals resign before investigations relating to disciplinary proceedings have been concluded.

28 In the United Kingdom, respondents reported having taken some comfort historically from the fact that, when judging an individual's fitness and propriety under the APR, regulators had access to a broader range of conduct information than that available to firms — gathered through supervisory interaction and firms' own reporting. However, the PCBS was concerned that the APR resulted in an unclear allocation of responsibility for the suitability of individuals within firms, and that the volume of approvals under the APR was unrealistically large for the regulators to process given the resources required. The PCBS argued that it was more appropriate for firms and their senior managers to take responsibility for the suitability of their employees. With the transition from the APR to the SM&CR, responsibility for the assessment of certified individuals will pass to the firm. Despite the proposed requirement to provide regulatory references for an individual's previous five years of employment under the SM&CR, many respondents considered that moving to the new regime could lead to a potentially significant loss of information, materially worsening the incidence of 'rolling bad apples'.

29 A range of possible ways to tackle this problem were highlighted to the Review. Some suggested retaining a central 'licensing' database of regulatory and other information (as under the current APR), or a register similar to the BrokerCheck⁽¹⁾ system operated by the Financial Industry Regulatory Authority (FINRA) in the United States. Some called for firms to be required to complete a mandatory form when providing regulatory references, and for this to incorporate a wider range of information than explicitly required by the proposed PRA and FCA rules. Box 13 provides examples of the type of information suggested by respondents. Others suggested that this approach be further strengthened by extending the 'look back' period for regulatory references beyond five years, and/or storing references in a central 'warehouse'.

30 The Review agrees on the importance of tackling the 'rolling bad apples' issue, subject to respecting the principles of the SM&CR (in particular the policy intent of switching responsibility for assessing fitness and propriety), and the constraints imposed by employment, data protection and human rights law.

31 The principles of the SM&CR are not consistent with continuing to operate a central regulatory 'licensing'

mechanism of the kind used under the APR. It is, in any case, not clear that the APR was effective in preventing 'rolling bad apples' in wholesale FICC markets. Following implementation of the SM&CR the FCA will nevertheless continue to maintain a public register of individuals subject to prohibitions,⁽²⁾ which firms can use to help inform their assessment of an individual. The SM&CR will also include requirements for regulated firms to notify the regulators of actual or suspected breaches of any Conduct Rule, and of any disciplinary action relating to a breach of the Conduct Rules. The regulators will therefore still be able to use information they receive from regulated firms to inform their supervisory focus and approach.

32 The Review has concluded that there is a strong case for the authorities to mandate a form setting out in detail the minimum information that firms should include in regulatory references, to ensure that there is a decisive break from past referencing practices, and to improve firms' ability to investigate an individual's past conduct effectively. Such a form would build on the information requirements already proposed under the new SM&CR rules, helping to promote a uniform approach. Firms will not be able to use non-disclosure agreements with departing employees to limit disclosure of information required in such regulatory reference forms by the new SM&CR rules.

33 The types of information suggested by respondents for inclusion in regulatory references, as summarised in Box 13, are broader than those currently proposed under PRA and FCA rules. In particular the suggested types of information include: items that may be uncertain or disputed — such as information about investigations or disciplinary proceedings begun, but not completed, before an employee's departure; and information going back significantly beyond the five-year period currently proposed for regulatory references. To consider whether it would be appropriate to mandate the provision of these broader types of information, it is necessary to take into account legal constraints, including the provisions of human rights law, which limit interference by public authorities with the private lives of individuals. It is likely that mandating the inclusion of these broader categories of information would require the creation of an extensive framework of safeguards for individuals, entailing disproportionate complexity and cost.

34 The constraints of human rights law referred to above apply to the acts of public authorities. But they do not preclude firms from deciding to disclose fuller information, or from agreeing to participate in any industry initiative to encourage fuller disclosure, provided those firms comply with their obligations to employees and recipients of references under the common law (in particular the obligation to ensure

(1) <http://brokercheck.finra.org/Search/Search>.

(2) www.fsa.gov.uk/register/prohibitedIndiv.do.

Box 13

Respondents' views on information for possible inclusion in a regulatory reference

This box summarises the types of information that respondents suggested should be considered for inclusion in a regulatory reference relating to a candidate for a senior management position or role requiring certification. In some cases, these data are already publicly available (for example, whether an individual has ever been registered with the PRA or FCA as a senior manager). In others, information is not currently available but will be caught by the regulators' proposed rules: for example, disciplinary action or the application of malus or clawback⁽¹⁾ to an individual's remuneration linked to breaches of Conduct Rules. Other suggested information would require an expansion of the proposed rules. The regulators will need to consult publicly on the content of a regulatory reference form. In doing so, they should consider all suggestions from respondents to the Review, taking into account relevant legal constraints.

Information about roles held and training or qualifications

- **Basic personal information:** including name, job title and basic identifying information;
- **Basic employment details:** including dates of employment and an outline of most recent roles and core responsibilities;
- **Regulatory approvals:** whether the candidate was ever registered with the PRA or FCA, by the firm providing a reference, as a senior manager under the Senior Managers and Certification Regimes, and a description of senior management functions and prescribed responsibilities;
- **Certification by the employer:** whether the candidate has been certified by the firm under the Certification Regime;
- **Transitional information about past regulatory approvals:** whether the candidate has ever been registered with the PRA or FCA in a Controlled Function under the Approved Persons Regime, including details of the Controlled Function held and a description of the role held; and
- **Training and qualifications:** details of any relevant formal training the candidate has attended and/or undertaken, and any qualifications obtained.

Information about misconduct or disciplinary actions

- **Termination of employment:** whether and in what circumstances the candidate was dismissed, suspended, or requested to resign from employment;
- **Disciplinary proceedings:** details of any internal disciplinary proceedings, for example the issuing of a formal written warning or notice or suspension;
- **Resignation while under investigation:** whether and in what circumstances the candidate resigned or left employment while under investigation for suspected misconduct or breaches of any Conduct Rule or Fit and Proper Criterion;
- **Breach of regulatory requirements:** details of any breaches of the Conduct Rules or Fit and Proper Criteria in the PRA Rulebook or FCA Handbook; and
- **Application of remuneration 'malus' or 'clawback':** details of any reduction or recovery of the candidate's remuneration, linked to misconduct or a failure of risk management.

Outstanding liabilities or complaints

- **Complaints:** details of any outstanding or upheld complaints against the candidate from a person eligible to have a complaint considered under the Financial Ombudsman Service; and
- **Outstanding commission payments:** details of any outstanding liabilities owed by the candidate relating to commission payments.

Respondents noted that it is important that a regulatory reference form should provide space for the candidate's past employer to provide additional context. The time period covered by a reference was also an important consideration, with respondents suggesting that it was important to achieve an appropriate balance between providing a meaningful picture of an individual's pattern of conduct, while ensuring that the information was still relevant.

(1) See Section 5.4 for a definition of these terms.

that any reference is true, accurate and fair). The Review therefore recommends that:

- **1c: the FCA and PRA should consult on a mandatory form for regulatory references, to help firms prevent the 'recycling' of individuals with poor conduct records between firms, with a view to having a template ready for the commencement of the Senior Managers and Certification Regimes in March 2016. In due course, the FMSB should consider whether there is scope to reach an industry-wide agreement to disclose further information.**

35 It is important that the bilateral exchange of meaningful regulatory references between former and potential employers is fully and properly embedded across all FICC market participants in the United Kingdom, through the extension of the SM&CR to a wider range of regulated FICC market participants. The regulators are committed to supporting the industry in their efforts to ensure that bad actors are identified and held to account for their conduct, and to working with firms in their collective efforts to comply with this important element of the new regime. Firms should provide as complete a picture of an individual's conduct record as possible to new employers, seeking wherever feasible to conclude investigative procedures before employees depart, and avoid giving any legal undertakings to suppress or omit

relevant information in order to secure a negotiated release. The regulators will expect firms to demonstrate how they meet these standards and will consider how firms comply with the requirements under the new regime through supervisory assessments. Senior managers will need to have in place policies, procedures and practices which deliver clear and accurate references.

36 The Review also considered the suggestion from market participants that the process of exchanging regulatory references could be further strengthened if a central warehouse of basic employment information or past regulatory references were established. This proposal could have some benefits if, for example, an individual's past employer no longer existed and an individual's new employer would not otherwise be able to obtain a reference. However, in general the Review did not identify significant benefits in terms of the content of information that would be exchanged, over and above that in regulatory references. The central registrar for such a central warehouse would also be subject to potentially significant operational and legal risks. Therefore, the Review has not established that there is a sufficient case for the development of a central warehouse; however, the case for such a warehouse, run if necessary in the private sector, should be kept under review in light of experience with regulatory references.

5.2 Towards credible market-wide standards for wholesale FICC training and qualifications

1 Section 4 set out the need to ensure that clear standards are defined for all FICC markets. However, it is equally important to have mechanisms to ensure that individuals behave according to those standards in practice. Training and qualifications are important tools for ensuring that individuals understand and then apply appropriate standards of behaviour.

5.2.1 Where was fairness and effectiveness deficient?

2 Recent FICC market enforcement cases highlighted a range of deficiencies in firms' training programmes. For example: submitters received no formal training on Libor or Euribor submission processes;⁽¹⁾ there was insufficient training for FX traders on how to apply general policies concerning confidentiality, conflicts of interest and trading conduct to their day-to-day activities;⁽²⁾ and staff involved in the gold fixing lacked adequate specific training.⁽³⁾

3 A wide variety of qualifications were available to wholesale FICC market participants. But, other than some firm-specific requirements, take-up has been voluntary since 2007. And even where staff did hold specific qualifications, there were a number of potential drawbacks in terms of ensuring consistently effective application of standards of good market conduct across FICC markets as a whole. Some qualifications were narrowly focused on specific business lines or areas of expertise. Some focused primarily on professional competence rather than conduct standards. The qualifications that did have a conduct component often focused primarily on 'classroom' or 'desktop' learning of high level principles, with limited use of 'real-life' examples relevant to FICC markets, so failed to assess the critical judgement of market participants adequately. And some lacked continuous assessment procedures, so failed to instil deep and lasting understanding of conduct standards. It should be stressed that some qualification providers did have a stronger approach to conduct standards, including using withdrawal of qualified status as a sanction for misconduct or non-completion of continuing professional development requirements. But the application of such standards was far from universal across FICC market participants.

5.2.2 What has already been done to put this right?

4 There have been a number of positive developments within firms since the height of the crisis. Considerable resources have in some cases been devoted to enhancing training and education programmes, often including specific modules on conduct. And firms have in some cases moved towards a more comprehensive ongoing approach that ensures training programmes remain up-to-date and more adequately meet the evolving demands of the roles that FICC market participants perform.

5 Several qualification providers have also updated the way in which they deliver their training and qualifications. Some have introduced requirements for individuals to demonstrate their ongoing adherence to codes of conduct. Some have introduced new foundation-level qualifications aimed at ensuring a greater range of new entrants receive formal training. And some have improved testing methods, notably by making greater use of case studies to test an individual's judgement.

6 Forthcoming policy initiatives will help underpin more consistent use of training within firms. The Senior Managers and Certification Regimes (SM&CR) set a number of expectations on the use of training programmes. First, firms will have to vet potential senior managers, having regard among other things to whether candidates have 'obtained a qualification' or have 'undergone, or [are] undergoing, training'. Second, individuals subject to certification will be required to undertake 'suitable training', 'have an awareness and broad understanding of [the FCA Conduct Rules]' and a 'deeper understanding of the practical application of specific rules which are relevant to their work'. These new rules will require firms covered by the Regimes to take a more structured approach to training senior managers and certified individuals. Other initiatives have also flagged the importance of improving training standards. For example, the new global preamble to national FX codes⁽⁴⁾ includes an expectation that firms should provide training programmes for staff on appropriate market conduct in foreign exchange markets and require regular attestations.

5.2.3 Where are the remaining gaps?

7 Despite this progress, several gaps remain in the way training and qualifications are used to enhance conduct standards within wholesale FICC markets.

8 Responses to the Review highlighted that current qualifications often make a sharp distinction between material related to professional competence (which is often the primary focus) and that related to conduct standards. Efforts to bring the two together — a primary goal of the Review — are still relatively uncommon. Material on conduct often speaks only to high-level expectations of behaviour. This means that course materials are often far detached from the realities of working on a trading desk, and are likely to have a lower impact on the standards of behaviour that candidates subsequently apply in practical situations. The Review has concluded that there is a need for greater use of training and

(1) See paragraph 4.55 in www.fca.org.uk/static/documents/final-notice/deutsche-bank-ag-2015.pdf.

(2) See paragraph 4.26 in www.fca.org.uk/static/documents/final-notice/final-notice-citi-bank.pdf.

(3) See paragraph 2.3 in www.fca.org.uk/static/documents/final-notice/barclays-bank-plc.pdf.

(4) The 'Global Preamble: Codes of best market practice and shared global principles', adopted by eight FX committees on 30 March 2015. See page 2 in www.bankofengland.co.uk/markets/Documents/forex/fixjsc/globalpreamble.pdf.

qualifications that focus on conduct standards, but using materials that assess candidates' understanding of those standards through the use of 'real-life' challenges that candidates might face in specific markets.

9 Second, current qualifications too often fail to have a lasting impact on candidates' understanding of conduct standards. This partly reflects the issues outlined above. But it also reflects assessment standards. Too often, training relies primarily on passing a simple, one-off exam, meaning that a candidate's understanding of standards becomes out of date, or the standards are simply forgotten. Consultation responses pointed to the importance of meaningful continuing professional development (or 'CPD') as a means of improving long-term adherence to conduct standards. The Review agrees, and has concluded that an integrated approach to training must include both rigorous initial assessment procedures, and regular follow-up training.

10 Finally, there are no market-wide standards for training and qualifications across the FICC markets in the United Kingdom. Although the standard of training at the top end may have improved markedly in recent years, the approaches to training taken by individuals and firms still varies widely. Responses to the Review's consultation highlighted that the diversity of FICC markets makes them unsuitable for a single uniform qualification for all market participants — for example, as used in some retail markets. However, the Review has concluded that it should be possible to establish common minimum training standards on some issues (for example, training on relevant regulatory standards, knowledge of competition law and relevant codes of conduct), as well as a range of training and qualifications that are relevant to specific business functions in specific markets.

11 To address these gaps, the Review assessed a range of current approaches to qualifications for market participants, summarised in Box 14. One option is for regulatory authorities to impose training and qualification requirements on FICC market participants, as is currently the case for certain retail market activities. However, the diversity of FICC markets means it would be challenging for a regulator to apply and maintain a qualifications framework that was appropriately calibrated to the range of different roles that FICC market participants perform.

12 The Review has developed a blueprint for a training and qualifications framework designed to improve conduct standards. That blueprint, shown in Box 15, is intentionally set out only at a very high level, in order to allow appropriate flexibility for market participants to meet the practical challenges of implementation. This framework could be taken forward by a future FICC Market Standards Board (FMSB), as proposed in Section 4. The Review therefore recommends that:

- **1b: The new FICC Market Standards Board (FMSB) proposed in recommendation 2a should give guidance on expected minimum standards of training and qualifications for FICC market personnel in the United Kingdom, including a requirement for continuing professional development.**

13 One of the important design decisions of the framework will be setting the minimum qualification standard. Existing qualifications available to wholesale FICC market participants are benchmarked to a wide range of Qualification and Credit Framework (QCF)⁽¹⁾ levels. For example, most elements of the Chartered Institute for Securities and Investment (CISI) Capital Markets Programme are benchmarked as a QCF Level 3 (equivalent to an A-level qualification in the United Kingdom). By contrast, Level III of the Chartered Financial Analyst (CFA) Program and the CFA charter are benchmarked at Level 7 (equivalent to a Master's degree). The Review recommends that the minimum standard for the FICC-wide framework should be set at QCF Level 3. However, the Review recognises that flexibility may be required according to the role being examined. In some cases, for example, the required attainment level could be higher.

14 It will be important for the FMSB to work closely with firms and qualification providers to develop this high level blueprint into a set of expected training and qualification standards within FICC markets. It is not anticipated that the FMSB would itself provide such training — but it should work with qualification providers to ensure that the minimum standards are met.

15 The practical challenges of implementing such a framework should not be underestimated. For example, before more detailed standards can be developed, it will first be necessary to establish a categorisation of business functions within different FICC markets. It will be important to recognise the differences in the training needs of, say, a debt syndication manager and a spot FX trader, but at the same time have categories that are sufficiently broad that the framework can be practically implemented. Certain training modules would be common to all business functions (for example, knowledge of regulation and competition law). But others would be specific to particular business functions.

16 The FMSB would need to address a number of practical issues of implementation. First, there is a question of how experience or prior education is recognised. And second, provisions should be made for some recognition of qualifications held by individuals transferring into the United Kingdom from third countries. Nevertheless, in some

(1) The QCF is the national credit transfer system for education qualification in England, Northern Ireland and Wales. It is referenced to the European Qualifications Framework (EQF) which relates different countries' national qualification systems to a common European reference framework.

Box 14

Alternative approaches to financial market qualifications

Financial Industry Regulatory Authority (FINRA) — Series 7 Examination

In the United States, securities professionals must be registered with FINRA to conduct securities transactions and businesses with the public. As part of the process of becoming registered, individuals must pass an exam, the most common being the General Securities Representative 'Series 7' qualification which aims to assess the competency of those entering the securities market. The exam measures the degree to which candidates possess the regulatory, product, and market knowledge needed to perform the critical functions of a general securities representative, such as sales of corporate securities, municipal fund securities, investment company securities, variable annuities, direct participation programs, options and government securities. There are additional exams required for supervisors, financial and operational professionals, and compliance officers, among others.

Once registered, FINRA requires individuals to complete continuing education programmes consisting of compliance, regulatory, ethical and sales practice standards within 120 days after the second anniversary of initial registration, and every three years thereafter. Individuals must re-qualify if out of the industry for more than two years. Securities firms are responsible for continuing education on products and markets.

FCA qualification requirements for customer-facing activities

The FCA requires individuals to attain 'appropriate qualifications' if they are carrying out certain activities for retail clients. The qualifications are mapped to specific

activities and therefore roles that cross over more than one activity require individuals to hold an appropriate qualification for each activity.

The content and level of an appropriate qualification is prescribed through examination standards which are produced and maintained by the FCA. The FCA then reviews and approves qualifications produced by third party training providers to ensure that the qualifications meet the required standard.

In addition to the minimum qualification standard, retail investment advisors must also complete a minimum of 35 hours of appropriate/relevant continuing professional development (CPD) each year.

Voluntary qualifications for FICC participants

There are a variety of voluntary qualifications available to wholesale FICC market participants, which some firms mandate for employees. These qualifications include: the ACI Dealing Certificate, the ACI Operations Certificate, the ACI Model Code Certificate and the ACI Diploma administered by the ACI Financial Markets Association; the Chartered Financial Analyst (CFA) Program and the Claritas Investment Certificate administered by the CFA Institute; the Chartered Institute for Securities and Investment (CISI) Capital Markets Programme; and the Chartered Alternative Investment Analysis Association (CAIA Association) Charter Program.

In some cases these qualifications perform an additional function of effectively licensing individuals to perform certain functions, with withdrawal of qualified status serving as a potential sanction for misconduct or non-completion of CPD requirements.

areas, such as knowledge of regulation, it will be important for individuals to receive additional training on the local standards that apply.

17 Training could be provided in-house, so long as such training involved structured learning programmes. The FMSB should also work with providers to ensure training and qualifications remain up-to-date and reflect market and regulatory developments. Guidance on continuing

professional development should, in particular, reflect current developments in market standards (for example, when new standards are enacted through regulation or codes including, potentially, materials produced by the FMSB). The longer-term ambition would be that firms adopt a consistent approach to using training and qualifications as part of their certification process for staff.

Box 15

Blueprint for training and qualification standards

Principles

The Review recommends that a training and qualification standards framework be developed around the following set of principles:

- Training/qualifications should have a significant focus on the understanding of conduct standards relevant to wholesale FICC markets;
- Training/qualifications should include course materials that make extensive use of real-world scenarios that an individual may face; and
- Training/qualifications should have rigorous and continuing assessment procedures, to ensure a deep and lasting understanding of relevant wholesale conduct standards.

Framework

The framework should ensure that there is a common standard of basic training for FICC market participants on the regulatory framework, competition law and codes of conduct (where relevant). Beyond these common minimum qualifications, the framework should give guidance on training for specific business functions in specific markets. These standards should ensure that FICC market participants have received training which critically assesses their judgement of how conduct standards should be applied, across the full range of issues that are relevant to the function they perform.

Across each business function in each asset class, the framework would set out:

- A minimum qualification standard, which the Review recommends to be set at Qualifications and Credit Framework (QCF) Level 3 (equivalent to an A-level qualification in the United Kingdom);
- Guidance on courses that meet the expected standards; and
- Guidance on good practice for continuing professional development (CPD).

Use of real-world scenarios

An important element of the training and qualifications framework is that it should require providers to assess candidates' critical judgement through the use of 'real-world' scenarios.

For example, as part of a wider training programme for traders in a particular market, a relevant topic to cover might be 'trading around a specific market event'. In relation to this topic, candidates would be expected to:

- Recognise and understand the distinction between legitimate trading activity and market manipulation, and be able to apply that knowledge when faced with similar (but not necessarily identical) circumstances;
- Understand how to execute a trade around a specific market event with confidence that it will not be misconstrued as market manipulation;
- Be aware of the necessary steps needed to ensure that conflicts of interest are prevented or managed fairly and effectively if/when they do arise. For example, executing a trade on behalf of a client while also having an opposing interest as principal; and
- Understand the appropriate way in which information about clients' orders should be treated.

As is clear from this example, the issues to be tested would build closely on the granular case studies to be developed by the FMSB, as discussed in Section 4.

The course as a whole might be developed around a number of central practices relevant to the particular market participant, with the aim of assessing the complete range of conduct standards that a candidate should know and apply in his/her market.

5.3 Raising standards and promoting good practice in control and governance structures

1 Higher standards of professionalism in FICC markets will only be achieved if firms have strong controls and governance. Firms have committed significant resources to improve control and governance structures, but face a collective challenge in turning this effort into lasting change and finding ways to reassert the interests of the market over those of individual traders or groups of traders engaged in misconduct. This section sets out some of the most important priorities for market practitioners in this area identified during the Review's outreach and consultation, and discusses ways in which the industry might adopt a more collaborative approach to deliver consistently higher standards, including through the proposed FICC Market Standards Board (FMSB).

5.3.1 Where was fairness and effectiveness deficient?

2 One of the clearest messages from FICC market enforcement cases, and the Review's outreach, is that firms, in the past, either allowed or encouraged cultures to develop in which the interests of individual traders diverged from the interest of their employers and the interests of the market as a whole. Aggressive trading and business strategies, supported by remuneration schemes that rewarded short-term revenue generation, encouraged the view, in at least some trading teams, that good conduct was a competitive disadvantage that could be cut in the pursuit of profits.

3 On top of this, traditional board and front-line management structures struggled to control increasingly large, diverse and horizontally integrated businesses. Firms responded to this by placing ever more responsibility on the so-called second and third lines of defence. Given the tendency of these compliance and audit functions to focus on implementing formal regulatory rules this shift in responsibility had a profound impact in FICC markets, given their less extensive regulatory coverage and greater reliance on bilateral rather than exchange-based trading structures. Even when cases of misconduct in firms' FICC operations did emerge, they often failed to identify the root causes and struggled to apply the lessons learned to other business lines.

4 Taken together, these developments substantially undermined confidence that FICC market participants would behave with integrity — a key component of this Review's definition of fairness and effectiveness. Respondents to the Review's consultation felt that such 'cultural' failings were among the most important drivers of recent misconduct.

5.3.2 What has already been done to put this right?

5 Many firms have embarked on costly and extensive programmes of reform, often led by CEOs, in attempts to address these failings. Recent emphasis on tone from the top has seen some firms take positive steps, including remodelling

codes of conduct and introducing new values statements. Board-level committees have been established, dedicated to addressing conduct issues, often coupled with an increased interest in metrics to improve analysis of conduct standards lower down the firm structure.

6 Leadership teams have also reportedly required middle management to give greater focus to conduct issues, employing new training programmes and peer review processes, while new control structures have come into being in the form of reputational committees, reformed HR processes, and structured reviews of client relationships. Compliance and conduct departments, meanwhile, have grown dramatically in size and scope.

7 Regulators have played a role in driving or reinforcing these change initiatives, through remediation exercises with those firms where misconduct has been revealed and other supervisory interventions, and through the introduction of new policies and supervisory initiatives. In the United Kingdom, these changes have included reforms to remuneration rules (see Section 5.4), the introduction of the new Senior Managers and Certification Regimes (SM&CR), publication of new strategies for supervising culture,⁽¹⁾ and cross-cutting thematic supervisory reviews by the FCA covering issues relating to governance and controls, on topics such as market abuse.⁽²⁾ In 2015, the FCA is set to conclude reviews into the controls over information flows within investment banks and trader controls around benchmarks. Authorities in other jurisdictions have developed initiatives which, while they vary in approach, have similar aims. For example, the Australian Securities and Investments Commission (ASIC) has developed a 'conduct calculator': a tool which helps firms identify gaps in their conduct risk framework and assess where staff knowledge of conduct issues is deficient.⁽³⁾ And in the United States, Federal Reserve Governor Daniel Tarullo has suggested that banks need to take more effective steps to control the behaviour of those who work for them to achieve a good standard of compliance with regulations and legislation.⁽⁴⁾

5.3.3 Where are the remaining gaps?

8 The firm and regulator-led initiatives already in train have significantly increased focus on conduct issues in wholesale markets, and over time should deliver substantial improvements in fairness and effectiveness. However, the scale and effectiveness of change has varied widely across different firms and sections of the FICC markets. There are

(1) See for instance 'The use of PRA powers to address serious failings in the culture of firms', available at www.bankofengland.co.uk/pradocuments/publications/policy/2014/powersculture.pdf, www.fca.org.uk/news/regulation-professionalism and www.fca.org.uk/news/the-commercial-importance-of-culture-to-industry.

(2) www.fca.org.uk/static/documents/thematic-reviews/tr15-01.pdf.

(3) <http://asic.gov.au/about-asic/corporate-publications/newsletters/asic-market-supervision-update/asic-market-supervision-update-previous-issues/market-supervision-update-issue-57/>.

(4) www.federalreserve.gov/newsevents/speech/tarullo20141020a.htm.

also concerns that firms' commitment to reform may wane as they grapple with other pressures on their business models in the post-crisis environment.

9 The Review's outreach identified four priority areas for focus by FICC market participants:

- (i) ensuring that firm **governance** has the right management structures, boards have the correct mix of skills and experience, and firms foster a culture of effective challenge;
- (ii) promoting integrity through firms using the **right incentive structures**;
- (iii) employing robust systems to **monitor** that policies are effective and identify problems quickly; and
- (iv) reinforcing the **first line of defence** and developing strong **information management** systems to guard against and deal with developing problems.

10 Sections 5.3.3.1–5.3.3.4 review each theme in more depth, and Box 18 summarises the key messages. Section 5.3.3.5 discusses ways in which the industry might adopt a more collaborative approach to deliver consistently higher standards.

5.3.3.1 Firm-level governance

11 In November 2014 the FCA fined five banks £1.1 billion for failing to control business practices in their G10 spot foreign exchange trading operations. Despite a programme of governance change following Libor, undertaken by the banks involved and the wider market, the cases demonstrated that significant failings remained. In particular, the strategic priorities and values set out by boards and the actions taken by frontline staff were sometimes sharply incongruent.

12 A range of work has been carried out by international authorities on improving board effectiveness. This includes reports by the Bank for International Settlements (BIS),⁽¹⁾ the Financial Stability Board (FSB),⁽²⁾ the Group of Thirty (G30),⁽³⁾ the Organisation for Economic Co-operation and Development (OECD)⁽⁴⁾ and most recently guidance and a draft supervisory statement from the FCA and PRA respectively. These reports stress the important role played by boards in a number of conduct areas including: establishing and monitoring strategy, culture and objectives; communicating these throughout the organisation; providing effective oversight and challenge on key risks, with clearly defined responsibilities; and ensuring that both the board itself and staff throughout the organisation have the correct mix of skills and expertise to implement the agreed strategy effectively. These align with the areas identified during the Review.

13 Boards should ensure that structures and mechanisms are in place so that their strategy can be effectively communicated and understood throughout the organisation. As the Market Practitioner Panel noted in its submission to the Review's consultation, this can be achieved in part via an increased role for middle management in ensuring that required conduct standards are cascaded down through the firm and in particular that front office desk managers embed the standards expected in their areas. In this context it is worth noting that the Banking Standards Board (BSB) has said that it expects bank boards to set appropriate tone and culture.⁽⁵⁾

14 An important role of a successful board is to provide challenge to the executive within the firm. As noted in the recent draft PRA statement on board effectiveness,⁽⁶⁾ boards should include non-executive directors who have sufficient independence and breadth of understanding to provide effective challenge to the executives. The guidance suggests it is good practice for at least half of the board, excluding the chairman, to be comprised of independent non-executives. The PRA also expects firms it regulates to have an independent, non-executive Chairman.

15 For independent non-executive board members to be effective, they must also have the correct mix of skills. There is a balance to be struck between broad experience, which may help promote challenge and a diversity of thought, and the specialist knowledge needed to scrutinise sometimes complex business areas. For institutions operating across multiple FICC markets, non-executive directors with very narrow specialisms may not be well placed to contribute to broad strategic debate. However, where firms' business revenues rely heavily on FICC market activities, the lack of industry experience is likely to limit the effectiveness of challenge by the board. It is striking that of the 124 non-executive group-level directors at the top ten sell-side companies globally, fewer than ten have disclosed any direct experience of working in FICC markets.⁽⁷⁾ Firms have pointed to the difficulty of attracting non-executive directors with FICC market experience. A partial solution to this problem may be to draw on specialist advice from time to time. But overall, further progress needs to be made in ensuring that boards have sufficient expertise and knowledge to identify and challenge risks in key business areas.

(1) www.bis.org/publ/bcbs294.pdf.

(2) www.financialstabilityboard.org/wp-content/uploads/r_131118.pdf.

(3) In 2012 the G30 released a report on effective governance of financial institutions (see www.group30.org/rpt_64.shtml). In September 2014 a new G30 Working Group was launched to look at corporate governance and risk culture.

(4) www.oecd.org/corporate/oecdprinciplesofcorporategovernance.htm.

(5) www.bankingstandardsboard.org.uk/assets/docs/may2014report.pdf. See page 7.

(6) www.bankofengland.co.uk/pradocuments/publications/cp/2015/cp1815.pdf.

(7) This figure includes only non-executive directors who have disclosed direct experience as a trader or line manager in FICC-dealing activities. While other FICC experience (eg in staff functions or business development) is highly valuable, it is less well suited to challenge issues that arise directly from trading activities.

5.3.3.2 Incentivising good conduct

16 Remuneration in FICC markets, where there can be scope for large short-term profits, is likely to play an important role in determining behaviour. In the past, many buy-side and sell-side firms relied on overly mechanical revenue-driven approaches to determining pay. That incentivised short-term risk-taking and tended not to factor in the negative effects of poor conduct on both the firm and FICC markets more broadly. Decisions on promotion were also frequently based largely on revenue generation with insufficient weight put on, for example, past conduct records or management ability.

17 Firms are increasingly recognising the importance of using remuneration and promotion decisions to promote better conduct. The Review has seen a number of firms on both the sell-side and the buy-side trying to improve the way conduct-related factors are incorporated into their remuneration and promotion decisions, rather than basing pay solely on financial performance (as discussed in Section 5.4). This includes putting pay at risk in the event of misconduct and using a range of other non-revenue factors in pay and promotion decisions (see Box 16).

18 The FCA's Business Plan for 2015/16 indicated that staff throughout all levels of the business need to understand and accept the values and practices of their firm. The FCA announced that it expects to conduct a cross sector thematic review on whether culture change programmes are driving the right behaviour, focusing on the remuneration, appraisal and promotion decisions of middle management and how concerns are escalated and acted upon.⁽¹⁾

19 There is a risk that progress may not be sustained where firms cannot quickly identify commercial benefits of improvements. Human resources departments need to play a central role in embedding non-revenue factors into decisions on pay, promotion, performance management and recruitment. In addition, firms should ensure that their internal codes are strongly embedded, for example through the use of annual attestation and other processes.

5.3.3.3 Conduct monitoring

20 Effective governance and management of conduct and culture require an understanding of risks inherent in a firm's business model, good real-time information, and effective escalation of areas of concern. Firms in FICC markets have typically had low levels of whistleblowing and escalation, and the use of culture and conduct metrics has lagged behind some other industries. Timely, reliable and well-designed indicators of problems enable management to respond effectively and allow firms to monitor their progress against key objectives. Much of this work is in its infancy, and faces substantial challenges. But it also offers significant promise and would benefit from a collaborative approach. The roles of conduct metrics and whistleblowing are discussed below,

while the role of trading surveillance is discussed separately in Section 6.3.2.

Conduct metrics

21 Historically, FICC market participants appear not to have put sufficient weight on the importance of measuring and addressing issues of poor conduct. While considerable resources have been invested in managing various types of financial and operational risk, approaches to measuring and changing conduct and culture have been much less well developed. Recent misconduct has underscored the importance of having good management information in these areas as a complement to effective lines of defence, and as a means of monitoring change.

22 In a relatively short period of time, progress has been made in developing a range of tools to measure conduct and culture. Some of these tools focus on using existing data to produce management 'traffic light' ratings, or flags, triggered by patterns of concerning behaviour across a range of measures, including: personal account dealing; expenses and authorisation; timeliness of training completion; adherence to mandatory leave policies and trader mandates; Suspicious Transaction Reports (STRs); client complaints; and staffing data including team turnover.

23 Qualitative surveys provide another means of measuring conduct and culture. Many firms rely on regular annual staff surveys to measure firm culture, but these can face a number of challenges. For example, questions may be poorly correlated with the factor of interest, and survey responses may be subject to biased responses owing to leading questions. More carefully developed internal surveys to measure risk culture can help management identify areas of weakness within the firm and benchmark against others (see Box 17). An alternative or complementary approach is to use surveys of clients. Although historically less common in wholesale markets, some firms carry out counterparty satisfaction surveys, and increased interest is being shown in asking conduct-related questions.

24 Increased public awareness of firms' conduct — both good and bad — may also help to align the incentives of executives, shareholders and other investors, not least by bringing competitive pressure to bear. Currently, there are challenges in collating data on fines levied on firms in a consistent way. Fines are published in different ways by different regulators, and firms are under no obligation to disclose conduct costs, often aggregating fines with other legal costs in their annual reports. Greater clarity in reporting by firms would help shareholders monitor progress on conduct issues, and has been recommended by the BSB. The Conduct Cost Project publishes details of fines levied by a range of authorities from

(1) See page 41 in www.fca.org.uk/news/our-business-plan-2015-16.

Box 16

Non-revenue factors in pay and promotion decisions

Market participants have taken steps to factor a range of non-revenue factors into decisions on pay and progression, although that progress has not been uniform across firms. Specific steps flagged during the Review's outreach include:

- Wider use of so-called 'balanced scorecards' which combine measures of both financial and non-financial performance. The non-financial features of a scorecard typically include external factors, such as the development of client relationships, and internal factors, such as involvement in recruitment processes and surveys.
- Peer review and 360 degree surveys to help assess an employee's effectiveness at working with others and managing people and risk. Greater weight may also be put on management skills in addition to technical skills in promotion assessments. For example, a number of firms say they have made a point of promoting individuals with strong communication and team management skills ahead of individuals seen as solely revenue generating.

around the world, split by institution,⁽¹⁾ and a number of private sector firms are also looking to develop conduct ratings using data on fines and measures of their severity.

25 While developing credible conduct measures is receiving significant focus from some firms, those involved in this work have made it clear that this is a challenging area and work is in its early stages. There is therefore particular scope for co-operation across the industry to speed up progress. But there are also pitfalls that need to be avoided. In particular:

- An overreliance on metrics or an overly mechanical approach may lead to poor decision-making. Metrics are a complement to, not a replacement for, an effective first line of defence.
- Although firms have large amounts of data, those data often provide metrics of conduct that are imperfect at best. This creates risks around data overload, 'big data' techniques delivering spurious results, or systems delivering too many false positives.
- The selection of metrics may be subject to so-called 'recency bias'. Selection of data must be forward looking rather than focused on trying solely to address the most recent cases of misconduct.
- Qualitative surveys risk falling foul of gaming or bias. For example, when staff know that survey results may affect

- Some firms use third parties to get client feedback on their satisfaction with the sales and trading services that they receive. Feedback scores can be used to help rank individuals against their competitors at other firms and within the firm.
- Negative factors, such as reported conduct issues or red flags identified in a firm's system of surveillance, are used in some firms to reduce pay or count against a prospective promotion.
- An individual's understanding of the compliance function and relationship with compliance staff is taken into account in some institutions. For example, some firms report that improvements in compensation and promotion were only awarded if explicitly supported by the compliance function directly related to an individual's daily activities.
- Some firms say they have attempted to promote good conduct by including individuals' ability to demonstrate behaviour reflective of a firm's core set of values (such as mentoring and helping with recruitment) in decisions on pay and promotion.

management decisions, they may internalise this into their responses to questions.

Whistleblowing

26 The opacity of some FICC markets means that misconduct can be harder to detect than in more centralised, exchange-based markets with well-developed reporting structures. Whistleblowing regimes can help reduce this risk by providing an alternative means of notifying firms and regulators where employees become aware of potential misconduct issues. Indeed, effective whistleblowing procedures can by themselves act as a deterrent to misconduct if they increase the perceived chance of detection.

27 Research by Public Concern at Work (PCaW) suggests that whistleblowing may be less effective in financial services than in the rest of the economy. A survey,⁽²⁾ conducted by PCaW from 2007 to 2012 on a sample of 320 financial service workers who had contacted PCaW for advice, showed that only 66% of financial services whistleblowers raised their concerns internally at the first attempt, falling to 35% at the second attempt if their concern was not resolved on the first occasion. That compares to 91% and 73% in the wider economy (**Chart 4**). Staff in financial services are instead more likely to raise their concern with external regulators than

(1) www.ccresearchfoundation.com/.

(2) www.pcaw.org.uk/silence-in-the-city-whistleblowing-in-financial-services.

Box 17

Measuring 'culture'

A number of survey tools have been developed to assess a firm's risk culture. For example, academics at Macquarie University's Applied Finance Centre have designed a survey⁽¹⁾ to measure risk culture,⁽²⁾ demonstrate its impact on the effectiveness of institutions, and hence deepen understanding of how it might be improved. The survey aims to do that by identifying the characteristics of firms perceived to have a strong culture, and the actions (including on governance, remuneration and risk systems) that might be effective in improving culture.

The survey has been subject to testing, first with a medium-sized bank as a pilot, followed by a larger survey spread across three large international banks. Features of the survey include:

- Measuring whether risk management is valued within the organisation; whether risk issues and events are proactively identified; whether risk issues and policy breaches are ignored, downplayed or excused; and whether line managers are effective role models.

in other sectors of the economy. This might imply that staff do not trust internal processes. The proportion of internal whistleblowers who report that nothing is done, even if they raise their concerns twice, is potentially also concerning (Chart 5). At the least, this suggests that there is a lack of feedback to whistleblowers regarding how their concerns are dealt with. But these findings may also suggest that firms may be missing a crucial opportunity to respond to valid concerns that are raised.

28 The Review's outreach with market participants suggests that there has been some limited progress in this area in recent years. Market participants had whistleblowing procedures in place and independent whistleblowing phone lines that employees could call to raise concerns. But many firms noted that their phone lines were either little used (sometimes viewed as a sign of success) or mainly caught lower level concerns or grievances. The Market Practitioner Panel's consultation response noted a low level of awareness that the FCA Market Abuse Helpline accepts anonymous calls for reporting suspected market abuse.⁽¹⁾

29 The apparent ineffectiveness of these formal whistleblowing procedures, particularly in identifying more serious cases of misconduct, may reflect a number of factors, including: a *de minimis* approach to whistleblowing procedures that does not extend beyond putting the basics in place; insufficient support from organisations' senior

- Questions found to be consistently interpreted, valid and reliable measures of the factor of interest, and not containing obviously socially desirable answers (ie that do not 'lead the witness').
- A 'factor model' approach to identify groups of questions which are correlated with, and therefore help measure, different components of risk culture.

Related work in this area includes: the Better Banking Project,⁽³⁾ which looks to understand the behaviours that drive actions in financial markets, and research by Ellul and Yerramilli (2010), which constructs a risk management index to assess the strength and independence of risk management in banks.⁽⁴⁾ There is scope for further research in this area as discussed in Box 24 in Section 7.

(1) Sheedy, E A and Griffin, B (2004), 'Empirical analysis of risk culture in financial institutions: interim report', *FIRN Research Paper No. 2529803*.

(2) The shared perceptions among employees of the relative priority given to risk management, including perceptions of the practices and behaviours that are expected, valued and supported.

(3) www.newamerica.org/economic-growth/the-better-banking-project/.

(4) Ellul, A and Yerramilli, V (2010), 'Stronger risk controls, lower risk: evidence from US bank holding companies', *The Journal of Finance*, Vol. 68(5), pages 1,757–803.

management; or concerns by potential whistleblowers about the level of protection they will receive (despite many benefitting from protection under the Public Interest Disclosure Act).⁽²⁾

30 There are a number of areas that the industry should look to take forward. PCaW and the Institute for Business Ethics (IBE), among others, have stated that strong endorsement for whistleblowing, by senior management up to and including the CEO, sends a clear message about the importance of raising concerns. Firms should ensure that there are adequate protections in place for whistleblowers, and that victimisation of whistleblowers is seen as unacceptable. And, crucially, staff should feel able to raise concerns both formally and informally with their managers. There are a number of initiatives in this area to which firms can sign up, including guidance from the IBE,⁽³⁾ the Chartered Institute for Securities and Investment's (CISI) 'Speak Up' programme⁽⁴⁾ and the Whistleblowing Commission's Code of Practice.⁽⁵⁾

31 In February 2015 the PRA and FCA launched a consultation on a new whistleblowing regime designed to help firms foster

(1) The Market Abuse Helpline is 020 7066 4900 (or see www.fca.org.uk/firms/markets/market-abuse).

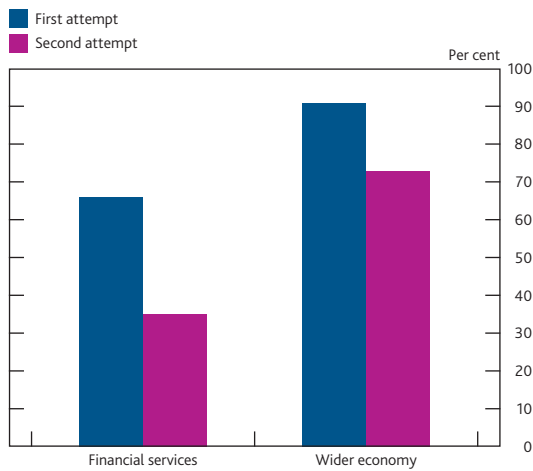
(2) www.legislation.gov.uk/ukpga/1998/23/contents.

(3) www.ibe.org.uk/userassets/briefings/speak_up.pdf and www.ibe.org.uk/userassets/pubsummaries/speak_up_procedures_summary.pdf.

(4) www.cisi.org/bookmark/genericform.aspx?form=29848780&URL=ethicsproducts#speakup.

(5) www.pcaw.org.uk/files/PCaW_COP_FINAL.pdf.

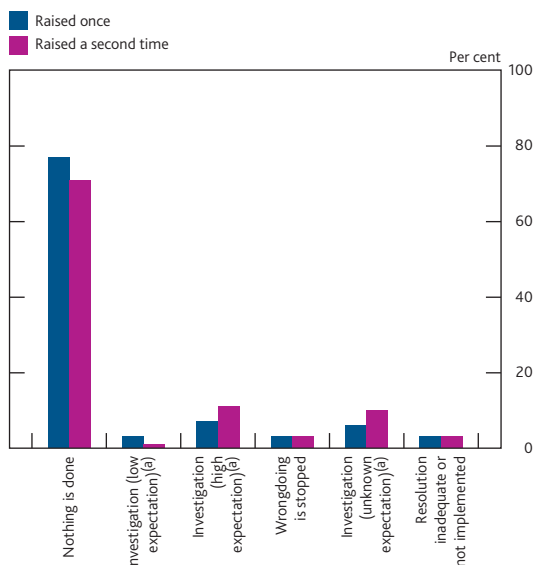
Chart 4 Proportion of whistleblowing through internal channels^(a)



Source: Public Concern at Work, 'Silence in the City? Whistleblowing in Financial Services' and 'Whistleblowing: the Inside Story'.

(a) Definition of internal channels includes: line managers, senior managers, executive or directors, compliance, risk, legal or audit functions and internal whistleblowing hotline or designated officer.

Chart 5 Responses to internal whistleblowing in financial services



Source: Public Concern at Work, 'Silence in the City? Whistleblowing in Financial Services'.

(a) Detail in parentheses gives the whistleblower's own expectation of the outcome of the investigation: 'low expectation' signifies a lack of confidence; 'high expectation' signifies confidence; 'unknown expectation' signifies uncertainty regarding the outcome.

a culture giving employees the confidence to speak out. Final rules are expected later this year.⁽¹⁾ Implementation of the new regime should provide a good opportunity for a co-ordinated approach from industry to raising standards in this area.

5.3.3.4 Effective first line of defence and information management

Refocusing oversight on the first line of defence

32 The 'three lines of defence' model of risk management is widely used within firms operating in FICC markets. The

'first line of defence' (FLOD) refers to the risk mitigation and control exercised by front-line staff within business units, including line managers and desk heads. The 'second line of defence' includes support functions, such as risk management, compliance, legal, human resources, finance, operations and technology. And the 'third line of defence' is the internal audit function that independently assesses the effectiveness of the processes created in the first two lines of defence, and provides assurance on those processes.

33 Recent FICC market enforcement cases suggest that this model has not always been effective in recent years. In particular, they show that firms were too reliant on the second and third lines of defence. These second and third lines often did not have sufficient knowledge, expertise, information or authority to provide effective control or oversight. They were functionally and physically separate from the activities of traders and sales people. At the same time, effectiveness of the first line was undermined by a lack of clarity about the standards front office staff were expected to adhere to, including how they should handle conflicts of interest. An example of such failings was provided by the November 2014 foreign exchange (FX) enforcement actions, where the FCA stated:

'Between 1 January 2008 and 15 October 2013, ineffective controls at the banks allowed G10 spot FX traders to put their banks' interests ahead of those of their clients, other market participants and the wider UK financial system. The banks failed to manage obvious risks around confidentiality, conflicts of interest and trading conduct...

Firms could have been in no doubt, especially after Libor, that failing to take steps to tackle the consequences of a free for all culture on their trading floors was unacceptable. This is not about having armies of compliance staff ticking boxes. It is about firms understanding, and managing, the risks their conduct might pose to markets'.⁽²⁾

34 The BIS Review of Principles for the Sound Management of Operational Risk⁽³⁾ also highlighted similar shortcomings in relation to: inappropriately classified responsibilities across the three lines of defence; difficulty in showing independence in FLOD risk reviews; and a lack of quality assurance in the second line of defence.

35 The Review has heard of a number of industry initiatives in train that go some way to addressing these problems. Many of these developments have been on the sell-side, reflecting

(1) www.bankofengland.co.uk/prd/Documents/publications/cp/2015/cp615.pdf.

(2) www.fca.org.uk/news/fca-fines-five-banks-for-fx-failings.

(3) www.bis.org/publ/bcbs292.pdf. The BIS Review recommends action in the following areas: improving the implementation of operational risk identification and assessment tools; enhancing implementation of change management programmes; strengthening the implementation of the three lines of defence, especially by refining the assignment of roles and responsibilities; and improving board and senior management oversight.

the serious weaknesses that emerged. But the lessons are often also germane to the buy-side, for example in relation to ensuring best execution.

36 One response in a number of firms has been to embed compliance officers within the front line operations. By connecting the second and first lines of defence, firms have found that supervision is more effective. More importantly, the desk head has easy access to support from compliance to help inform his/her decisions. Firms on both the sell and buy-side are developing better tools for monitoring trading and communications to help detect market abuse and monitor best execution, as discussed in Section 6.3.2.

37 Firms have identified ways to communicate messages about the importance of good conduct from senior executives more effectively to traders. This includes direct face-to-face interaction with senior members of the firm, and videos of senior executives recalling difficult trading situations they were involved in and how they resolved them. A number of firms run courses to inform traders of what is acceptable conduct, with the more effective approaches typically involving interactive discussions and debates between trading teams and others responsible for risk, using real life examples.

38 Change in this area will be supported by the introduction of the SM&CR. This will reinforce the accountability of senior business managers, and also require firms to certify individuals who could pose a risk of significant harm, which will include many traders. Section 5.1.3.2 recommends that these requirements be extended to a wider range of regulated firms active in FICC markets.

Information handling and conflicts of interest

39 The appropriate use of confidential information is central to the viability of the market making model. But inappropriate handling of information was at the heart of many of the recent cases of FICC market misconduct, including inappropriate external communication in relation to benchmark fixings, and misuse of information to front run client orders.

40 There has been mixed progress on improving the handling of confidential data and managing conflicts of interest. Sell-side firms have typically developed detailed documentation and registers on conflicts of interest, but it is unclear to what extent these sometimes lengthy documents are of practical use to trading and sales staff. More promising developments include thorough reviews of the use of confidential information and increased scrutiny of trades that are likely to be subject to conflicts or have a significant impact on market prices. These are likely to be most effective when backed up with direct oversight by front office managers and when high quality locally-located compliance staff are available to advise in cases of uncertainty.

41 Buy-side institutions are also vulnerable to potential conflicts of interest. For example, firms may be in receipt of

confidential information (such as during a primary issuance sounding) and conflicts may arise between an asset manager and its client or between fund managers within the same firm. The FCA's thematic review of asset management firms and the risk of market abuse found deficiencies in some buy-side firms in their ability to: identify when they were in receipt of inside information; control access to, and manage disclosure of, inside information; and use pre-trade controls and post-trade surveillance tools to prevent insider dealing and market manipulation.

42 Existing FCA rules and guidance (such as Principle 8 of the FCA Principles for Businesses) require firms to manage conflicts of interest fairly, both between themselves and their customers and between a customer and another client. Regulatory reforms are also in train to address some of the vulnerabilities related to confidential information. But changes in regulation need to be accompanied by cross-industry work to make further progress in this area. Further steps are needed to strengthen the management of conflicts, including through: improved conflict identification; monitoring of information barriers; and functional separation where necessary. There is still a lack of clarity in some areas, and existing codes and guidance appear insufficient to provide clarity to sales and trading staff. The proposed FMSB's work to produce case studies on areas of uncertainty should help in this area.

5.3.3.5 Fostering greater collaboration by market practitioners

43 Responsibility for developing and operating effective control and governance structures in the areas identified in this section, and elsewhere, lies with individual firms. Change is only likely to have lasting impact when it has strong ownership by senior management, is well aligned with firms' business strategies, and has a strong practical bias. As discussed above, firms have already taken a number of important steps. But progress overall has been uneven. Responses to the Review strongly supported the idea of identifying better mechanisms for sharing and promoting good practice, to help ensure a more consistent approach and maintain the momentum for change.

44 A number of mechanisms already exist in this area. The FCA has an ongoing series of wholesale market thematic reviews.⁽¹⁾ And firms meet in various formal or informal groups periodically. But the Review's analysis suggests that there is a strong case for complementing these approaches with a more coherent FICC-wide approach. One of the key objectives of the proposed new FMSB would be to promote adherence to standards by sharing and promoting good practices on control and governance structures around FICC business lines, as outlined in Section 4.3.2. The Review

(1) www.fca.org.uk/news/list?ttypes=Thematic+Reviews.

recommends that an early priority for such a body should be to set out a credible work programme for achieving this, including ways it might enable market participants to engage

proactively with regulators to identify areas of both positive behaviour and weakness, and open a two-way dialogue on possible solutions.

Box 18

Priority areas for raising standards of governance and control structures in FICC markets

This box summarises some of the most important priorities for FICC firms and market practitioners to deliver lasting improvements in governance and control structures identified during the Review's outreach and consultation.

Firm-level governance (see Section 5.3.3.1)

- Ensuring that the board has sufficient independence to provide effective challenge;
- Ensuring that the board has sufficient expertise at its disposal to scrutinise business areas; and
- Developing the structures and processes needed for management to promulgate the board's conduct strategy effectively throughout the organisation.

Incentivising good conduct (see Section 5.3.3.2)

- Increasing the weight placed on non-revenue factors in pay decisions;
- Developing measures of conduct that recognise good as well as bad behaviour; and
- Embedding those measures into pay, promotion and disciplinary decisions.

Conduct monitoring (see Section 5.3.3.3)

Conduct metrics

- Improving the use of existing firm-level data to monitor conduct;
- Creating new tools, including robust surveys of firm culture, to identify potential conduct vulnerabilities and their drivers; and

- Exploring the scope for greater transparency over conduct by firms, including better disclosure of fines.

Whistleblowing

- Delivering senior-level endorsement of whistleblowing programmes;
- Developing effective formal and informal escalation procedures to support the raising of concerns at an early opportunity; and
- Strengthening the effectiveness, and staff awareness, of structures for protecting whistleblowers.

Effective first line of defence and information management (see Section 5.3.3.4)

Refocusing oversight on the first line of defence

- Fostering strong ownership of risk by business heads while also developing an effective challenge culture;
- Supporting the first line of defence with effective ways to identify and manage risks;

- Reinforcing standards of acceptable trading practice through effective training; and

- Improving the support provided by the second line of defence including through strengthened status, quality and accessibility.

Information handling and conflicts of interest

- Developing a deeper understanding of where conflicts of interest may occur, including the use of confidential information;
- Identifying effective controls to reduce and manage conflicts of interest; and
- Embedding these procedures and relevant future work on guidelines and case studies into firm training.

5.4 Improving the alignment of remuneration and conduct risk

1 Remuneration is one of the central drivers of conduct in FICC markets. So developing effective regimes to align remuneration with conduct risk is an important priority in the drive towards higher standards of professionalism. This section outlines the significant progress that has been made and suggests two important areas for further attention: first, the increasing role of fixed pay; and, second, the extent to which conduct risk is integrated into firms' remuneration decisions. The Financial Stability Board (FSB) has announced its intention to conduct further analysis in this area and Box 19 makes a number of recommendations for further action.

5.4.1 Where was fairness and effectiveness deficient?

2 It is now widely recognised that, pre-crisis, bonuses and other elements of the variable pay of staff at many firms were too closely linked to short-term revenues, with insufficient weight placed on longer-term value generation and risk for the firm as a whole (including risk related to conduct). These pay structures both incentivised excessive individual risk-taking and left firms and their shareholders to absorb losses when risks (including misconduct fines) materialised. The desire to maximise short-term personal returns was evident in many of the FICC market misconduct cases that have come to light, and respondents to the Review's consultation identified remuneration as a central element in the drive to improve incentives and governance across financial markets.

5.4.2 What has already been done to put this right?

3 Significant steps have been taken by national and international authorities aimed at improving the alignment of remuneration with prudent risk-taking. The overarching global approach is set out in the FSB's Principles and Standards on Sound Compensation Practices, issued in 2009.⁽¹⁾ These state in particular that compensation should be:

- adjusted for all types of risk — including reputational and compliance risk;
- symmetric with risk outcomes — a substantial proportion of senior risk-takers' compensation should be variable and paid on the basis of individual, business-unit and firm-wide measures that adequately measure performance;
- sensitive to the time horizon of risks — a substantial proportion of senior risk-takers' variable compensation should be paid out gradually over a period of years, with the unpaid component capable of being adjusted or cancelled in the event of negative performance of the firm or business-line (so-called 'malus'); and

- composed of assets that incentivise appropriate risk-taking — a substantial proportion of variable compensation should be awarded in shares or other non-cash instruments that create incentives aligned with long-term value creation and the time horizons of risk.

4 In its November 2014 Progress Report,⁽²⁾ the FSB concluded that implementation of the Principles and Standards had been essentially completed by member states, although some jurisdictions continued to refine their regimes. In the United Kingdom, the authorities have consulted on proposals to extend the length of deferral for senior bank managers' bonuses from a period of between three to five years (the current minimum period under the EU Capital Requirements Directive) to up to seven years, exceeding the minimum periods stipulated in other countries. Deferred pay is required to be reduced or cancelled in the event of employee misbehaviour, material downturns in firm performance, or failures of risk management.

5 The European Union has also put in place remuneration requirements for alternative fund managers and providers of certain types of collective investment funds under the Alternative Investment Fund Managers Directive and the Undertakings for the Collective Investment of Transferable Securities Directive. These are similar to those that apply to banks and investment firms, including the requirement for part of variable remuneration to be deferred and paid out only if that payment is sustainable and justified.

6 For banks in the United Kingdom, the PRA has introduced a rule on 'clawback',⁽³⁾ allowing firms in certain circumstances to reclaim bonuses even after they have been paid, for up to seven years (with proposals being considered to extend this in certain circumstances to ten years for senior managers). The FCA is also considering the introduction of a rule on clawback, and consulted on it as part of a wider package of measures during 2014. In addition, the United Kingdom is subject to EU-wide rules, which go beyond the FSB standards in a number of ways, notably in including a maximum ratio of variable to fixed pay (the so-called 'bonus cap').

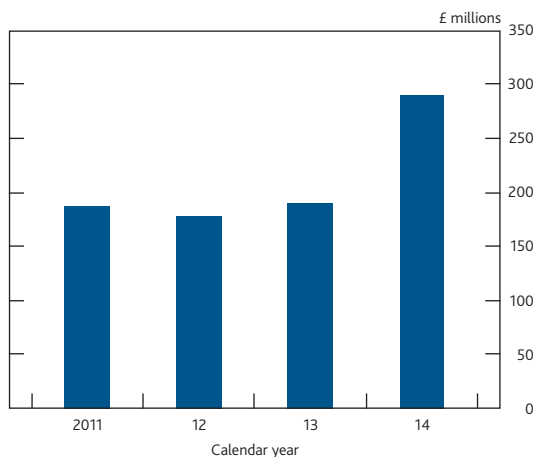
7 Recent events help to illustrate the impact of these changes. A notable development has been the application of malus in cases of misconduct and failures of risk management. Since the implementation of the malus rule in December 2010, major firms in the UK have made deductions from deferred variable remuneration for individuals implicated in misconduct in FICC markets and elsewhere, as shown in **Chart 6**. Banks have also made significant deductions from current-year firm-wide bonus pools in respect of misconduct and other risk management failures.

(1) www.financialstabilityboard.org/what-we-do/policy-development/building-resilience-of-financial-institutions/compensation/.

(2) www.financialstabilityboard.org/wp-content/uploads/r_141104.pdf.

(3) www.bankofengland.co.uk/prd/Documents/publications/ps/2014/ps714.pdf.

Chart 6 Total reductions to unpaid deferred bonuses^{(a)(b)} (malus) by major UK banks



Source: Published accounts — Barclays, HSBC, Lloyds, RBS and Standard Chartered.

(a) Excluding figures for individuals who resigned or had their contracts terminated.
(b) The figure for 2014 was amended on 26 June 2015.

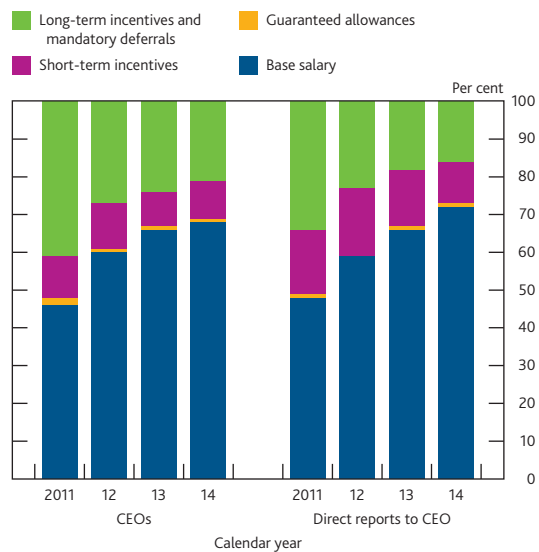
5.4.3 Where are the remaining gaps?

8 Taken together, these steps represent considerable progress at both national and international level. But the extent to which reforms to compensation structures will bring about a lasting reduction in incentives to engage in misconduct across financial markets as a whole will depend on how those reforms interact with wider developments in the industry. Two issues in particular merit further attention: first, the increasing role of fixed pay; and, second, the extent to which conduct risk is integrated into firms' remuneration decisions.

9 Recent data suggest that fixed pay (salaries and certain types of allowance) is forming an increasing proportion of total pay for major banks operating in the European Union, with an accompanying fall in the proportion of variable pay (bonuses and long-term incentive plans). **Chart 7** shows the remuneration of CEOs and their direct reports over the past four years. The proportion of CEO pay comprising base salary rose from 46% to 68% during that period, while for their direct reports the figure rose from 48% to 72%. The proportion of CEO pay that may be subject to long-term adjustments and deferrals fell from 41% to 21%, while for their direct reports it fell from 34% to 16%.

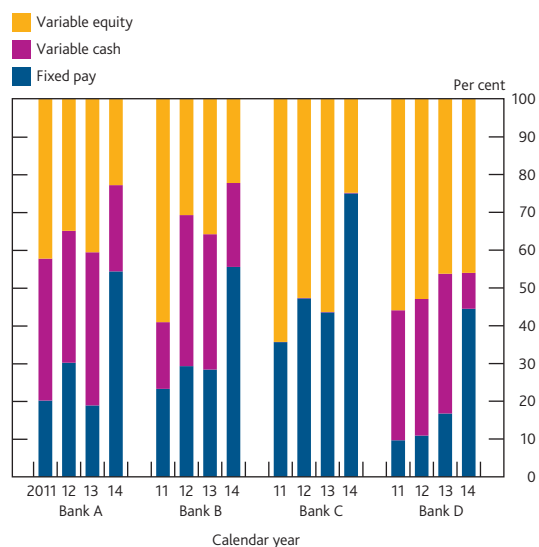
10 A similar trend is visible in data for senior non-board executives at a number of major UK banks (**Chart 8**). While it is possible that part of this trend reflects a cyclical slowdown in financial market activity, firms have also said that a significant driver has been the impact of remuneration regulation since 2010 and the need to retain staff who might otherwise move to less regulated sectors. One way to retain staff has been to limit the proportion of their pay that is subject to adjustment (ie the variable portion) and shift the balance towards the fixed portion, which is paid in cash and is not subject to longer-term adjustments such as deferral, malus or clawback. The EU bonus cap has added a further

Chart 7 Compensation structure of CEOs and direct reports to CEOs of major banks operating in the European Union



Source: Mercer Oliver Wyman.

Chart 8 Breakdown of pay for the eight highest paid senior non-board executives at four major UK banks^(a)



Source: Published accounts.

(a) Estimated future pay-outs of long-term incentive plans not included.

dimension to this debate by limiting the ratio of variable to fixed pay.

11 In November 2014, the Chancellor of the Exchequer asked the Review to consider the challenges posed by this development.⁽¹⁾ There are two reasons why it may be a cause for concern:

- First, as the variable proportion falls, the incentive effect of remuneration rules weakens, because a shrinking proportion

(1) www.gov.uk/government/uploads/system/uploads/attachment_data/file/377192/CX_MC_201114.pdf.

of total pay is potentially subject to longer-term adjustments. This limits the potential for variable pay to exercise a positive influence on the day-to-day decision-making of employees, and undermines efforts to align compensation with risk.

- Second, as the fixed proportion of total pay rises, firms accumulate larger fixed cost bases which cannot be adjusted easily in times of stress.

12 More generally, poorly aligned incentive structures may result in individual conduct that leads to significant losses and reputational damage for a firm.

13 The Review's work also highlighted the importance of ensuring that conduct risk is integrated into firms' remuneration decisions. The FSB's November 2014 Progress Report noted that banks had continued to improve their governance frameworks for remuneration, and better practices were being seen in terms of *ex-ante* adjustment of remuneration for risk. However, challenges were reported to remain in the application of risk metrics to business lines and individuals, and the development of transparent and consistent policies and procedures to guide the use of discretionary pay awards. The Review has heard a similarly mixed picture in its own outreach. Some firms said they have had success in introducing so-called 'balanced scorecards' for assessing remuneration awards, using both traditional revenue and new conduct-based metrics. But the robustness of metrics used, and the consistency of application, appears to vary quite widely, as discussed in Section 5.3.3.2. Both President William Dudley⁽¹⁾ of the Federal Reserve Bank of New York and Governor Daniel Tarullo⁽²⁾ of the United States Federal Reserve Board have noted the importance of remuneration structures in driving culture and behaviour.

President Dudley, in his speech in October 2014, pointed to a number of innovative potential conduct-related measures in that direction.

14 These concerns, and the importance of effectively managing conflicts of interest relating to remuneration, are not limited to banks. For example, a recent FCA enforcement case involving a major asset manager highlighted a practice known as 'cherry-picking' in which traders at the firm had incentives to favour funds paying higher performance fees to trigger higher pay.⁽³⁾ These issues may become of greater systemic importance if the relative size of trading volumes and pay levels continues to shift towards the buy-side, as they appear to have done in recent years.⁽⁴⁾

15 Following its March 2015 plenary meeting in Frankfurt, the FSB announced its intention to review how the incentives created by reforms to remuneration structures (among other things) had helped to reduce misconduct, and whether any additional measures were needed.⁽⁵⁾ Given the global nature of financial markets, it is right that this analysis should proceed at an international level. Box 19 suggests two potential areas for further investigation by the FSB. The Review therefore recommends that:

- **4d: The FSB should examine further ways to improve the alignment between remuneration and conduct risk at a global level.**

16 Closer focus on conduct may also call for fresh consideration of the appropriate components of remuneration packages, in particular the current preference for using cash and equity (**Chart 8**). Box 20 considers whether the use of debt structures could help to strengthen the alignment between remuneration and conduct risk.

(1) www.newyorkfed.org/newsevents/speeches/2014/dud141020a.html.

(2) www.federalreserve.gov/newsevents/speech/tarullo20141020a.pdf.

(3) www.fca.org.uk/your-fca/documents/final-notice/2015/aviva-investors.

(4) <http://newfinancial.eu/wp-content/uploads/2015/02/Feeling-the-squeeze-New-Financial-report-on-pay-Feb-2015.pdf>.

(5) www.financialstabilityboard.org/wp-content/uploads/Press-Release-FSB-Plenary-Frankfurt-final-26Mar15.pdf.

Box 19

Ways in which the FSB standards for remuneration might be developed

The FSB might consider developing further analysis on the role of remuneration in reducing the likelihood of conduct failures, building on the points made in its November 2014 Progress Report.⁽¹⁾ While consideration has been given to *ex-post* measures that may apply after a conduct failure (such as malus and clawback), less attention has been given to the ways in which remuneration structures may anticipate conduct-related risks and reduce the likelihood of misconduct in the first place. At one level, this might involve firms attaching to malus and clawback clauses more explicit conduct-based triggers that are clearly linked to measures such as conduct costs, balanced scorecards and client satisfaction with standards of professional conduct. At another level, this could involve revisiting the structure and the qualitative components of both fixed and variable remuneration. In that regard, two potential lines to explore are discussed below.

- **Ensuring that an appropriate proportion of remuneration is variable.** If the reduction in the proportion of remuneration that is subject to adjustments persists, the incentives towards good conduct will be weakened. FSB Standard 6 recommends that a 'substantial' proportion of material risk-takers' compensation should be variable. To underpin this standard, the FSB could consider clarifying expectations around levels of variability in remuneration. Key to this will be an analysis of how different proportions of variable pay may exert more or less influence over the

decisions and conduct of individuals: for example, could a structural shift to receiving the bulk of remuneration as fixed pay lead to complacency and a lack of attention towards good standards of conduct? What are the practical and legal challenges? What measures can be taken to ensure that a lower level of variable remuneration is still capable of driving good conduct? And how can this be achieved while retaining the flexibility for firms to pay no variable remuneration in situations where such payments would be unjustified?

- **Promoting the use of a wider range of instruments and payout structures.** The FSB could give further thought to how the composition of remuneration incentivises conduct. In particular, further consideration could be given to the types of instruments used in remuneration. Although the FSB's Principle 7 states that 'the mix of cash, equity and other forms of compensation must be consistent with risk alignment', it is rare at present, particularly in banks, for remuneration packages to comprise anything other than cash and equity (typically in the form of shares). As discussed in Box 20, there could be merits in applying a more varied combination of equity and debt instruments as part of variable pay, including debt-like structures such as 'performance bonds' which may have particular advantages from a conduct risk perspective. In situations where the variable proportion of remuneration is inadequate to incentivise good conduct, the FSB may wish to consider whether it is desirable to extend the use of such instruments to fixed remuneration as well.

(1) See Section III.2.1, www.financialstabilityboard.org/wp-content/uploads/r_141104.pdf.

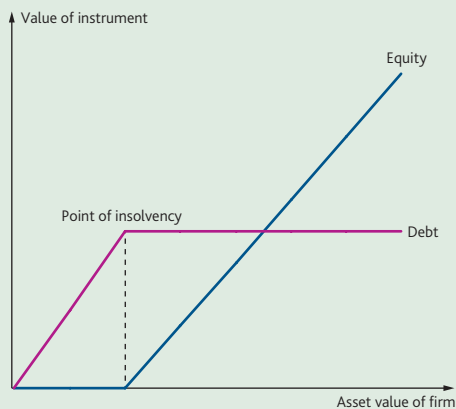
Box 20

Illustrating the conduct incentives of equity vs debt compensation

In order to meet Standard 8 of the FSB's Principles and Standards on Sound Compensation Practices, which calls for a significant part of total compensation to be paid in a non-cash form, firms have so far shown a preference for the use of equity (Chart 8) rather than debt instruments. But the incentives imposed by equity differ significantly from those of debt, not least in the area of conduct risk.

Chart A gives a stylised illustration of how a firm's equity and debt values vary with the value of the firm's assets. While equity-based remuneration has some useful risk-sharing properties (in a downturn, equity starts to lose value sooner than debt), it also offers potentially unlimited upside, which may encourage a 'double or quits' approach to risk-taking and a lack of attention to good standards of conduct as equity holders try to drive up the firm's value even further. Debt-based remuneration on the other hand offers limited upside even if the value of the firm increases, while at the same time carries exposure to downside risk if the value of the firm falls. This implies that the use of debt-based structures in remuneration could help to temper the conduct and risk-taking incentives of equity-based pay.

Chart A Stylised values of equity and debt instruments as a firm's asset value changes



Traditional debt instruments (such as that illustrated in Chart A) may not necessarily be ideal for this purpose as typically they only start to lose their value at or near default, which may be too late to impose the desired conduct incentive effect. For firms operating in the European Union, there are also detailed eligibility criteria for the use of debt in remuneration, such as a prescribed maximum rate of return, which may pose further implementation challenges.

Possible mechanism for implementation

An alternative would be to implement a debt-like structure that is capable of more directly incentivising good conduct.

One such structure could be the 'performance bond' suggested by President William Dudley of the Federal Reserve Bank of New York. Under this type of arrangement, part of the employee's remuneration could be paid into an account where it remains held for a substantial period of time. Funds in the account could be drawn on by the employer to meet conduct-related costs such as regulatory fines, although the employer could also attach other triggers or conditions as part of the employment contract. If no such costs are incurred, funds would be released to the employee at the end of each holding period. Consideration might be given to the proportionate application of such measures; for example how it might be applied to senior managers and risk-takers.

Proposals to implement this type of structure would need to consider some important implementation challenges:

- Shareholders have been reluctant to support the use of debt instead of equity in remuneration, fearing that it could weaken senior management's incentives to act in shareholders' best interests. Firms may also seek to push up pay levels to compensate for the more limited returns from debt compared to equity-based awards. Both these concerns may be addressed by ensuring that senior management receive an appropriate combination of cash, equity and debt-based remuneration. The inclusion of debt as part of the award package could provide a better balance to the current practice of pure cash-and-equity based awards. And in the case of the 'performance bond' structure, there should be an added advantage for shareholders in that a proportion of conduct costs will be shifted from them to the staff whose funds will be used to meet those costs.
- Firms may cite legal, regulatory and structural requirements of debt issuance as making payment in debt instruments costly and impractical. The issuance of new debt instruments to meet changing remuneration requirements each year may incur substantial costs, for example to meet regulatory rules on prospectuses and to take account of changing interest rate conditions. These concerns could be addressed by using a debt-like structure like a 'performance bond', which could be less complex because the terms do not need to conform to external market conventions.
- It has been noted that firms may seek to remunerate staff in a debt instrument that pays exceptionally high interest rates in order to compensate them for the potential future loss of earnings, thus partially or completely undermining the intended positive incentive effect. To address this concern, firms would need to take into account the overall incentive effect of any debt-like structure when putting it in place.

6 Stronger, more forward-looking tools for firms and regulators to detect and address misconduct

1 This section examines ways of dealing with those who engage in misconduct in FICC markets, looking both at how to increase the likelihood of catching wrongdoing at an early stage (surveillance), and how to increase the expected cost to those found to be responsible (penalties). Although it is often assumed that these tasks fall primarily to regulators, they are in truth shared responsibilities between firms and authorities. An important lesson from the enforcement actions of recent years is that firms must ensure they have the means to detect wrongdoing (since they are closest to the actions of their own staff and counterparties) and act decisively when it is detected (since they stand to lose the most, financially and reputationally).

2 The Review's consultation identified widespread support for: (i) greater focus on punishment for individuals in addition to action against firms, and (ii) a more forward-looking approach to reducing misconduct in FICC markets, including earlier and more comprehensive detection. After reviewing the sources of the problems and the steps already taken to address it, this section focuses on four areas where action is needed:

(i) extending the UK criminal sanctions regime for market abuse; (ii) making use of IT developments and other tools to help detect misconduct at an earlier stage; (iii) forward-looking supervision and early intervention measures by regulators; and (iv) ensuring that FICC firms comply with suspicious transaction reporting requirements.

6.1 Where was fairness and effectiveness deficient?

3 Evidence from enforcement actions and the Review's outreach with market participants suggests that, prior to the crisis, there was a culture of impunity in some parts of FICC markets, framed by a perception that misconduct would go either undetected or unpunished. Benchmark manipulation, and attempted manipulation, occurred in some cases over periods of several years. Yet the language used in electronic communications cited in enforcement cases suggests that those involved did not expect their behaviour to be identified by management, internal compliance or external supervisors.

4 Respondents to the Review identified a number of potential reasons for this apparent sense of impunity:

- First, the probability of detection by firms' own management or risk functions was perceived to be low in some cases, reflecting the progressive delegation of risk responsibilities to the second and third lines of defence described in Section 5.3, and underinvestment in tools for monitoring the behaviour of staff and counterparties.
- Second, those factors were felt to have been particularly pronounced in some FICC markets, reflecting a combination of patchy internal data sources (caused, for example, by greater reliance on voice rather than electronic trading systems), and a perception of limited formal guidance on standards and external scrutiny — particularly in less regulated markets such as spot FX. FICC markets that fall outside the scope of the existing UK market abuse regime also lay outside of the scope of the requirement to report suspicious transactions to the FCA under the Suspicious Transaction Reporting (STR) regime — an important tool for detecting and deterring market abuse in equity and other markets.
- Third, there was evidence of a reluctance to punish misconduct by high performers in some firms even when it was detected, which may have been heightened where trading in FICC markets was contributing especially heavily to firms' overall revenues.
- And, fourth, there was a perception that civil or criminal enforcement by the authorities was not a commonly used tool in wholesale FICC markets in the pre-crisis period. In particular, the range of instruments covered by the UK civil and criminal sanctions regimes against individuals and firms had failed to keep pace with the move towards organised trading platforms in these markets.

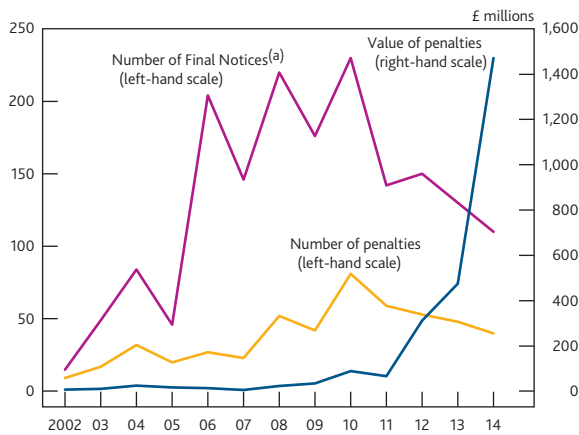
6.2 What has already been done to put this right?

Regulatory and criminal penalties

5 Since the financial crisis, significant steps have been taken to maintain and enhance the effectiveness of enforcement and criminal sanctions for market abuse in the United Kingdom. The FSA and subsequently the FCA have adopted a more active credible deterrence approach since 2008, and in 2010

introduced a new policy to impose penalties in a more transparent and consistent manner.⁽¹⁾ As a result, the regulators materially increased the scale and breadth of their enforcement actions across a number of products, markets and practices, with the objective of effecting changes in behaviour and culture, and deterring misconduct in financial markets (Chart 9).

Chart 9 FCA regulatory actions

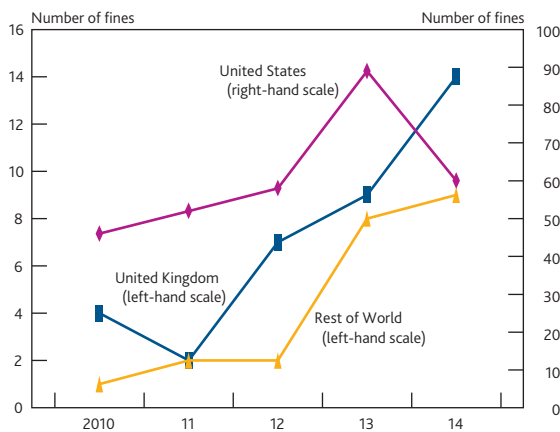


Source: FCA Final Notices 2002–14.

(a) Includes only Final Notices issued by FSA and FCA enforcement.

6 Within this total, fines levied in FICC markets, including those relating to Libor and foreign exchange misconduct, have risen sharply since 2010. Similar trends have been seen in other jurisdictions (Chart 10).

Chart 10 International comparison of FICC fines^(a)



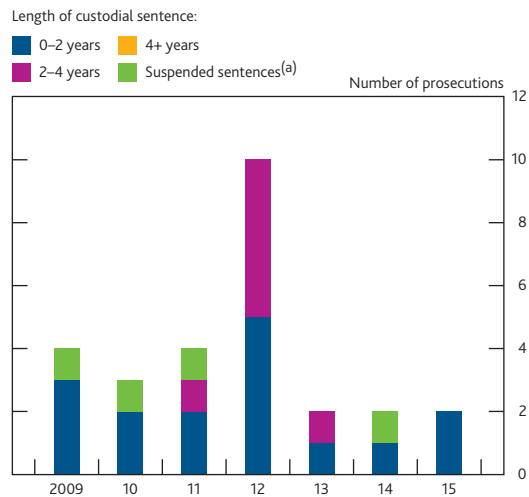
Source: Corlytics.

(a) Data include regulatory fines and certain criminal and civil market abuse penalties from major financial centres.

7 The UK authorities have sought to focus on individual accountability in their enforcement work wherever possible, including through criminal prosecutions. Across financial markets as a whole, there have been 27 successful prosecutions by the FSA/FCA since 2009 for insider dealing, 23 of which have resulted in a custodial sentence of up to four years (Chart 11). A criminal conviction for conspiracy to

defraud has been secured in relation to Libor misconduct,⁽²⁾ while another trial and other investigations are ongoing in relation to both Libor and FX manipulation.⁽³⁾ Building on the experience developed in recent years through prosecuting market abuse offences, the FCA is now working with a number of domestic and international partners including the National Crime Agency and the Serious Fraud Office with a view to tackling the most sophisticated types of offending.

Chart 11 Successful prosecutions for insider dealing since 2009



Source: FSA/FCA Annual Reports.

(a) Suspended sentences reflect substantial co-operation provided to FSA/FCA and/or the particular personal circumstances of the individual involved.

8 The FCA has also taken regulatory enforcement action, with 85 Final Notices in respect of market abuse issued between April 2003 and March 2015. Of these, 75 were to individuals, including for example action taken for market abuse in the gilts market.⁽⁴⁾ In addition, the FCA has imposed sanctions relating to similar failings in other FICC markets, such as the Libor, FX and gold fixing cases.⁽⁵⁾

9 The Senior Managers and Certification Regimes (SM&CR), which come into force in March 2016, will place greater emphasis on individual responsibility within UK banks, building societies, credit unions and PRA-designated investment firms (and potentially a wider range of FICC market participants as proposed in Section 5.1.3.2). This should make it easier to identify the matters for which a senior individual within a firm is responsible, and therefore easier to hold individuals to account when misconduct occurs.

(1) www.fsa.gov.uk/library/communication/pr/2010/036.shtml.

(2) www.sfo.gov.uk/press-room/latest-press-releases/press-releases-2014/libor-manipulation-banker-pleads-guilty-to-conspiracy-to-defraud.aspx.

(3) www.sfo.gov.uk/press-room/latest-press-releases/press-releases-2012/libor-sfo-to-investigate.aspx and www.sfo.gov.uk/press-room/latest-press-releases/press-releases-2014/forex-investigation.aspx.

(4) www.fca.org.uk/your-fca/documents/final-notice/2014/mark-stevenson.

(5) www.fca.org.uk/static/documents/benchmark-fines.pdf.

10 In addition to these steps, the UK criminal regime for market abuse (which already covered Libor) has been extended to cover seven major FICC benchmarks on the basis of the Review's August 2014 recommendation (see Section 3.2). In relation to these benchmarks, it is now a criminal offence to make misleading statements or create a false or misleading impression of the value of investments that could affect them.

11 In July 2016, the Market Abuse Regulation (MAR) will come into force. Box 21 provides a summary of the provisions set out in the current market abuse regime and how the position will change with the introduction of MAR.

Firm-level surveillance

12 Firms have made progress developing more sophisticated techniques to monitor for misconduct by traders since the crisis and in light of recent enforcement actions. Increased investment in surveillance systems, and wider availability of market-wide pricing and trading data in some FICC markets, has improved the scope for firms to perform comparative analysis of trading outcomes. The approaches used and the number of trades surveyed vary across market participants, with larger horizontally integrated firms generally employing a wider range of surveillance techniques. The Review's market outreach indicated that some firms have increased the extent to which more sophisticated techniques — such as analysis of unusual patterns of trading behaviour or *ad hoc* reviews of large or particularly profitable trades — are employed in the detection of misconduct.

13 Firms with a significant volume of voice-brokered trading face a particular surveillance challenge, because of the difficulties of integrating electronic trade data with voice recording systems, instant messaging and email systems. In these cases, some FICC market participants have begun to move away from manual monitoring of voice communication towards more electronic techniques based on the identification of key-words. Such techniques remain at an early stage of technological development and their effectiveness can currently be limited by the wide variation in words used. Alternative approaches that monitor written electronic communication channels (eg instant messaging or email) for key-words (so-called 'lexicon-based approaches') have been more widely adopted and can help to improve surveillance levels. But traders who know they are being monitored may attempt to switch to different channels and new words. And staff reviewing the results of key-word surveillance require a detailed understanding of the activities taking place in order to identify genuine areas of concern.

Regulatory surveillance

14 In recent years, the supervision of wholesale market conduct has become more forward-looking in many countries, reflecting the experience of the financial crisis. For example, in

July 2014 the FCA's Market Watch newsletter outlined the application of the STR regime to fixed income markets.⁽¹⁾ And the implementation of MAR in July 2016 will require firms to report suspicious transactions across a wider range of FICC markets.

15 MiFID2 extends general transaction reporting requirements beyond instruments admitted to trading on traditional exchanges to include all regulated trading venues, derivatives which have instruments trading on trading venues as an underlying, and derivatives related to those instruments. As extended reporting requirements come into force with MiFID2 from January 2017, firms in the United Kingdom and across the European Union will be required to provide data on transactions across a wider range of FICC markets, and regulators will have access to a progressively larger data sets to perform market surveillance, using a variety of techniques and technologies.

16 As well as reaching out to participants to discuss current and emerging surveillance issues, the FCA has announced plans to deliver an industry education programme on MiFID2 transaction reporting to provide market participants with the knowledge and skills to improve transaction reporting in their firms. This should lead to improved overall data quality and enable more effective monitoring.⁽²⁾

6.3 Where are the remaining gaps?

17 Recent high profile FICC markets enforcement actions have resulted in very significant fines for firms, and have shown that conduct that undermines the integrity of financial markets will not be tolerated by regulators. However, the Market Practitioner Panel (MPP) noted in its response to the Review's consultation that it is possible firms may begin to treat large enforcement fines as a cost of doing business, reducing the potential deterrent effect. To bring about a more lasting change in behaviour, responses to the Review highlighted four main themes. First, the importance of holding individuals to account for misconduct in FICC markets, in particular through the possibility of longer jail sentences. Second, the importance of improving firm-level surveillance and penalties to detect and deal with misconduct without the need for regulatory intervention. Third, the need to identify and deal with cases of misconduct earlier in the cycle, through a combination of more effective surveillance, a forward-looking supervisory strategy and — where necessary — 'early intervention' by regulators. And fourth, the importance of suspicious transaction reporting requirements. These are considered in turn below.

(1) www.fca.org.uk/static/documents/newsletters/market-watch-46.pdf.

(2) www.fca.org.uk/static/channel-page/business-plan/business-plan-2015-16.html.

Box 21

Scope of the civil and criminal market abuse regime in the United Kingdom

The scope of the market abuse framework in the United Kingdom is established in both civil regulation and criminal law.

The current market abuse regime

The current UK civil market abuse regime prohibits two broad categories of behaviour: insider dealing and market manipulation. The regime was introduced in 2000, but was substantially updated in 2005 to implement the EU Market Abuse Directive (MAD).

Currently the regime applies only to behaviour 'in relation to':

- (i) 'Qualifying investments': including listed equities, UK government bonds, some corporate bonds and listed derivatives, admitted to trading on a 'prescribed market'.
- (ii) Other investments, including derivatives, the price or value of which depends upon or affects the price or value of a traded investment caught under point (i) above.

This produces a somewhat wider scope than it might at first appear, because a number of instruments that are in practice traded largely OTC are brought into scope by virtue of being also admitted to trading on a prescribed market. The regime also captures trading in any physical commodity that seeks to manipulate a related exchange-traded derivative.

In addition to this civil regulatory regime, the United Kingdom also has a criminal market abuse regime that establishes insider dealing offences and offences of market manipulation through misleading statements or impressions, and benchmark manipulation.

A significant proportion of FICC activity nevertheless falls outside the scope of the existing civil and criminal regimes, for example:

- (i) Unlisted bonds, interest rate swaps, credit and commodity derivatives that are traded OTC (provided the price or value of such instruments does not depend upon or affect the price or value of a traded financial instrument);

- (ii) Spot commodities (except in respect of behaviour that has a manipulative effect on a financial instrument admitted to trading); and
- (iii) Spot FX (except in respect of behaviour that has a manipulative effect on a financial instrument admitted to trading).

The future market abuse regime

A new Regulation relating to civil market abuse offences at an EU level has recently been agreed. From July 2016, MAD will be replaced by the Market Abuse Regulation (MAR).

Implementation of MAR will extend the scope of the UK civil market abuse regime to financial instruments on all regulated trading venues, including Multilateral Trading Facilities (MTFs) and Organised Trading Facilities (OTFs). In the context of market manipulation, MAR also specifically captures behaviour in relation to spot commodity contracts which are related to, or have an effect on, financial instruments traded on a venue.

In practice, this will mean that a greater range of FICC instruments are covered, as these are often not admitted to trading on the limited number of prescribed markets covered by the current regime. MAR will also introduce a new civil offence of benchmark manipulation. This will cover any financial benchmark by reference to which the amount payable under or value of a financial instrument is determined, which should include all FICC benchmarks.

These changes mean that the main areas of FICC not covered by MAR, absent any other changes, may be limited to:

- (i) The spot FX market (except in respect of behaviour that has a manipulative effect on a financial instrument admitted to trading); and
- (ii) Other markets which trade exclusively OTC (for example bespoke derivative contracts) and where the price or value of such instruments does not depend on or affect the price or value of traded financial instruments.

Sections 4.3.3 and 6.3.1 discuss these cases.

6.3.1 Extending criminal sanctions for market abuse

18 One barrier to the greater potential use of criminal sanctions against individuals suspected of engaging in market abuse in FICC markets is the limited scope of existing legislation. It is possible that these gaps in the scope of the criminal sanctions regime may have contributed to the sense of impunity that prevailed before the financial crisis, undermining overall confidence in market integrity. To close these gaps, some respondents to the consultation felt that the scope of the United Kingdom's criminal sanctions regime should be aligned with the forthcoming changes to the civil market abuse regime (outlined in Box 21).

19 Respondents also agreed that changes to the UK criminal sanction regime should be aligned with further changes in the European Union being introduced through the Criminal Sanctions Market Abuse Directive (CSMAD). CSMAD creates new minimum criminal standards for the offences of insider dealing and market manipulation, and makes manipulating or attempting to manipulate any benchmark a criminal offence. In 2014, the Government announced that the United Kingdom would not opt into the EU rules set out in CSMAD, but that the UK criminal sanctions regime for market abuse would be updated, and would be at least as strong. The recommendations below are designed to deliver that objective, and could be implemented as part of the forthcoming changes to the United Kingdom's criminal sanctions regime.

Extending the UK criminal sanctions regime for market abuse to a wider range of FICC markets

20 It is important to ensure that the scope and coverage of the regime reflects market developments and innovation. Maintaining the existing UK regime would allow individuals involved in market abuse to target instruments that fall outside the scope of criminal sanctions in the United Kingdom.

21 The UK regime also applies criminal liability to firms in respect of market manipulation, but it does not apply criminal liability to firms in respect of insider dealing. To ensure a consistent approach, the regime should be extended to apply criminal liability to firms for both market manipulation and insider dealing.

22 The Review therefore recommends:

- **1d: that the UK criminal sanctions framework for market abuse for individuals and firms be updated, through an extension to a wider range of FICC instruments (by including all of those covered under the Market Abuse Regulation).**

23 In Section 4.3.3, the Review also recommends a new statutory civil and criminal market abuse regime for spot foreign exchange, drawing on, among other things, the

recently announced work towards a global code. The extension of the scope of the UK criminal sanctions regime for market abuse should take this recommendation into account and allow for the possibility of further extension, with relevant consultation, to other OTC FICC markets outside the scope of MAR. HM Treasury may also wish to consider the extension of the current market abuse regime to include financial instruments and benchmarks which will be covered under MAR but which fall outside FICC, to achieve consistency across financial markets.

24 In addition the Ministry of Justice has been examining the case for a new statutory offence of a 'corporate failure to prevent economic crime', and the rules on establishing corporate criminal liability more widely. The Review suggests that HM Treasury considers whether further changes to corporate criminal liability for market abuse offences are appropriate and desirable once this work has concluded.

Lengthening the maximum criminal sentence for market abuse offences

25 In the United Kingdom, the maximum sentence for both insider dealing and market manipulation is seven years. However, this maximum sentence is lower than for other economic crimes such as fraud or bribery (which carry maximum sentences of ten years) or money laundering (which carries a maximum sentence of fourteen years). In terms of seriousness and the harm caused to society, market manipulation and insider dealing are comparable to other economic crime offences such as fraud, and so should carry the same maximum sentences of imprisonment.

26 When sentencing, a court will consider the circumstances of the offence and any applicable guidelines. It will also seek to identify any 'aggravating' and 'mitigating' factors which apply to the offence and the offender. 'Aggravating' factors identified by the courts as relevant for insider dealing cases include: breach of trust and the nature of the offender's employment; deliberate, planned and dishonest action; level of sophistication; steps taken to conceal criminal conduct; offences committed over a prolonged period involving a large number of individual trades; high levels of profit made; acting in a group; and the impact of the offence on overall public confidence in the integrity of the financial markets.

27 To date, no criminal market abuse case has been tried which involved a significant number of these aggravating factors, and so no case has yet resulted in a sentence being imposed at the maximum level of seven years. Indeed, as shown in **Chart 11**, the maximum sentence to date has been four years (although in one case the original sentence was five years four months, but reduced to four years through the application of a sentencing discount of 25% for a guilty plea). However, it is possible that in future there will be convictions in a case where there are a larger number of aggravating factors and either a very significant breach of trust by senior

individuals and/or sophisticated criminality by organised criminal groups. At present there would only be a limited amount of headroom under the maximum sentence for judges to impose an increased custodial sentence in order to mark the seriousness of the offence and send an appropriate general deterrent message.

28 The Review therefore recommends:

- **1e: that HM Treasury introduce legislation to lengthen the maximum sentence for criminal market abuse from seven to ten years imprisonment.**

6.3.2 Firms' role in misconduct surveillance and penalties

Firm-level surveillance

29 Substantial further development of firms' misconduct surveillance is required to deliver fully effective oversight of FICC markets, notwithstanding the progress noted earlier in this section. For example, the FCA's recent thematic review on best execution and payment for order flow identified firms' capability to monitor best execution — an important area of focus for buy-side firms — as an area for improvement. The FCA's review found that most firms lacked effective monitoring capability to identify failures in best execution and noted that one firm had incorrectly concluded that fixed income was generally out of scope of the best execution rule.⁽¹⁾

30 The forthcoming MiFID2 best execution regime will be enhanced to require execution venues across all types of financial instruments to disclose information on the quality of execution they provide publicly. It will also require that firms publicly disclose, on an annual basis, information on execution venues they have used most frequently and the quality of execution obtained. This will consolidate data on the quality of execution and improve the comparability of data for execution monitoring purposes. It is also anticipated, based on the European Securities and Markets Authority's technical advice to the Commission, that firms executing orders or taking decisions to deal in OTC products will be required to check the fairness of the price proposed to the client, by gathering market data used in the estimation of the price of such product and, where possible, by comparing with similar products.

31 The primary aim of firm-level surveillance is to identify and mitigate behavioural and business risk by monitoring individuals' conduct and identifying vulnerabilities. Firms have started to make progress in response to the limitations of existing surveillance solutions, including the use of new technology and analytics which go beyond the key-word surveillance and simple statistical checks previously used by firms to detect improper trading activity and discussed earlier in this section. Further details on some of these themes are outlined in Box 22.

32 As outlined in Section 4.3.2, it is expected that the activities of the proposed FICC Market Standards Board (FMSB) would include sharing and promoting good practices on control and governance structures around FICC business lines. The Review expects that the FMSB could play an important role over time in helping firms to share and promote good practice in relation to the development of successful monitoring techniques to enhance surveillance and oversight of FICC trading.

Firm-level penalties

33 Firms have primary responsibility for responding to individual instances of misconduct and should have sufficiently strong sanctions in place to deter bad behaviour. Respondents to the consultation rightly noted the importance of following due process in investigating such cases. However, the Review is concerned that more effective action may still be constrained in some cases by insufficiently challenging internal cultures, or concerns to protect corporate reputations.

34 The appropriate response to these issues must be a fundamental change in approach by firms. As discussed in Sections 5.4 and 5.1, tools that could be used to strengthen this response further include: reducing an individual's bonus through the use of malus or clawback, or disclosure to another firm of an individual's misconduct through a detailed regulatory reference.

6.3.3 Forward-looking supervisory and early intervention actions

35 Enforcement investigations are costly both for regulators and for firms, and are often concluded a significant time after misconduct took place. Where misconduct, or the potential for misconduct, can be identified at an earlier stage, regulators can make use of forward-looking supervisory strategies and 'early intervention' actions to address concerns in a more timely way instead of (or prior to) a full disciplinary investigation. Use of such actions covers a wide range of scenarios, ranging from a firm changing its behaviour voluntarily on account of supervisory prompting, to change being imposed by the regulator's formal use of its statutory powers.

36 A number of respondents to the Review's consultation said they would welcome greater use of such actions in FICC markets, provided that they were used in a proportionate way. Respondents supported the onus remaining on firms in the first instance to tackle conduct related concerns on a pre-emptive basis, with discussions with the FCA around remedial action where appropriate. In December 2014, HM Treasury made recommendations aimed at ensuring that regulators selected the most appropriate regulatory tool(s) in

(1) www.fca.org.uk/news/tr14-13-best-execution-and-payment-for-order-flow.

Box 22

Recent developments in firm-level surveillance

Examples of developments in the monitoring of trading activity highlighted to the Review include:

- 'Pattern analysis' which can be used to identify unusual patterns of activity such as 'spoofing' (placing an order and then cancelling it seconds later to encourage others to drive up the price of a particular asset), front running and wash trades, using predefined patterns of trading behaviour.
- 'Big data' techniques, which typically use a far larger number of inputs than standard surveillance techniques, helping to straddle information silos. The algorithms used have the potential to detect a wider range of suspicious activity than

pattern analysis, and can also be used to identify networks of trading and communications activity which may themselves identify vulnerabilities.

- 'Predictive coding', which looks to identify patterns of activity, such as unusual use of communication, non-routine patterns of leaving the office, non-completion of training, or missing mandatory leave, which may flag potential conduct concerns.
- Digitalisation of voice communications, which some firms claim has the potential to be more effective than analysing written communications.

These developments are in their early stages, but offer greater scope for identifying misconduct, and reducing the number of 'false positives' from communications surveillance.

a particular set of circumstances.⁽¹⁾ The FCA and the PRA are considering the recommendations, and plan to publish information about their approach to implementation in due course.

37 The FCA already has an extensive set of forward-looking supervisory and early intervention actions at its disposal, and reconfirmed these as meeting its needs in its June 2014 responses to the Parliamentary Commission on Banking Standards.⁽²⁾ A summary of some of the forward-looking supervision and early intervention tools which the FCA may use is provided in Box 23. Wherever possible, regulators seek to ensure that firms are incentivised to remedy conduct failures voluntarily and as early as possible. Where a particular risk is identified, the FCA may decide to undertake a further in-depth assessment, or 'deep-dive' at a particular firm, and such work may lead to risk mitigation programmes which firms can undertake voluntarily or at the requirement of the FCA. In these circumstances the FCA may request a voluntary attestation from an approved person (or a senior manager under the new SM&CR) in a regulated firm — a personal commitment that specific action has been or will be taken to address a particular regulatory concern. Thematic reviews can also be used by the FCA to focus attention on current practices and emerging trends across selected firms or a specific sector of the market.

38 If conduct failures cannot be remedied with the voluntary co-operation of firms through supervisory engagement, then the regulators will consider whether formal early intervention actions to force behavioural changes are an appropriate response. This can include the use of statutory powers through which the FCA can mandate significant changes in an authorised firm's behaviour, including: (i) an 'own initiative' or 'voluntary requirement' power under which the FCA can

impose a requirement on a firm to undertake or cease a particular action; and (ii) an 'own initiative' or 'voluntary variation' of permission power under which the FCA in voluntary cases (following an application by the firm in question) can amend or remove a firm's regulatory permissions. Box 23 gives some specific examples of the use of such powers.

39 In recent years, where such early intervention actions have been used by FCA supervision and enforcement working together, these have been primarily where a risk of harm to consumers was identified. Of the 21 uses of these actions identified by the FCA in its 2013/14 Annual Report, none occurred in relation to the FCA's integrity or competition objectives, although a small number nevertheless related to wholesale markets.⁽³⁾ Greater use of these actions in pursuit of the FCA's integrity or competition objectives in wholesale markets, and in wholesale FICC markets specifically, is to be welcomed, especially where these tools can provide an alternative to enforcement, while continuing to deliver reductions in misconduct by firms.

40 Forward-looking supervisory and early intervention actions have generally received limited publicity, in contrast to enforcement actions and fines. To some extent that is

(1) 'Review of enforcement decision-making at the financial services regulators', December 2014 (see recommendations 1–3), available at www.gov.uk/government/uploads/system/uploads/attachment_data/file/389063/enforcement_review_response_final.pdf.

(2) 'Tackling serious failings in firms: a response to the special measures proposal of the Parliamentary Commission on Banking Standards', June 2014, available at www.fca.org.uk/news/tackling-serious-failings-in-firms. See also the PRA's related response: 'The use of PRA powers to address serious failings in the culture of firms', June 2014, available at www.bankofengland.co.uk/pr/Pages/publications/powersculture.aspx.

(3) FCA Annual Report 2013/14, available at www.fca.org.uk/static/documents/corporate/annual-report-13-14.pdf. Note that this figure does not include voluntary agreements reached with regulated firms or skilled person reviews in accordance with FSMA s.166.

consistent with such actions being used as part of a graduated response. However, increased publicity of their successful use should be welcomed, especially where this would help ensure firm or scenario-specific lessons are learnt. This should be done in ways that ensure appropriate firm confidentiality is maintained, so as not to impact the willingness of firms to co-operate with regulators in such scenarios. This issue was considered by HM Treasury as part of its Enforcement Review, and its December 2014 report included a recommendation that the regulators should explore how better information might be provided, in relation both to formal enforcement and early intervention actions. Both regulators are currently considering these recommendations and plan to publish information about their approach to implementation in due course.⁽¹⁾

6.3.4 Suspicious Transaction Reports in relation to FICC instruments

41 Under existing FCA rules (giving effect to the Market Abuse Directive), authorised firms must send a 'Suspicious Transaction Report' (STR) to the FCA without delay if they believe that a transaction which they have arranged or executed might constitute market abuse. This requirement applies across the same set of asset classes and markets to which the market abuse regime outlined in Box 21 applies,

regardless of the venue or location of trading. STRs should therefore be submitted even in respect of OTC trades if the trade relates to an instrument falling within the regime. The changes envisaged by MAR will extend the STR regime to orders, attempted offences and a wider range of instruments, while MiFID2 will extend general reporting and transparency requirements to a greater universe of FICC market activity.

42 In 2014 the FCA received 1,626 STRs — a 24% rise on a year earlier. Those STRs were reported to be generally of a high quality. But, although firms' STR submissions in regulated FICC assets are increasing, they are nevertheless only a fraction of those in equities. That could be for a number of reasons, including the possibility that surveillance capabilities for fixed income and derivatives activities are less well developed than those for equities markets, perhaps reflecting the more fragmented structure of some FICC markets. Submitting STRs is nevertheless an FCA regulatory requirement and is a crucial part of the FCA's toolkit for tackling market abuse related misconduct.

43 The FCA will continue to take steps to ensure that the STR regime is working effectively in regulated FICC markets and the Review calls on market participants to do more to ensure they are meeting their obligations.

(1) 'Review of enforcement decision-making at the financial services regulators', December 2014 (see recommendation 6), available at www.gov.uk/government/consultations/review-of-enforcement-decision-making-at-the-financial-services-regulators-call-for-evidence.

Box 23

Forward-looking supervision and early intervention actions — the FCA toolkit⁽¹⁾

Regulatory tool	Purpose	Practical examples
Request for attestation	To ensure clear accountability and a focus from senior management on remedying conduct problems in regulated firms. ⁽²⁾	The FCA's current FX remediation programme requires senior management at impacted firms to attest that sufficient remedial action has been taken such that the firm's systems and controls adequately and appropriately manage the risks arising in its spot FX business.
Thematic reviews	To assess a current or emerging risk relating to an issue or product across a number of firms within a sector or market. ⁽³⁾	Outcomes of thematic reviews can include (i) published reports, which highlight findings and good or bad practice; (ii) consultation on new or refined guidance; and (iii) individual firm feedback. Firms may also choose to benchmark themselves against published reports as a way of keeping up with good practice. Recent thematic reviews have looked at best execution and payment for order flow as well as asset management firms and the risk of market abuse. ⁽⁴⁾ There are ongoing thematic reviews into trader controls around benchmarks, controls over flows of information in investment banks and conflicts of interest in dark pools. Proposed thematic reviews include work in relation to cultural change in banks. ⁽⁵⁾
Deep dives	To take an in-depth supervisory look at an issue at a specific firm.	Deep dives can cover a wide range of topics, for instance: (i) a firm's new product approval process in relation to FICC products; (ii) cross-selling between corporate lending and debt capital market businesses; and (iii) a firm's conflicts of interest in its debt capital markets business.
Skilled persons reviews Section 166 FSMA 2000	To obtain an independent view of aspects of a firm's activities that cause the regulator concern, or where the regulator requires further analysis. ⁽⁶⁾	Skilled persons reviews are used to review emerging, current or crystallised risks and can, for example, be used to look at: (i) the effectiveness of a firm's market conduct controls; (ii) the effectiveness of a firm's board and executive-level governance arrangements; (iii) the effectiveness of firms' control functions (risk management or compliance for example); or (iv) the effectiveness of a firm's trader controls.
Requirement powers (Own Initiative/ Voluntary Power or 'OIREQ'/'VREQ') Section 55L-N FSMA 2000	Where an issue is identified, and the regulator determines that the imposition of a formal requirement is appropriate and necessary in the circumstances. This can be done by agreement with the firm (where the firm agrees to apply for the imposition of the requirement) or, if the firm does not agree, it can be imposed by the FCA on its 'own initiative'.	Examples of the use of these powers include: (i) requiring a firm to cease a particular trading activity until the firm in question has remediated specified concerns in relation to the trading desk (for example access by proprietary traders to inside information); (ii) requiring a firm to put in place appropriate governance structures and committees to oversee regulatory concerns about the firm meeting regulatory requirements; (iii) requiring an external party to be appointed to monitor and oversee the board's compliance with the regulator's requirements, with a direct reporting line to the regulator.
Variation of permission powers (Own Initiative/ Voluntary Variation of Permission or 'OIVOP'/'VVOP') Section 55H-J FSMA 2000	To amend or remove a firm's regulatory permissions to perform specific regulated activities. This can be done by agreement with the firm (where the firm agrees to apply for the imposition of the variation) or, if the firm does not agree, it can be imposed by the FCA on its 'own initiative'.	The variation power might for example be used to impose limitations on the number or category of customers that a firm can deal with, the number of specified investments that a firm can deal in, or the types of activities the firm is permitted to carry on.
Request for specified information Section 165 FSMA 2000	Request for specified information Section 165 FSMA 2000.	While firms provide information to the regulators in the context of day to day supervision, in certain instances it may be more appropriate for the FCA to require the provision of information or documents using its formal information gathering power.

(1) The PRA is also able to make use of these tools in order to pursue its statutory objectives.

(2) www.fca.org.uk/about/what/regulating/how-we-supervise-firms/attestations.

(3) www.fca.org.uk/about/what/regulating/how-we-supervise-firms/thematic-reviews.

(4) www.fca.org.uk/news/list?ttypes=Thematic+Reviews.

(5) www.fca.org.uk/static/channel-page/business-plan/business-plan-2015-16.html.

(6) www.fca.org.uk/about/what/regulating/how-we-supervise-firms/reports-by-skilled-persons.

7 Conclusions and next steps

1 **Table C** gives the Review's recommendations in full, along with proposals about who might take the work forward. For the avoidance of doubt, no part of those recommendations, or any other part of the Report, constitutes formal guidance from the UK regulatory authorities.

2 The recommendations vary quite widely in nature. Some can be implemented relatively quickly, or are already underway. Others require further discussion, international negotiation or legislative change. Where implementation falls to the UK authorities, they will develop and consult on proposals in the normal way. The Review's terms of reference require that it should have regard to the impact of its recommendations on: the stability, efficiency and effectiveness of the financial sector, and its capacity to contribute to the growth of the UK economy in the medium and long run; the need to maintain vibrant competition in wholesale financial markets; the competitiveness of the UK financial and professional services sectors and the wider UK economy; and the resources needed for implementation. In the view of the Review's Chairs, the package of recommendations in this Report takes appropriate account of these considerations. But, where required, formal cost/benefit analyses will also need to be completed for legislative and other changes requiring public consultation.

3 To ensure that momentum is maintained on those recommendations that are under the control of the UK authorities, the Review's Chairs will provide a full implementation update to the Chancellor of the Exchequer and the Governor of the Bank of England by June 2016.

4 The Review has also identified a number of rather deeper questions about the underlying drivers of behaviour in, and structure of, FICC markets that would benefit from longer-term research by academics and others. With a view to catalysing this work, Box 24 sets out some of the themes that arose during the Review's work, and encourages efforts by the wider academic community, policy institutions and research departments within financial institutions to deepen the collective body of knowledge available in this area.

5 The Open Forum, to be held at the Bank of England in the autumn of 2015, will also provide an important opportunity for a broad range of stakeholders to discuss the recommendations and research themes in this Report, and the role they can play as part of building a wider, dynamic reform programme.

Table C Fair and Effective Markets Review: recommendations and proposed owners

	Near-term actions to improve conduct in FICC markets	Proposed owner	Section
1 Raise standards, professionalism and accountability of individuals			
a	There should be a set of common standards for trading practices in FICC markets, written in language that can be readily understood, and which will be consistently upheld.	IOSCO	4.3.1
b	The new FICC Market Standards Board (FMSB) proposed in recommendation 2a should give guidance on expected minimum standards of training and qualifications for FICC market personnel in the United Kingdom, including a requirement for continuing professional development.	FMSB	5.2.3
c	The FCA and PRA should consult on a mandatory form for regulatory references, to help firms prevent the 'recycling' of individuals with poor conduct records between firms, with a view to having a template ready for the commencement of the Senior Managers and Certification Regimes in March 2016. In due course, the FMSB should consider whether there is scope to reach an industry-wide agreement to disclose further information.	FCA and PRA FMSB	5.1.3.3
d	That the UK criminal sanctions framework for market abuse for individuals and firms be updated, through an extension to a wider range of FICC instruments (by including all of those covered under the Market Abuse Regulation).	HMT	6.3.1
e	That HM Treasury introduce legislation to lengthen the maximum sentence for criminal market abuse from seven to ten years imprisonment.	HMT	6.3.1
2 Improve the quality, clarity and market-wide understanding of FICC trading practices			
a	<p>The Review calls on the senior leadership of FICC market participants to create a new FICC Market Standards Board (FMSB) with participation from a broad cross-section of global and domestic firms and end-users at the most senior levels, and involving regular dialogue with the authorities, to:</p> <ul style="list-style-type: none"> • scan the horizon and report on emerging risks where market standards could be strengthened, ensuring a timely response to new trends and threats; • address areas of uncertainty in specific trading practices, by producing guidelines, practical case studies and other materials depending on the regulatory status of each market; • promote adherence to standards, including by sharing and promoting good practices on control and governance structures around FICC business lines; and • contribute to international convergence of standards. 	Market participants and end-users	4.3.2
3 Strengthen regulation of FICC markets in the United Kingdom			
a	Extend the UK regulatory framework for benchmarks to cover seven additional major UK FICC benchmarks — accepted and implemented by HM Treasury on 1 April 2015.	HMT and FCA (completed)	3.2
b	A new statutory civil and criminal market abuse regime should be created for spot foreign exchange, drawing on, among other things, the work of the international project to draw up a global foreign exchange code.	HMT and FCA	4.3.3
c	Proper market conduct should be managed in FICC markets through regulators and firms monitoring compliance with all standards, formal and voluntary, under the Senior Managers and Certification Regimes.	Firms and FCA	5.1.3.1
d	HM Treasury should consult on legislation to extend elements of the Senior Managers and Certification Regimes to a wider range of regulated firms, covering at least those active in FICC wholesale markets.	HMT and FCA	5.1.3.2
e	Improve firms' and traders' awareness of the application of competition law to FICC markets, including through the communication by the FCA of material presented in this Report to authorised firms active in FICC markets, through firms' internal training programmes, and through the new guidance on FICC market qualifications and training to be developed by the FMSB.	FCA	2.4.2

Near-term actions to improve conduct in FICC markets		Proposed owner	Section
4 Launch international action to raise standards in global FICC markets			
a	There should be a single global FX code, providing: a comprehensive set of principles to govern trading practices around market integrity, information handling, treatment of counterparties and standards for venues; comprehensive examples and guidelines for behaviours; and stronger tools for promoting adherence to the code by market participants.	BIS and national central banks including the Bank of England	4.3.3
b	As part of that work, or otherwise, particular attention should be given to improving the controls and transparency around FX market practices where there may be scope for misconduct, including 'last look' and time stamping.	BIS and national central banks including the Bank of England	4.3.3
c	The IOSCO Task Force on Financial Benchmarks should consider exploring ways to ensure that more consistent self-assessments against the benchmark Principles are published by administrators, and provide guidance for benchmark users.	IOSCO	3.3
d	The FSB should examine further ways to improve the alignment between remuneration and conduct risk at a global level.	FSB	5.4.3

Principles to guide a more forward-looking approach to FICC markets		Proposed owner	Section
5 Promoting fairer FICC market structures while also enhancing effectiveness, through:			
a	Improving transparency in ways that also maintain or enhance the benefits of diverse trading models, including over-the-counter.	Authorities and firms	2.4.1
b	Promoting choice, diversity and access by monitoring and acting on potential anti-competitive structures or behaviour.	FCA and CMA	2.4.2
c	Catalysing market-led reform held back by private sector co-ordination failures.	Authorities and firms	2.4.3
6 Forward-looking conduct risk identification and mitigation, through:			
a	Timely identification of conduct risks (and mitigants) posed by existing and emerging market structures or behaviours.	FCA and FMSB	2.5
b	Enhanced surveillance of trading patterns and behaviours by firms and authorities.	Firms and FCA	6.3.4
c	Forward-looking supervision of FICC markets.	FCA	6.3.3

Box 24

Future research into the fairness and effectiveness of FICC markets

Many of the issues considered by the Review raised questions about the underlying drivers of behaviour in, and the structure of, wholesale FICC markets, which could usefully be informed by further theoretical and empirical academic research. The development of a formal academic literature in some of these areas has been relatively limited in recent years.

To compensate for that gap and to inform its wider work, the Review consulted with academics across a wide range of disciplines, including market microstructure theory, financial economics, financial law, regulatory economics, corporate governance, behavioural economics and competition. These discussions made a valuable contribution to the work of the Review. In part they helped to inform the specific recommendations set out in the body of this Report. But they also helped identify a number of issues and themes, summarised briefly below, where further research could usefully deepen the basis for future policymaking. In some cases, this research might be conducted by the authorities — for example through the FCA or the Bank of England's One Bank Research Agenda.⁽¹⁾ But the Review would also encourage efforts by the wider academic community and research departments within financial institutions to deepen the collective body of knowledge available in this area.

What role do biases and organisational culture play in shaping conduct and risk management?

Market participants and authorities are likely to be subject to cognitive and behavioural biases that may affect the fairness and effectiveness of markets. For example, cultures that reward short-term performance may result in overconfidence. Beliefs that wrongdoing may be unlikely to be exposed may encourage slippage in conduct standards. And incentive structures may encourage myopia or group behaviour such as 'herding'.

A range of work is needed to improve understanding of these effects in wholesale markets and help counter them. Areas for future work include: understanding how trading environments can affect the behaviour of individuals; improving the measurement of conduct culture and risk management within banks and other financial institutions; developing a better understanding of effective control and supervision interventions including the role of codes, education and training; and assessing how the quality of firms' risk management and control functions affect the likelihood of misconduct or poor performance in times of financial stress. Recent work in this area has been completed by Elizabeth Sheedy and colleagues on risk culture,⁽²⁾ and by Nicholas

Morris, David Vines and colleagues on restoring trust in finance,⁽³⁾ amongst others.

How does the composition of remuneration affect systemic and conduct risk within financial firms?

Within firms, remuneration structures are among the most important influences on conduct and a potentially effective way of aligning risk and individual reward. As Section 5.4 discusses, a range of challenges remain in this area and the Review is recommending that work on improving standards for remuneration is taken forward by the Financial Stability Board. Areas that would benefit from further research include: the optimal proportion of variable pay; and how different payout structures such as equity, debt and escrow accounts can be used to improve the alignment of incentives between firms, staff, shareholders, creditors and other stakeholders.

How do changes in the structure of FICC markets affect fairness and effectiveness?

Developments such as the increasing diversity of trading platforms, the use of algorithmic or high-frequency trading, and changes in levels of transparency are likely to have profound effects on the fairness and effectiveness of market structures, as discussed for example by the Government Office for Science.⁽⁴⁾ But further research is needed to deepen understanding of the impact of these developments on FICC market functioning. That might include: the impact of algorithmic trading and systematic internalisation on market quality, welfare, conduct risks and liquidity; how controls to manage market volatility, such as circuit breakers, should evolve to reflect new trading structures and strategies in OTC markets; and the impact of potential fragmentation and the related development of new order types on the effectiveness and integrity of markets.

The structure of FICC markets also poses a number of challenges to traditional industrial organisation theory. While issues of vertical and horizontal integration, concentrated markets and monopoly power are well understood, the specific dynamics of competition in wholesale financial markets may merit further research. Possible questions include: the effectiveness of competition in markets where concentration is moderate but interactions between firms are very frequent; the scope for collusion in markets when concentration is heightened for short periods of time, for example around benchmark fixes; the impact of the structure of markets (eg centralised versus decentralised) and market microstructure (eg the extent of transparency) on competition; and whether, or to what extent, competition

(1) www.bankofengland.co.uk/research/documents/onebank/discussion.pdf.

(2) [www.mafc.mq.edu.au/mafc/assets/File/ELEMENTS_OF_RISK_GOVNANCE_AND_CULTURE - 17 April 2013 Final\(3\).pdf](http://www.mafc.mq.edu.au/mafc/assets/File/ELEMENTS_OF_RISK_GOVNANCE_AND_CULTURE_-_17_April_2013_Final(3).pdf).

(3) www.inet.ox.ac.uk/news/capital-failure.

(4) www.gov.uk/government/uploads/system/uploads/attachment_data/file/289431/12-1086-future-of-computer-trading-in-financial-markets-report.pdf.

over speed might create potential competition concerns, including barriers to entry in OTC markets.

Why does market discipline appear so weak in FICC markets, and how might it be improved?

FICC markets are characterised by a profusion of often extended principal-agent relationships. For example, market makers both trade with counterparties and manage their own principal risk. In such circumstances, it can be challenging for end-investors to monitor the extent to which their asset

managers fulfil their duties (including, for instance, best execution). These problems are likely to be compounded when markets are opaque in nature, making monitoring (and showing proof of harm) more difficult. Improved understanding of these value chains and interactions, and the influence of different levels of disclosure, may help explain the current apparent ineffectiveness of market discipline and may offer solutions to improving market-based policing in FICC markets.

Annex: Competition law and wholesale markets

1 Why does awareness of competition law matter?

The ability of market participants to trade at competitive prices and engage in merit-based competition are two essential characteristics of fair and effective markets. However, attempted collusion to manipulate market prices has featured in many of the most prominent recent FICC market misconduct cases. Based on the consultation responses and its own analysis and outreach, the Review has concluded that there needs to be much greater awareness and understanding among market participants of the existing UK and EU competition law framework as it applies to wholesale FICC markets.

This annex, written in conjunction with the Competition and Markets Authority (CMA), provides a high-level summary of the competition law framework and the means by which it is enforced. It aims to highlight unacceptable practices and related sanctions, as well as reminding market participants of the leniency programmes provided by UK and EU competition authorities. It also sets out some illustrative case studies of historical enforcement cases relating to financial markets. The examples of scenarios or conduct which could result in breaches of competition law given here are illustrative only and not exhaustive.⁽¹⁾⁽²⁾

The main messages are:

- **The UK and EU competition law (or 'antitrust') framework covers all firms and individuals including those operating in the financial markets. No distinction is made between wholesale and retail markets, or between FICC and non-FICC markets. The framework also applies to financial markets, including spot FX, which may currently fall outside of the direct scope of financial market regulation.**
- **Breaches of competition law can have serious consequences for individuals as well as firms — including possible fines, director disqualification, criminal sanctions, damages claims by third parties, and reputational damage.**
- **Businesses and individuals that come forward to report their own involvement in a cartel may have their penalties reduced, avoid a penalty altogether and/or be**

granted immunity from prosecution under the 'leniency' programme.

2 What are the penalties for breaching competition law?

Breaches of competition law can have serious consequences for both firms and individuals participating in FICC markets, including:⁽³⁾

- **Significant financial penalties for firms:** firms found to have breached competition law can be fined up to 10% of their annual group global turnover and ordered to change their behaviour.
- **Criminal penalties and fines for individuals:** individuals in firms who engage in certain types of cartel activity (for example, agreements between competitors on pricing, sharing or dividing up customers or markets, or engaging in bid-rigging in auctions or tenders) may face criminal prosecution for an offence under the Enterprise Act 2002, which carries a maximum sentence of five years imprisonment, or be made to pay a fine.
- **Liability in civil litigation:** companies or individuals that have suffered as a result of practices that breach competition law may sue the firm(s) involved and, if successful, may obtain an injunction to stop the breach and/or damages to compensate for the loss.
- **Director disqualification:** company directors can be disqualified from directorships in any UK company for up to fifteen years.
- **Reputational damage:** this can be significant and long lasting.

(1) The information provided in this section is for general information and educational purposes only. The information may not be applicable in all situations and may not, after the date of this final Report, even reflect the most current authority. It is not intended and should not be construed to constitute legal advice and should not be relied or acted upon without the benefit of independent competition law advice.

(2) For further information on competition law, see 'Competition Law Risk: A Short Guide' produced by the Institute of Risk Management and Competition and Markets Authority, available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/372555/CMA_Risk_Guide.pdf — and the wide range of CMA guidance publications available on www.gov.uk/cma.

(3) For more information on fines and penalties see OFT423 *OFT's guidance as to the appropriate amount of a penalty* (now adopted by the CMA); CMA9 *Cartel offence prosecution guidance*; and OFT510 *Director disqualification orders in competition cases* (now adopted by the CMA). The CMA has also produced a 60-second summary guide for Directors on avoiding cartel infringements which can be accessed on www.gov.uk/cma.

3 What types of behaviour could breach competition law?

There are three broad types of anti-competitive behaviour, discussed in further detail below:

- (i) **Cartels;**
- (ii) **Other anti-competitive agreements or concerted practices; and**
- (iii) **Abuse of dominant market position.**

i. Cartels

Cartels are a serious form of anti-competitive behaviour and involve two or more competitor firms agreeing, whether formally or informally, to limit or cease competition between them. The operation of a cartel may involve price-fixing, market sharing, bid-rigging, limiting the supply or production of goods or services, or information exchange. The agreement or arrangement between competitors could be formed in many ways — including a written contract, a conversation over the phone or at a social event, a meeting or chat room, or via emails.

Cartel behaviour can have the most detrimental impact on competition, which is why engaging in cartel activity may lead to criminal prosecution of individuals (under the cartel offence in the Enterprise Act 2002), as well as fines imposed on firms (under UK/EU legislation on anti-competitive agreements and arrangements).⁽¹⁾

In FICC markets, potential examples of behaviour which may be indicative of cartel behaviour include:

- (i) **Price-fixing:** agreeing with one or more competitors (directly or indirectly) the prices at which to supply products or services to clients (such prices could include commissions, fees, interest rates, benchmark submissions, discounts or rebates). **Case Study 1** gives an example from the interest rate derivatives markets.
- (ii) **Market sharing:** agreeing with one or more competitors to share customers or markets. Examples include where firms: agree among themselves not to compete in providing certain financial instruments or services; agree not to compete with one another in certain territories; or agree not to compete with one another for certain classes of customer.
- (iii) **Agreeing to limit production or sales:** **Case Study 2** gives an example from the zinc market.
- (iv) **Engaging in bid-rigging:** where a group of firms agree to collaborate over their response to a competitive auction or tender; for example by agreeing not to undercut each

Case Study 1

Illegal cartels in the interest rate derivatives markets⁽¹⁾

In December 2013, the European Commission announced that it had fined eight international financial institutions a total of €1.7 billion for participating in illegal cartels in markets for financial derivatives covering the European Economic Area. The Commission found that:

- Barclays, Deutsche Bank, Société Générale and RBS had participated in a cartel relating to euro-denominated interest rate derivatives linked to Euribor and/or EONIA. Traders in those banks discussed their bank's submissions for the calculation of Euribor as well as their trading and pricing strategies. The Commission imposed fines totalling €1 billion (Barclays received full immunity for revealing the existence of the cartel). The Commission has also opened proceedings against Crédit Agricole, HSBC and JPMorgan, which remain ongoing.
- RBS, UBS, Deutsche Bank, JPMorgan, and Citigroup had participated in one or more bilateral cartels relating to interest rate derivatives denominated in Japanese yen. The broker RP Martin facilitated one of the infringements by using its contacts with a number of Japanese Yen Libor panel banks that did not participate in the infringement, with the aim of influencing their Japanese Yen Libor submissions. The Commission imposed fines totalling €0.7 billion (UBS received full immunity for revealing the existence of the cartels). In addition the broker ICAP was found to have facilitated six of the infringements, resulting in a €14.9 million fine from the Commission in February 2015. (ICAP announced it would be challenging this decision).

(1) http://europa.eu/rapid/press-release_IP-13-1208_en.htm.

other on price or to 'take turns' and rotate the order among them.

ii. Other anti-competitive agreements or concerted practices

A cartel is only one form of prohibited anti-competitive agreement. Other anti-competitive agreements or arrangements can be either 'horizontal' (between competitors)

(1) However, not all cartel arrangements will give rise to criminal liability under the cartel offence. This is because the criminal cartel offence is framed more narrowly than the law on anti-competitive agreements in the civil regime. The offence only applies to price-fixing, market or customer sharing, agreements to restrict production or supply, or bid-rigging and it applies only to reciprocal arrangements between competitors. For more information on the cartel offence in the UK see CMA9 *Cartel offence prosecution guidance* on www.gov.uk/cma.

Case Study 2

Zinc Producer Group⁽¹⁾

In 1984 the European Commission found that the world's major zinc producers had formed a cartel by agreeing to limit their production to collectively agreed quotas and not to build any new zinc production facilities without approval from the cartel. The arrangements also included market sharing — and the cartel agreed to introduce a common price in their supply contracts, substituting this for the price set by the London Metal Exchange (LME), while also agreeing not to sell on the LME. The cartel was dismantled after the infringement came to light.

(1) <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31984D0405&from=EN>.

or 'vertical' (between suppliers and their clients).⁽¹⁾ Like cartels, these can arise formally (for example, via a contract) or informally (for example, via a conversation). Examples of such agreements, formal or informal, which could arise in FICC markets and which may raise concerns include:

- (i) **Direct or indirect communication of non-public commercially sensitive information such as future pricing intentions between competitors.** Case Study 3 gives an example involving the pricing of loans.
- (ii) **Agreements between a firm and its client which restrict the price and/or terms on which that client can resell a product, service, instrument or data.** For example, a firm may require a client not to sell products below a certain price or impose a condition that the client cannot resell a financial instrument to the firm's competitors.
- (iii) **Where a group of firms (or individuals within such firms) work together to prevent other competitors from entering the market, thus protecting their position in the market.** For example, by imposing criteria or fees for participating in a market that discriminate against smaller players or new entrants in a way that is not objectively justifiable.
- (iv) **Where a group of firms (or individuals within such firms) agree to work together to prohibit the development or introduction of new technologies which could reduce their influence in the market and/or reduce their profits.**
- (v) **Where a group of firms agree to work primarily or exclusively with another firm(s) in a related (upstream or downstream) market, and in exchange get beneficial terms placing them at a competitive advantage to their rivals.** For example where a group of asset management firms enter into an agreement with an investment bank in return for beneficial treatment.

Case Study 3

Unilateral disclosure of confidential and commercially sensitive information⁽¹⁾

In January 2011, the Office of Fair Trading (OFT), the predecessor of the Competition and Markets Authority, concluded that individuals at RBS had disclosed confidential and commercially sensitive future pricing information to their counterparts at Barclays with the aim of co-ordinating the price of loans supplied to large professional services firms, although there was no explicit agreement on those prices.

Individuals at RBS shared generic information about the market between October 2007 and February or March 2008. For example in an email titled 'Enemy Intelligence — RBS', Barclays' Head of Team disclosed that he had 'been verbally approached by [the RBS Head of Team] to come to an agreement over raising our pricing as margins are too low they say they are suffering'. RBS also shared specific pricing information: for example, a Barclays Regional Director said that RBS had informed him that they would be pricing their loan facility at a basis point margin 'somewhere in the 70s'.

The disclosures by RBS staff took place through telephone conversations and a number of informal contacts, such as a bowling event organised by an accountancy firm, an industry dinner for managing partners, and a seminar at a law firm.

The case demonstrated that an infringement of the law on anti-competitive agreements does not require the sharing of commercially sensitive information to be reciprocal: the unilateral disclosure of such information is sufficient.

This case came to light because Barclays approached the OFT seeking leniency. RBS was fined £28.59 million (which included a 15% reduction in the fine to take into account the early resolution of the case, involving RBS admitting the breach and co-operating with the OFT). By contrast, Barclays benefited from total immunity under the OFT leniency policy.

(1) http://webarchive.nationalarchives.gov.uk/20140402142426/http://www.of.gov.uk/shared_of/ca-and-cartels/CE8950_08_dec.pdf.

Not all such agreements will breach the law. An agreement or arrangement will be 'exempt' from the UK or EU law on anti-competitive agreements and arrangements if (broadly speaking) it brings economic or technical benefits which are passed on to consumers and is restrictive of competition only

(1) For more information about how competition law may apply to agreements see OFT401 (now adopted by the CMA) *Agreements and concerted practices* available on www.gov.uk/cma. For more information on agreements between competitors see the European Commission *Guidelines on the applicability of Article 101 of the Treaty for the Functioning of the European Union (TFEU) to horizontal co-operation agreements*. For more information on how competition law provisions may apply to agreements between businesses at different levels of the distribution chain, see the European Commission *Guidelines on vertical restraints*.

to the extent absolutely necessary (ie is 'indispensable') to achieving those benefits. For example, some exclusivity agreements will be exempt if they bring a new product to market, provided that the exclusivity lasts only for a limited period necessary to achieve that.

Case Study 4

European Commission investigations into Credit Default Swaps⁽¹⁾

The European Commission has two separate ongoing investigations into (a) the activities of sixteen investment banks, as well as the International Swaps and Derivatives Association (ISDA) and the market information provider, Markit, in relation to the Credit Default Swaps (CDS) information market, and (b) the activities of nine investment banks, as well as a clearing house provider, ICE Clear Europe, in relation to the CDS clearing market.

In the CDS information market, the European Commission's preliminary statements of objections stated that thirteen of the sixteen investment banks, together with ISDA and Markit, infringed EU competition law by colluding to prevent exchanges from entering the credit derivatives business. Between 2006 and 2009, Deutsche Börse and the Chicago Mercantile Exchange tried to enter the credit derivatives business. The exchanges turned to ISDA and Markit to obtain necessary licenses for data and index benchmarks, but, according to the preliminary findings of the Commission, the banks controlling these bodies instructed them to license only for 'over-the-counter' (OTC) trading purposes and not for exchange trading. Several of the investment banks were also found to have sought to shut out exchanges in other ways, for example by co-ordinating the choice of their preferred clearing house.

In the Commission's preliminary view the banks acted collectively to shut out exchanges from the market because they feared that exchange trading would have reduced their revenues from acting as intermediaries in the OTC market. The Commission's investigations are ongoing and its statement of objections does not prejudice the final outcome of the investigation.

(1) http://europa.eu/rapid/press-release_IP-13-630_en.htm.

iii. Abuse of dominant market position

Both UK and EU competition law prohibits any firm with a 'dominant' market position from behaviour that may constitute an abuse of its dominant position.⁽¹⁾ A dominant position equates essentially to market power: a business is only likely to hold a dominant position if it is able to behave

independently of the normal constraints imposed by competitors, suppliers and consumers.⁽²⁾ Having a dominant position does not in itself breach competition law; it is the actual abuse of such a position which is prohibited. Competition law requires that dominant businesses compete on the merits of the products or services they provide rather than by trying to exploit clients and/or exclude their competitors from the market by anti-competitive means.

A dominant firm can employ different strategies to exclude competitors, and/or exploit customers. Examples of behaviour in FICC markets which could potentially amount to an abuse of dominance by a firm are considered in the non-exhaustive list below:

- (i) **Refusing to supply an existing or new client, or refusing to provide access to an essential facility, service or data (or providing such access only on terms which are unreasonable) without an objective justification.**
- (ii) **Offering different prices or terms to similar clients without an objective justification.** For examples of both (i) and (ii) see **Case Study 5**.
- (iii) **'Bundling' or 'tying' two products.** This is where a firm stipulates that a client wishing to purchase one product must also purchase another different one. In some circumstances bundling can be efficient and lead to lower prices for clients; however competition concerns arise when the dominant firm uses its dominance in one product market to push out competitors in another market by bundling the two products together.
- (iv) **Stipulating that a firm will do business with a client only on the condition that the client gives all of its business to the firm.** For example, where a large broker takes on a client for prime brokerage services on the condition that the client agrees to conduct all of its trading activity through the broker (even though services such as execution-only trading are separable and may be cheaper elsewhere).
- (v) **Charging prices so low that they do not cover the cost of the products or services being sold.** For example, where a firm offers a service at below-cost with the aim of driving out competitors and then increasing prices again.

The practices described above are not always evidence of an infringement of competition law. The specific facts and circumstances of each case would be taken into account,

(1) For more information see OFT402 *Abuse of a dominant position* (now adopted by the CMA) available on www.gov.uk/cma.

(2) One measure of market power is market share. As a rough rule of thumb a dominant position is unlikely to arise with a market share of below 40%. However, market shares are not the only factor to consider when assessing dominance.

Case Study 5

Clearstream (Clearing and Settlement)⁽¹⁾

In 2004, Clearstream Banking AG, a provider of primary clearing and settlement services for securities issued under German law, was found by the European Commission to have abused its dominant position in the market by:

- (i) **Refusing to supply** primary clearing and settlement services to Euroclear Bank, one of its customers, for more than two years after it requested those services. This contrasted with a usual delay of a maximum four months within which other comparable customers were supplied those services.
- (ii) **Discriminatory behaviour** towards Euroclear Bank by charging an unjustified higher per transaction price to Euroclear Bank for clearing and settlement services than to other similar customers outside Germany.

The above infringements came to an end before the conclusion of the investigation and Clearstream agreed to refrain from repeating the infringements in the future.

(1) http://europa.eu/rapid/press-release_IP-04-705_en.htm?locale=en.

including whether there was an objective reason for the dominant firm undertaking such behaviour.

4 Who is responsible for competition law in the United Kingdom and Europe?

Anti-competitive behaviour which may affect trade within the United Kingdom is prohibited by UK legislation (under the Competition Act 1998 and the Enterprise Act 2002). The Competition and Markets Authority (CMA) and Financial Conduct Authority (FCA) share enforcement powers in relation to the provision of financial services in the United Kingdom (although only the CMA is responsible for the UK cartel offence). The FCA's competition functions are not limited merely to FCA-regulated activities and firms, but extend to financial services as a whole, including parts of the FICC markets which currently fall outside of the United Kingdom's financial services regulatory perimeter.

Where the effect of anti-competitive behaviour extends beyond the United Kingdom to other EU Member States, EU legislation (Articles 101 and 102 of the Treaty on the Functioning of the European Union) is applicable. The European Commission (through its Directorate General for Competition) is tasked with enforcement of EU-wide

competition rules. The CMA and FCA also have powers to enforce Articles 101 and 102 in the United Kingdom.

5 Reporting knowledge or suspicions of breaches of competition law, and the leniency programmes

Under leniency programmes operated by the CMA and the European Commission, firms and individuals that come forward to report their own involvement in a cartel to a competition authority **may benefit from a reduction or annulment of the fines that would otherwise be imposed on them**.⁽¹⁾ To qualify for leniency, applicants must admit their involvement, co-operate fully with the authority's investigation and immediately stop their involvement in the cartel (unless the CMA directs otherwise, which it will do only rarely).

Provided they co-operate, the directors of applicant firms may also avoid disqualification and employees and officers may be granted immunity from prosecution under the cartel offence if the application is made to the CMA.

The CMA is prepared to offer financial rewards for information about cartel activity (informant rewards). Additionally, individuals who come forward with information about their involvement in a cartel may be granted immunity from criminal prosecution (called a 'no-action' letter).

The FCA expects that leniency applications will normally be made directly to the CMA, in particular since the FCA cannot grant immunity from criminal prosecution in relation to the cartel offence. However, if a firm were to apply to the FCA directly for leniency and it satisfied the relevant criteria, the FCA would have regard to the CMA's Penalty Guidance and apply the CMA's leniency policy in relation to its competition enforcement.⁽²⁾

Individuals or firms who suspect a colleague, competitor, supplier, customer or any other business may be infringing competition law, should call the CMA Cartels Hotline on 020 3738 6888; or email cartelshotline@cma.gsi.gov.uk. For information about leniency and to apply call 020 3738 6833.

Individuals who are concerned about other instances of potentially anti-competitive behaviour by their firm, a rival firm, or other firm(s) can raise concerns, formally (through a

(1) For more information on the CMA leniency programme and no-action letters, see OFT1495 *Applications for leniency and no-action in cartel cases* (now adopted by the CMA); OFT1495i *Quick Guide to Cartels and Leniency for Individuals* (now adopted by the CMA); OFT1495b *Quick Guide to Cartels and Leniency for Businesses* (now adopted by the CMA); CMA9 *Cartel offence prosecution guidance* — all available on www.gov.uk/cma.

(2) See the FCA consultation paper on 'Competition Concurrence Guidance and Handbook amendments', January 2015.

complaint) or informally, with the CMA or FCA. Firms regulated by the FCA can also raise their concerns with their supervisors.

Regulated firms may also be obliged to bring their own contraventions to the FCA's attention under Principle 11 of the Principles for Businesses.

Glossary and acronyms

Glossary

Agent: An agent is a person or firm that arranges financial transactions on behalf of others. The agent typically receives a commission for arranging the transaction.

Algorithmic trading: Trading using computer programmes applying algorithms, which determine various aspects including price and quantity of orders.

All-to-all platform: A multilateral system open to several classes of market participant which, in particular, allows buy-side firms to trade directly with other buy-side firms.

Barrier option: Barrier options are a type of option which are either activated or cancelled if a pre-determined level of the underlying market price is reached.

Bid-offer spread: The difference between the price at which a market maker is willing to buy an asset and the price at which it is willing to sell.

Bookrunner: The main underwriter or lead manager in the issuance of new equity, debt or securities instruments.

Broker-dealer: A person or firm in the business of buying and selling securities and other financial instruments, either for its own account or on behalf of its customers, depending on the transaction.

Buy-side: Financial institutions holding and dealing in financial instruments for investment or asset management purposes. Examples include mutual funds, pension funds and insurance firms.

CDS Index: A basket of credit default swaps typically covering numerous individual companies that have unsecured debt trading in the broad secondary markets.

Central counterparty (CCP): An entity that acts as an intermediary between trading counterparties to reduce credit and settlement risk. If one of the trading parties defaults, the central counterparty and/or its members absorbs the loss.

Central limit order book (CLOB): A mechanism, often employed by exchanges and other multilateral trading systems, where trading counterparties disclose prices and volumes at which they are willing to buy and sell, and the system concludes transactions between them according to a pre-determined set of rules.

Circuit breaker: A mechanism employed to suspend trading temporarily in certain conditions, including sudden, deep price falls.

Corporate bonds: A debt security issued by a corporation, typically with a term of more than one year.

Dark pool: A trading venue where parties can post trading interest without making such information publicly available.

Digital (or binary) option: An option which pays out a fixed amount or nothing, depending on whether the underlying price reaches a level at a specific point in time.

Electronic communication network (ECN): An electronic trading system that facilitates a broad range of trading requirements including, for example, the automatic matching of buy and sell orders at specified prices. ECNs are often associated with the interdealer FX market.

Electronic Trading Platform: An electronic trading platform is a computerised system of trading for financial products.

Exchange: A traditional form of regulated multilateral trading system, often also associated with the primary issuance of securities. Exchanges are subject to a range of regulatory requirements relating to, for example: pre and post-trade transparency; non-discriminatory access; and monitoring and governance.

First/Second/Third Line of Defence: The lines of defence are the governance and controls to protect against risks in an organisation. The First Line of Defence is risk mitigation and control within the business function that generates the risks, in particular through policies and procedures, training and line management oversight. The Second Line of Defence is an independent oversight function — commonly the risk functions monitoring each key risk category. The Third Line of Defence is an independent assurance function — the internal audit function.

Front-running: Front-running is the practice whereby an individual is trading in possession of private information about an order designed to take advantage of the anticipated price effect of a future order.

Futures: Financial contracts which oblige the buyer to purchase an asset (or the seller to sell an asset), at a predetermined future date and price.

High-frequency trading: A highly automated form of algorithmic trading that is often characterised by holding positions very briefly in order to take advantage of short-term price rises and falls.

Interdealer broker (IDB): A brokerage firm that acts as an intermediary between major dealers to facilitate trades.

Interest rate swap: An exchange of one interest payment for another, based on a specified principal amount for a specified term. Interest rate swaps often exchange a fixed payment for a floating payment that is set with reference to a benchmark rate (such as Libor).

Internalisation: The process by which customer and other trading interests are matched within a firm, often as part of that firm's single-dealer platform (SDP), rather than executed in the open market.

Last look: A practice whereby market makers have a final opportunity to accept or reject orders where a client wishes to trade against their quoted price.

Limit order: An order to buy a financial instrument at or below a specified price, or to sell at or above a specified price.

Liquidity: The ease with which investors are able to transact in reasonable quantities of an instrument without discontinuity of price formation.

Listed security: A financial instrument that is admitted to trading an exchange.

Market maker: A market participant who facilitates trading in a financial instrument by supplying (tradable) buy and sell quotes. Market makers may act as members of exchanges, though FICC markets more often rely on market makers trading on an OTC basis.

Market order: An order to buy or sell a financial instrument at the best available price for immediate execution.

Multi-dealer platform (MDP): A trading venue where liquidity is provided by many different market makers.

New issue (primary issuance): An offering of a debt or equity security, sold to public for the first time.

Options: Contracts that give the buyer the right, but not the obligation, to buy or sell an underlying instrument at a predetermined price in the future.

Order-to-trade ratio: The ratio of the number of orders a market participant submits to the number of actual trades executed.

Over-the-counter (OTC): Transactions that are bilaterally negotiated between two market participants.

Price discovery: The process by which market participants obtain information about the prices at which counterparties are willing to buy or sell specific financial instruments.

Price formation: The process by which market participants decide the prices at which they are willing to transact.

Price transparency: The amount of information available to market participants about prices. Price transparency takes two forms: (1) 'pre-trade price transparency', ie the prices at which counterparties advertise they are willing to buy or sell specific financial instruments; or (2) 'post-trade price transparency', ie the prices at which counterparties recently bought or sold specific financial instruments.

Principal: A principal in a financial transaction makes an outright purchase of the financial instrument and hence the principal takes the instrument onto its balance sheet (and bears all the risks of ownership), even if this is sometimes only for a short period of time before it is sold to another party.

Repo: A repurchase agreement ('Repo') is a form of asset-backed financing, usually for the short term. The borrower sells securities (usually government bonds or other high quality securities) to investors and agrees to buy them back (at a price agreed at the start of the repo agreement) at the end of the agreement.

Request for quote (RFQ): A mechanism for arranging transactions where customers ask one or more market makers to provide quotes for a financial instrument before agreeing to trade.

Sell-side: Financial institutions (predominantly banks and broker-dealers) involved with the creation, promotion, analysis and sale of securities and other financial instruments.

Single-dealer platform (SDP): A trading venue which is owned by a bank or broker-dealer who acts as the sole market maker on that venue.

Spot FX: The exchange of two currencies at a rate agreed today, where delivery of the currencies occurs within the shortest standard settlement period for the currency pair.

Structured notes: A debt obligation that also contains an embedded derivative component with characteristics that adjust the security's risk and return profile.

Tick size: The minimum price movement allowed by a trading venue for transactions in a particular financial instrument.

Acronyms

ACI – Association Cambiste Internationale.	OTC – Over-the-counter.
ACT – Association of Corporate Treasurers.	OTF – Organised Trading Facility.
AIFMD – Alternative Investment Fund Managers Directive.	PCBS – Parliamentary Commission on Banking Standards.
APR – Approved Persons Regime.	PRA – Prudential Regulation Authority.
ASIC – Australian Securities and Investment Commission.	QCF – Qualifications and Credit Framework.
BIS – Bank for International Settlements.	RAP – Relevant Authorised Person.
bps – Basis Points.	REMIT – Regulation on Wholesale Energy Market Integrity and Transparency.
BSB – Banking Standards Board.	RFQ – Request for Quote.
CAIA – Chartered Alternative Investment Analyst.	RM – Regulated market.
CCP – Central counterparty.	RONIA – Repurchase Overnight Index Average.
CDS – Credit Default Swap.	SDP – Single-dealer trading platform.
CFA – Chartered Financial Analyst.	SIMR – Senior Insurance Managers Regime.
CISI – Chartered Institute for Securities and Investment.	SM&CR – Senior Managers and Certification Regimes.
CLOB – Central Limit Order Book.	SONIA – Sterling Overnight Index Average.
CMA – Competition and Markets Authority.	STR – Suspicious Transaction Reporting.
CPD – Continuing professional development.	UCITS – Undertakings for the Collective Investment of Transferable Securities.
CRD – Capital Requirements Directive.	WM/R – WM Reuters.
CSMAD – Criminal Sanctions Market Abuse Directive.	
EBA – European Banking Authority.	
ECN – Electronic communication network.	
EMIR – European Market Infrastructure Regulation.	
ESMA – European Securities and Markets Authority.	
EU – European Union.	
Euribor – Euro Interbank Offered Rate.	
FCA – Financial Conduct Authority.	
FICC – Fixed Income, Currencies and Commodities.	
FINRA – Financial Industry Regulatory Authority.	
FLOD – First line of defence.	
FMSB – FICC Market Standards Board.	
FSA – Financial Services Authority.	
FSB – Financial Stability Board.	
FSMA – Financial Services and Markets Act.	
FX – Foreign Exchange.	
FXBG – FSB Foreign Exchange Benchmark Group.	
G20 – The Group of Twenty major world economies.	
HMT – Her Majesty’s Treasury.	
ICE – Intercontinental Exchange.	
ICMA – International Capital Markets Association.	
IOSCO – International Organization of Securities Commissions.	
ISDA – International Swaps and Derivatives Association.	
LBMA – London Bullion Market Association.	
Libor – London Interbank Offered Rate.	
LME – London Metal Exchange.	
MAD – Market Abuse Directive.	
MAR – Market Abuse Regulation.	
MDP – Multi-dealer platform.	
MiFID – Markets in Financial Instruments Directive.	
MPP – Market Practitioner Panel.	
MTF – Multilateral Trading Facility.	
NIPs – Non-Investment Products.	
OIREQ – Own-Initiative Requirement.	
OIVOP – Own-Initiative Variation of Permission.	

