FEMR FAIR AND EFFECTIVE MARKETS REVIEW

How fair and effective are the fixed income, foreign exchange and commodities markets?

Consultation document
October 2014

HM Treasury

BANK OF ENGLAND

FCA FINANCIAL CONDUCT AUTHORITY

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Executive summary

The purpose of this consultation document is to seek respondents' views on the fairness and effectiveness of the Fixed Income, Currency and Commodities (FICC) markets, and on ways in which, where necessary, that fairness and effectiveness might be improved.

FICC markets underpin almost every major financial transaction in the global economy. 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 financial risks associated with investment, production and trade. They are vast in size, and support employment for many around the world, not least in the United Kingdom, where a substantial share of these markets is based. Further details of these markets, and their economic significance, are set out in Sections 1 and 2, and in the Appendix.

Public trust in the FICC markets has nevertheless been seriously damaged by a series of high-profile abuses involving, among other things, the attempted manipulation of benchmarks, alleged misuse of confidential information, the misleading of clients about the nature of assets sold to them, and collusion. Such actions fundamentally undermine the primary function of markets to provide price signals to the broader economy and allocate resources effectively — and they materially increase uncertainty, at a time when technological and regulatory developments are driving other substantial changes in FICC market structures.

Much has already been done to respond to these abuses, by legislators, regulators and market participants, and there has been a series of major enforcement actions against firms and individuals. But with further investigations and private legal challenges still under way, the purpose of the Fair and Effective Markets Review is to assess whether that change has yet gone far enough to reinforce confidence — and, where it has not, to ask what further steps may be needed, by firms and individuals (who bear the primary responsibility for ensuring appropriate behaviour) or by the authorities.

The Review will publish its independent recommendations in June 2015. In forming its views, it is seeking input from many different sources, including its own Market Practitioner Panel, academics, international authorities, a wide range of end-users of FICC markets, market infrastructure providers, and the general public.

This consultation is organised around four key themes:

First, Section 3 sets out the Review's perspective on **what 'fair and effective' means for FICC markets**. FICC market participants are predominantly sophisticated firms — but the outcomes in those markets have ramifications far beyond those firms alone, potentially affecting everyone in the economy. With that in mind, the Review proposes to define 'effective' FICC markets as those which: enable market participants to trade at competitive prices; and allow the ultimate end-users to undertake investment, funding, risk transfer and other transactions in a predictable fashion, underpinned by robust infrastructure. The Review proposes to define 'fair' markets as those which: have clear and consistently applied standards of market practice; demonstrate sufficient transparency and open access (either directly or through an open, competitive and well-regulated system of intermediation); allow market participants to compete on the basis of merit; and provide confidence that participants will behave with integrity.

Second, the Review is seeking respondents' views on **areas where the fairness and effectiveness of FICC markets may currently be deficient**. In its initial conversations, the Review has heard a wide range of different perspectives on the underlying factors that may have caused, or facilitated, recent abuses. Some of the drivers put forward relate to structural features of FICC markets. These include: the greater ease of manipulation in markets for bespoke products that are rarely traded; conflicts of interests; limited transparency; poor benchmark design; market concentration; and a reduction in the effectiveness of market discipline. Others bear more directly on conduct, and include: poor or misunderstood standards of market practice; weak cultures of accountability, poor controls and inappropriate remuneration structures within firms; poor personal ethics; the limited regulatory perimeter; poor benchmark governance and transparency; and limited surveillance or penalties for wrongdoing from firms or regulators in the pre-crisis period. The Review also heard concerns from market participants about the potential resilience of liquidity in post-crisis FICC markets.

The Review is keen to know where respondents believe the most important deficiencies lie, to help inform the identification of potential solutions. To give structure to that assessment, the Review uses the framework set out in **Table A** shown at the end of this summary. This framework focuses on the six potential sources of vulnerability that are considered most critical. Three of these are structural: market microstructure; competition and market discipline; and benchmarks. And three relate to conduct: standards of market practice; responsibilities, governance and incentives; and surveillance and penalties. Section 4 **describes this framework in more detail, and provides a high level overview of the remaining sections of the document.**

Third, the Review is seeking views on the **extent to which the regulatory, organisational and technological changes that have taken place since the financial crisis are likely to address perceived deficiencies in fairness and effectiveness**. Where they do, the Review has no desire to duplicate existing efforts. Relevant regulatory initiatives include: post-crisis reform to prudential and conduct regulation in the European Union, United States and elsewhere; reforms in the design and regulation of benchmarks; prospective revisions to global foreign exchange codes; and a more proactive approach by conduct regulators to supervision and enforcement. Industry-led and technological changes include the new Banking Standards Review Council, widespread efforts to improve firms' internal controls systems, and the increasing migration of FICC business to more transparent trading platforms. These issues are considered in further depth in Sections 5.1 to 5.6.

Finally, the Review is seeking views on **further steps that might be needed to help boost fairness and effectiveness in particular FICC markets**. Using the same six-part framework, Sections 5.1 to 5.6 identify a wide variety of possible steps:

- To improve market structures, the Review is seeking respondents' views on actions including: industry-led standardisation of more FICC assets; initiatives led by the market or public authorities to improve transparency, for example, through greater use of electronic platforms; enhancements to market-driven competition; industry-led improvements to benchmark design; and steps to encourage greater compliance of benchmarks with international standards.

- To improve conduct, the Review is seeking respondents' views on actions including: developing a global code (or codes) of conduct for FICC markets, written by the market in terms that market participants understand; bringing trading in certain FICC markets more fully into the scope of regulation; further steps to strengthen the translation of firm-level standards into more effective control and incentive structures; stronger tools for ensuring that firms' hiring and promotion decisions take due account of conduct; greater use of electronic surveillance tools by firms; and stronger penalties for staff breaching internal guidelines.

Throughout, the Review is conscious that the FICC markets are global in scope, and shaped by forces far wider than those in the United Kingdom alone. In each case, the Review will need to evaluate the extent to which change is: (a) for the industry (which has the capacity to act globally) to implement; (b) for the UK authorities; or (c) for wider discussion with international authorities.

The full list of questions on which the Review is seeking views is given in Section 6. Responses are sought by Friday 30 January 2015 and should be sent by email to FEMR@bankofengland.co.uk. Further details on the consultation process are given in Section 1.5.

Table A A framework for evaluating the fairness and effectiveness of FICC markets

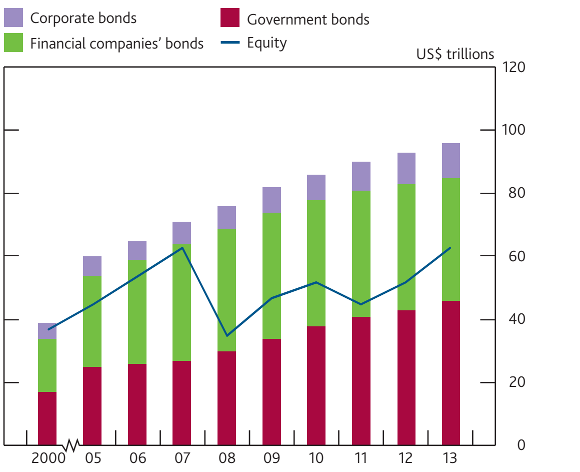
	Potential source of vulnerability	Possible responses by			
		Markets	Firms	Individuals	Regulators/ Legislators
Structure	Market microstructure				
	Competition and market discipline				
	Benchmarks				
Conduct	Standards of market practice				
	Responsibilities, governance and incentives				
	Surveillance and penalties				

1 Introduction

1.1 Why the FICC markets matter

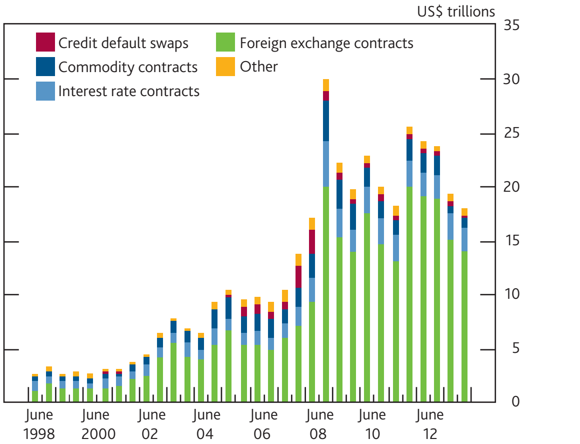
1 The Fixed Income, Currency and Commodities (FICC) markets lie at the heart of every aspect of the global economy. They are huge in size, and highly diverse. To take just three examples, turnover in foreign exchange markets is some US$5 trillion a day;[1] the global stock of corporate, financial and government bonds is nearly US$100 trillion (**Chart 1**); and FICC 'over-the-counter' (OTC) derivatives amount to around US$700 trillion in notional terms, or US$18 trillion[2] in market value (**Chart 2**). So it is vital that they work well, and in the best interests of everybody.

Chart 1 Global financial assets



Source: McKinsey. Values are at end-year, constant 2013 exchange rates, based on a sample of 183 countries.

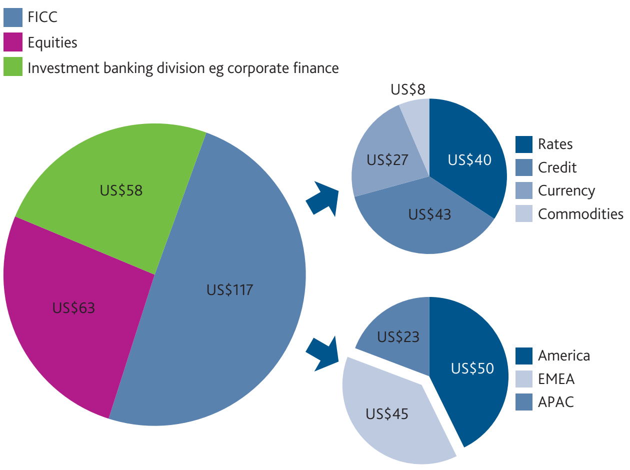
Chart 2 Gross market value of OTC FICC derivative contracts



Source: BIS semiannual survey of OTC derivatives.

2 The challenge is global: FICC instruments are traded continuously in financial centres around the world. But the United Kingdom has a particular concern for ensuring the FICC markets are fair and effective, because substantial shares of these markets are based here. The United Kingdom is the venue for 70% of trading in international bonds, nearly 50% of trading in OTC interest rate derivatives and 40% of foreign exchange trading. London is a leading centre for trading in energy, gold, silver and other precious metals — and major derivatives exchanges located in the United Kingdom account for around a sixth of total global commodities trading. Much of this business is done by foreign banks based in the United Kingdom, which employ around 160,000 people in London alone.[3] On one estimate, revenues from FICC business booked in London accounted for perhaps two thirds of the US$45 billion European total in 2013 (**Chart 3**),[4] and made a major contribution towards the United Kingdom's net foreign earnings from trade in financial services as a whole of more than US$70 billion in 2013, over twice that of any other country.[5]

Chart 3 The size and composition of investment banking revenues (US$ billions, 2013)



Source: Oliver Wyman.

(1) BIS Triennial Survey.
(2) BIS semiannual survey of OTC derivatives.
(3) 'Key facts about the UK as an international financial centre', CityUK, June 2014.
(4) Oliver Wyman.
(5) CityUK, June 2014, *op. cit.*

1.2 Misconduct

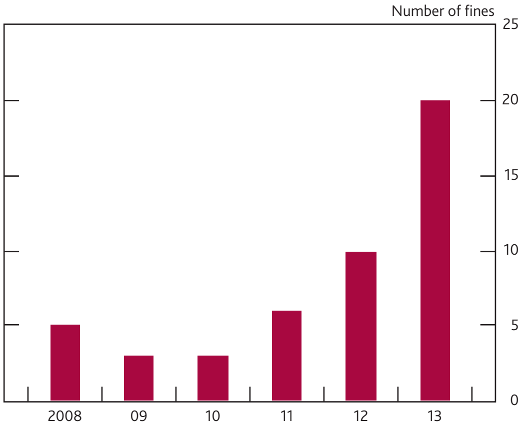
3 In recent years, major FICC markets have been hit by a series of actual or alleged acts of misconduct. In fixed income, employees in firms around the world attempted to manipulate Libor, Euribor and other similar measures of short-term borrowing costs in order to benefit themselves or some other part of their firm's business. In the United States and elsewhere, firms structured the mortgages or other assets used to back securitised assets, or misrepresented the nature of those underlying assets, in ways inconsistent with the interests of end-investors. Regulators identified systematic attempts to mis-value and otherwise engage in market misconduct in relation to large scale positions in credit default swaps. And in commodities markets, traders were found to have sought to manipulate physical or derivative prices, including gold, oil, lead, platinum, palladium and coffee. Box 1 on page 9 draws out some common underlying themes from these recent cases.

4 In the past, it was sometimes argued that misconduct in FICC and other wholesale markets had limited relevance to the wider economy because it primarily affected only the relative financial positions of sophisticated firms, which were seen as being capable of looking after their own interests. As discussed in Section 3, recent events have highlighted limitations to that view. First, the many linkages between FICC markets and the wider economy mean that successful manipulation of FICC markets can have large negative externalities on a broad swathe of end-users who rely indirectly on those markets. Second, there may be conflicts of interest between professional intermediaries and their specific end-investors. And, third, less sophisticated investors may on occasion seek to access FICC markets directly.

5 The policy response to recent FICC market misconduct has been two-fold. First, the number of large-scale enforcement actions against specific abuses has increased significantly (**Chart 4**). Authorities in the United States, the United Kingdom and the wider European Union have so far levied fines of some £4 billion for the manipulation of Libor, Euribor and similar indices, and there have been further substantial fines for misconduct relating to securitisations and other FICC instruments. Taken together with fines and provisions for conduct issues in other markets and banking activities,(1) that is large enough to require significant recapitalisation and business restructuring by many of the firms involved. Investigations of further cases and criminal actions, in foreign exchange and other markets, remain ongoing.

6 Second, there has been concerted action to reform the design and regulation of key FICC benchmarks, the manipulation of which featured in many recent cases. The United Kingdom introduced a new regulatory regime for Libor in 2013 — and the first act of the Fair and Effective Markets Review was to recommend that this regime be extended to include a further set of seven major UK-based benchmarks drawn from across the FICC markets.(2) Consultation on, and implementation of, these recommendations is now being taken forward by HM Treasury. Further steps to strengthen global benchmark standards are also under way, through the Financial Stability Board (FSB) reports on interest rate and foreign exchange benchmarks,(3) the International Organization of Securities Commissions (IOSCO) assessment process,(4) and the proposed EU benchmarks Regulation.

Chart 4 FICC related fines

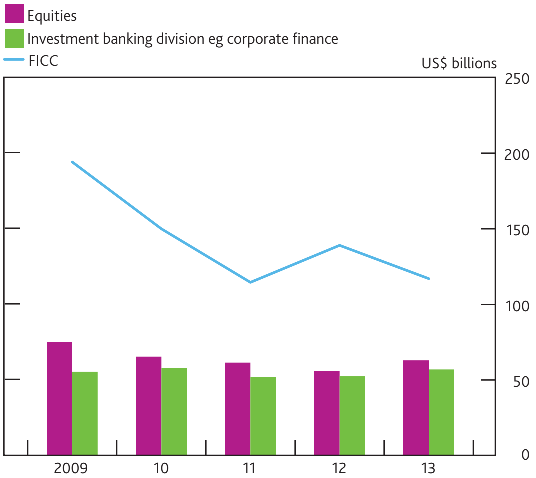


Source: Conduct Costs Project at the CCP Research Foundation, fines imposed on a sample of ten banks by authorities in the United States, the United Kingdom and the wider European Union.

7 The continued accumulation of misconduct cases nevertheless suggests that the causes of these abuses lie deeper than deficiencies in benchmarks alone. Recognition of that fact has further undermined public confidence in FICC markets. Attempts to mislead clients or manipulate prices, sometimes through collusion, prevent markets from performing their primary function, and foster distrust of those involved by wider society. That distrust in turn further impairs the effective operation of FICC markets, creating uncertainty among intermediaries, investors and other end-users, diverting management resources and increasing the compensation required for taking risk. Those challenges come at a time when FICC markets are also undergoing substantial change for other reasons, including a reduction in leverage by some liquidity providers and a series of other changes in trading and clearing arrangements, driven by reduced risk tolerance and new regulatory requirements designed to tackle the causes of the financial crisis. Reflecting those factors, global FICC revenues fell by 40% between 2009 and 2013 (**Chart 5**).

(1) Estimated to be £160 billion between 2009 and 2013 by the Conduct Costs Project at the CCP Research Foundation.
(2) The Review's detailed recommendations are available at www.bankofengland.co.uk/markets/Documents/femraug2014.pdf.
(3) See www.financialstabilityboard.org/publications/r_140722.pdf and www.financialstabilityboard.org/publications/r_140930.pdf.
(4) See www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf.

Chart 5 Investment banking revenues



Source: Oliver Wyman.

1.3 Objectives of the Review

8 Against that backdrop, the formation of the Fair and Effective Markets Review was announced on 12 June 2014 by the Chancellor of the Exchequer and the Governor of the Bank of England. Chaired by Nemat (Minouche) Shafik (Deputy Governor for Markets and Banking, Bank of England) and co-chaired by Charles Roxburgh (Director General, Financial Services, HM Treasury) and Martin Wheatley (Chief Executive Officer, Financial Conduct Authority), the aim of the Review is to identify ways to reinforce confidence in the fairness and effectiveness of wholesale financial market activity conducted in the United Kingdom, and to influence the international debate on trading practices.(1) The three chairs are supported by a secretariat drawn from the Bank of England, HM Treasury and Financial Conduct Authority and led by Andrew Hauser, the Bank of England's Director for Markets Strategy.

9 In view of the continued accumulation of misconduct cases, the main aim of the Review is to take a much broader look at the fairness and effectiveness of the FICC markets: identifying areas of potential deficiency, evaluating the extent to which those deficiencies will be addressed by reforms currently under way, and proposing ways to fill any remaining gaps. To inform that work, the Review will draw on the insights of FICC market participants, infrastructure providers and end-users, academics, commentators, international authorities, and the general public. An important role will be played by an independent Market Practitioner Panel, made up of senior representatives of internationally-active sell-side and buy-side firms, market infrastructure providers, major corporate users of financial markets and independent members, and chaired by Elizabeth Corley, CEO of Allianz Global Investors. All executive decisions will however be the responsibility of the Review's leadership team. The Review will make its final recommendations in June 2015.

10 The Review is aware that many changes are already under way at a regulatory, market and firm level in response to the financial crisis. Where these are likely to improve fairness and effectiveness in FICC markets, the Review will say so, and will not seek to duplicate them. Relevant regulatory changes include: MiFID 2 and the Market Abuse Regulation (MAR); the G20 provisions for trading, reporting, clearing and margining derivatives, as implemented in EMIR (and MiFID 2) in Europe and the Dodd-Frank provisions in the United States; the Basel III capital and leverage provisions, as implemented in international and national law; and the Banking Reform Act and Senior Managers and Certification Regime in the United Kingdom. International foreign exchange committees are developing a global set of high-level principles on FX trading. And the FCA has launched a new, more pro-active, approach to wholesale market supervision,(2) has continued its 'credible deterrence' enforcement strategy, and recently consulted on areas of the wholesale markets that might benefit from further investigation from a competition perspective.(3) Market structure changes in FICC, many influenced by regulatory reform, include: greater price transparency; a move towards greater use of standardised exchange-traded and cleared derivatives; the development of a range of single and multi-dealer electronic platforms; and more offerings of agency-only services. And there have been a number of initiatives aimed at improving culture and behaviour at a firm and individual level, including the UK Parliamentary Commission on Banking Standards, the Banking Standards Review Council,(4) and widespread efforts by individual firms to strengthen internal controls.

1.4 Principles guiding the Review's work

11 The Review's work will be guided by three important principles.

12 First, the Review believes that markets are the best source of dynamism, prosperity and progress. FICC market function, structure, scope and participation are all evolving rapidly — and interventions should where possible anticipate, and be robust to, those changes. For that reason, it is likely that key parts of the Review's final recommendations will consist of firm and market-led initiatives to boost fairness and effectiveness. In considering ways to shape market structures, the Review will seek to harness market forces, incentives and competition. And in considering ways to improve culture and values within firms and markets as a whole — a primary determinant of individual behaviour — the Review recognises that overriding responsibility rests with the leadership of financial firms themselves. The Review is therefore

(1) The full terms of reference for the Review are available at www.bankofengland.co.uk/publications/Documents/news/2014/tor120614.pdf.
(2) See www.fca.org.uk/news/evolving-the-fca-approach-to-markets-regulation.
(3) See www.fca.org.uk/news/wholesale-sector-competition-review.
(4) See www.bankingstandardsreview.org.uk.

Box 1
Common themes in recent FICC misconduct cases

The Review has analysed all of the published enforcement cases of market abuse and misconduct in UK FICC markets in recent years, as well as a range of significant international cases. Such behaviour is not a new phenomenon. But the breadth, scale and impact of recent cases involving the manipulation of Libor and other major benchmarks is greater than in the past. This box draws out some of the common themes associated with those recent cases.

1 Benchmark and other price manipulation

Benchmark manipulation: benchmark manipulation has been the highest profile of all recent cases of market abuse in FICC markets. The attempted manipulation of Libor, Euribor and other interbank rates has affected every major financial centre, including London, Singapore, Frankfurt and Tokyo, and resulted in total fines on institutions of some £4 billion, by US, UK and European regulators. In addition, the FCA recently fined one firm £26 million for manipulation of the London Gold Fix, and another firm £70 million for attempting to manipulate the BBA Repo Rate benchmark in order to influence the fees payable to the Bank of England for liquidity support. These cases highlighted the susceptibility of some historic fixing processes to manipulation, but they also involved other forms of misconduct. For example, some 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.

Manipulation of other market prices: there have been a number of cases where traders have either placed orders or executed transactions in order to push a market to an artificial position. Such cases often occur in more thinly-traded markets, where traders take advantage of low liquidity to move a reference level (for example, the closing price) in order to benefit from another transaction that depends on that level. The low levels of liquidity in certain FICC markets make them potential targets for these kinds of abuse. Cases like these are less common in more liquid markets, such as those for government debt. But they are not unheard of, particularly in less regularly-traded securities. A recent enforcement action by the FCA involved a fine of nearly £700,000 on an individual for attempted manipulation of the price of such a bond in the gilts market.

2 Misuse of information

Front-running and abuse of confidential information: front-running, the practice whereby an individual is trading in possession of private information with the purpose of taking advantage of the anticipated price effect of a future order, has been the subject of a large number of abuse cases in equities markets. One major investigation by the FCA, which concluded in 2013, resulted in a trader being jailed for two years for front-running the orders of his own firm. More recently, there have been a number of allegations that similar practices may also have occurred in FICC markets. More general abuse of confidential client information has also been at the heart of a number of abuse cases in fixed-income markets, where bond traders have used privileged information about new bond issues or corporate re-financing to benefit their own positions.

Misleading clients: a related but different form of abuse has been the provision of false or misleading information about a product by brokers to their clients. One example is the sale of a product (designed by a broker for one client) to another client, without the broker disclosing how and why the product was created. However, courts have on occasion rejected claims from plaintiffs alleging that a broker-dealer had responsibilities towards them, judging they were sufficiently sophisticated to have understood the deal on offer from the broker.

3 Collusion

An important feature of some recent cases has been attempted collusion to manipulate market prices. In the Libor and Euribor cases, for example, the European Commission levied fines of €1.7 billion against two groups of firms for colluding. Although most benchmarks had some defence against attempted manipulation by individual firms, few had explicit anti-collusion measures — highlighting an important design weakness. A more general lesson of this case is that where a relatively small number of players in a market have the ability to set a fixing or a reference price from which they all stand to gain, there is a risk that those players may attempt to collude. The potential implications of this for FICC markets with elevated concentration levels are discussed in Section 5.2.

4 Artificial restriction of physical supply to drive up prices

Attempts to restrict supply in a market are typical in cases of abuse in the commodities markets. For example, firms that control the supply of a commodity in their physical business may be able to manipulate that supply in order to profit from transactions undertaken by their trading arm. The best-known case of this kind involved Enron in 2000–01, where the energy firm deliberately withheld power supplies in California. The ultimate expression of abuse of this kind is the 'cornering' of a particular market, where an entity acquires such a dominant portion in an individual asset class that it can force those seeking that asset to buy from it at inflated prices. Major attempts to corner the copper and silver markets in the 1980s resulted in the introduction of new rules for the relevant exchanges.

particularly interested in exploring ways in which the authorities can help to catalyse credible and effective market-led processes, for example, by helping to enhance market discipline and innovation, or co-ordinating industry efforts to improve standards, culture and incentives. The Review's Market Practitioner Panel will play an important role in the Review's work, including by helping to launch and take forward those parts of the Review's final recommendations requiring active market ownership.

13 However, given the seriousness of recent misconduct, recommendations for targeted interventions by the authorities must also be a potential part of the Review's toolkit. The Review's terms of reference make it clear that such recommendations should have due regard to the impact on the efficiency, competitiveness and growth-generating potential of the financial services sector, and on the cost of regulatory resources. Interventions by the authorities to create or influence market structures, for example, have the potential to bring about profound change, so would require particularly careful analysis.

14 The second principle stems from a recognition that the FICC markets are global in scope, and shaped by forces far wider than those in the United Kingdom alone. For that reason, the Review is conscious that many of its recommendations are likely to require global discussion — whether with industry bodies, or with EU and other international authorities (including standard setters, such as the FSB and IOSCO, and central banks). In the latter case, the Review's primary role will be to raise issues and propose options for consideration by the wider international community. That will require extensive prior outreach to international partners — a process that is already under way, and will intensify during the consultation period. Where appropriate, the Review will also make recommendations for regulatory reforms at a domestic level, subject to the constraints of the current EU legislative framework.

15 The third principle stems from a recognition that there is no such thing as a single 'FICC market'. As described in Section 2 and the Appendix, fixed income, currency and commodities markets differ markedly in their operation, structures and regulation. Within each market, there are also further sub-segments, each with their own characteristics. The Review will take account of those differences in its analysis, drawing clear distinctions between markets where change is not required, and those where further action may be needed to improve fairness and effectiveness.

1.5 The consultation process

16 Given the broad scope of the Review's terms of reference, the range of possible issues for consideration by respondents is wide. Nevertheless, for the Review to have lasting impact its final recommendations will need to focus on a small number of the highest priority actions. To give focus to the consultation process, without imposing pre-set notions of what those priorities should be, the main body of this document is organised around the six key potential sources of vulnerability identified in **Table A** on page 5, and elaborated on in turn in Sections 5.1 to 5.6. In some of these sections, specific policy options are discussed. In others, the questions are somewhat broader in scope. The Review is seeking candid, robust and constructive responses across the full range of topics, including respondents' sense of where the relative priorities lie. The full list of consultation questions is drawn together in Section 6.

Consultation responses are sought by Friday 30 January 2015 or earlier, and should be sent by email to FEMR@bankofengland.co.uk.

17 The Review intends to make all responses to this consultation available for public inspection, unless the respondent requests otherwise. Information provided in response to this consultation, including personal information, may be subject to publication or release to other parties or to disclosure, in accordance with access to information regimes under the Freedom of Information Act 2000 or the Data Protection Act 1998, or otherwise as required by law or in discharge of statutory functions. Respondents should indicate if they regard all, or some of, the information they provide as confidential. If a request for disclosure of this information is received, respondents' indications will be taken into account, but no assurance can be given that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by a respondent's IT system on emails will not, of itself, be treated as constituting notice that such respondent regards any information supplied as confidential.

2 Key characteristics of the FICC markets

1 This section gives a factual account of the operation and regulation of four main areas of FICC — fixed income (subdivided into interest rate and credit markets), foreign exchange and commodity markets — to set the scene for the substantive analysis of fairness and effectiveness in the remainder of this document. Further detail on these markets and their regulation is given in the Appendix.

2.1 Common features

2 Although individual FICC markets differ in many respects, most share three key features, which have important implications for the rest of this consultation:

- First, FICC markets tend to be dominated by large **professional counterparties**, often acting on behalf of end-users or investors. The professional nature of the market means that most direct participants can be assumed to be highly knowledgeable about the products they trade, and capable of making educated investment decisions. The implications of those decisions however affect a much wider set of end-users, investors and the broader public — an issue returned to in Section 3.

- Second, a relatively large proportion of FICC assets are bespoke, designed to fit the particular funding or hedging needs and maturity profiles of borrowers or investors. By no means all FICC assets are of this type: developed economy currencies and government bonds for example typically trade in highly liquid, standardised forms. But, taken together, FICC assets are **unusually heterogeneous** (**Table B** provides examples of FICC assets by market).

- Third, trading in most FICC markets has tended to rely to a greater or lesser extent on intermediaries known as **market makers**, which means that more trading has occurred on a 'principal-to-principal' basis than, for example, in equity markets. The key features of the market maker model, and the pressures for change that have arisen since the financial crisis, are discussed in Box 2 on pages 13–14.

2.2 Specific FICC markets

3 The **foreign exchange** (FX) market has a wide range of purposes, including: facilitating businesses' import or export of goods and services; corporate and financial hedging or investment; and central banks' implementation of macroeconomic policy. Markets in developed countries' currencies in particular are the most liquid of all FICC markets, with very tight bid-offer spreads. In 2013 the global average daily reported FX turnover was US$5.3 trillion per day — more than half of which was in the form of swaps, forwards and derivatives. Although FX turnover is globally dispersed, London is home to 40%(1) of overall turnover.

4 Foreign exchange markets remain predominantly physically settled OTC markets. The need for flexibility on settlement and tenor for the majority of FX products is cited as remaining a significant barrier to the further development of organised exchanges and associated clearing. Nevertheless the OTC dealers' business models have become increasingly electronic, and many end-users now access the market through the 'single dealer' and 'multi dealer' platforms that these firms offer. However, price variations across counterparties remain, in part because credit spreads and client-servicing costs are embedded in the prices shown to customers. An important recent trend in spot FX markets has been the growth of 'internalisation', where banks match off client orders internally without having to go to the inter-dealer market to hedge their risk. Market participants have indicated that dealers with large enough market share now internalise up to 90% of their client orders in major currency pairs. The increased use of technology and internalisation by the large dealers has coincided with greater concentration in the market. As at April 2014, six firms accounted for 61% of overall FX turnover in the UK-based interdealer market; the equivalent figures for business with other banks, other financial firms and non-financial firms lay in the range 64–81%.(2)

5 The **fixed income rates** market is essential for the economic functioning of most countries, by providing financing for governments and government related agencies. Taken together the stock of G7 government debt amounts to over US$30 trillion.(3) As government debt securities are often viewed as having little or no credit risk, they provide a yield curve against which other assets can be valued, and serve a number of other important secondary purposes, including providing collateral against short-term loans in the repo market. The size of the European repo and reverse repo market in June 2014 was €5.8 trillion.(4) Derivatives also play an important role in the fixed income rates market, principally

(1) BIS Triennial Survey 2013.
(2) Bank of England FXJSC Turnover Survey, April 2014.
(3) BIS Triennial Survey 2013.
(4) ICMA European repo market survey, June 2014.

Table B Examples of FICC asset classes by market

	Fixed Income (rates)	Fixed Income (credit)	Currency	Commodities
Cash	• Repo • Government bonds/SSA • US mortgage-backed agency debt • Covered bonds • Corporate bonds	• Certificates of deposit • Commercial paper • Securitisations/asset-backed securities (CLO, CDO, MBS)	• Spot	• Physical
Derivatives	• Short-term interest rate futures and options • Bond futures and options • Interest rate swaps (incl. basis swaps) • Cross-currency swaps • Interest rate swaptions	• Single-name CDS • CDS Index • Synthetic CDO • Credit index futures	• FX forwards • FX swaps • FX options • Non-deliverable forwards • FX futures	• Exchange-traded futures and options • OTC swaps and forwards

to switch fixed for floating rate risk between counterparties. The majority of the interest rate derivative market is OTC, reflecting end-users' needs for specific hedging products. In 2013 the total outstanding notional of OTC interest rate derivatives was US$577 trillion,(1) with almost 50% of the market located in London. A smaller, but still significant, proportion of the interest rate derivatives market consists of standardised contracts that trade on exchanges. The total notional amount of exchange-traded interest rate derivatives was US$66 trillion.

6 The secondary market for government bonds continues to operate on an OTC basis in many countries. In the United Kingdom, for example, designated Gilt-edged Market Makers (GEMMs) are responsible for providing liquidity. Ongoing concentration of the market around benchmark issues and larger issuance volumes has resulted in greater liquidity in the secondary market, and average daily turnover was £29 billion in 2012–13.(2) An increasing amount of OTC trading is now facilitated through electronic platforms.

7 The **fixed income credit** market provides banks and non-financial companies with access to short-term and long-term funding. Short-term fixed income credit markets include the issuance of certificates of deposit by banks, and commercial paper by banks and non-banks with relatively high credit ratings. The related market for short-term unsecured inter-bank loans has declined in recent years as concerns about counterparty credit risk have led to greater reliance on secured lending. However, the unsecured lending market continues to have wider significance for the fixed income markets as the basis for Libor, the benchmark to which most interest rate swaps and many other derivatives refer. The average daily turnover in the sterling unsecured and secured money markets as at May 2014 was £45 billion and £90 billion respectively.(3)

8 Bonds provide long-term finance to financial institutions and other companies in both developed and emerging markets. In most cases, corporate bonds are issued via a 'syndication', where a group of banks or investment firms underwrite a bond issue and act as advisers on the timing, price and allocation to investors. In addition, securitisations — that is, the transformation of portfolios of credit assets into investment products in the form of asset-backed securities (ABS) — have helped to broaden credit markets. However, the size of the European securitisation market has declined in recent years, with US$239 billion of new issuance in 2013.(4) Credit default swaps (CDS) are also an important part of the credit markets, and serve a range of purposes including allowing banks with large credit exposures to mitigate that risk without having to cut credit lines or liquidate bond or loan positions. The size of notional outstanding in the CDS market has, however, also declined considerably in recent years, from US$51 trillion in June 2007 to US$24 trillion(5) by June 2013.

9 A striking feature of the fixed income credit market is its heterogeneity. Whereas a company will typically only issue a single class of equity shares, it will often have multiple outstanding debt securities of different sizes and maturities, some with optional features. In turn, issuance of new debt may be accompanied by sales of other financial instruments such as derivatives, as borrowers switch the proceeds into currency and interest rate profiles more suited to their ultimate funding needs. Secondary market liquidity in most bond issues (and the associated derivatives) can be limited, and bond investors therefore rely on market makers to provide quotes rather than trading through an exchange. Although a variety of electronic platforms show live pricing for corporate bonds, they mostly reflect indicative bids and offers that need to be confirmed with the dealers supplying them before execution can take place. Attempts to develop alternative trading platforms to provide a central pool of liquidity have so far failed to achieve critical mass.

10 The **commodity** markets determine the prices of food and raw materials that are relied upon by producers and consumers across the globe. The four main sectors of the commodities markets are energy, agriculture, precious metals,

(1) BIS Triennial Survey 2013.
(2) UK DMO Data.
(3) Bank of England MMLG Sterling Money Market Survey 2014 H1.
(4) SIFMA and AFME.
(5) BIS Triennial Survey 2013.

Box 2
The recent evolution of the FICC market making model

In recent decades, many FICC markets have been built around a 'market making' system in which market participants trade bilaterally with an intermediary on an 'over the counter' (OTC) basis, rather than multilaterally with each other on an organised exchange. In cash markets, the market maker builds up inventories of assets on its own balance sheet when there are net sales from the market, and runs them down when there are net purchases, providing investors with continuous two-way prices in return for compensation via a bid/offer spread. In derivatives markets, the market maker performs a similar function, but warehouses risk positions rather than asset inventories.

This structure has a number of important advantages. It allows market participants to trade smoothly in and out of positions, if necessary in large size, without excessive price volatility, even where the underlying positions may be relatively illiquid or heterogeneous — as they can be in corporate bonds and many other FICC markets — and in a relatively wide range of market conditions. It also gives counterparties certainty over their credit exposure in markets such as foreign exchange where there can be extended exposures related to settlement or other risks. However, to the extent that the model relies on bilateral price discovery and execution (historically often by phone), market-wide transparency of pricing may be limited both pre and post-trade, and pricing may differ across market segments, including so-called 'dealer to dealer' and 'dealer to client' markets.

Standing ready to meet customer demand at committed prices exposes market makers to potentially sizeable losses, if they deal with counterparties who have an informational advantage, or face sharply moving markets. They therefore need to specialise in gathering information about their markets in order to predict the likely path of demand and supply, and adjust their risk positions accordingly. That means that market making has natural increasing returns to scale, in the sense that a market maker that sees more trades in a particular market is likely to be able to make more efficient prices. In the pre-crisis period, many firms on the sell-side sought to enhance these efficiencies in the use of information and returns to scale further by engaging in horizontal integration between market making and other FICC businesses, including proprietary trading and market making in structured products and derivatives. This increasingly integrated approach gave a number of firms substantial scale and breadth of product offering, increasing the rates of concentration in some FICC markets and providing scope for complex price differentiation between different 'bundles' of products and different counterparties.

The market making model, whether combined with horizontal integration or not, provides a number of key benefits. Investors in gilt and foreign exchange markets, for example, have benefited from near-continuous liquidity at very tight prices in a wide range of market conditions. That deep liquidity has in turn allowed issuers to borrow at very fine and predictable terms. At the same time, it requires market making firms to have effective controls in place to manage two key risks. First, the need to take principal risk gives market makers an interest in future price movements that can benefit, but may sometimes also conflict with, the interests of their clients. That may be particularly true where a market maker accounts for a large share of a particular market, or is part of a horizontally integrated firm. Second, the information that market makers gather about market trends and customer demand as part of their role is important for them to provide customers with the best possible service, and avoid significant losses. But, in the wrong hands, it may also be used to manipulate thin markets, undertake transactions or otherwise work against customer interests.

None of these risks are new: well-managed market makers have long had controls in place to prevent the abuse of conflicts of interest, confidential information or market power; and investors have long known to handle information about future orders carefully. Nor are they unique to market makers: inter-dealer brokers will often have confidential information about order flow, even though they cannot take principal positions. Customers may also have informational advantages or pricing power, particularly where they are large relative to the overall market — as has increasingly been the case post-crisis. The role these factors may or may not have played in recent cases of market misconduct is discussed in Sections 4 and 5.

The traditional market making model is however now changing rapidly, reflecting a combination of technological and regulatory drivers. First, market makers have become more reluctant to commit capital to warehousing risk. That reflects a combination of reduced risk tolerance since the financial crisis, and the impact of regulation designed to improve the resilience of the financial system by increasing capitalisation and reducing the implicit government subsidy. This reduction in market making capacity has further increased concentration in some FICC markets. Second, regulation is requiring more types of FICC business that previously would have traded via market makers to move onto an exchange or other regulated venue (for example, the more liquid types of derivative). And, third, market makers have been embracing more electronic forms of trading, including 'request-for-quote' platforms (which automate processes previously carried out by phone), and single-dealer or multi-dealer platforms (SDP/MDP), which allow customers to place orders within an automated system. As discussed further in Section 5.1, such 'electronification' can bring significant increases in transparency. But it may not always do so: 'internalisation' for example, widely used in FX spot markets, allows customers to trade across the books of a single firm, with no price transparency to the wider market. And exchange-like platforms are only well suited to relatively standardised products with a regular flow of buyers and sellers.

These recent developments highlight some of the challenges in improving fairness and effectiveness in FICC markets. The shift from voice-based market making may increase transparency and access for more standardised assets, without harming liquidity in normal market conditions. But there may be a more explicit trade-off between the two for more bespoke assets or in unsettled market conditions. For these reasons, market makers are likely to play a continued, albeit potentially more specialised role in many FICC markets.

and industrial metals. Each sector has a huge array of derivatives contracts, with each contract having very specific requirements concerning the precise nature of the underlying commodity, for example the grade or delivery location and delivery date of a particular commodity. For example, deliverable crude oil streams include UK Brent Blend, US West Texas Intermediate, Norwegian Oseberg Blend, Colombian Cusiana and Nigerian Bonny Light. For a number of key commodities, there are liquid exchange-traded derivatives markets. However, many commodity derivatives are traded OTC, including the entire London precious metals markets and large sections of the energy derivatives market.

11 The commodity derivatives markets are linked to underlying physical markets which are typically global in scope. Most trading in the physical market is done on an OTC basis and, in many cases, there are few published data on such transactions. As a consequence, market participants who also have physical businesses often have an information advantage over those who only participate in the derivative markets. A recent trend across many commodity markets has been the transfer of market share in commodities trading from the major investment banks to vertically integrated commodity firms, combining both a physical business and a trading arm.

2.3 Regulation

12 Historically most FICC markets were not covered by market conduct regulation, reflecting the perception that professional counterparties could take care of themselves. Most provisions governing market conduct in the United Kingdom related to markets organised as exchanges, and therefore focused predominantly on the equity markets, together with a few exchange-traded FICC instruments such as interest rate futures. By contrast, OTC FICC markets were covered by a range of codes — some of which continue to play a role (notably in the United Kingdom the Non-Investment Products or 'NIPs' Code,[1] which covers foreign exchange and certain physically settled commodity derivative markets).

13 Over time, regulation has replaced codes in some areas of the FICC markets. The four main parts of the regulatory framework governing market conduct in the United Kingdom are: the FCA Principles for Businesses; the EU's Markets in Financial Instruments Directive (MiFID); the EU's Market Abuse Directive (MAD); and the EU's Regulation on Wholesale Energy Markets Integrity and Transparency (REMIT). The FCA's Principles for Businesses apply to all authorised individuals and firms, and are a fundamental part of the regulatory framework which all firms must adhere to, even where detailed rules do not apply.

14 MiFID requires the authorisation of investment firms and sets out rules determining how such firms must behave when dealing with clients, calibrating requirements according to the nature of the client and the activities that firms undertake. For participants in wholesale markets, there are two classes of client: professionals and eligible counterparties (ECPs). While a range of protections exist for business done with professional clients, transactions with ECPs are mostly exempt from the obligations. MiFID also sets out rules governing the operation of exchanges and other trading venues. MAD and REMIT set out rules on market misconduct covering insider dealing and market manipulation. These rules are supplemented in the United Kingdom by the FCA's Code of Market Conduct and separate criminal offences for insider dealing and market manipulation (under the Criminal Justice Act 1993 and Financial Services Act 2012, respectively).

15 Earlier this year, both MAD and MiFID were replaced by new pieces of European legislation which will apply from July 2016 and January 2017, respectively. The revised Markets in Financial Instruments Directive and new Markets in Financial Instruments Regulation, known as MiFID 2, will widen regulatory coverage of the FICC markets. MiFID will now cover shares, fixed income securities and derivatives, all commodity derivatives traded on authorised venues, and most currency derivatives.[2] However, spot FX and, depending on

(1) www.bankofengland.co.uk/markets/Documents/forex/fxjsc/nipscode1111.pdf.
(2) A full list of financial instruments covered by MiFID can be found in Appendix I Section C of the Directive: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0065&from=EN.

context and purpose, some forward contracts in foreign exchange and physical commodities, are not specifically covered. Pre and post-trade transparency requirements will be extended to cover firms and venues in all bond and derivative markets, and the creation of a new regulated venue, the 'Organised Trading Facility', will mean that much FICC business that was traditionally classified as over the counter will now be subject to the rules covering venues. Where appropriate, standardised and liquid OTC derivatives will also be required to be traded on regulated venues, as part of the EU's implementation of the G20 derivatives commitments.(1)

16 The changes to MiFID will therefore not only extend regulatory cover, but also have a profound impact on the structure of many areas of the FICC markets. The G20 commitments will see large sections of the derivatives market moved onto organised venues for the first time, and the new transparency measures are expected to have a significant impact on the functioning of secondary bond markets. The new Market Abuse Regulation (MAR) will also greatly extend the coverage of market abuse provisions in FICC markets, including a broader range of financial instruments traded on venues other than regulated exchanges and also covering spot commodity markets (where trading in spot affects a financial contract). Taken together, these measures will mean there is greater regulatory cover of most FICC markets. The issue of the regulatory perimeter is considered further in Section 5.4.4.

17 Recent developments in prudential regulation are also cited by market participants as having a major impact on the 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: higher trading book capital requirements to ensure adequate capitalisation of positions that cannot be exited quickly; a non risk-based leverage ratio, requiring banks to assess capital as a percentage of total exposure; and measures to ensure that firms have sufficient liquidity coverage in times of stress. These new provisions will only apply to banks and other credit institutions (not to firms such as hedge funds and inter-dealer brokers), and some are not due to be fully implemented internationally for several years. Taken together these measures are designed to ensure greater prudential stability of financial firms, including those playing a key role in the FICC markets. The implications for liquidity in FICC markets are discussed in Box 4 in Section 4.

18 There are a number of other recent regulatory initiatives which, while not dealing directly with conduct issues, also have an important bearing on the fairness and the effectiveness of FICC markets. The Dodd-Frank Act will implement the G20 derivatives commitments in the United States, and the European Market Infrastructure Regulation (EMIR) will implement most elements of the commitments in the EU (except for the trading commitment, which is covered by MiFID 2). Reforms to the structure of banking, such as the UK Banking Reform Act and the Volcker Rule in the United States, may indirectly affect liquidity in the FICC markets. Finally, the EU's Alternative Investment Fund Managers Directive (AIFMD) has led to a larger number of participants in FICC markets being subject to regulatory oversight. These other regulations are considered in more detail in the Appendix.

(1) See Group of Twenty (2009), 'The G20 Pittsburgh Summit Leaders' Statement,' item 13 under 'Strengthening the International Financial Regulatory System.' www.g20.org/sites/default/files/g20_resources/library/Pittsburgh_Declaration.pdf.

3 What does 'fair and effective' mean for the FICC markets?

1 **Table C** summarises the Review's provisional view of the high-level characteristics it would expect to see in fair and effective FICC markets. These have been derived from a range of sources, including academic and practical studies in finance, economics, law and competition policy, and have been the subject of initial discussions with a range of market participants, policymakers and academics. The rest of this section elaborates on the reasoning behind the proposed definition.

Table C Proposed characteristics of 'fair and effective' FICC markets

'Effective'	Enabling investment, funding and risk transfer; underpinned by robust infrastructure
	Competitive prices
'Fair'	Clear standards of market practice
	Transparency
	Open access
	Competition on the basis of merit
	Integrity

3.1 Fairness and effectiveness for whom?

2 A central question for the Review is how to craft a set of characteristics appropriate for FICC markets which — as discussed in Section 2 — are largely populated by professional market participants. Such firms have historically been thought of as being capable of taking care of their own interests when engaged in mutual trade, without regulatory interference to govern conduct: a principle sometimes loosely described as '*caveat emptor*' (or 'buyer beware'). The true meaning of that term has never involved the complete absence of standards, as discussed in Box 3 on page 17. But avoiding the imposition of highly prescriptive conduct rules has long been thought of as helping FICC and other wholesale markets to operate effectively — particularly important for markets relied upon by a wide range of other markets, companies and policymakers for efficient price discovery and liquidity.

3 In recent years, and particularly since the financial crisis, conduct regulators have been re-evaluating this balance, for three main reasons. First, there has been a growing recognition that some market practices that may have been considered acceptable between market intermediaries may nevertheless impose negative externalities on the ultimate end-users of those markets as a whole, undermining confidence in the integrity of those markets more generally. Second, conflicts of interest may mean that outcomes that are in the interests of professional intermediaries are not always in the interests of their individual clients or counterparties. And, third, on occasion, less sophisticated investors may seek to access FICC markets directly. For these reasons, there has been increased supervisory and regulatory interest, as discussed in Sections 1 and 2 and the Appendix. At the same time, the importance of not overburdening the effective operation of wholesale markets has remained a key consideration. For example, while MiFID requires investment firms to act 'honestly, fairly and professionally' and communicate in ways which are 'fair, clear and not misleading' in their dealings with 'retail' or 'professional' clients and MiFID 2 will extend that general requirement to the most knowledgeable and sophisticated 'eligible counterparty' category, more detailed conduct rules only apply to transactions with 'retail' or 'professional clients'. The concepts of fairness and effectiveness proposed here are consistent with maintaining that balance, but the Review would welcome views of respondents on this issue.

3.2 Defining 'effective'

4 The Review believes that effective FICC markets are ones that successfully achieve the underlying objectives of financial markets. This has two key components.

5 The first characteristic of effective FICC markets is that they should operate in ways that allow end-users, borrowers and end-investors to undertake **transactions, including risk transfer and the channelling of savings to investment** in a predictable way, in support of the broader non-financial economy. This definition requires markets to be underpinned by robust infrastructure, and implies as an outcome that they are sufficiently liquid and resilient to support the needs of end-users, and not prone to sudden closure. It does not however imply that more is always better when it comes to liquidity. Excessive liquidity provision caused, for example, by the underpricing of liquidity and credit risk — such as that seen in the build-up to the financial crisis — may harm, rather than serve, the interests of the ultimate users of markets (see Box 4 on page 21).

6 The second characteristic of effective FICC markets is that market participants should be able to trade at **competitive prices**, set through a price discovery process reflecting the current and expected balance of supply and demand. This

Box 3
The meaning of *caveat emptor*

Discussions of FICC and other wholesale markets often refer to the concept of *caveat emptor*. Some argue that it is important to preserve this principle in order to avoid over-regulation. Given its importance to the debate, it is important to elucidate its meaning.

In the general law of sale, *caveat emptor* expresses the basic principle that a buyer of property purchases it at his or her own risk, and that — unless expressly agreed otherwise — the seller makes no representation, gives no warranty, and is under no obligation to volunteer information, about the property sold. In financial markets, the phrase is often used as shorthand for the more general proposition that market participants contracting with each other should be held to the bargains that they agree, and that the public interest is best served by allowing them to contract freely with each other without regulatory restriction or overlay.

However, *caveat emptor* has never meant 'anything goes'. It has always been subject to the general law on fraud and misrepresentation, which has long been relatively strict, embodying the principle that (in the words of a Victorian judge, Lord Macnaghten in *Gluckstein vs Barnes* [1900] AC 240) 'sometimes half a truth is no better than a downright falsehood'. And over the years the practical application of the *caveat emptor* principle has been further qualified by judicial and statutory intervention (for example on implied terms), by disclosure and other provisions of consumer law, and, in the context of investment transactions, by statutory and regulatory rules. For example, *caveat emptor* does not trump the regulatory obligation on a firm to act 'honestly, fairly and professionally'. Market manipulation cannot therefore be said to be consistent with *caveat emptor*, even where it takes place between two counterparties of broadly equal bargaining power and sophistication.

implies that allocations of assets should result from competitive behaviour, free from collusion, unwarranted barriers to entry or other restraints on trade, and that prices should be observable to relevant parties. This definition of an 'effective' market is preferred to the concept of an 'efficient' market more commonly used in the economics and finance literature, since that concept has not described market outcomes well in recent years, and has a number of potentially extreme policy implications (for example, that 'anything goes' in terms of getting information to market).(1)

3.3 Defining 'fair'

7 The first proposed characteristic of fair markets(2) is that market outcomes should result from **clear 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; and confidence that market participants will apply those standards consistently and rigorously. It does *not* imply that rules, codes and market practices are necessarily uniform across all markets, participants and jurisdictions. Nor does it imply they need necessarily be highly prescriptive in nature.

8 The second proposed characteristic is that there should be sufficient **transparency**, giving participants common access to the information necessary to allow them to verify that rules and practices are applied consistently. So, for example, there should at a minimum be enough post-trade transparency to allow a firm paying for best execution to verify that its broker achieved it, or a beneficial owner to verify that an agent lender has lent securities only to allowed borrowers. This definition allows for the possibility that there may be instances in which increases in transparency, beyond some point, may reduce the effectiveness of a market — an issue that for example lies at the heart of the calibration of the MiFID 2 provisions on pre and post-trade transparency. The Review is not seeking to re-open that debate — but would welcome respondents' views on the broader role of transparency in FICC markets (see also Section 5.1).

9 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 are reasonable and transparent, do not confer unfair advantage on large or otherwise incumbent firms, and allow at a minimum effective intermediated access for all. The Review nevertheless recognises that evaluating such terms can be far from straightforward in practice.

10 The fourth characteristic of fair markets proposed by the Review 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

(1) The Efficient Markets Hypothesis asserts that markets fully, accurately, and instantaneously incorporate all available information into market prices — including, in some strong forms of the definition, hidden or insider information.
(2) 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). That suggests that outcomes are typically perceived to be fair in the presence of procedural, informational, interpersonal and distributional justice.

innovate successfully, leading to superior capabilities or processes, should be able to earn a return on that investment in the form of superior prices and allocations, provided those outcomes are merit-based. In the Review's opinion, such a concept is necessary in order to ensure there are incentives for market participants to innovate and invest. Such a criterion is however challenging to assess in practice. For example, firms may seek to exploit an initially beneficial technology to establish a lasting incumbency position, preventing fair market entry by others, and creating systematic losers out of end-users.

11 Finally, and importantly in light of the misconduct of recent years, fair markets should be 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, misrepresentation, manipulation or coercion. In particular, where one party acts for another, that other party's essential interests should be reasonably protected. By implication, attempts to manipulate markets or measures such as Libor and Euribor are wholly inconsistent with fair markets.

3.4 Can there be trade-offs between fairness and effectiveness?

12 It is sometimes argued that there may be trade-offs between fairness and effectiveness. The characteristics proposed in this section have been designed to minimise that risk. For markets characterised by low levels of fairness, increases in fairness should also increase effectiveness. For example, combatting serious market abuse, including insider dealing, will improve effectiveness by increasing market participation by those previously unwilling to tolerate the risk of large indiscriminate losses or abuse. At higher levels of fairness, the Review recognises that some market participants see this relationship as more finely balanced. It is often argued, for example, that regulators seeking to impose ever higher levels of market transparency may at some point trigger market fragmentation as those seeking to trade in large size seek alternative trading arrangements, or cease trading altogether. These issues are discussed in more depth in Section 5.1. However, the concepts of transparency, openness and merit-based competition used in the definition of fairness proposed in this section have been designed with the objective of avoiding this risk.

Consultation question

Q1: **The Review would welcome respondents' views on the definition of 'fair and effective' FICC markets proposed in Section 3. Does it strike the right balance between safeguarding the interests of end-users without unnecessarily impeding the effectiveness of FICC markets? Are the concepts of transparency, openness and equality of opportunity appropriately specified? And how does the definition compare with those used in other markets, jurisdictions, organisations or legislation?**

4 Evaluating the fairness and effectiveness of FICC markets

4.1 The Review's analytical framework

1 Section 2 sets out the key features of the major FICC markets, and Section 3 gives a working definition of the characteristics the Review would expect to see in fair and effective markets. This section draws the two together, and outlines a framework for evaluating the fairness and effectiveness of the major FICC markets. Between now and June 2015, the Review proposes to develop this framework, and use it to identify: (a) where FICC markets are susceptible to abuse, which practices are potentially detrimental to clients and whether current market structures exacerbate conduct problems; (b) the extent to which these issues have been, or will be, addressed by regulatory and other changes already under way; and (c) the areas where further action is needed.

2 The scope of this assessment is potentially enormous. To give its preliminary work focus, while avoiding potential blindspots, the Review has drawn on a wide range of inputs, including published enforcement cases from the FCA and other international regulators, an extensive round of discussions with end-users and participants in FICC markets (including those on the Market Practitioner Panel and its Expert Groups), regulators and other stakeholders; an assessment of economic and legal academic research including discussions with a number of academic experts; and data and other desk-based analysis.

3 This process has helped the Review to refine its view of the key questions and the broad shape of possible policy responses. But in the time so far available, the Review has not sought to reach definitive answers. Indeed, it is clear that there are many alternative perspectives on the key issues, including the sources of misconduct, the extent to which individual FICC markets are already fair and effective (or will become so once the current set of reforms is complete), and the efficacy of alternative proposals for improving fairness and effectiveness. A key aim of this consultation is therefore to seek respondents' views on how to weight these alternative perspectives, in order to inform the Review's final recommendations in June 2015.

4 To give structure and focus to this process, the Review has developed the framework shown in **Table A** in the Executive Summary. The table divides the sources of potential vulnerability in FICC markets into six categories. Three of these are structural: market microstructure; competition and market discipline; and benchmarks; and three relate to conduct: standards of market practice; responsibilities, governance and incentives; and surveillance and penalties.[(1)] These categories are designed to capture the full range of hypotheses about the extent and nature of cross-cutting vulnerabilities. As stressed in Sections 1 and 2, however, it is recognised that the assessment may vary across different FICC markets.

5 The Review will also use the framework in **Table A** to evaluate ways in which the fairness and effectiveness of FICC markets might potentially be improved. The table highlights the fact that, for each of the areas in which fairness and effectiveness might potentially need to be improved, this could happen through action either by markets, by firms, by individuals or by regulators. This ordering reflects the principles set out in Section 1.4, in particular the desire to explore ways in which the authorities can help to catalyse market-led initiatives to improve fairness and effectiveness. Given the seriousness of recent misconduct, however, recommendations for regulatory interventions may also be required — and that is reflected in the final column in the table. Since the Review is consulting on the appropriate way forward, this document does not present a completed version of this table — but the table has been used as an organising framework for the Review's diagnostic work.

6 Sections 5.1 to 5.6 explore the potential vulnerabilities and solutions under each of the six headings in more detail. The rest of this section provides a high level summary of that material.

4.2 A high-level summary of Sections 5.1 to 5.6

7 **Section 5.1 considers issues related to market microstructure**. As discussed in Section 2, markets for bespoke FICC products — such as many types of corporate bonds, credit products, OTC interest rate derivatives and interbank unsecured lending — tend to be relatively thin and lack widespread transparency. Instruments traded in markets of this type are intrinsically harder to value, and hence their prices may be more vulnerable to manipulation. Regulatory

(1) The three conduct categories broadly follow the approach recommended by Sue Jaffer, Nicholas Morris and David Vines in Chapter 16 of Jaffer, S, Morris, N and Vines, D (2014), *Capital Failure: rebuilding trust in financial services*, Oxford.

and technological change is already leading to greater standardisation and transparency across many FICC markets. The question posed in Section 5.1 is whether respondents think that process should go further, through industry-led standardisation, removing barriers to entry for new trading platforms or utilities, or further transparency enhancements to practices (such as new issue allocation) and structure, led either by industry or through regulation. The contrary view is that the process already under way is sufficient, and that imposing standardisation or transparency standards in excess of that required by issuers and end-users may harm, rather than enhance, market functioning and risk transfer.

8 **Section 5.2 considers issues related to competition and market discipline**. Concentration in some FICC markets is relatively high on both the sell and the buy-side, and in some cases firms have also engaged in horizontal or vertical integration — raising potential conflicts of interest and concerns about information asymmetries. A number of recent misconduct cases have involved attempted collusion, exercise of market power or inadequate management or control of conflicts. The ability of FICC market participants to exercise market discipline against those engaging in misconduct may also have diminished somewhat in recent years, weakening a key bulwark against abuse.

9 At the same time, the market maker system that has typically characterised FICC markets has delivered important benefits, including tight pricing and deep and near-continuous liquidity in a wide range of market conditions. As Box 2 in Section 2 discusses, that model is now changing, as increased risk aversion and regulatory reforms designed to return the cost of liquidity and capital to more sustainable levels favour more agency-based trading models in some FICC markets. The potential diminution of liquidity in certain FICC markets has been raised as a concern about market effectiveness by many investors and end-users in early conversations with the Review (see Box 4 on page 21). This is therefore a finely balanced issue for the Review to explore. Section 5.2 asks respondents for their views on the effectiveness of competition and market discipline in FICC markets, on the scope for enhancing market-driven competition, and on the potential role for official sector competition policy.

10 **Section 5.3 considers issues related to FICC benchmarks**. Recent abuse cases revealed widespread issues with the design and oversight of benchmarks in FICC and other markets. Substantial reform has already occurred, and further regulatory change is under way. Section 5.3 asks for respondents' views on whether those steps are sufficient. Further steps may include: reducing or diversifying benchmark use; improving benchmark construction; and ensuring more comprehensive compliance of benchmarks with the IOSCO standards.

11 **Section 5.4 considers standards of market practice**. Recent enforcement cases in FICC markets reflect clear breaches of standards of market conduct and integrity, as set out for example in the FCA's Principles for Businesses. In addition, fundamental standards in relation to fraud, insider dealing and market manipulation are set out in law. On one view, those standards provide a sufficient guide to expectations of market practice, given the impossibility of providing detail for every scenario or circumstance. In such circumstances, the main priority should be to ensure that all FICC market participants understand the implications of those provisions, and abide by them.

12 An alternative view, expressed to the Review by some market participants, is that there is a need in the future to supplement these standards with more specific market-wide guidance or rules on acceptable market practice, closing perceived gaps caused by the combination of an uneven regulatory perimeter across FICC markets and dated voluntary market codes lacking formal enforcement powers. The regulatory perimeter is being extended through the introduction of MiFID 2 and MAR in Europe, and codes covering foreign exchange markets are being updated. Market participants have nevertheless identified a range of market practices to the Review where they believe further guidance would be helpful.

13 Section 5.4 seeks respondents' views on these issues. If further guidance were judged to be desirable, practical design questions for comment include: whether to couch such guidance in a market code owned by the industry, or whether to give it regulatory force; whether it is desirable for such codes to be broad or precise in nature; how to recognise the differences between FICC markets; how to phrase them in terms that could be of practical use in a trading context; how to ensure they remain up to date; how to avoid conflict with other existing codes and regulations; how to ensure they apply to all relevant market participants; and how to ensure compliance. The Review is mindful of the need to avoid conflict between market-wide guidance and regulatory requirements, and the vulnerability of overly detailed guidance or rules to 'gaming' behaviour. A final issue raised in this section is whether there is a case for extending the scope of regulation to extra institutions or markets.

14 **Section 5.5 considers responsibilities, governance and incentive structures within firms**. Those who place particular weight on this as a key vulnerability argue that, in the run-up to the crisis, some firms active in FICC markets had allowed the culture on their trading floors to get out of control. On this view, poor 'tone from the top' was coupled with widely ignored firm-level codes of conduct, weak and siloed management, and desk heads with incentives focused heavily on their own short-term revenue performance. In such

Box 4
The importance of market liquidity in the context of the Review

A recurrent theme throughout this consultation document, and in the Review's initial round of conversations with market participants, is the role of market liquidity. In a broad sense, market liquidity typically 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 for both issuers (who want to be able to borrow when they want, at competitive terms) and investors (who want to be able to move smoothly in and out of positions).

Market participants report that liquidity in some FICC markets is noticeably lower than it was before the financial crisis. Market makers are less willing or able to take on risk, increasingly focusing on activities requiring less capital and balance sheet capacity and shifting to a more order-driven or brokerage model, meaning that the execution of large trades tends to take longer. Some market makers have also withdrawn from key markets, increasing concentration levels. These trends are not universal across FICC markets — while dealer inventories in corporate bond markets have fallen by nearly three-quarters since early 2008, liquidity in spot FX markets, for example, remains high. But the general trend appears to reflect a combination of reduced risk tolerance since the financial crisis, together with the impact of regulation designed to improve the resilience of the financial system by increasing the capitalisation of financial institutions and reducing the implicit subsidy to the banking system (see the Appendix).

It is not clear that these changes will necessarily reduce liquidity in the FICC market over the long run. Many market participants recognise that liquidity was oversupplied before the crisis, reflecting the underpricing of risk and the subsidy provided to major banks by implicit government guarantees. That led to a sharp deleveraging when the pricing of risk returned to more normal levels. One of the goals of recent prudential regulation has been to reduce the probability of such cycles in future, increasing the resilience of the system, reducing subsidies and hence ensuring liquidity is provided at a more sustainable level. For that reason, respondents should take the international post-crisis prudential reform package as a given when replying to this consultation.

It is nevertheless recognised that the increased cost of market making could have potential implications for the structure of FICC markets, and hence may interact with some aspects of this Review. The traditional role of the buy-side in policing poor market conduct by sell-side firms, for example, may be weakened when there are limited alternatives for them to choose. The Bank of England's Financial Policy Committee is considering the resilience of market liquidity as part of its medium-term priority on supporting diverse and resilient market-based finance.

structures, focus on maintaining a firm's reputation — normally a bulwark against misconduct — was weak, with traders feeling greater loyalty to their desk or friends and peers in the market than to their firm.

15 Since the crisis, the major financial firms have signalled their determination to move away from this model, and have embarked on a wide range of initiatives. Practitioners nevertheless recognise the challenges of translating these good intentions into lasting change. Section 5.5 seeks respondents' views on the key priorities for firms in that respect, including: improved performance measures for individuals and firms; adjustments to remuneration; safeguards against inappropriate staff moves; the importance of high standards of conduct in decisions on promotion and advancement; ways to strengthen the role of boards in the governance of FICC activities; and ways to strengthen the so-called first line of defence. Section 5.5 also seeks views on how the Review's recommendations should interact with those of the Banking Standards Review Council, and on the scope for strengthening firm-level practices through regulatory backstops, including the prospect of extending these regulatory provisions across the FICC industry.

16 **Section 5.6 considers surveillance against, and penalties for, those found to be engaging in misconduct**. It highlights that looking out for misconduct, and ensuring identified cases have consequences, are shared responsibilities between firms and regulators. Pre-crisis, many firms' systems for monitoring FICC traders were underdeveloped, and procedures for dealing with internal misconduct were sometimes inadequate, particularly where higher-paid staff were involved. Approaches to these issues have since improved, but the Review is keen to identify examples of best practice, and ways in which the authorities can work with the industry to catalyse further progress. Questions raised in Section 5.6 include: the scope for stronger firm-level whistleblowing regimes; the role for electronic surveillance tools; penalties for staff breaching internal guidelines (and ways to publicise such cases); and the extent to which firms can punish poor behaviour by other firms by shifting business and reporting such behaviour to the authorities.

17 Conduct regulators have also increased the resources devoted to FICC and other wholesale markets in recent years, having been perceived by some as being more focused on retail and more directly regulated wholesale markets such as

equities in the pre-crisis period. In particular, as Section 5.6 discusses, the FCA now has a more forward-looking supervisory approach, and has continued its credible deterrence approach to enforcement activities. But FICC market supervision poses a number of specific challenges, given the markets' global scope, less widely available data on pricing, and the relatively complex regulatory coverage. Respondents are asked whether the level of supervisory resources dedicated to FICC market supervision is appropriate and whether there are further steps that might be taken to strengthen the impact of enforcement action further.

Consultation question

Q2: **Of the six themes identified in Table A on page 5 which do you consider to be the most important factors contributing to the recent series of FICC market abuses? In which other areas do you believe the fairness and effectiveness of FICC markets globally may be deficient? Do these answers vary across jurisdictions, or specific markets within FICC? Are there any other important areas of vulnerability that are not identified in the table?**

5 Specific issues in FICC markets

1 Section 4 describes the six key areas where vulnerabilities arising from structural features and conduct issues potentially arise in FICC markets, using the framework shown in **Table A** on page 5. Sections 5.1 to 5.3 consider the three structural themes in that table. Section 5.1 asks whether there are ways to improve market microstructure and price discovery mechanisms; Section 5.2 considers competition and market discipline issues; and Section 5.3 explores issues related to the design of benchmarks.

5.1 Market microstructure

5.1.1 Overview

2 Box 2 in Section 2 discusses how the OTC market making structure in FICC markets developed as a means of bridging between a diverse set of heterogeneous assets and the demand for continuous two-way liquidity from investors. That model has brought many benefits in terms of tight pricing and deep, continuous liquidity. But price discovery has tended to be somewhat less transparent, and the specialisation in information gathering and increasing returns to scale inherent in market making may increase vulnerabilities.

3 Improvements in market structures that facilitate price discovery and improve price transparency are therefore key to ensuring fair and effective markets. Regulatory and technological changes have already started to impact these markets. MiFID 2 will extend rules on pre and post-trade transparency to many areas of the FICC markets for the first time. The introduction of the new 'organised trading facility' (OTF) will mean that much FICC business that was traditionally classified as OTC will now be subject to the rules covering venues. In addition, the G20 derivatives commitments will result in large volumes of standardised OTC derivatives moving on to organised venues.

4 There have also been a number of initiatives to enhance transparency and standardisation in securitisation markets. For example, the Bank of England and the European Central Bank 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, and suggested there may be scope for additional standardisation of prospectuses and investor reports.[1]

5 This section asks about the extent to which other market-led or regulatory initiatives could support further changes in that direction, while avoiding a reduction in effectiveness or access to markets.

5.1.2 Fixed income

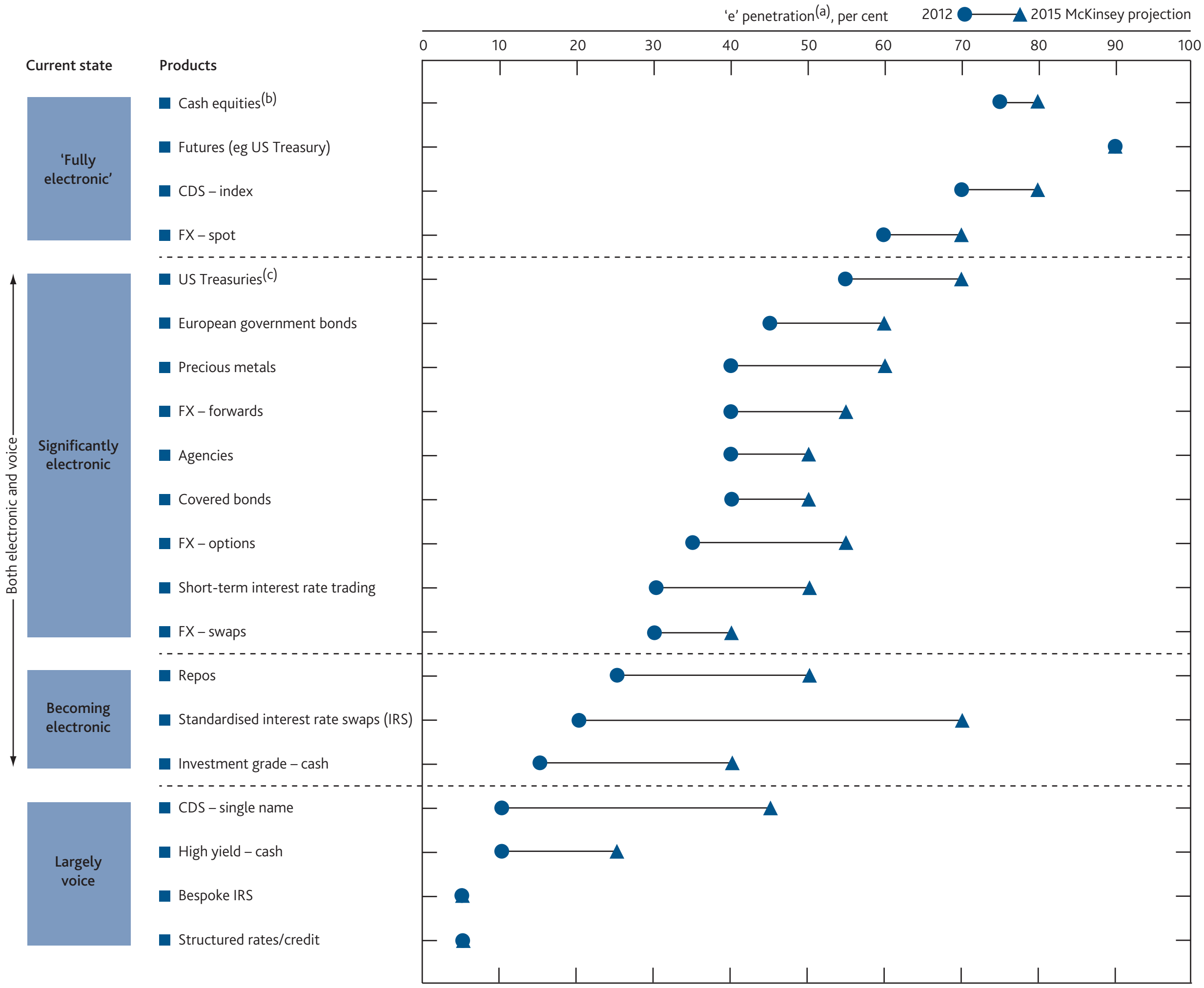
6 Recent years have seen an increase in more transparent forms of electronic trading in fixed income markets, through the increased use of single or multiple-dealer platforms. Other initiatives have sought to improve the matching process so that less intermediation by banks is required. For example, in some markets there are designated time periods when a particular bond can be traded at a price set to reflect the balance of supply and demand. Some providers have also sought to introduce exchange-like trading for corporate bonds via a central limit order book model. However, the use of technology in many FICC markets remains relatively underdeveloped (**Figure 1**). Many end-users therefore still access the market via an OTC market maker, with the markets segregated into separate interdealer and dealer-to-client platforms.

7 As set out in Box 2, one of the main drivers of the OTC market maker model is the heterogeneity of fixed income products. While there will always be a need for a range of bespoke structured products, there may be scope for greater standardisation of more frequently-traded instruments. This has already occurred, to some extent, in government bond markets, futures contracts, and with credit default swaps (CDS) which were standardised to have fixed coupons and maturities in April 2009.

8 Some market participants argue that standardising corporate bond issuance would help reduce the problems associated with variable secondary market liquidity, by concentrating market activity in a smaller number of bonds with similar features, improving price transparency for investors, reducing the scope for market manipulation and possibly also resulting in cheaper funding for issuers. However, issuers place a high value on being able to choose specific maturity and coupon structures to match their underlying cash flows, and this presents difficulties for moving to a more standardised model. Indeed private placements are often sought for that very purpose. The Review is interested

(1) *The case for a better functioning securitisation market in the European Union*, available at www.bankofengland.co.uk/publications/Documents/news/2014/paper300514.pdf.

Figure 1 Electronic market development by asset class



Source: McKinsey.

(a) Includes multidealer RFQ.
(b) Included for comparison.
(c) 'On the run' securities in dealer-to-client market.

to know more about whether greater standardisation of corporate bonds could occur in the issuance process, how this might be achieved, and the extent to which it would affect the ability of end-users to meet their funding needs (or fully hedge their exposures).

9 The new issue process for syndicated bonds has also been raised with the Review by many market participants as being 'unfair', especially to smaller investors. A lack of transparency around the allocation process has been a particular area of concern, with some alleging that some investors receive greater allocations because they are either favoured clients of the arranging bank or a large market participant. There is also a perception that when smaller investors receive a full or higher than normal allocation it is because the bond is not faring well with large investors and expected to perform poorly after issuance.

10 However, these concerns must be balanced against an issuer's objectives. Those may include: ensuring an issue is fully allocated; developing a stable investor base willing to hold its bonds for a significant period of time; and optimising the prospect of bonds performing well in secondary trading (so that the price does not immediately fall, generating losses for investors), minimising the risk that the bonds are immediately sold (or 'flipped'). These aims may be most effectively achieved through careful allocation and by ensuring large commitments from the biggest investors. ICMA maintains market-wide guidelines[1] on syndicate best practices for the new issue process for sovereign and corporate issuance in Europe, including allocation procedures, and is engaged in dialogue to explain the new issue process to investors.

(1) See 'Pre-Sounding, Bookbuilding and Allocations', in Appendix B of Section 6 in the *ICMA Primary Market Handbook*.

11 The Review would like to hear from respondents about additional measures that could enhance transparency in the new issue process. These might include publication of final allocations, or the use (or integration of) some of the features of an auction process to determine the clearing price and allocations.

5.1.3 Foreign exchange

12 Section 2 and the Appendix set out the major structural changes seen in global FX markets in recent years, including considerable investment in electronic trading, and increased 'internalisation'. In early conversations with the Review, many of the largest end-users of FX markets have emphasised the benefits stemming from the availability of multiple prices that can be sourced from different single and multiple-dealer platforms. Electronic communication and confirmations were also cited as being helpful in providing an audit trail to demonstrate best execution, and the Review heard arguments that internalisation resulted in better execution for clients because it allows them to trade at bid-offer spreads that are narrower than those available in the external market. However, the structure of such platforms reduces transparency to the broader market and concentrates information on flows in the hands of several large banks. It has also been argued that there are risks associated with too much internalisation if the external market withers away: in times of stress when client flows are likely to be in the same direction, banks may not be able to offload their residual risk effectively.

13 Banks have also developed 'last look' practices which give market makers the chance to accept or reject a trade immediately prior to acceptance, in order to protect themselves against market moves or automated trading strategies that might exploit the market maker's inability to refresh quotes quickly. But some market participants have argued that such practices may also incentivise market makers to delay a decision for longer periods in order to observe market moves and reject unprofitable trades or even engage in front-running of orders. The Review would be interested to hear views on the risks associated with internalisation and 'last look' practices and whether there are any barriers preventing a shift to a more transparent FX market structure.

14 Another structural feature of FX markets is that some market participants are incentivised to transact at a benchmark price (the 'fix') in order to match benchmark indices in other markets, or to value portfolios or otherwise establish transparency in execution. Customers often submit orders earlier in the day that are to be traded at the fix, creating the opportunity and incentive for dealers to try to influence the exchange rate to generate a profit. Even if dealers act with integrity, attempts to hedge can look like front-running.

15 The FSB established a Foreign Exchange Benchmark Group to consider ways in which the market infrastructure underpinning the calculation of FX fixing prices could be improved. Among its fifteen recommendations, it welcomed a number of market initiatives recently proposed to address these issues.(1) Most of these solutions have the form of maximising the netting opportunities of fixing orders and then executing those orders in a way that clearly delineates the separation between dealers acting as principal and dealers acting as agent. Some firms have already started to segregate fix orders from other types of trading to eliminate potential conflicts of interest. The Review is interested to hear about potential barriers preventing the FX market moving further in this direction.

16 Finally, the Review has heard potential concerns about the impact of trading in so-called 'barrier' and 'digital' options in foreign exchange and other markets, and would welcome respondents' thoughts on the seriousness of this issue. Box 5 on page 26 discusses this in more depth.

5.1.4 Commodities

17 Section 2 and the Appendix note that, for many major commodities, price formation is driven by exchange-traded derivatives markets, where pricing is fairly transparent. Prices in the underlying physical markets are linked to derivatives prices by robust arbitrage relationships. However, some commodity derivatives, such as those for energy and precious metals, are mostly traded OTC via interdealer brokers, with associated reduced transparency. Market participants stress that bespoke OTC hedging is a necessity in physical markets for many end-users. But since many contracts in physically settled forward markets are of a fairly standardised type it is not clear why these OTC markets should not benefit from greater transparency.

18 Market participants who have physical businesses often have an information advantage over those who only participate in derivatives markets. The Review notes that technology has improved transparency in some physical markets: firms willing to invest in technology and information services can build up more complete views of the supply and demand dynamics in some (though not all) markets. However, the Review would like to know respondents' views on further measures that could be taken to enhance transparency in the OTC commodity derivatives markets.

5.1.5 Regulatory measures

19 So far, this section has discussed how well-designed market microstructure can reduce the scope for market manipulation and other misconduct, and how various market-led initiatives might address potential weaknesses in the fairness and effectiveness of FICC markets. However, in

(1) www.financialstabilityboard.org/publications/r_140930.pdf.

Box 5
Barrier and digital options

1 A theme in enforcement actions against market manipulation has been the involvement of so-called 'barrier' and 'digital' options.

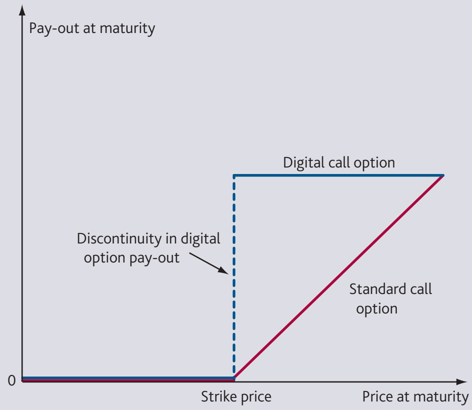
2 Barrier options are types of options that are either activated or cancelled if a pre-determined level of the underlying market price is reached. Digital (or binary) options pay out either a fixed amount or nothing, depending on whether the underlying price reaches a particular level at a specific point in time.

3 These options are typically used by market participants to express a view that more closely matches their beliefs about future price movements, or to hedge specific economic and financial risks. They can also be used to reduce costs — barrier options tend to be cheaper than alternative 'plain vanilla' options because they provide more limited protection. They are used by a variety of participants, including non-financial companies managing risk, speculative investors and retail investors (eg via the purchase of structured notes). They are also the building blocks for a wide range of other complex financial contracts, including 'knock-ins', 'knock-outs', 'one-touch binaries' and 'range accruals'.

4 Unlike simpler options, barrier and digital options have discontinuous pay-off profiles. This means that the value of the derivative increases or decreases when the price of the underlying asset reaches a certain level (**Figure A**). When the price is near this level, the buyer and the seller of the option stand to gain or lose substantial amounts depending on small movements in the price. In some cases, the resulting exposure can far exceed the normal trading size in the underlying market. This creates at least the incentive for both buyers and sellers to place large orders in the underlying asset in an attempt to move the market and thereby prevent (or cause) the occurrence of the barrier event. This practice is known as 'defending' (or 'triggering') a barrier option.

5 Such trading, where it occurs, may temporarily force the market to an artificial level, harming other users of that market. For that reason, it is banned for barrier options under market abuse rules where the underlying is a listed security. Some market participants nevertheless suggest that it can still occur in these markets, perhaps reflecting the sheer size of the incentive. Market abuse rules do not cover some other markets, including those for foreign exchange — though the FCA's Principles for Businesses may still apply. Whether traders can in fact influence the underlying price will depend on the depth and liquidity of the market in question, and the share of the market they control.

Figure A Digital and standard call options



6 Market participants typically distinguish 'defending' an option from trading in the underlying market to cover the option's 'delta' risk. 'Delta hedging' involves a trader taking offsetting positions in the underlying market to manage the risk as it develops, but without seeking to move that market to a different level. The motivation is therefore quite different — though in some cases the difference may be hard for a third party to detect by looking at trading patterns alone.

Consultation question

Q3: Do trading practices involving barrier or digital options pose risks to the fairness and effectiveness of one or more FICC markets? How hard is it to distinguish between hedging and 'defending' such options in practice? Should further measures be taken to deal with the risks posed by barrier options, whether through market-wide disclosure of significant barrier positions, an extension of regulation or some other route?

some areas there may be fundamental barriers to changing or improving the design of current structures. In such situations, transparency and other regulatory requirements may be necessary to ensure the fairness and effectiveness of markets. As set out in Section 2 and the Appendix, there are a number of ongoing international regulatory initiatives that aim to promote the transparency of market microstructure. Taking these initiatives as a given, the Review would like to know whether respondents feel any further regulatory measures are needed to address structural weaknesses that exist in the design of current market microstructure.

Consultation questions

Q4: Does the market microstructure of specific FICC markets — including trading structures, transparency, asset heterogeneity or market access — enhance or diminish fairness and effectiveness? Where there are deficiencies, will recent or in-train regulatory or technological changes improve the situation, or are further steps needed? How do these answers vary across jurisdictions, or specific markets within FICC?

In fixed income:
Q5: Is greater use of electronic trading venues for a wider range of market participants possible or desirable? Are there barriers preventing a shift to a more transparent market structure?

Q6: Is standardisation of corporate bond issuance possible or desirable? Should standardisation be contemplated across a broader range of fixed income products? How could that be brought about?

Q7: Should the new issue process for bonds be made more transparent through the use of auction mechanisms, publication of allocations or some other route?

In foreign exchange:
Q8: Are there risks associated with internalisation and last look practices? Are there barriers preventing increased pre and post-trade transparency in foreign exchange markets?

Q9: Are there barriers impeding the development of more comprehensive netting and execution facilities for transacting foreign exchange fix orders?

In commodities:
Q10: Are there any material barriers preventing greater transparency in OTC commodity derivatives markets? If so, what could be done to remove them?

Regulatory measures:
Q11: Are there any areas of FICC markets where regulatory measures or internationally co-ordinated regulatory action are necessary to address fundamental structural problems that exist?

5.2 Competition and market discipline

5.2.1 Overview

1 Being able to trade at competitive prices, and engage in merit-based competition, are two of the key characteristics of fair and effective markets proposed in Section 3. Among other things, that implies that allocations of assets result from competitive behaviour, and there is no collusion, anti-competitive barriers to entry or other restraints on trade. Furthermore, market discipline has historically been thought of as one of the central bulwarks against market misconduct, in the sense that professional counterparties who feel their interests have been harmed are likely to move their business elsewhere. An important question for the Review is therefore whether competition in each of the key FICC markets is sufficiently effective to achieve competitive outcomes, and whether market participants are able to exercise market discipline against counterparties that engage in unfair market practices.

2 Assessing competitive conditions in FICC markets is nevertheless a complex matter. As described in Section 2 and the Appendix, the fixed income, foreign exchange and commodities markets differ markedly in their composition, operation and geographical reach. And the structure of these markets is evolving substantially. In its preliminary discussions, the Review has heard a range of views from market participants on this issue. On the one hand, several contacts have argued that some FICC markets are intensely competitive, demonstrated by the extremely thin margins earned on some products, the level of innovation, and the wide range of instruments available. Others, however, highlighted relatively high barriers to entry and degrees of concentration and horizontal or vertical integration in some markets, a perceived diminution in the effectiveness of market discipline, and the prevalence of attempted collusion in a number of recent misconduct cases.

3 There are several ways in which changes to competitive conditions may come about. Market forces, including so-called 'disruptive innovations'(1) and new market entrants, can be powerful agents for change. And the authorities have a number of regulatory and legislative tools that can impact on competitive conditions if necessary. The FCA has a statutory objective to promote effective competition, and from April 2015 will have competition powers which will operate concurrently with those of the Competition and Markets Authority (CMA).(2) The FCA recently consulted on competition in UK wholesale markets.(3) Competition law has also featured in a number of recent enforcement cases around the world.

4 Regulation can, however, also act as a barrier to entry that can prevent new entrants from entering the industry. A number of regulatory changes are under way in response to the financial crisis that have or could have an effect on competition and market structure, including MiFID 2, Dodd-Frank, and the capital and leverage provisions of Basel III. Respondents should take this post-crisis reform package as a given. The Review would nevertheless be interested to hear views on whether there are any other regulatory interventions that could be helpful in promoting competition and market discipline in FICC markets, or whether there are any alternatives to additional regulation that can achieve the same level of protection for end-users.

5.2.2 Promoting effective competition through market forces

5 The review is interested in understanding the current relationship between the level of competition in FICC markets and the fairness and effectiveness of those markets. There are two aspects to that question: first, whether the current competitive structure may in certain circumstances facilitate potential misconduct; and, second, whether it helps to prevent it through enabling effective market discipline. These are considered in turn.

Could the current competitive structure facilitate potential misconduct?

6 Box 2 in Section 2 describes the key features of the market maker model that characterises many FICC markets. An important question for the Review is the extent to which this business model may also have created vulnerabilities which are open to abuse. On one view, the combination of mixed principal and agent responsibilities, specialisation in rich information gathering, and extensive horizontal integration created multiple conflicts of interest and scope for market manipulation or misuse of information. Similar vulnerabilities may also arise in cases of vertical integration, which is prevalent in some commodities markets. It is noteworthy that a number of misconduct cases featured some combination of improper influence being exerted across different functions within a firm (for example by derivatives traders over those making Libor submissions), inappropriate use or disclosure of market-sensitive information, and attempted collusion. Concentration in some FICC markets has continued to increase, reflecting amongst other things the failure of a number of key intermediaries during the financial crisis and a perception in some quarters of increased barriers to entry, created not least by the cost of regulation.

(1) The term 'disruptive innovation' was introduced by Clayton Christensen (Professor of Business Administration, Harvard Business School). It describes a process by which a product or service takes root initially in simple applications at the bottom of a market and then moves up market, eventually displacing those offered by established competitors.
(2) Specifically, the FCA is to be given:
(1) Enforcement powers under the Competition Act 1998 (CA98) to address restrictive practices engaged in by companies operating in the United Kingdom that distort, restrict or prevent competition — for example ordering that offending agreements or conduct be stopped. Businesses that break the law can be fined up to 10% of their worldwide turnover.
(2) Power under the Enterprise Act 2002 to carry out market studies and make references to the CMA.
(3) *Wholesale sector competition review — call for inputs*, available at www.fca.org.uk/your-fca/documents/market-studies/wholesale-sector-competition-review--call-for-inputs.

7 On another view, however, outcomes in many FICC markets appear consistent with strong competitive conditions. For example, government bond and foreign exchange markets continue to provide near-continuous liquidity at very tight prices in a wide range of market conditions. And vulnerability to conflicts of interest, abuse of confidential information or collusion can at least in principle be avoided through robust internal controls, even in highly-integrated sell-side firms. For example, some firms have begun to separate trading functions physically, as discussed in Box 6 on pages 30–31. Those advocating this view also point out that the structure of some FICC markets is now changing rapidly, as higher costs of liquidity and capital make the pre-crisis business model substantially less economic, and regulatory and technological change increasingly point towards an agency-only, exchange-based trading model, at least for more standardised FICC assets. On this view, the bigger challenge to the fairness and effectiveness of FICC markets is the potential loss of the economic and market-wide benefits of the continuous two-way pricing and liquidity that an OTC market making model can provide.

8 To the extent that respondents believe competition is ineffective in any of the FICC markets, the Review would be interested to hear what market-led initiatives, or structural and technological changes, might best remedy this situation. Examples might include:

- Technological developments and disruptive innovations that can foster more effective competition between existing incumbents or facilitate the entry of new firms to the market — for example, through lower cost access to more sophisticated analytical toolkits, or the growth of agency broker firms in the corporate bond market since the crisis, who have taken business from the traditional market makers. A comparable example outside of the FICC markets is the recent growth in peer-to-peer lending as an alternative to the established banks.

- The cessation of practices that make it difficult for less established players to compete, for example tying or bundling of services.

- The growth of electronic trading platforms (as discussed in Section 5.1) that have, in some cases, resulted in investors being able to view a broader range of prices from multiple dealers, and thus increase competitive pressures.

9 The Review would also be interested to hear respondents' views on whether there are any lessons that can be drawn from experiences in other financial markets about the ways that alternative or evolving market structures could impact on competition in FICC markets. For example, technological advances in the equity market (combined with regulatory changes like MiFID) have allowed greater market entry from Multilateral Trading Facilities (MTFs), providing investors with alternative options for executing trade orders and reducing margins for incumbent exchanges. In turn, that has led to a material change in the market structure, with new entrants taking significant market share away from incumbents. At the same time, however, competition between rival infrastructures has also been associated with an evolution in pricing structures, with a number of platforms offering fee rebates to intermediaries (including high-frequency trading firms) who direct larger volumes to their venues. The associated growth of high-frequency trading techniques has affected market dynamics in a number of ways. Whether these developments have, on net, increased or decreased fairness and effectiveness is of interest to the Review.

Is market discipline effective?

10 The extent to which market discipline can successfully be self-imposed by FICC markets is an important consideration in determining whether fair and effective outcomes can be achieved. It has historically been assumed that market discipline would play a primary role in policing conduct 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 with the firms suspected of abuse; and knowledge of that potential reaction would help to ensure appropriate market conduct.

11 In the Review's opinion, there is clear evidence that this mechanism has been effective on occasions in the past. But it is also important that it should remain a powerful deterrent. Whilst some of the largest investors and corporates believe they can still exercise market discipline when required, others have highlighted a number of factors that may have weakened this mechanism over time. First, some buy-side firms have noted that, with increased market concentration on the sell-side, it can be more difficult to step back from trading with any one counterparty for fear that the firm's remaining exposures become too concentrated among the remaining counterparties. Second, the increasingly broad product offering by the sell-side may make it harder to act on misconduct affecting only one product amongst many. Third, where abuse is perceived to be widespread, or affects the market as a whole (rather than an individual investor) there may be no easy way to exercise discipline, or prove who has lost. And, fourth, there may be circumstances where misconduct (for example the selective disclosure of confidential information) results from a desire to win or retain valuable business from one or more buy-side firms: in such circumstances, the interests of the individual client and the market as a whole may be at odds. The Review would be interested in hearing respondents' views on whether market discipline between firms needs to be strengthened in FICC markets, and if so how that might be achieved.

Box 6
Conflicts of interest and information flows

Financial market participants are often subject to conflicts of interest. Market makers may, for example, act as both principal and agent or may be co-located with other functions in horizontally-integrated investment banks, and asset managers may have interests that are sometimes at odds with those of their customers, for example when purchasing research.

These conflicts can be particularly acute when managing flows of confidential information, either within firms or between firms and their clients. Some forms of information sharing clearly constitute market misconduct. Examples include: the disclosure of information in breach of market abuse rules; the specific disclosure of a client's positions or orders to a trader in another firm; use of information on a firm's client order flow in its own proprietary trading; or securing benefit to favoured parties by a firm underwriting a debt offering. At the same time, the market making model that has historically been at the heart of many FICC markets relies on the efficient flow of information about client transactions and order flow, as discussed in Box 2 on pages 13–14. So the issues of FICC market structure and conduct are intrinsically linked.

There are a variety of possible ways to deal with conflicts of interest, implying an increasingly active degree of intervention (summarised in **Figure A**):

(a) Some firms provide staff with guidance on what constitutes inappropriate use of information, take steps to monitor communications and other information use (including by making use of new data techniques), and have robust controls to manage conflicts of interest appropriately. Firms can back these measures up by using appropriate disciplinary actions, as discussed in Section 5.6.

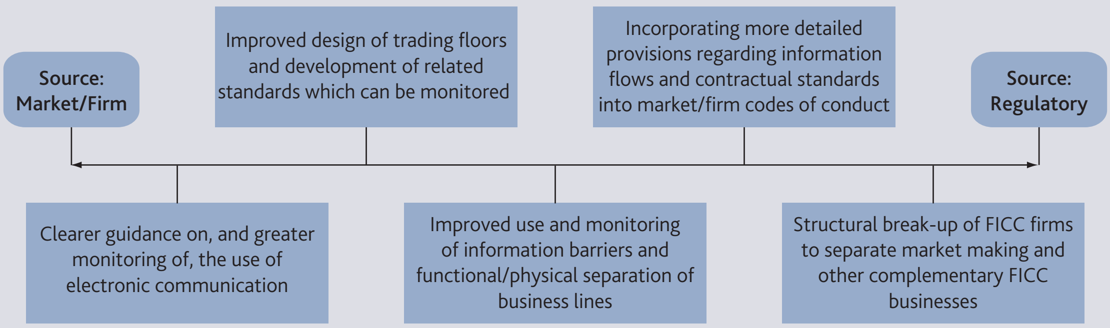
(b) Physical separation of certain functions may further help to minimise the chance of clients being adversely affected by conflicts of interest. This may be most effective at reducing casual, or inadvertent, exchange of inappropriate information. For example, some banks locate syndication and secondary market bond traders on different floors, as well as separating areas that act as principal and agent.

(c) Clear standards on identifying and managing conflicts of interest can be set out in market or regulatory codes, as discussed in Section 5.4. The FCA's Principles for Businesses would apply, including Principle 8, which requires FCA-regulated firms to manage conflicts of interest fairly, both between themselves and their customers, and between the different customers they serve. The FCA Handbook of Rules and Guidance (which implements MiFID) outlines firms' responsibilities including: taking all reasonable steps to identify conflicts; operating effective arrangements to prevent damage to clients' interests; and, where conflicts may still exist, disclosing them to clients. Market-led codes can also help to establish best practice, with a number of relevant FICC-related codes (such as the NIPs Code and the ACI Model Code) already incorporating relevant guidance on this issue.

(d) Contractual terms of business may disclaim or limit the scope of a fiduciary relationship with the client under the general law. They may also describe, and seek the client's acknowledgment of, conflicts that are inherent in a multi-service FICC business. In relation to activities within the scope of regulation, such provisions cannot limit the application of regulatory requirements, but may prevent firms being subject to overlapping or more extensive obligations. In relation to unregulated activities, such provisions may raise questions of fairness. A possible way of addressing this would be to ensure that any market codes stipulating best practice in FICC markets limit the use that can be made of such contractual exclusions.

(e) Changes in market structure and business models may affect the scope for conflicts of interest. For example, in firms with lower levels of horizontal integration there may be less scope for inappropriate sharing of information and clearer distinction between principal and agent roles.

Figure A Spectrum of responses to 'information flows' issue



Such changes may be effected by market forces including disruptive innovations, by regulation or by a response to concerns at the level of competition within a market as discussed elsewhere in Section 5.2.

Consultation questions

Q12: Where do potential conflicts of interest arise in the various FICC markets, and how do they affect the use and potential abuse of confidential information, both within and between firms?

Q13: How can the vulnerabilities posed by such conflicts be reduced? Are existing internal structures and control procedures sufficient? Where they are not, are further internal management controls required (such as better trading floor design and/or closer monitoring of electronic communications within and between firms) or is more radical action required to remove conflicts altogether?

5.2.3 Promoting effective competition through regulatory and legislative initiatives

12 As described in Section 1, the Review is keen to harness market forces, incentives and competition to shape market structures. Nonetheless, these markets are also subject to competition scrutiny by the authorities, and if competition is deemed not to be working effectively, there may be benefits to further regulatory intervention. Such intervention could range from creating new regulatory rules to promote transparency, to more significant structural reforms. The Review is nevertheless conscious of the risk of unintended consequences. The current market structure of multi-service firms combining both principal market making and agency broking flowed from the abolition of so-called 'single capacity' firms at the time of the 'Big Bang' — a decision in which competition considerations played an important role. So there can be no guarantee that using competition policy to remove one vulnerability will not introduce others. The Review would nevertheless welcome respondents' opinions on whether there is a need for competition authorities to assess competition levels in any of the key FICC markets.

13 The Review would be interested to hear views on whether there are any other regulatory interventions that could be helpful in promoting competition and market discipline in FICC markets. In replying to this question, respondents should take the post-crisis package of regulatory changes designed to reduce the probability of future crises as given.

14 There is a well-developed body of competition law and regulation in the United Kingdom and at EU level. Broadly speaking, FICC market participants are prohibited from entering agreements which have as their object or effect: the restriction of competition; abusing a dominant market position; or engaging in cartel activity. Levels of fines for infringement of such prohibitions can be significant, with the United Kingdom and the European Commission for example capable of imposing fines up to a maximum of 10% of a firm's worldwide turnover for the preceding business year. Evidence from recent misconduct cases suggests that the potential applicability of this law to FICC market structures and practices may be under-appreciated. The Review would be interested in understanding the extent of awareness of these competition issues among firms and individuals operating in the FICC markets, and the extent to which respondents judge that these implications should be more clearly highlighted.

Consultation questions

Q14: Is there a relationship between the level of competition in FICC markets globally and the fairness and effectiveness of those markets? What risks are posed by the increase in concentration seen in some FICC markets? In answering this, please have regard to the geographical scope of any relevant markets.

Promoting effective competition through market forces

Q15: To the extent that competition is currently ineffective in any of the FICC markets, are there market-led initiatives, technological or structural changes that may remedy this situation?

Q16: Are there any lessons that can be drawn from experiences in other financial markets (or indeed other markets) about the ways that alternative or evolving market structures could impact on competition in FICC markets?

Q17: How effective is market discipline in enforcing sound market practices in each of the key FICC markets? What could be done to strengthen it?

Promoting effective competition through regulatory and legislative initiatives

Q18: In what ways might competition in any of the key FICC markets usefully be addressed by competition authorities (eg by assessing the state of competition in relevant markets)?

Q19: Are there any additional regulatory reforms that could be helpful in promoting competition and market discipline in FICC markets?

Q20: Is there a need for better awareness and understanding of the existing competition framework among FICC market participants, both at firm and individual level? How do you think that might be best achieved?

5.3 Benchmarks

5.3.1 Overview

1 As a preliminary output, and separate to the Review's engagement with the Market Practitioner Panel and its broader outreach, the Review produced a report for HM Treasury in August 2014 recommending the extension of the UK regulatory framework to cover a range of major benchmarks.(1) HM Treasury has now consulted on this report and plans to lay secondary legislation before Parliament. The inclusion of new benchmarks under existing legislation is an important additional step in ensuring consumers and market participants are protected against the risks associated with major benchmarks. However, as set out in its report to HM Treasury, the Review considers that this measure only forms one part of an overall solution for ensuring the effectiveness and integrity of benchmarks.

2 Some of the weaknesses in the governance, design and administration of benchmarks have been well documented in work undertaken initially by the Wheatley Review in 2012, and subsequently by IOSCO and the FSB in its work on interest rate and foreign exchange benchmarks.(2) The FCA is actively engaged with this work. In September 2013, the European Commission also proposed legislation that will regulate the provision of financial benchmarks at the EU level, once negotiations with the European Parliament and the Council of the European Union are completed.

3 Taken together, these initiatives set the direction for the longer-term international framework for managing the risks surrounding benchmarks. Given the importance of benchmarks within the FICC markets, the Review believes it is important to evaluate whether they provide a comprehensive solution to the problems that have arisen in recent years. Such a solution will necessarily involve collective action by industry, measures taken by UK authorities, and measures that require collective action at the international level.

4 The Review's earlier report to HM Treasury focused predominantly on measures that could be taken by UK authorities. The European legislation will replace the UK regulatory framework in due course. The Review is therefore focusing on whether there are further industry-level measures or regulatory actions at the international level that might be necessary to complete the package of reforms. The remainder of this section sets out some of the issues that may need to be addressed in both of these areas.

5.3.2 Industry-level measures

5 One of the key structural issues in financial markets has been how widely investors and end-users have come to depend on benchmarks in recent years, despite the serious design flaws highlighted by Libor and other cases. This demand reflects a number of factors, including a lack of transparency and valuation challenges in some FICC markets, and changes in asset management performance tracking in recent years. For example, the recent FSB report on foreign exchange benchmarks highlighted how the WM Reuters fixes are embedded in many multi-currency indices, incentivising asset managers who track those indices to place foreign exchange trades at the same time as the fix in order to eliminate the tracking error from their portfolios. The report also pointed to the need for asset managers to consider whether the best price for their FX transactions was achieved through trading only at the WM Reuters 4pm fixing or whether it could be achieved at other times of day. The Review believes this is an important consideration for users of all benchmarks. Widespread use of a particular benchmark can lead to concentration of order flows around a fixing which can provide incentives for both front-running and manipulation. The Review is interested to know more about market-led initiatives that could reduce the dependency on benchmarks in order to address this problem.

6 It is also important that market participants make use of a range of reference rates that best suit their particular business requirements. For example, the recent FSB report on reforming interest rate benchmarks noted that some financial instruments (for example, interest rate derivatives) might be better served with a risk-free or near risk-free reference rate, rather than one that incorporates a bank credit risk component (like Libor), and recommended the development of these alternative rates. Market participants, working in concert with the official sector, have an important role to play in advancing this initiative.

7 The Review notes there have been several other market-led reforms to some of the most significant FICC benchmarks. Some important benchmarks have transitioned by changing their administrators or evolving their methodology. These changes have been driven by the need to improve the governance, quality and viability of these benchmarks and, in some cases, to address conflicts of interest. The Review is interested in views on whether there are other benchmarks that should move to a more robust design.

8 There are a number of potential evolutionary steps that could be taken to improve the quality and effectiveness of benchmark construction — many of which have currently been implemented (or are in the process of being implemented) by a number of major benchmark administrators. For example:

- The **quality** of benchmark design can be strengthened by making greater use of data sources that are independently

(1) SONIA, RONIA, WM/Reuters 4pm London Fix, ISDAFix, London Gold Fixing, LMBA Silver Price and ICE Brent futures contract (see www.bankofengland.co.uk/markets/Documents/femraug2014.pdf for further details).
(2) www.financialstabilityboard.org/publications/r_140722.pdf and www.financialstabilityboard.org/publications/r_140930.pdf.

verifiable as representative of the market to which the benchmark relates, for example by using tradeable input prices rather than subjective quotes. Various administrators are in the process of developing ways to make greater use of such prices in the construction of these benchmarks.

- The **transparency** of the benchmark fixing process could be further increased through other methodological changes, for example through the development of electronic auction platforms or publishing the price inputs used to construct the benchmark.

- The **robustness** of benchmarks could also be improved through modifications to their design methodology. For example, the FSB has recently proposed widening the length of the window used to calculate the WM Reuters FX fixes in order to reduce the sort of 'point in time' risks discussed above. It also suggested alternative benchmark calculations (such as a volume-weighted or time-weighted benchmark price calculated over a longer time period) and changes to the centring and exact timing of the fixing window.

9 These represent just a few examples of how benchmark governance, transparency and methodology can be made more effective. The Review recognises that each benchmark is different and that some of these approaches, such as auctions or the use of transparent and tradeable input prices, will not be feasible for every benchmark. The Review would like to know more about potential mechanisms for improving the construction of benchmarks, and whether an industry panel would be desirable as a means of reviewing the construction of benchmarks.

5.3.3 Regulatory action

10 In July 2013, IOSCO published a report on Principles for Financial Benchmarks. The IOSCO Principles set out standards for benchmarks in four main areas:

- **Governance**: covering the overall responsibility of administrators for the production of benchmarks and their responsibility for overseeing every aspect of each benchmark's production.

- **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.

- **Accountability**: covering complaint handling, auditing, and co-operation with regulatory authorities.

11 IOSCO asked benchmark administrators to disclose their compliance with the principles publicly by July 2014, and intends to review the extent to which the principles have been implemented by January 2015. The Review believes that the IOSCO Principles provide a strong framework within which to seek further international convergence. The Review welcomes the process of self-assessment against the principles that has subsequently been undertaken by benchmark providers. However, the Review believes there is more work to do to ensure there is compliance with these principles for all benchmarks.

12 In order to achieve this objective, there is a balance to be struck between further regulation and the role of industry in taking on responsibility for benchmark standards. In its August 2014 report to HM Treasury, the Review recognised that the benefits of the United Kingdom's current regulatory framework would only outweigh the costs for the most significant UK-based benchmarks. The Review also noted that this left open the question of how to deal with the many other benchmarks to which the UK regulatory framework will not apply. For these other benchmarks, the Review believes the onus lies on industry to ensure that there is compliance with the IOSCO Principles. The Review would like to know more about the measures industry could take to ensure this compliance is achieved.

13 The Review's benchmark recommendations excluded benchmarks administered outside the United Kingdom, because the current legislation cannot easily be applied in such cases. The Review acknowledges that this leaves an issue over how to ensure there is sufficient regulatory protection for the many overseas benchmarks that UK market participants rely on. This issue will, in practice, be dealt with as part of the EU benchmarks Regulation currently being negotiated.

14 The Review believes that compliance with the IOSCO Principles should be the starting point for ensuring that UK consumers are protected when using benchmarks administered in other jurisdictions. The question is then how the new EU regulatory framework will reflect whether a benchmark in another jurisdiction is compliant with these principles or not. The Proposal for an EU benchmarks Regulation proposes a system based on the European Commission assessing whether a third country provides for a legal framework and supervisory practices for benchmarks equivalent to the EU's own regime. The Review is interested to know stakeholders' views on how an equivalence system could be designed to ensure adequate protection for market participants, whilst recognising that other countries may take different approaches to implementing the IOSCO Principles.

Consultation questions

Q21: Do current domestic and international initiatives by industry and regulators to improve the robustness of benchmarks go far enough, or are further measures required?

Industry-level measures

Q22: What steps could be taken to reduce the reliance of asset managers and other investors on benchmarks?

Q23: What additional changes could be made to the design, construction and governance of benchmarks?

Q24: Should there be an industry panel to discuss benchmark use and design with the aim of assisting industry transition?

Regulatory action

Q25: What further measures are necessary to ensure full compliance with the IOSCO Principles for financial benchmarks by all benchmark providers?

Q26: How can the regulatory framework provide protection to market participants for benchmarks administered in other jurisdictions in a proportionate way?

5.4 Standards of market practice

1 Sections 5.1–5.3 reviewed possible solutions to structural challenges in FICC markets. The next three sections review possible conduct-based solutions — starting in this section with the question of how to ensure agreement to, and common understanding of, appropriate standards of market practice. Section 5.5 then considers how such standards might be embedded in firms' governance and incentive structures; and Section 5.6 discusses ways to identify and punish breaches of those standards.

5.4.1 Are current standards of market practice sufficient?

2 As set out in Section 3, the Review believes that fair and effective markets require clear and consistently applied standards of market practice. Recent enforcement cases reflect clear breaches of basic standards. However such cases typically capture only the most extreme forms of behaviour. To operate effectively, firms and individuals must be in a position to judge appropriate conduct across a wider spectrum of potential situations.

3 Some market participants have reported that they are uncertain about a number of current FICC market practices. Those reported uncertainties or 'grey areas' cut across different markets, including foreign exchange and fixed income, and are summarised in Box 7 on pages 36–37. Many, though not all, relate in some way to the current market making trading model prevalent in many FICC markets. The Review is seeking feedback from respondents about whether there are indeed uncertainties over some or all of these practices in one or more FICC markets, and whether there are any other areas that should be added to the list.

4 On one view, these perceived uncertainties are already adequately dealt with by existing, or prospective, regulatory or market-wide standards. Fundamental standards in relation to fraud, insider dealing, and market manipulation are set out in law. All firms operating in the United Kingdom and authorised by the FCA are subject to the Principles for Businesses to a greater or lesser degree, as set out in Box 8 on page 38, 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'). Those dealing in exchange-traded FICC products are subject to the rules of that exchange. From 2016–17, the provisions of MiFID 2 and MAR will extend protections relating to transparency, the handling of information, the standard of care owed to counterparties and clients and market integrity to many more FICC markets — as discussed in Section 2 and the Appendix. FX and other OTC FICC markets are also covered by various voluntary codes of conduct (see Box 9 on page 39). And most if not all financial firms have their own codes of conduct setting out expectations of management and staff behaviour.

5 On this view, the existing and prospective set of standards do the best possible job in setting out appropriate behaviour, recognising that there will always be an important element of judgement to trading practices, and being mindful of the vulnerability of overly detailed rules to 'gaming' behaviour and their limitations in responding to evolving market practices. In those circumstances, the main priorities would be, first, to ensure that all FICC market participants understand the implications of those provisions; and, second, to ensure they abide by them, through a combination of stronger firm-level controls and incentives, and stronger surveillance and penalties from firms and regulators. Ways of improving understanding are discussed in Section 5.4.2. Controls and incentives are discussed in Section 5.5. Surveillance and penalties are discussed in Section 5.6.

6 On another view, reported by some market participants to the Review, market participants would welcome more specific market-wide guidance or rules on acceptable market practice. That reflects some combination of: (i) a desire for greater certainty than that provided by current regulatory provisions; (ii) a perception that existing voluntary market codes are either too numerous, too focused on technical market issues rather than market practices, too dated, too legalistic to have traction with FICC traders, or lacking in enforcement powers; or (iii) gaps in the regulatory perimeter in a small number of FICC markets. On that view, it would be unwise to leave the determination of market standards to bilateral negotiation between FICC market participants alone.

7 Section 5.4.3 asks about the extent to which the industry, working with the authorities, may be able to develop its own set of more specific standards whilst avoiding some of the pitfalls of previous attempts to develop industry codes. Section 5.4.4 asks whether the regulatory perimeter needs adjusting.

5.4.2 Improving knowledge of existing standards

8 The Review seeks views from respondents on whether more can be done by industry, firms and regulators to improve the understanding of existing codes and regulations by FICC market participants and their managers. Part of the answer may involve doing more to translate existing requirements into simple, clear language that can be widely used on trading floors. A number of firms have been undertaking such exercises in recent years — but report it to be a challenge to develop guidance that is neither too broad (and thus hard to apply to specific cases) nor too specific (and thus long and overly fitted to individual cases).

9 Another approach would be to introduce some form of compulsory professional qualification or attestation for FICC

Box 7
Reported uncertainties over FICC market practices

This box summarises areas of perceived uncertainty over the boundary between acceptable and unacceptable practice reported to the Review in some of its preliminary discussions with market participants. There will always be at least a potential conflict of interest where market participants are trading on their own behalf as well as trading for or with clients, and hence competing incentives may be in play. Many of the cited examples relate to intrinsic features of the market making trading model, and as such are neither new nor limited to FICC markets. Enforcement cases across a range of markets show that there is a high degree of certainty about behaviours that are in clear breach of standards of market conduct. The questions of interest to the Review are: (a) the extent of any uncertainty amongst FICC markets participants over how they should apply these standards in less clear-cut situations; and (b) the extent to which, looking forward, further steps should be taken to reduce any uncertainty, such as developing more detailed guidance for FICC markets on practices or appropriate controls, drawing on insights from participants in a range of markets both within and outside FICC.

Lack of clarity regarding trading relationship between dealers and end-users

In FICC markets, some participants report that there can be confusion as to whether a dealer is acting in a principal capacity, or whether they are acting in an agency capacity (with the fiduciary responsibilities that implies). A related confusion can arise around whether a counterparty is placing an 'order' or merely communicating an expression of interest. These distinctions have material follow on implications for how a trade is executed, how information related to that trade is handled, and what disclosure is appropriate. These distinctions and the potential conflicts that arise also have a strong bearing on most of the issues discussed below.

Distinction between legitimate trading activity and inappropriate 'front-running'

Dealers in FICC OTC markets act in a principal capacity and may need to trade at times when they have private knowledge of a forthcoming trade — in order to respond to other trade enquiries, hedge pre-existing inventory, and potentially even to pre-hedge the trade in question. Where such trading activity may affect the market price, some participants report that otherwise legitimate activity may be constrained by a concern that such trading could be misconstrued as 'front-running' (ie principal trading in possession of private information designed to take advantage of the anticipated price effect of a future order). When a dealer is acting in an agency role, participants report that the distinction is usually much more straightforward.

Distinction between legitimate trading activity and market manipulation

Market participants may need to trade around a specific market event, such as a benchmark setting, as part of a legitimate activity such as portfolio rebalancing or risk management. Some participants report a perception that legitimate activity may be constrained by a concern that it could be misconstrued as trading designed to move the market deliberately in order to secure a specific outcome (such as a favourable payout in a contract referencing a benchmark).

Standards for external communication of market activity

Where dealers provide commentary and opinion on current market developments to buy-side clients, this is often referred to as 'market colour'. Participants report that such communication is an important component of client service for dealers in FICC markets. Dealers report that they may also need to share market information with other dealers in order to risk manage anticipated trading flows. Some market participants report a lack of clear industry guidance, for example, as to where market colour crosses the line between general market descriptions and market sensitive information about other participants' trading activity, and where interdealer communication crosses the line into collusive behaviour.

Standards for internal communication of market activity

A firm acting as principal may need to communicate levels of client activity and short-term directional flows internally in order to assess the risk associated with the firm's trading positions. A firm acting as agent may need to keep information about client business confidential. Effective risk management resulting from internal communications may nonetheless adversely impact client execution levels. Some market participants report a lack of clear industry standards regarding internal information sharing.

Lack of granular market-wide standards for client suitability

In FICC and other markets, dealers use their subjective assessment of a client's suitability for transacting in different products, for example, assessing the clients' level of knowledge and sophistication. Some market participants report that the lack of common detailed standards for such assessments leaves scope for interpretation, leading to differing standards being applied by different dealers, especially in varied jurisdictions. In certain circumstances it may also incentivise some firms to compete over client categorisation, or 'regime shop' to limit their liabilities, triggering an inappropriate diminution of market-wide standards.

Allocation of new issues

Some market participants expressed concern regarding the opacity of the process for allocating new issue bond syndications to investors. Currently, new issues are allocated to investors based on a combination of issuer and dealer judgement that varies not only between primary dealers but also between different syndications, rather than following well-defined and widely understood market-wide or industry guidelines.

traders and their management to ensure staff understand both their general obligations and the specific standards that apply in their markets. In the United States, the Financial Industry Regulatory Authority (FINRA) requires staff seeking registration with it to pass an exam — the most relevant to FICC being the General Securities Representative 'Series 7' qualification. A number of related qualifications already exist in the United Kingdom, but none are compulsory. These include: the Chartered Financial Analyst qualification for asset managers and investment analysts; the Chartered Institute for Securities and Investment qualifications for staff working in the financial services industry, including one on capital markets; and the Chartered Banker Code of Professional Conduct, to which individuals within the supporting banks may adhere by signing an annual declaration agreeing to be bound by the Code. Approaches in other jurisdictions include, for example, Dutch banking regulators requiring all bank employees in the Netherlands to swear an oath to uphold standards. Market participants vary in the extent to which they believe such qualifications would prove useful in a FICC context. The Review would welcome respondents' views on these and other ways to improve understanding of existing standards.

5.4.3 Can the industry help to establish standards of market practice?

10 Some market participants have told the Review that they believe that the perceived need for more detailed standards of acceptable market practice will not be fully addressed by forthcoming regulation alone, and see merit in exploring whether the industry should develop its own standards for FICC markets, in language that market practitioners understand, with the guidance and support of authorities in the United Kingdom and other jurisdictions. They note however that such an exercise would first need to tackle a number of important design issues that have reduced the impact of codes in the past:

(a) **How to ensure sustainability over time, given industry innovation?** Principles-based standards allow room for innovation and the exercise of judgement, but lack the specificity of detailed guidance — something that some firms indicate they would favour. By contrast, more detailed guidance is vulnerable to gaming and can quickly become out of date unless it is actively refreshed. The two are not necessarily incompatible however: Box 10 on page 40 describes how the UK Takeover Panel combines high-level principles with mechanisms for updating guidance in real-time through the accumulation of 'case law' from live cases and the involvement of an active, market-savvy Executive. In FICC markets, such 'case law' currently tends to be developed by individual firms and their legal advisers. Today this analysis is seen as proprietary — but there may be scope for the industry to centralise this process.

(b) **How to differentiate from existing codes?** There are already numerous codes in FICC markets, reflecting the evolution of financial instruments and markets in different legal jurisdictions (see Box 9 on page 39). The existence of multiple codes arguably limits their collective effectiveness, but reflects the desire of individual jurisdictions and markets to retain control over their own domain. The ACI Model Code, for example, has global coverage, but is not universally adopted. And there are many national codes covering FX markets — although FX Global Committees are currently working to introduce a common global preamble to those codes. In principle, market participants see merit in developing a single, global approach across a number of FICC markets, commanding broad-based industry support. The Review would welcome respondents' views on whether that is a realistic objective and, if so, how it might be achieved. Careful thought would also be needed to ensure any initiative was consistent with other ongoing exercises, including, for example, the BSRC's work to establish standards of good practice for UK banks.

(c) **How to give codes teeth?** One of the main weaknesses of most current codes is that they lack mechanisms for ensuring compliance. Box 11 on page 41 outlines possible options to achieve this. A key challenge would be ensuring that the terms of any code were consistent with regulatory requirements in each of the jurisdictions in which the code applied.

(d) **How to communicate codes to trading teams?** In many cases existing codes are complex, drafted in legal language and cover many different issues within one document. The Review believes that it is important that the core principles and guidelines should be expressed in a clear, concise way that is accessible and can be communicated to staff at trading desks.

Box 8
FCA Principles for Businesses

The FCA Principles for Businesses provide a general statement of the fundamental obligations of firms under the regulatory system. This includes provisions which implement EU rules and requirements.

1 Integrity	A firm must conduct its business with integrity.
2 Skill, care and diligence	A firm must conduct its business with due skill, care and diligence.
3 Management and control	A firm must take reasonable care to organise and control its affairs responsibly and effectively, with adequate risk management systems.
4 Financial prudence	A firm must maintain adequate financial resources.
5 Market conduct	A firm must observe proper standards of market conduct.
6 Customers' interests	A firm must pay due regard to the interests of its customers and treat them fairly.
7 Communications with clients	A firm must pay due regard to the information needs of its clients, and communicate information to them in a way which is clear, fair and not misleading.
8 Conflicts of interest	A firm must manage conflicts of interest fairly, both between itself and its customers and between a customer and another client.
9 Customers: relationships of trust	A firm must take reasonable care to ensure the suitability of its advice and discretionary decisions for any customer who is entitled to rely upon its judgement.
10 Clients' assets	A firm must arrange adequate protection for clients' assets when it is responsible for them.
11 Relations with regulators	A firm must deal with its regulators in an open and co-operative way, and must disclose to the appropriate regulator appropriately anything relating to the firm of which that regulator would reasonably expect notice.

(e) **Whether, and how, to customize codes for individual asset classes?** Many of the areas of uncertainty so far identified to the Review are common across FICC markets. But some relate to specific products or asset classes; and some markets may not face uncertainties. Whether any code should seek to cover all relevant FICC markets, or whether there should be a short core code covering principles that apply in all markets, supplemented by additional modules that deal with specific issues in individual asset classes, is something the Review would welcome feedback on.

5.4.4 Should the scope of regulation be extended?

11 Where existing regulatory requirements and industry-led initiatives are judged insufficient to secure markets that are fair and effective, the Review would be interested in respondents' views on whether there is a case for extending the scope of regulation. Such an extension could involve either: (a) extending the range of firms and individuals to whom obligations apply; or (b) extending the range of financial instruments covered by regulation.

12 Regarding the first of these possible extensions, the current regulatory regime for investment business in the United Kingdom, derived from MiFID, calibrates the application of the FCA Principles for Businesses and other regulatory requirements according to the nature of the client and the activities that firms are undertaking. For participants in wholesale markets, there are two classes of client: professionals and eligible counterparties (ECPs). ECPs are considered to be the most sophisticated investors and the client categorisation regime provides fewer constraints for those firms that transact with them. For business done with an ECP, firms are also not generally required to apply some of the FCA Principles, for example, Principle 1 (Integrity) and Principle 2 (Skill, care and diligence).

13 Certain aspects of this regime will change under the new MiFID 2, which introduces high level principles for firms, in their dealings with ECPs, to act 'honestly, fairly and professionally', and communicate in a way that is 'fair, clear and not misleading'. This is a change from the current standard and the FCA will be considering whether it may extend the application of its Principles to ECP business in the context of implementing MiFID 2.

14 The second question is whether there are any financial instruments that should be brought more fully into the scope of regulation in order to improve the fairness and effectiveness of specific FICC markets. For any such case there are three subsidiary questions: (a) what protections does the current framework provide?; (b) what gaps remain of relevance to fairness and effectiveness?; and (c) what is the cost/benefit case, bearing in mind the Review's Terms of Reference as set out in Section 1?

Box 9
Codes of Conduct

A wide range of voluntary codes of conduct affect FICC markets. These broadly divide into two kinds: those aimed primarily at traders and other sell-side participants; and those designed for the asset management industry. This box gives some of the more prominent examples.

Codes for sell-side market participants

ACI Model Code (Global):(1) Developed by ACI, the Model Code was designed to provide a minimum standard for all OTC product markets globally in areas including ethics, trading practices, organisational structures and risk management.

The Non-Investment Products Code (United Kingdom):(2) Developed by the London Foreign Exchange Joint Standing Committee, a group of senior FX market participants (under the auspices of the Bank of England), this code was designed to provide guidance to UK market participants on best practice in wholesale markets for non-investment products, specifically sterling, FX and bullion wholesale deposit markets, and spot and forward foreign exchange and bullion markets.

Guidelines for Foreign Exchange Trading Activities (United States):(3) Published by the Foreign Exchange Committee, which is sponsored by the Federal Reserve Bank of New York, these guidelines seek to educate FX market participants on best practices, with the aim of improving market efficiency and transparency.

Code of Conduct and Practice (Hong Kong):(4) Produced by the Treasury Markets Association of Hong Kong, and endorsed by the Hong Kong Monetary Authority, this code sets out minimum standards for participants in wholesale treasury markets, including FX, money market instruments, debt securities, OTC derivatives, repo, commodities and credit derivatives.

Singapore Guide to Conduct and Market Practices for Treasury Activities (Singapore):(5) Designed by the Singapore Foreign Exchange Market Committee, a group of senior FX market participants, this code lays out principles to govern trading in OTC FX (spot and forwards), fixed income, money market instruments and derivatives.

Code of Conduct (Orange Book) (Japan):(6) Written by the Tokyo Foreign Exchange Market Committee, a group of senior FX market participants, the Orange Book lays out principles for the maintenance of high ethical standards in the Tokyo interbank FX markets.

CISI Code of Conduct (United Kingdom, Ireland, Singapore, India):(7) This set of eight principles was created by the Chartered Institute for Securities and Investment and applies to all its members. Any material breach of the Code is considered grounds for terminating membership.

SIFMA Principles and Practices for Wholesale Financial Market Transactions (United States):(8) Published and overseen by the Securities Industry and Financial Markets Association, the Principles are applicable to wholesale transactions in US OTC markets.

Codes for the asset management industry

CFA Code of Ethics and Standards of Professional Conduct (Global):(9) Developed by the CFA Institute and designed for individuals involved in either managing client portfolios or producing investment research. Violating the Code may result in expulsion from the CFA.

Global Investment Performance Standards (Global):(10) These standards, also composed by the CFA, relate to how asset managers report their investment performance.

Hedge Fund Standards (Global):(11) These standards focus on issues around fund governance, disclosure and risk management, and are administered by the Hedge Fund Standards Board on a 'comply or explain' basis.

(1) www.aciforex.org/docs/misc/20131104_ACI_The_Model_Code.pdf.
(2) www.bankofengland.co.uk/markets/Pages/forex/FXjsc/default.aspx.
(3) www.newyorkfed.org/FXC/2010/tradingguidelinesNov2010.pdf.
(4) www.tma.org.hk/pubfile/tmacode.pdf.
(5) www.sfemc.org/pdf/Singapore_Blue_Book.pdf.
(6) www.FXcomtky.com/coc/code_of_conduct_e2013.pdf.
(7) www.cisi.org/bookmark/genericform.aspx?form=29848780&URL=ethics.
(8) www.sifma.org/services/standard-forms-and-documentation/cross-product/.
(9) www.cfainstitute.org/ethics/codes/ethics/pages/index.aspx.
(10) www.gipsstandards.org/Pages/index.aspx.
(11) www.hfsb.org/?section=12512.

Box 10
The Takeover Panel

In considering possible means of defining and enforcing standards of conduct in the FICC markets, the Review has considered examples of practice in other financial markets. Though operating in a very different environment, the Panel on Takeovers and Mergers (or 'Panel' for short), which regulates takeovers of UK-listed companies under the City Code on Takeovers and Mergers (or 'Takeover Code' for short), offers a number of potentially useful insights:

- The Takeover Code contains a set of **high-level general principles**. These are broad enough to accommodate substantial developments in market practices without themselves requiring major modification (the principles are little changed in substance since the Panel was set up in the late 1960s).

- To give market participants **greater certainty about the application of these principles, whilst also allowing that application to adjust over time in line with market developments**, the Panel uses two main tools. First, the Takeover Code contains a more detailed set of rules, which are updated from time to time. Second, the Panel Executive is available to advise or adjudicate on uncertainties or disputes over specific applications of the Takeover Code as they arise during the course of a takeover, if necessary at speed. In so doing, the Panel builds up a large body of 'case law' against which it is able to evaluate future cases. There is an appeals process for disputed rulings.

- The Panel has both formal and informal means of **enforcing its decisions**. The Takeover Code now has a statutory backing through provisions of the Companies Act 2006, though it was for the majority of its life a wholly self-regulatory regime. Where breaches or abuses occur, the Panel can issue private and public censure of firms and individuals, report the cases to the FCA, and, in the case of the most serious misconduct, ban individuals from involvement in transactions to which the Takeover Code applies. The threat of using the more serious of these powers is, however, sufficient to ensure they are deployed only very rarely.

- The Panel maintains a **close relationship with the market** through senior membership of its Code Committee (which exercises the Panel's rule-making functions and is responsible for changes to the Code) and its Hearings Committee (which reviews decisions of the Executive), and through regular secondments to the Executive of industry high fliers, who continually refresh the Executive's knowledge of the market and take back an understanding of the Panel's work to their respective institutions. The Panel is a self-funding body, relying on charges levied on market participants in relation to transactions overseen by the Panel.

15 The Review would welcome respondents' views on these questions. In view of recent allegations, one market that has been highlighted to the Review is wholesale transactions in spot FX. The trading of spot FX in the United Kingdom is already (or will be) subject to a number of protections. First, regulated firms are subject to the FCA's Principles for Businesses in limited circumstances when trading spot FX if either (a) that trading is 'ancillary' to a regulated activity; or (b) that trading is judged to have a negative effect on the integrity of the UK financial system or the ability of the firm to meet certain minimum standards for being authorised. Second, manipulation and attempted manipulation of FX benchmarks will be covered as an offence under the EU's MAR Regulation (which comes into force in July 2016). The Review has also separately recommended that the WM/Reuters 4pm London Closing Spot Rate is subject to regulation, and that attempted manipulation of this benchmark is made a criminal offence. Third, standards of trading practice in the spot FX markets are subject to various voluntary codes overseen by central bank-sponsored foreign exchange committees — including the Non-Investment Products (NIPs) Code in the United Kingdom. In April, those Committees agreed to issue a joint global high-level principles statement on FX trading.(1) Finally, in certain circumstances the criminal law can apply to spot FX trading, for example, where behaviour amounts to fraud.

16 Against that backdrop, the Review would welcome respondents' views on whether there are further protections against misconduct in these wholesale markets that should be delivered through regulatory means. Factors relevant to the cost/benefit assessment could include: the importance of an internationally co-ordinated approach (given the global nature of FX markets, and the fact that many countries' currencies are traded outside of their borders), the interaction with macroeconomic policymaking (given the variety of exchange rate regimes operated by central banks around the world) and the extent to which reporting of trading data, possibly from multiple jurisdictions, is required to implement any extension in regulation.

(1) Minutes of the Meeting of Global Foreign Exchange Committees, 11 April 2014, available at www.rba.gov.au/afxc/meetings/gfxc/2014/gfxc-minutes-20140411.html.

Box 11
Methods for ensuring compliance with codes

(a) **Self-certification**: participants who claim to use a code could be required periodically and publicly to certify their compliance, either on their websites or in their annual reports. An example of an existing system of self-certification in the financial markets is the recently-introduced regime relating to the IOSCO Principles for Financial Benchmarks.

(b) **Comply or explain**: participants could be required either to confirm their compliance or to explain their reasons for non-compliance with specific provisions. An example of existing codes employing the comply or explain approach are the UK Corporate Governance Code,(1) which places disclosure obligations on premium listed companies in the United Kingdom; and the Hedge Fund Standards of the Hedge Fund Standards Board,(2) which maintains governance and transparency standards for the hedge fund industry.

(c) **Contract**: Market participants could incorporate contractual undertakings to comply with a market conduct code directly into their contracts with market counterparties, or their employment contracts with employees. Trade bodies producing widely used contractual standards in the FICC markets (such as ISDA and ICMA) could have an important role in any such approach.

(d) **Independent oversight body**: A market conduct code could be overseen and/or policed by an independent body, for example, a panel of market experts. While such a market body would not have statutory power to enforce a code's provisions, it could police a code through a mixture of moral suasion, public/private direction or reprimand, and dispute resolution services between market participants in relation to a code's provisions. The UK's Takeover Panel, which is described in Box 10, is an example of such a body.

(e) **Official regulatory endorsement**: The status of a market conduct code could be strengthened by formal regulatory endorsement. Regulators in Australia, Hong Kong, Japan, Singapore, the United Kingdom and the United States have publicly supported codes used in currency and bond markets, but there may also be potential for international regulatory bodies, such as the FSB or IOSCO, to endorse or sponsor market codes of practice. Even where a regulator does not have formal statutory powers to endorse a code, a certain amount of moral suasion by a regulator could significantly strengthen both a market's awareness of a code and its compliance with the provisions of such code. It is however very important that the precise relationship between codes and regulatory requirements is made clear.

(1) www.frc.org.uk/Our-Work/Codes-Standards/Corporate-governance/UK-Corporate-Governance-Code.aspx.
(2) www.hfsb.org/?section=12512.

Consultation questions

Q27: Are existing sources of information regarding standards of market practice across FICC markets globally: (a) already sufficiently clear (or will be once current regulatory reform has concluded); (b) sufficient, but in need of clearer communication or education efforts; or (c) not sufficiently clear, requiring more specific guidance or rules to provide more detail or close genuine gaps?

Q28: Box 7 on pages 36–37 discusses a number of uncertainties over FICC market practices reported by market participants, including: the need for greater clarity over when a firm is acting in a principal or an agency capacity; reported difficulties distinguishing between legitimate trading activity and inappropriate front-running or market manipulation; and standards for internal and external communication of market activity. To the extent that there are uncertainties among participants in the different FICC markets over how they should apply existing market standards in less clear-cut situations, what are they?

Q29: How could any perceived need to reduce uncertainties best be addressed: (a) better education about existing standards; (b) new or more detailed market codes on practices or appropriate controls; or (c) new or more detailed regulatory requirements?

Will these uncertainties be dealt with by current reforms?

Q30: How can the industry, firms and regulators improve the understanding of existing codes and regulations by FICC market participants and their managers?

Q31: Should there be professional qualifications for individuals operating in FICC markets? Are there lessons to learn from other jurisdictions — for example, the Financial Industry Regulatory Authority's General Securities Representative (or 'Series 7') exam?

Can the industry help to establish better standards of market practice?

Q32: What role can market codes of practice play in establishing, or reinforcing existing, standards of acceptable market conduct across international FICC markets?

Q33: How would any code tackle the design issues discussed in Section 5.4.3, ie: how to ensure it can be made sustainable given industry innovation over time? How to differentiate it from existing codes? How to give it teeth (in particular through endorsement by regulatory authorities or an international standard setting body)? How to communicate it to trading teams? Whether, and how, to customise it for individual asset classes?

Should the scope of regulation be extended?

Q34: In the context of implementing MiFID 2, which of the FCA Principles for Businesses should apply in relation to MiFID business with Eligible Counterparties?

Q35: Are there any financial instruments that should be brought more fully into the scope of regulation in order to improve the fairness and effectiveness of specific FICC markets? For any instruments proposed: (a) what protections does the current framework provide; (b) what gaps remain of relevance to fairness and effectiveness; and (c) what is the cost/benefit case, bearing in mind the Review's Terms of Reference as set out in Section 1?

5.5 Responsibilities, governance and incentives

5.5.1 Overview

1 Section 5.4 reviewed the need for clearer standards of good market practice in FICC markets. This section asks how such standards can be embedded within firms' internal processes in a way that ensures they have lasting impact, and are safeguarded against the pressures that can arise at different points in the financial cycle. In terms of governance, the question is how firms can create a framework of responsibility and accountability for their management and staff which supports and enforces standards of behaviour, and embeds these in day-to-day operations. In terms of incentives, the question is how firms can incentivise employees to behave in the right way.

2 Important initiatives are under way in this area, within firms, at an industry level (eg through the proposals of the Banking Standards Review Council) and through regulation (including the proposed new Senior Managers and Certification (SMC) Regime). The Review is keen to consider what further steps may be needed to strengthen and deepen the impact of these changes in a FICC context.

5.5.2 Firm-wide initiatives to improve incentives and governance

3 Since the crisis, CEOs in many major financial institutions have signalled a determination to improve standards of behaviour within their businesses, taking steps such as re-writing internal codes of conduct, strengthening board oversight, and re-training staff. There has also been a push to strengthen the so-called 'first', 'second' and 'third lines of defence' in FICC trading operations (referring to the responsibility of line management, compliance and independent auditors respectively to ensure sound risk management).

4 There are mixed reports on the extent to which such initiatives have so far produced lasting change. In some cases, firms appear to have made genuine progress. Market practitioners have told the Review that it could play an important role in highlighting these examples of good practice. However, they have also identified a number of significant challenges delaying progress more widely. Without a degree of consistency or minimum standards across the industry — something the authorities might be able to catalyse — there was felt to be a risk that some firms might seek to 'free ride' on the efforts of others, slowing or halting the pace of continued change. The following areas were identified as particular priorities by practitioners.

(a) **Improved performance measures**:

(i) **Individuals** — market practitioners highlighted the importance of a more balanced approach to individual performance assessment and remuneration. Narrow revenue-based measures of performance assessment should be complemented by a wider set of metrics reflecting good client outcomes and other subjective criteria to reinforce best practice in culture and behaviour. But ensuring these metrics received sufficient attention over the cycle was a key challenge.

(ii) **Firms** — performance measures might also be used to incentivise better conduct risk management by firms as a whole — for example, by measuring conduct performance against public yardsticks. Some firms already do this on a stand-alone basis, but there may be scope for a consistent industry-wide approach, as proposed, for example, by the Banking Standards Review Council (see Section 5.5.3). A single, objective, industry-wide definition of costs arising from misconduct and its transparent disclosure in firms' annual (and/or corporate social responsibility) reports could also be explored as a way of incentivising improved ethical behaviour across the FICC sector.(1)

(b) **Adjustments to remuneration**: some firms have reduced bonus pools and other forms of remuneration to reflect misconduct issues — but this has been variable across the industry. In the United Kingdom, banks and investment firms are covered by the FCA and PRA Remuneration Code, which obliges the larger and more significant firms to reduce or cancel deferred variable remuneration (known as 'malus') in the event of employee misbehaviour, material downturns in firm performance, or failures of risk management. Fund managers are also subject to the AIFMD Remuneration Code, which requires that delayed variable remuneration should only be paid out if that payment is sustainable and justified. Firms will need to make full use of these powers,(2) and in future to make use of new powers to reclaim remuneration already paid (known as 'clawback').(3) Some market participants suggested that powers and obligations such as these might be extended to other firms active in FICC markets who are not already covered by these remuneration provisions, including all asset managers, interdealer brokers, and trading firms.

(c) **Safeguards against inappropriate staff moves**: many FICC markets have close-knit trading communities across

(1) The work of the London School of Economics Conduct Costs Project and the CCP Research Foundation (www.ccpresearchfoundation.com) could provide a framework for further development in relation to industry-wide performance measures relating to conduct.
(2) Under the malus provisions in CRD 4 Art 94 (banks) or AIFMD Art 13/Annex II (investment firms).
(3) Under the new provisions in www.bankofengland.co.uk/pra/Documents/publications/ps/2014/ps714.pdf.

the sell and buy-side. Traders commonly move jobs frequently, and, it has been suggested, may sometimes feel greater loyalty to their desks and peers in the market than to their current firms. In that context, a particular concern voiced by some firms was that it was too easy for employees who had to a greater or lesser extent contravened standards of good market practice at one firm simply to move to another firm, even if they had been subject to qualified withdrawals under the existing Approved Persons regime. Ongoing regulatory reforms go some way to address this. For example, the PRA and FCA are seeking views on rules to prevent an employee's deferred bonuses being shielded from forfeiture after moving to a new employer. And for important roles the proposed SMC regime will require firms to seek job references covering the last five years. Other possible solutions, subject to the requirements of employment law, may include: mandating greater openness from firms about cases of staff misconduct; and improving the supply of information about employees' past records.

(d) **Promotion and advancement**: firms' decisions on promotion and advancement can send powerful messages to employees regarding expected standards of behaviour. In tandem with improvements in performance measures as discussed above, a more consistent approach is needed towards taking account of behavioural factors when promoting staff to senior positions within FICC businesses. For example, the decision to award a management role to an individual who has scored poorly on conduct issues during performance assessments could be subject to review by senior management and the board prior to the appointment being made.

(e) **Involvement by boards in the governance of FICC activities**: in general, boards have become much more focused on the need to enforce higher standards on FICC trading floors. In some major FICC firms, new governance structures have been introduced to strengthen the weight placed on reputational considerations in trading decisions, including new (and existing) product and transaction review committees and reputational oversight groups. However, practitioners highlight the challenges of ensuring that boards can in practice identify gaps between their stated values and what is happening on trading floors, particularly where business has developed in silos (as is common in many FICC firms). The proposed SMC regime addresses this at a high level by defining senior management responsibilities in relation to culture and behaviours. Market practitioners have nevertheless highlighted the importance of improving the metrics that boards use to monitor conduct in FICC business. And the Basel Committee's recent consultative document on corporate governance(1) highlights the importance of ensuring during selection processes that board members have skills relevant to the firm's business and risk profile. The Review is interested in the extent to which the boards of institutions with a major FICC market presence could be required, or at a minimum encouraged, to include more members with direct FICC market experience (current information suggests this coverage is extremely limited).

(f) **Front line responsibilities**: market practitioners recognise that delivery of higher standards in complex FICC markets cannot be left solely to a central compliance or audit team. The key responsibility in the first instance lies with traders themselves and those managing them. This first line of defence is closest to actual transactions and clients, best able to observe misconduct by colleagues, and therefore best placed to form an understanding of how a particular form of behaviour could impact client outcomes. Market participants have however told the Review that the role, responsibilities and powers of front office supervision needs to be more clearly defined, as well as supported by more regular training for front office staff to remind them of the standards to which they should adhere. The role, size and reporting lines of compliance and audit functions also needs careful review to ensure they complement the efforts of front office supervision. The role of compliance and audit was reported to be more challenging in FICC businesses, which were subject to less formal regulation, and required a greater ability to form judgements and compare emerging risks across business silos. Some participants stressed the importance of ensuring high fliers were rotated through central functions in order to strengthen the impact of those functions, and improve knowledge of their roles.

5.5.3 Market-wide initiatives to align market conduct, incentives and governance

5 Participants stressed to the Review the importance of ensuring a common commitment from all of those engaged in FICC markets to raising standards in the areas covered in this section. The need for such improvements in the banking sector was recognised by the Parliamentary Commission on Banking Standards, which expressed support for a professional body to promote higher standards in the banking industry. Leading on from this, one of the aims of the newly-established Banking Standards Review Council (BSRC) will be to develop a process by which banks can assess and improve their standards of behaviour and professionalism against a common framework. Firms, which participate on a voluntary basis, will submit the results of their self-assessments to the BSRC, who will collate, validate and publish the information. The BSRC's work will also cover improving the uptake and value of professional qualifications and training in the banking industry.

(1) See www.bis.org/press/p141010.htm.

6 The BSRC aims to attract participation from all firms in the UK banking industry, including those with a FICC market presence. This is not however expected to include other non-banking firms that are participants in the FICC markets, such as hedge funds, asset managers and end-users. The Review would be keen to hear views on whether these other key FICC institutions should engage in a similar process of assessment — either by seeking to participate in the BSRC's work, or by developing a parallel process for the wider FICC markets. This would help to ensure that efforts to raise standards in governance and culture eventually benefit FICC markets as a whole, and not just a segment of the firm population.

5.5.4 Regulatory initiatives to improve governance and incentives

7 In response to recommendations from the Parliamentary Commission on Banking Standards, a number of UK regulatory initiatives are under way, seeking to align market conduct, incentives and governance more closely. Two key initiatives currently being jointly consulted on by the PRA and FCA are the revised remuneration rules(1) and the proposed new SMC rules.(2)

8 The remuneration regime has recently introduced clawback provisions for bonuses in certain circumstances. There are proposals under consultation to extend the length of bonus deferrals for up to seven years to allow more time for *ex-post* adjustments, which in turn will allow firms to align remuneration more closely with any subsequent discovery of misbehaviour. The PRA and FCA are seeking views on the treatment of 'buy-out' awards, which result in an employee's deferred bonuses being shielded from forfeiture after moving to a new employer.

9 The proposed SMC regime will introduce three broad changes in governance. First, it will introduce the allocation of detailed responsibilities to specific individuals who hold senior manager roles and may be held accountable for failures in the area for which they are responsible. Second, the SMC will require firms to assess and certify the fitness and propriety of employees whose role presents significant risk of harm to the firm or its customers. Third, the SMC will introduce a set of enforceable conduct rules which will apply to all senior managers and to their respective populations within the certification regime. In addition, the FCA proposes to apply the Conduct Rules to all other employees of relevant firms except staff carrying out purely ancillary functions. These proposed measures will apply to banks, building societies, credit unions and PRA-designated investment firms. There is a question about whether similar measures should also be applied to other types of firm engaged in the FICC market, such as hedge funds and interdealer brokers, either in a full or a more tailored version.

Consultation questions

Q36: How much of a role did inadequate governance, accountability and incentive arrangements play in the recent FICC market abuses, and to what extent do these remain potential vulnerabilities in FICC markets globally? In addition to on-going regulatory changes, what further steps can firms take to embed good conduct standards in their internal processes and governance frameworks? And how can the authorities, either internationally or domestically, help to reinforce that process, whether through articulating or incentivising good practice, or through further regulatory steps?

Firm-wide initiatives to improve incentives and governance

Q37: Do respondents agree that the thematic areas highlighted in Section 5.5 are key priorities for FICC firms (fine-tuning performance measures; adjustments to remuneration; attitudes towards hiring, promotion and advancement; closer board involvement in governance of FICC activities; and clearer front line responsibilities)? What specific solutions to these challenges have worked well, or could work well? And how best can the authorities help to support these initiatives?

Market-wide initiatives to align market conduct, incentives and governance

Q38: To what extent could the Banking Standards Review Council help FICC market participants to raise standards collectively — in particular, are there other steps that could be taken to help complement or extend this initiative in FICC markets for non-banks and internationally?

Regulatory initiatives to improve governance and incentives

Q39: Are there other regulatory measures the authorities could take to strengthen personal accountability or otherwise improve the way firms manage incentives and governance? In particular, should any or all of the measures in the Senior Managers and Certification regime be extended to non-bank firms active in FICC markets?

(1) See www.bankofengland.co.uk/pra/Pages/publications/cp/2014/cp1514.aspx.
(2) See www.bankofengland.co.uk/pra/Pages/publications/cp/2014/cp1414.aspx.

5.6 Surveillance and penalties

5.6.1 Overview

1 Sections 5.4 and 5.5 discuss ways to improve standards of market practice in FICC markets, establish clear responsibilities for reaching those standards, and provide positive incentives to do so. This section discusses how to deal with those who nevertheless engage in misconduct, looking in turn at measures that increase the likelihood of being caught (surveillance) and/or increase the cost to those responsible for wrongdoing when they are caught (penalties).

2 The Review notes that looking out for, and punishing, misconduct is a shared responsibility between the industry, firms and authorities. Though the focus is often greatest on regulatory surveillance, supervision and enforcement, the Review believes there is scope to strengthen firm and industry-level action as a first line of defence. A key question for this Review therefore is identifying areas where, once clear standards for FICC markets are established, firms can play a more prominent role in enforcing them. Sections 5.6.2 and 5.6.3 discuss such areas, while sections 5.6.4 and 5.6.5 cover the potential role of regulatory-led initiatives.

5.6.2 Firm and market-level surveillance

3 Firms have a range of systems and controls in place to detect misconduct by their staff. During its preliminary fact-finding, the Review has heard views that these systems were underdeveloped or had atrophied in some firms prior to the crisis, partly reflecting the perceived lack of detailed regulatory requirements compared with other markets and the modest level of price transparency. Since the crisis, firms have increased investment, including through innovative techniques such as electronic surveillance. This subsection focuses on how surveillance measures could be developed further or used more uniformly.

4 At the most basic level, employees must feel able to report instances of malpractice and be confident that these will be dealt with seriously and effectively, and that reporting will not be to their detriment. However, there are examples in past misconduct cases of staff reporting concerns within their organisations, but appropriate action not being taken. The UK authorities believe that effective whistleblowing procedures that establish clear ways to report while offering protection to the whistleblower can play an important role in helping to prevent and detect wrongdoing.

5 There has been debate in the United Kingdom and elsewhere about whether more could be done to encourage whistleblowing in the financial sector. The Parliamentary Committee on Banking Standards (PCBS) published a number of recommendations on this issue, many of which are addressed to the industry. The FCA and PRA have already expressed their agreement with many of the PCBS recommendations, noting that a culture where people are prepared to speak up can significantly improve behaviour throughout a firm. In particular, they agree that firms should have effective whistleblowing mechanisms, and that a senior manager should have accountability for these, and for protecting whistleblowers. The proposed new Senior Managers and Certification (SMC) regime includes a requirement for a senior manager to have explicit responsibility for overseeing the integrity of whistleblowing procedures within firms.

6 But it is not just the responsibility of the authorities to promote whistleblowing. The industry can also play a role in helping to promulgate best practices on how to make whistleblowing regimes more effective, and how to ensure that employee concerns about more 'borderline' issues are also escalated, alongside those involving clear breaches of policy/regulations. In that context, the Review welcomes the recent launch by the Chartered Institute for Securities and Investment of a 'Speak Up' programme designed to encourage firms to adopt policies that help staff report violations of company policy, the law or any other failing that impacts standards.

7 The significant increase in availability of real-time trading data in some markets and advances in analytical techniques mean that firms can now use 'big data' tools to complement other existing techniques for monitoring trading behaviour. Such approaches are currently being explored by some market participants, and offer scope to detect anomalies in trading behaviour which could reflect malpractice. Advanced versions of these tools also incorporate analysis of email, chatroom and phone usage (including digitised voice recording) to highlight possible misconduct by identifying certain words and the context in which they are used. The Review has nevertheless heard of a number of challenges to applying these techniques more widely, including the variation in availability of market-wide pricing and trading data across FICC markets, and siloisation in some firms of staff and systems. The Review is interested to hear respondents' views on whether these or other techniques and processes could help increase the chances of misconduct being identified at a firm level.

5.6.3 Firm-level penalties and market discipline

8 Firms should have sufficiently strong sanctions in place to deter bad behaviour. In the pre-crisis period, some participants have described a 'low' or 'no consequences' culture in which misconduct by high-earning staff was quietly disregarded, or dealt with by an unpublicised dismissal. In such circumstances, traders released by one firm could often reappear in the market soon after at another firm.

9 As discussed in Section 5.5, penalties that could be used to tackle this include: disclosure to another firm of an

individual's bad behaviour (subject to employment law-related restrictions); the ability of firms to apply malus to unvested bonus awards; and, from 1 January 2015 for PRA-regulated firms, the claw back of remuneration already paid out.

10 As well as firms using penalties to discipline individual members of staff, there is also scope for the market as a whole to police itself more effectively, punishing firms with poor conduct records through the removal of business. The ability of the buy-side to punish poor behaviour of the sell-side (or *vice versa*), for example, by reducing or stopping business with a misbehaving bank for a period of time, is an important form of market discipline. However, as discussed in Section 5.2, the Review has heard from some market participants that the scope for such policing may have become more limited following the financial crisis as concentration in certain markets, combined with responsibilities to execute at the best available prices on behalf of clients, and the consequent need to maintain access to liquidity, has limited the scope for firms to move their business away from firms perceived to be engaging in abusive behaviour. In addition, it may be difficult for markets to self-police when there is partial or incomplete information. The Review would be interested to hear views on whether market discipline is being constrained and, if so, how these constraints could be overcome.

11 On occasions there may be cases where a firm chooses to take business away from another firm in response to what are (or are perceived to be) regulatory breaches. The FCA Principles for Businesses require firms to disclose to the appropriate regulator anything relating to the firm of which that regulator would reasonably expect notice. In addition, firms arranging transactions in certain financial instruments are required to report suspicious transactions to the FCA without delay under the Suspicious Transaction Reporting (STR) regime. The current regulatory architecture means most FICC markets remain out of scope of the STR regime; but the Market Abuse Regulation (MAR) and MiFID 2 will extend coverage to most FICC markets. It is crucial that all FICC market participants report suspected misconduct to the FCA in addition to any bilateral action against the relevant firm, for example, through a temporary suspension of new business.

5.6.4 Regulatory-level surveillance and supervision

12 Although substantial responsibility for policing behaviour lies with firms, that must be backed by strong surveillance, supervision and enforcement by the public authorities. In recent years, the supervision of wholesale market conduct has become more forward looking in orientation around the world, reflecting the experience of the financial crisis. The FCA has a strategic objective to make markets function well. Its three operational objectives are to protect consumers, to uphold market integrity and to promote competition.(1)

13 The FCA has set out what it expects of firms operating in wholesale markets, which includes: that firms behave in a manner consistent with the capacity in which they act (eg agent or principal); that firms know when to keep information confidential, or share it; and that firms have adequate controls over their traders and ensure that they observe market conduct rules. In addition, the FCA has been clear that it expects market participants to act as the first line of defence against market abuse and has articulated its expectations for market infrastructure focused on: operational resilience; effective systems and controls to identify and prevent abusive trading activity; and effective governance.

14 In its Business Plan for 2014/15(2) the FCA set out specific plans for more intensive supervision of wholesale conduct, including: evaluating controls at investment banks over conflicts of interest; evaluating controls over the use of information by investment banks; and evaluating controls over traders contributing to benchmarks. As part of its wholesale conduct strategy, the FCA has also implemented a new supervisory approach for trading firms (interdealer brokers, agency brokers, high frequency traders and others with an impact on the market infrastructure). That includes reviewing firms' activities, analysing business models and the drivers of conduct risks (including trading culture, behaviour and controls), and identifying forward-looking risks through specialist sector teams.(3) Other areas of focus for the FCA have included establishing regulatory priorities for the commodities markets,(4) and setting more robust expectations for the timely and proper dissemination of regulated information by issuers.(5)

15 Within this, however, supervision of the FICC markets poses a number of particular challenges. Comprehensive transaction and pricing data are not currently available to the FCA (although that will improve once MiFID 2 has been implemented in January 2017). The FICC markets are also global in scope, draw in many players from the regulated and non-regulated sectors, and are subject to a complex patchwork of regulatory requirements, as set out in Section 2 and the Appendix. All of these factors mean that there is a globally evolving understanding of the extent and nature of supervision for FICC markets.

5.6.5 Regulatory level penalties

16 In 2008 the predecessor to the FCA, the Financial Services Authority (FSA), announced that enforcement powers needed to become a credible means of deterring

(1) See Financial Services Act 2012.
(2) See www.fca.org.uk/news/business-plan-2014-15.
(3) See www.fca.org.uk/static/documents/corporate/annual-report-13-14.pdf#chapter-3.
(4) See www.fca.org.uk/static/documents/commodity-market-update-1402.pdf.
(5) See www.fca.org.uk/static/documents/policy-statements/ps14-02.pdf.

wrongdoing in financial markets, and that wrongdoers had to realise that they would face a real risk of being caught and of incurring significant financial penalties. More recently, the FCA confirmed it would take the same approach and highlighted its intention to pursue a more assertive and interventionist approach to wrongdoing in wholesale markets.(1) It has since issued fifteen final notices for misconduct in FICC markets and imposed more than £700 million in financial penalties.

17 In May, HM Treasury published a consultation on a review of the UK enforcement regime, looking at the fairness, transparency, speed and efficiency of the institutional arrangements and processes for enforcement decision making at the FCA and PRA. That includes the decision making process for referring cases for enforcement investigation and possible action; incentives for early settlement; and the arrangements for referring cases to the Upper Tribunal. The review will also consider how UK arrangements compare with international practice.

18 The ability to bring criminal prosecutions for serious financial misconduct is an important form of deterrence. While criminal convictions are already possible for a range of financial crimes, such as insider dealing, market manipulation and fraud, the PCBS noted that these generally apply to individuals or groups and do not cover mismanagement by senior banking staff. The Government introduced a new criminal offence in the Financial Services (Banking Reform) Act 2013, which includes reckless misconduct by senior bank managers that leads to bank failure. This means that senior managers covered by the SMC regime can face criminal penalties (including imprisonment) if they are involved in taking a decision which causes the institutions to fail, while knowing the risks around this decision, and if their conduct in relation to that decision fell far below what could reasonably be expected of someone in their position. As this is a criminal offence, the 'presumption of innocence' applies and a prosecution can only be brought if it is in the public interest to do so.

19 HM Treasury has also committed to taking domestic action to ensure that the criminal regime for market abuse is up-to-date and fit for purpose, and to make changes to reflect forthcoming regulatory changes (such as MiFID 2). As part of this approach the Government has decided that the United Kingdom will not opt into the EU rules set out in the Criminal Sanctions Market Abuse Directive (CSMAD), but that the proposed UK criminal regime for market abuse will be at least as strong as CSMAD. CSMAD creates new minimum criminal standards for the offences of insider dealing and market manipulation, and for behaviour which amounts to inciting, aiding or abetting market abuse. It also makes manipulating or attempting to manipulate benchmarks a criminal offence. The Review would be interested in views on whether the coverage of CSMAD is appropriate and whether activities and instruments should be covered in the domestic criminal regime that are not currently envisaged under CSMAD.

20 The Review notes the widespread view amongst market participants that recent high profile enforcement actions have brought sharply renewed focus on conduct issues, particularly where they are seen as targeting individuals. The Review believes it is important that enforcement actions in FICC markets continue to support and enhance credible deterrence. Of particular interest is the appropriate balance between financial penalties, prohibition of individuals and criminal prosecutions.

21 HM Treasury's enforcement review will consider the effectiveness of the current enforcement process. But enforcement actions generally conclude long after the offences concerned have taken place, and require a high standard of evidence. In light of this, the Review is interested in views on whether there would be a case for making even greater use of early intervention, including informal tools which have been used successfully in the past, such as reaching a voluntary agreement with a firm; or formal tools, such as the FCA and PRA's existing OIREQ (own-initiative requirement) and OIVOP (own-initiative variation of permission) powers, to impose temporary requirements on, or vary the permission of, authorised firms.(2) Such formal tools can only be used in respect of firms performing activities that require FCA or PRA authorisation, so their application in FICC markets would be limited. But they could potentially be used as preventative measures when malpractice is suspected to suspend or limit a particular regulated trading activity, pending further investigation of conduct failings. The prompt and effective use of such protective and forward-looking tools would require a different approach, and potentially a different level of evidence to that needed for full-scale enforcement action.

22 The Review also notes that Basel III capital requirements, as implemented in the EU under CRD IV, allow national authorities to impose specific add-ons where justified following an individual supervisory review. Given this, there may be greater scope for regulators to impose additional capital requirements on firms in respect of conduct or governance failings. While the power to do this is discretionary, regulators both in and outside the EU could look for ways for this to be applied more consistently on a global basis given the international nature of FICC markets.

(1) 'Journey to the FCA', available at www.fca.org.uk/static/documents/fsa-journey-to-the-fca.pdf.
(2) Procedures for the use of such tools is set out in the FCA's Handbook, Enforcement Guide and the Decision Procedure and Penalties Manual.

Consultation questions

Q40: What role can more effective surveillance and penalties for wrongdoing play in improving the fairness and effectiveness of FICC markets globally? How can firms and the industry as a whole step up their efforts in this area? And are there areas where regulatory supervision, surveillance or enforcement in FICC markets could be further strengthened?

Firm-level surveillance

Q41: How can firms increase the effectiveness of their own surveillance efforts across FICC markets globally? What role could the industry play in helping to explore best practices on how to make whistleblowing and other similar regimes more effective? Is there scope to make greater use of large scale market data sets and electronic voice surveillance to help detect cases of abuse in FICC markets? Are there other potentially effective tools?

Firm-level penalties

Q42: Are there processes or structures that can allow firms to punish malpractice by their own staff more effectively (for example, penalties for breaching internal guidelines)?

Q43: Could firms active in FICC markets do more to punish malpractice by other firms, for example, by shifting business and reporting such behaviour to the authorities?

Regulatory-level surveillance and supervision

Q44: Is the current supervisory approach and level of intensity dedicated to supervising conduct within the UK wholesale FICC markets appropriate?

Q45: Are there ways to improve the data on FICC market trading behaviour available to the FCA, whether through the extension of the regulatory perimeter or otherwise?

Regulatory-level penalties

Q46: What further steps could regulators take to enhance the impact of enforcement action in FICC markets?

Q47: Should consideration be given to greater use of early intervention, for example, temporary suspension of permission for a particular trading activity for firms or individuals or increased capital charges?

Q48: Is there a need to widen and or strengthen criminal sanctions for misconduct in FICC markets?

Q49: Is the approach set out in the Criminal Sanctions Market Abuse Directive appropriate for the United Kingdom? Are there additional instruments or activities to those envisaged by the Directive that should be covered by the domestic criminal regime?

6 Questions for feedback

This section summarises the questions posed in Sections 3 to 5 of this document.

What does 'Fair and Effective' mean for FICC markets?

Q1: The Review would welcome respondents' views on the definition of 'fair and effective' FICC markets proposed in Section 3. Does it strike the right balance between safeguarding the interests of end-users without unnecessarily impeding the effectiveness of FICC markets? Are the concepts of transparency, openness and equality of opportunity appropriately specified? And how does the definition compare with those used in other markets, jurisdictions, organisations or legislation?

A framework for evaluating fairness and effectiveness

Q2: Of the six themes identified in Table A on page 5 (market microstructure; competition and market discipline; benchmarks; standards of market practice; responsibilities and incentives; and surveillance and penalties), which do you consider to be the most important factors contributing to the recent series of FICC market abuses? In which other areas do you believe the fairness and effectiveness of FICC markets globally may be deficient? Do these answers vary across jurisdictions, or specific markets within FICC? Are there any other important areas of vulnerability that are not identified in the table?

Barrier and digital options

Q3: Do trading practices involving barrier or digital options pose risks to the fairness and effectiveness of one or more FICC markets? How hard is it to distinguish between hedging and 'defending' such options in practice? Should further measures be taken to deal with the risks posed by barrier options, whether through market-wide disclosure of significant barrier positions, an extension of regulation or some other route?

Market microstructure

Q4: Does the market microstructure of specific FICC markets — including trading structures, transparency, asset heterogeneity or market access — enhance or diminish fairness and effectiveness? Where there are deficiencies, will recent or in-train regulatory or technological changes improve the situation, or are further steps needed? How do these answers vary across jurisdictions, or specific markets within FICC?

In fixed income:

Q5: Is greater use of electronic trading venues for a wider range of market participants possible or desirable? Are there barriers preventing a shift to a more transparent market structure?

Q6: Is standardisation of corporate bond issuance possible or desirable? Should standardisation be contemplated across a broader range of fixed income products? How could that be brought about?

Q7: Should the new issue process for bonds be made more transparent through the use of auction mechanisms, publication of allocations or some other route?

In foreign exchange:

Q8: Are there risks associated with internalisation and last look practices? Are there barriers preventing increased pre and post-trade transparency in foreign exchange markets?

Q9: Are there barriers impeding the development of more comprehensive netting and execution facilities for transacting foreign exchange fix orders?

In commodities:

Q10: Are there any material barriers preventing greater transparency in OTC commodity derivatives markets? If so, what could be done to remove them?

Regulatory measures:

Q11: Are there any areas of FICC markets where regulatory measures or internationally co-ordinated regulatory action are necessary to address fundamental structural problems that exist?

Conflicts of interest and information flows

Q12: Where do potential conflicts of interest arise in the various FICC markets, and how do they affect the use and potential abuse of confidential information, both within and between firms?

Q13: How can the vulnerabilities posed by such conflicts be reduced? Are existing internal structures and control procedures sufficient? Where they are not, are further internal management controls required (such as better trading floor design and/or closer monitoring of electronic communications within and between firms) or is more radical action required to remove conflicts altogether?

Competition and market discipline

Q14: Is there a relationship between the level of competition in FICC markets globally and the fairness and effectiveness of those markets? What risks are posed by the increase in concentration seen in some FICC markets? In answering this, please have regard to the geographical scope of any relevant markets.

Promoting effective competition through market forces
Q15: To the extent that competition is currently ineffective in any of the FICC markets, are there market-led initiatives, technological or structural changes that may remedy this situation?

Q16: Are there any lessons that can be drawn from experiences in other financial markets (or indeed other markets) about the ways that alternative or evolving market structures could impact on competition in FICC markets?

Q17: How effective is market discipline in enforcing sound market practices in each of the key FICC markets? What could be done to strengthen it?

Promoting effective competition through regulatory and legislative initiatives
Q18: In what ways might competition in any of the key FICC markets usefully be addressed by competition authorities (eg by assessing the state of competition in relevant markets)?

Q19: Are there any additional regulatory reforms that could be helpful in promoting competition and market discipline in FICC markets?

Q20: Is there a need for better awareness and understanding of the existing competition framework among FICC market participants, both at firm and individual level? How do you think that might be best achieved?

Benchmarks

Q21: Do current domestic and international initiatives by industry and regulators to improve the robustness of benchmarks go far enough, or are further measures required?

Industry-level measures
Q22: What steps could be taken to reduce the reliance of asset managers and other investors on benchmarks?

Q23: What additional changes could be made to the design, construction and governance of benchmarks?

Q24: Should there be an industry panel to discuss benchmark use and design with the aim of assisting industry transition?

Regulatory action
Q25: What further measures are necessary to ensure full compliance with the IOSCO Principles for financial benchmarks by all benchmark providers?

Q26: How can the regulatory framework provide protection to market participants for benchmarks administered in other jurisdictions in a proportionate way?

Standards of market practice

Q27: Are existing sources of information regarding standards of market practice across FICC markets globally: (a) already sufficiently clear (or will be once current regulatory reform has concluded); (b) sufficient, but in need of clearer communication or education efforts; or (c) not sufficiently clear, requiring more specific guidance or rules to provide more detail or close genuine gaps?

Q28: Box 7 on pages 36–37 discusses a number of uncertainties over FICC market practices reported by market participants, including: the need for greater clarity over when a firm is acting in a principal or an agency capacity; reported difficulties distinguishing between legitimate trading activity and inappropriate front-running or market manipulation; and standards for internal and external communication of market activity. To the extent that there are uncertainties among participants in the different FICC markets over how they should apply existing market standards in less clear-cut situations, what are they?

Q29: How could any perceived need to reduce uncertainties best be addressed: (a) better education about existing standards; (b) new or more detailed market codes on practices or appropriate controls; or (c) new or more detailed regulatory requirements?

Will these uncertainties be dealt with by current reforms?
Q30: How can the industry, firms and regulators improve the understanding of existing codes and regulations by FICC market participants and their managers?

Q31: Should there be professional qualifications for individuals operating in FICC markets? Are there lessons to learn from other jurisdictions — for example, the Financial Industry Regulatory Authority's General Securities Representative (or 'Series 7') exam?

Can the industry help to establish better standards of market practice?
Q32: What role can market codes of practice play in establishing, or reinforcing existing, standards of acceptable market conduct across international FICC markets?

Q33: How would any code tackle the design issues discussed in Section 5.4.3, ie: how to ensure it can be made sustainable given industry innovation over time? How to differentiate it from existing codes? How to give it teeth (in particular through endorsement by regulatory authorities or an international standard setting body)? How to communicate it to trading teams? Whether, and how, to customise it for individual asset classes?

Should the scope of regulation be extended?
Q34: In the context of implementing MiFID 2, which of the FCA Principles for Businesses should apply in relation to MiFID business with Eligible Counterparties?

Q35: Are there any financial instruments that should be brought more fully into the scope of regulation in order to improve the fairness and effectiveness of specific FICC markets? For any instruments proposed: (a) what protections does the current framework provide; (b) what gaps remain of relevance to fairness and effectiveness; and (c) what is the cost/benefit case, bearing in mind the Review's Terms of Reference as set out in Section 1?

Responsibilities, governance and incentives

Q36: How much of a role did inadequate governance, accountability and incentive arrangements play in the recent FICC market abuses, and to what extent do these remain potential vulnerabilities in FICC markets globally? In addition to on-going regulatory changes, what further steps can firms take to embed good conduct standards in their internal processes and governance frameworks? And how can the authorities, either internationally or domestically, help to reinforce that process, whether through articulating or incentivising good practice, or through further regulatory steps?

Firm-wide initiatives to improve incentives and governance
Q37: Do respondents' agree that the thematic areas highlighted in Section 5.5 are key priorities for FICC firms (fine-tuning performance measures; adjustments to remuneration; attitudes towards hiring, promotion and advancement; closer board involvement in governance of FICC activities; and clearer front line responsibilities)? What specific solutions to these challenges have worked well, or could work well? And how best can the authorities help to support these initiatives?

Market wide initiatives to align market conduct, incentives and governance
Q38: To what extent could the Banking Standards Review Council help FICC market participants to raise standards collectively — in particular, are there other steps that could be taken to help complement or extend this initiative in FICC markets for non-banks and internationally?

Regulatory initiatives to improve governance and incentives
Q39: Are there other regulatory measures the authorities could take to strengthen personal accountability or otherwise improve the way firms manage incentives and governance? In particular, should any or all of the measures in the Senior Managers and Certification regime be extended to non-bank firms active in FICC markets?

Surveillance and penalties

Q40: What role can more effective surveillance and penalties for wrongdoing play in improving the fairness and effectiveness of FICC markets globally? How can firms and the industry as a whole step up their efforts in this area? And are there areas where regulatory supervision, surveillance or enforcement in FICC markets could be further strengthened?

Firm level surveillance
Q41: How can firms increase the effectiveness of their own surveillance efforts across FICC markets globally? What role could the industry play in helping to explore best practices on how to make whistleblowing and other similar regimes more effective? Is there scope to make greater use of large scale market data sets and electronic voice surveillance to help detect cases of abuse in FICC markets? Are there other potentially effective tools?

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Glossary and acronyms

Glossary

Agent: An agent is a person or firm that arranges financial transactions on behalf of others. The financial instrument transacted does not pass through the agent's balance sheet. The agent typically receives a commission for arranging the transaction.

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.

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.

Central Limit Order Book (CLOB): A pricing framework used by most exchanges globally whereby customer orders (bids and offers) are matched in a transparent and pre-defined manner.

Dark pool: A private exchange or forum with restricted access where parties can post trading interest without making such information publicly available.

Delta: The ratio comparing the change in the price of the underlying asset to the corresponding change in the price of a derivative referencing that asset.

Derivative: A financial instrument whose price is dependent upon or derived from one or more underlying assets or benchmarks.

Digital option: Digital (or binary) options are options which pay out a fixed amount or nothing, depending on whether the underlying price reaches a level at a specific point in time.

Direct market access: Where participants can transact directly with other participants. The market participant is able to choose who they transact with (either because they know who is posting what prices or because they can see a range of prices and select the price they prefer).

Electronic Trading Platform: An electronic trading platform is a computerised system of trading for financial products.

Equitisation: The process of moving FICC products to an exchange or an exchange-like model.

Exchange: A regulated marketplace in which securities, commodities, standardised derivatives, and other financial instruments are traded.

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.

Forward rate agreement: A forward rate agreement is a contract between two parties which sets a fixed interest rate for a future period.

Front-running: Front-running is the practice whereby an individual is trading in possession of private information designed to take advantage of the anticipated price effect of a future order.

IBD business: IBD encompasses client primary market issuance for debt and equity markets as well as the corporate finance division that advises clients on (and often provides and arranges finance for) mergers and acquisitions and other major projects. Sometimes referred to as corporate finance.

Indirect market access: Where participants cannot transact directly with other participants, but access the market through a broker or dealer, who may act as principal or as agent in executing the trade.

Institutional investor: A financial institution which pools large sums of money and invests those sums in securities, property and other investment assets on behalf of itself and others.

Interdealer broker: A brokerage firm operating in the bond or OTC derivatives market that acts as an intermediary between major dealers to facilitate interdealer trades.

Interest rate swap: An interest rate swap is 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 transactions are matched within an investment firm rather than in the open market.

Knock in option: An option which is activated when a pre-defined price level is breached.

Knock out option: An option which is deactivated (and therefore expires worthless) when a pre-defined price level is breached.

Liquidity: Liquidity refers to the ease with which investors are able to transact in reasonable quantities of an instrument without discontinuity of price formation.

Market maker: A market participant that facilitates trading in a financial instrument by supplying (tradable) buy and sell quotations and hence committing itself to hold a position in the financial instrument.

Multi-dealer trading platform (MDP): An electronic platform used to provide transaction and associated services in financial instruments from a range of banks to the wider market.

New issue: A new issue is an offering of a debt or equity security, sold to public for the first time. Sometimes referred to as primary issuance, a new issue can involve the issuance of a new security (an initial public offering) or can be an addition to an already existing security.

One touch binaries: A one touch binary option is an option which gives the investor a pay out if the underlying asset breaches a pre-defined price during the term of the option. These types of options are binary because the pay-out is either full, if the pre-defined price is breached, or zero, if the pre-defined price is not breached.

Over-the-counter (OTC): Transactions that are bilaterally negotiated between two market participants, as opposed to taking place on a central exchange.

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 which is the prices at which counterparties advertise they are willing to buy or sell specific financial instruments; or (2) post-trade price transparency which is 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.

Private placement: A private placement is a non-public offering of a debt or equity security. Private placements are typically offered to a small number of chosen investors.

Range accruals: Range accruals are options which pay a specified interest rate only if another reference rate is within a pre-defined range. Should the reference rate fall outside of the pre-defined range, no interest is paid.

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): Where a market participant asks for a price quote from one or more market makers. In some organised markets, market makers are required to quote a price for a certain size (such as GEMMs in the gilts market); in other markets there is no obligation to quote. The market makers who do quote show a bid/offer price and the size they are willing to transact. The market participant submitting the RFQ can then choose whether to trade and, if so, which price to take.

Securitised asset: A financial instrument created through repackaging a combination of other financial assets (which can include mortgages, credit cards, and loans) into tiers of varying credit quality which are then sold to investors.

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 trading platform (SDP): An electronic platform owned and provided by a bank or broker-dealer to provide transaction and associated services in financial instruments to its clients where the firm is the sole liquidity provider on the platform.

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.

Two-way pricing: A quote where both a bid and an offer is shown at the same time.

Acronyms

ABS – Asset-Backed Securities.
ACI – Association Cambiste International.
AIFMD – Alternative Investment Fund Managers Directive.
APAC – Asia Pacific = East Asia, South Asia, South East Asia, Oceania.
ATS – Alternative Trading System.
BBA – British Bankers' Association.
BIS – Bank for International Settlements.
bps – Basis Points.
BSRC – Banking Standards Review Council.
CDS – Credit Default Swap.
CFA – Chartered Financial Analyst.
CISI – Chartered Institute for Securities and Investment.
CLOB – Central Limit Order Book.
CLS – Continuous Linked Settlement.
CMA – Competition and Markets Authority.
CME – Chicago Mercantile Exchange.
CRD – Capital Requirements Directive.
CSMAD – Criminal Sanctions Market Abuse Directive.
DMO – UK Debt Management Office.
ECP – Eligible Counterparty.
EMEA – Europe, Middle East & Africa.
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.
FSA – Financial Services Authority.
FSB – Financial Stability Board.
FSMA – Financial Services and Markets Act.
FX – Foreign Exchange.
G20 – The Group of Twenty major world economies.
GDP – Gross Domestic Product.
GEMMs – Gilt-Edged Market-Makers.
HFT – High-Frequency Trading.
HMT – Her Majesty's Treasury.
ICB – Independent Commission on Banking.
ICE – Intercontinental Exchange.
ICMA – International Capital Markets Association.
IMA – Investment Managers Association.
IOSCO – International Organization of Securities Commissions.
IPO – Initial Public Offering.
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.
MiFID – Markets in Financial Instruments Directive.
MIFIR – Markets in Financial Instruments Regulation.
MMLG – Money Market Liaison Group.
MTF – Multilateral Trading Facility.
NIPs – Non-Investment Products.
OTC – Over-the-counter.
OTF – Organised Trading Facility.
OIREQ – Own-Initiative Requirement.
OIVOP – Own-Initiative Variation of Permission.
PCBS – Parliamentary Commission on Banking Standards.
PRA – Prudential Regulation Authority.
REMIT – Regulation on Wholesale Energy Markets Integrity and Transparency.
RFQ – Request for Quote.
SIFMA – Securities Industry and Financial Markets Association.
SMC – Senior Managers and Certification Regime.
STR – Suspicious Transaction Reporting.
TRACE – Trade Reporting and Compliance Engine.
USFXC – US FX Committee.

Appendix: Further detail on the operation and regulation of FICC markets

1 This Appendix provides further detail on the purpose, instruments, trading structures and trends in the four major FICC markets (foreign exchange, fixed income rates, fixed income credit and commodities) in parts A to D. Part E describes the current structure of regulation and market codes.

A Foreign exchange

Purpose and key instruments

2 The foreign exchange (FX) market has a wide range of purposes. It is used to provide foreign currency to businesses to facilitate the import or export of goods and services, and serves many other users, ranging from corporate and financial hedging or investment, to central banks implementing macroeconomic policy, and individuals for travel and holidays.

3 The FX market has the highest turnover of any market in the world and (particularly for the core currencies) is the most liquid of the FICC markets. In 2013 the global average daily turnover was US$5.3 trillion. Although FX turnover is globally dispersed, London is home to 40%(1) of overall turnover. The FX market is also concentrated. As at April 2014, six firms accounted for 61% of overall FX turnover in the UK-based interdealer market; the equivalent figures for business with other banks, other financial firms and non-financial firms lay in the range 64–81%.(2)

4 There is a high degree of integration between cash and derivatives, and the combined market comprises six main instruments (**Table D**).

5 As at April 2013 interdealer trading accounted for 39% of overall FX market turnover, much lower than in the late 1990s where interdealer trading was in excess of 60%. The primary reason for this decline is the growth in 'internalisation': ie the internal netting of trades by dealing banks. A breakdown of FX market turnover by counterparty type and instrument can be seen in **Table E**.(3)

Table D Foreign exchange instruments

Instrument	Description	Average daily turnover US$ billions	% of total
FX spot	The exchange of two currencies at a rate agreed today for delivery (cash settlement) within two business days.	2,046	38%
Outright forwards	The exchange of two currencies at a rate agreed today for delivery at some time in the future (ie more than two business days).	553	10%
Non-deliverable forwards (NDF)	A forward that is settled with a single cash payment for the net value, rather than through the exchange of the two currencies.	127	2%
FX swaps	The combination of an FX spot and outright forward in a single transaction.	2,228	42%
Currency swaps	The exchange of notionals in two currencies at inception and expiry (as with an FX swap) and interest payments in those currencies over the life of the swap.	54	1%
FX options	An option gives the option buyer the right (but not obligation) to exchange one currency for another currency at a pre-agreed exchange rate with the option seller during or at the end of a specified period.	337	6%

Source: BIS Triennial Survey 2013.

Trading structures

6 FX markets remain predominantly quote-driven 'over-the-counter' (OTC) markets. The need to exchange one currency for another physically when spot, swap and forward transactions settle, involves the risk of paying away the full notional in one currency without receiving the full notional in the other. The need to manage this risk, referred to as settlement risk, is one of the most important drivers of market structure in the FX markets and led to the development of the Continuous Linked Settlement (CLS) system used by many major market participants to mitigate this risk. CLS group, which is owned by its member banks, now accounts for 46%(4) of daily FX volumes across all products.

(1) BIS Triennial Survey 2013.
(2) Bank of England FXJSC Turnover Survey April 2014.
(3) BIS Triennial Survey 2013.
(4) CLS and Bank calculations.

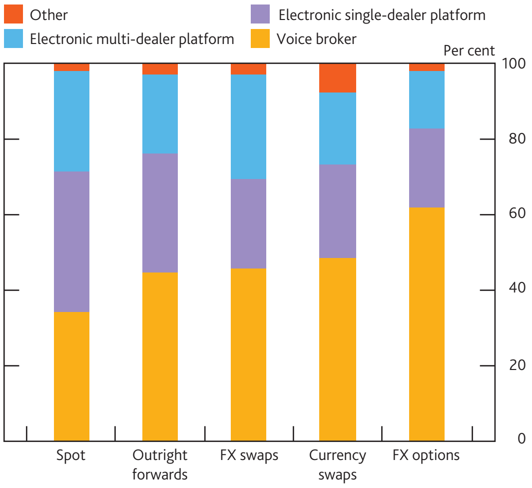
Table E Foreign exchange turnover by counterparty

	Total	Spot	Outright forwards	FX swaps	Currency swaps	FX options
Reporting dealers[a]	39%	33%	27%	49%	54%	29%
Non-reporting[b] banks	24%	25%	14%	27%	15%	19%
Non-financial[c] customers	9%	9%	14%	6%	12%	9%
Institutional investors	11%	13%	19%	7%	3%	16%
Hedge funds and Proprietary trading firms	11%	14%	17%	5%	7%	21%
Official sector	1%	1%	1%	1%	1%	0%
Other[d]	6%	6%	8%	5%	8%	6%

Source: BIS Triennial Survey 2013

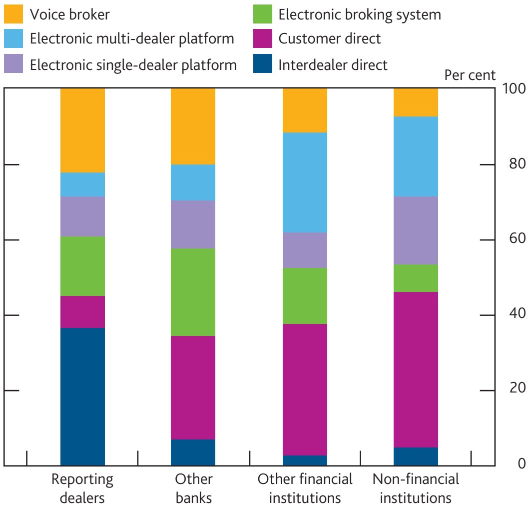
(a) Mainly large commercial/investment banks and securities houses that i) participate in the interdealer market, and/or ii) have an active business with large customers, such as large corporate firms, governments and non-reporting financial institutions.
(b) Smaller or regional commercial banks, publicly owned banks, securities firms or investment banks not directly participating as reporting dealers.
(c) Non-financial end-users such as corporations and non-financial government entities.
(d) Financial institutions that are not classified as 'reporting dealers' in the BIS Triennial Survey.

Chart 6 Execution method by product type



Source: BIS Triennial Survey 2013.

Chart 7 Execution method by client type



Source: Bank of England FXJSC Turnover Survey April 2014.

7 The need for flexibility on settlement and tenor for the majority of FX products is cited as representing a barrier to the further development of organised exchanges and associated clearing. Although the FX market remains predominantly OTC, that business is executed in a number of different ways and via a number of different trading platforms (**Charts 6** and **7**). The market trades mostly through major banks and is divided between separate interdealer and dealer-to-client markets. The advent of electronic platforms in both the interdealer and dealer-to-client markets has resulted in increased levels of transparency. Banks mostly offer their clients access to the market via either 'single-dealer platforms' or 'multi-dealer platforms'. Single-dealer platforms restrict clients to trade against quotes from the platform owner, whilst multi-dealer platforms allow clients to trade against quotes from other dealers. Electronic trading now accounts for 64% of transactions in the FX spot market. However, the added complexity of FX options has meant that only 36%[1] of this market trades electronically.

8 FX markets have some of the narrowest bid-offer spreads of all the financial markets, which are often less than a percentage in point (PIP) in the most liquid currency pairs.[2] Dealers typically generate low margins per trade compared to other markets, especially in the most liquid currency pairs, which means that only the largest players can remain profitable when competing for volume business. Pricing in the FX market can differ by credit rating and client relationship, such that each participant sees a different subset of prices, and therefore by definition there is no single price.

Current and future market trends

9 Given the pressure on margins, banks have invested heavily in technology in an attempt to increase their market share and reduce costs. This has led to an increase in 'internalisation' in the spot FX markets where banks are able to match off client orders internally without having to go to the interdealer market to hedge their risk. Market participants have indicated that some dealers with large enough market share can now internalise up to 90% of their client orders in major currency pairs. Some argue that internalisation results in better execution for clients because it allows them to trade at bid-offer spreads that are narrower than those available in the external market. However, internalisation also reduces transparency to the wider market, whilst at the same time giving platform-providers access to privileged information about their clients' flows in the market.

10 As with other derivatives markets, international regulators are increasing their oversight of the FX derivative markets. For example, the G20 OTC derivatives regulatory reform agenda,

(1) BIS Triennial Survey 2013.
(2) Defined as 1/100th of 1 unit of currency for YEN related currency pairs and 1/10,000th of 1 unit of currency for all other major currency pairs.

including Dodd-Frank in United States and both EMIR and MiFID 2 in the EU, will require the most liquid and standardised derivatives to be both traded on electronic platforms and centrally cleared, where applicable.

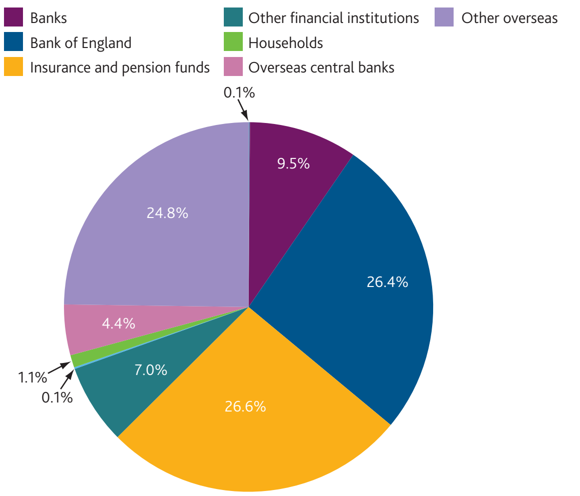
B Fixed income rates

Purpose and key instruments

11 The fixed income rates market is split into cash and derivatives. The cash market provides financing for government and government related agencies. Issuers such as the government of the United Kingdom, through its gilt issuance programme, use the market to obtain large volumes of funding. At end-June 2014 there was a notional value of nearly £1.5 trillion(1) of gilts outstanding. The governments of the G7 countries together have over US$30 trillion(2) of debt outstanding.

12 In developed economies, government debt securities are generally regarded as low risk investments, having little or no credit risk. Purchasers of government debt range from small retail investors to some of the largest institutional investors. Pension funds and insurance companies buy government debt to hedge their long term liabilities, and banks use government securities for liquidity management, as collateral, and for hedging debt and other derivative instruments. In addition, central banks often hold debt of other governments for currency reserve management, and many sovereign wealth funds are active investors in this market. The composition of investors in UK government debt is shown in **Chart 8**.

Chart 8 UK Government bond holdings by investor type — 2014 Q1



Source: UK DMO data.

13 As government debt securities often have little or no credit risk, they are also widely used as collateral in the 'repo' market. A 'repo', or sale-and-repurchase agreement, is a short-term loan which is secured against a highly liquid asset. The repo market is an important part of the fixed income rates market; it is used as a means of financing for dealers and a money-like asset for risk-averse investors, including central banks in monetary policy operations. The size of the European repo and reverse repo market in June 2014 was €5.8 trillion.(3)

14 Derivatives also play an important role in the fixed income rates market. Exchange traded derivatives include interest rate and bond futures. The major classes of OTC derivatives are interest rate swaps, cross-currency swaps, and forward rate agreements (FRAs). Swaps are used by a wide range of institutions for many different purposes: corporate issuers use swaps to exchange their fixed rate exposure for a floating rate when they issue bonds; banks use swaps to hedge fixed rate mortgage portfolios and to manage other interest rate risks in their balance sheet; and insurers and pension funds use swaps to manage the risks associated with both their assets and liabilities.

15 The total outstanding notional of OTC interest rate derivatives was US$577 trillion(4) as at end June 2013, with London home to around 50% of the market. The exchange-traded derivatives market accounted for a further US$66 trillion of notional.

Trading structures

16 Government bond primary issuance is usually managed by a specific department within the government. In sterling markets, primary auctions of UK government bonds are performed by the Debt Management Office (DMO). Designated Gilt-edged Market Makers (GEMMs) are the only institutions eligible to submit competitive bids directly to the DMO, meaning that all other market participants wishing to bid competitively at a gilt auction must route their order through a GEMM. Non-competitive bids may be placed directly with the DMO.

17 A liquid secondary market is critical for market participants, many of whom need to adjust their portfolio of government bond holdings regularly. In addition to their role in primary auctions, GEMMs are also obliged to provide liquidity in the secondary market, which continues to operate on an OTC basis. Ongoing concentration of the market around benchmark issues and larger trading volumes has resulted in greater liquidity in the secondary market, and an increasing amount of trading is now facilitated through electronic OTC platforms. Prices posted on such platforms have high visibility across the market and a wide range of participants are now able to access the market through them. Post-trade data is less widely available. The average daily turnover of gilts was £29 billion in 2012–13,(5) more than

(1) UK DMO data.
(2) BIS Debt securities statistics.
(3) ICMA European repo survey June 2014.
(4) BIS Triennial Survey 2013.
(5) UK DMO data.

seven times the value of daily turnover for shares listed on the London Stock Exchange. The average bid-offer spread for gilts in late 2013 was 0.8bps, demonstrating the liquidity of this market.

Current and future market trends

18 Since the financial crisis the demand for government bonds has increased dramatically. Banks are now far more likely to seek secured rather than unsecured funding, which typically requires high-quality assets as collateral, and participants in the OTC derivatives markets also increasingly need government debt to post as margin as a result of the G20 derivative reforms. There has also been a large increase in issuance of government debt to fund budget deficits. Trading volumes of gilts have increased broadly in line with the increase in issuance.

19 The European repo market has grown over the past five years. However, levels remain lower than the pre-crisis peak of €6.8 trillion in June 2007.(1)

20 International regulators are increasing their oversight of the OTC interest rate derivative markets. Interest rate swaps, which are the largest class of derivatives, are expected to be captured by the G20 trading and clearing obligations. Some market participants are anticipating these changes through the use of contracts which seek to replicate traditional OTC contracts, for example swap futures.

C Fixed income credit

Purpose and key instruments

21 The fixed income credit markets provide banks and non-financial companies with access to short-term and long-term funding. Short-term fixed income credit markets comprise certificates of deposit issued by banks and commercial paper issued by banks and non-banks with relatively high credit ratings. They are popular investments for money market funds as well as financial institutions and large companies looking to invest surplus cash for the short to medium term. The related market for short-term unsecured inter-bank loans has declined in recent years as concerns about counterparty credit risk have led to greater reliance on secured lending. However, the unsecured lending market continues to have wider significance for the fixed income markets as the basis for Libor, the benchmark to which most interest rate swaps and many other derivatives refer. The average daily turnover in the sterling unsecured and secured money markets as at May 2014 was £45 billion and £90 billion(2) respectively.

22 Bonds provide long-term finance to financial institutions and other companies in both developed and emerging markets. In most cases, corporate bonds are issued via a 'syndication', where a group of banks or investment firms underwrite a bond issue and act as advisers on the timing, price and allocation to investors. The returns for corporate bonds usually exceed the returns on government bonds. As at end-2013 there were around US$50 trillion of corporate debt securities outstanding globally, of which around US$39 trillion was issued by banks and other financial corporations.(3)

23 The credit ratings of issuers in the credit markets vary significantly. Likewise, the investors vary. Life insurance companies can match their long term liabilities with high quality long term corporate bonds. Investors with a higher risk appetite and searching for higher yield can invest in bank capital issues or issuers with lower credit ratings.

24 Asset-backed-securities (ABS) are an important subset of the bond markets. Securitisation is the process by which a number of securities are created which reference a pool of assets (eg residential/commercial mortgages, loans, credit card receivables). ABS are constructed to achieve different credit ratings and therefore appeal to a range of different investor groups.

25 The outstanding amount of securitisations in the EU at the end of 2013 was about US$2 trillion, or around one fifth of the size of the US securitisation market. Since the crisis aggregate issuance has been notably lower, with only US$239 billion of new issuance in 2013 (including retained issuance), equivalent to roughly 40% of the pre-crisis annual rate.(4)

26 The fixed income credit derivatives markets grew sharply in size following the development of the Credit Default Swap (CDS) in the mid-1990s. CDS are an important part of the credit market and serve a range of purposes including allowing banks to mitigate their credit exposures without having to cut credit lines or liquidate bond or loan positions. Despite recent declines in volume, the CDS market remains one of the largest derivatives markets, with over US$24 trillion(5) notional outstanding as of June 2013.

Trading structures

27 The issuance of new bonds involves banks acting as intermediaries between issuers looking for funding (through the banks' Debt Capital Market desks) and investors looking for instruments to purchase (through the banks' credit sales desks). This dual role means that banks have to be very sensitive to the fact that they have a duty both to the issuer (to obtain the best price for their debt securities) and to the investors (to provide best execution relating to the sale of the securities).

(1) ICMA European Repo Survey June 2014.
(2) Bank of England MMLG Sterling Money Market Survey 2014 H1.
(3) McKinsey, based on a sample of 183 countries.
(4) SIFMA, AFME and Bank of England calculations.
(5) BIS Triennial Survey 2013.

28 A striking feature of the fixed income credit market is its heterogeneity. Unlike the equity markets, where typically one class of common stock represents the entire equity value of the company, a large borrower will often have multiple debt securities outstanding of different sizes and maturities, often with optional features. The large number of instruments in the credit market means that secondary market liquidity in most bond issues is limited, and investors therefore rely on OTC market makers to provide quotes rather than trading through an exchange. Although there are a variety of electronic platforms that show live pricing for corporate bonds, they mostly reflect indicative bids and offers that need to be confirmed with the dealers supplying them before execution can take place. Attempts to develop alternative trading platforms to provide a central pool of liquidity have so far failed to achieve a critical mass.

29 In the credit markets, banks often package bond issuance with other services in bundled transactions, offering clients reduced fees for a package of services. For example the issuance of new debt often prompts the creation or purchase of related swaps and derivative securities, because most investors are interested in fixed rate investments while issuers generally prefer to fund at floating rates. In such cases, issuers will enter into a fixed to floating interest rate swap at the same time as issuing the new securities. This was one factor behind the increasing integration of banks in the pre-crisis period, as this bundling of services required greater co-operation between departments.

Current and future market trends

30 Many market participants consider liquidity to have declined in secondary corporate bond markets since the end of the financial crisis (see Box 4 in Section 4). European banks' net trading in securities has fallen since 2007; most of that fall was in corporate bonds and ABS.

31 Investors have indicated that it is harder to sell corporate bond holdings as banks often refuse to bid in meaningful size. While inventories held by market makers have fallen, there has been an increase of a fifth in the amount of non-financial corporate debt outstanding globally between 2012 and 2014(1) reflecting reparations to balance sheets post crisis and companies taking advantage of historically low interest rates.

32 In recent years, US markets have seen a trend toward increased transparency with the introduction of the Trade Reporting and Compliance Engine (TRACE) in July 2002.(2) The TRACE system now provides close to real time post-trade(3) transparency for a wide range of US corporate debt securities and asset-backed securities. Transparency in European markets will be enhanced through the implementation of MiFID 2.

33 The total amount of single name CDS outstanding declined by almost half between June 2007 and June 2013.(4) The decline in CDS volumes has been ascribed in part to regulatory reforms implemented by regulators in the United States and Europe in response to the financial crisis, which have reduced both the capital benefits of CDS and the ability to net CDS purchased and sold.

D Commodities

Purpose and key instruments

34 The four main sectors of the commodities markets are energy, agriculture, precious metals, and industrial metals. Commodities trade in 'physical' markets where prices are quoted based on very specific requirements concerning the precise nature of the commodity in question. For example, deliverable crude oil streams include UK Brent Blend or US West Texas Intermediate. The physical market is global and decentralised with a diversity of products and grades within products. There is also often price differentiation between different delivery points for the same product.

35 The first formal commodity derivatives exchange was established 160 years ago with the creation of the Chicago Board of Trade. Commodity derivatives can be used either to hedge or to speculate on the price movement of the underlying. The main advantage of a commodity derivative is that it allows the holder to gain exposure to price movements in the underlying without having to hold (and pay for the storage of) the underlying itself. Other advantages of trading derivatives versus physical include lower transaction costs and the ability to hold leveraged positions. A number of key exchange-traded commodity derivative contracts are traded globally. However, OTC trading is also significant, although outstanding notionals have fallen in recent years from US$8.3 trillion in June 2007 to US$2.7 trillion in June 2013.(5)

Trading structures

36 Physical commodity markets are typically global in scope. Globalisation and economic development has resulted in increased international movement in commodities and disaggregation of the supply chain. However, despite the global nature of the business and the large trading flows, these markets are still quite opaque because business is conducted bilaterally. Some of the most active participants in the physical commodity markets are trading houses that are also active in the derivative markets. The physical markets trade insignificant volumes. For example, the top ten firms in the oil market trade in the region of one billion barrels-equivalent of oil and oil products per month against global consumption of approximately 2.7 billion barrels a month.(6)

(1) BIS Debt securities statistics.
(2) TRACE was introduced by the National Association of Securities Dealers, a forerunner of the Financial Industry Regulatory Authority in US.
(3) www.finra.org/industry/compliance/markettransparency/trace/corporatebonddata/.
(4) BIS Triennial Survey 2013.
(5) BIS Triennial Survey 2013.
(6) BP Statistical Review of World Energy 2014.

37 Physical commodity trading is mostly OTC, with brokers linking buyers and sellers. Newswires and data providers publish updates on commodity flows and aggregate market information for reference pricing. Pricing in the physical market is often influenced by pricing in derivatives markets. Market participants have to invest in the infrastructure that goes with the physical market, by either owning, or having access to transportation and storage facilities.

38 There are a wide variety of exchange traded and OTC commodity derivatives covering different products, grades and delivery locations across agriculture, energy and metals. However, exchange traded commodity derivatives make up only a small part of total exchange traded derivative volumes across all asset classes; and at US$2.7 trillion notional outstanding, OTC commodity derivatives make up less than 1% of total OTC derivative notional outstanding.(1)

Current and future market trends

39 Many banks entered the commodities business in the late 1990s when rules preventing bank holding companies from operating in these markets were relaxed. The physical commodities businesses of the banks were developed as a complement to the derivatives business. However, some banks have reduced their presence in physical commodities markets in recent years as a result of balance sheet and regulatory pressure.

40 Recent regulatory initiatives in the EU and the United States will require that position limits are applied across many of the major commodity derivative markets. However it is not yet clear what impact these provisions will have on the market.

E Market conduct regulation of UK FICC markets

(i) Overview

41 Market conduct regulations set standards for the organisation of venues for trading financial instruments; for transparency and reporting requirements in relation to information on prices and transactions; for required standards of behaviour between market participants transacting in financial instruments; and for the use of information by market participants. They also define the specific activities that constitute market abuse. After a brief historical overview, this section summarises the current regulatory framework for UK FICC markets, covering; the FCA's Principles for Businesses; rules covering conduct of business and market structure (primarily the EU's Markets in Financial Instruments Directive, or MiFID); market abuse rules (primarily the EU's Market Abuse Directive, or MAD); other regulation affecting the fairness and effectiveness of FICC markets (such as Basel III); and voluntary market-generated codes of practice.

42 Historically, most provisions governing market conduct in the United Kingdom related to markets organised as exchanges (notwithstanding the fact that firms themselves may have been regulated as banks). More limited provisions applied to the (OTC) bilateral dealings which characterise most FICC markets: the general anti-fraud provisions of the Financial Services Act 1986 covered transactions in all regulated investments and therefore many, but not all, FICC instruments. Institutions permitted to trade in wholesale money market instruments were required to comply with the London Code of Conduct (a part of the so-called 'Grey Paper' regime) in relation to all wholesale market instruments, whether regulated or not. When the Financial Services and Markets Act (FSMA) superseded the Financial Services Act 1986 in 2001, the London Code of Conduct was replaced by the Non-Investment Products Code (the NIPs Code) which only applied to dealings in instruments that fell outside the regulatory perimeter, such as spot FX transactions. Similar provisions in relation to wholesale market dealings in regulated instruments were for a time incorporated into the FSA (now FCA) rulebook.

43 The UK civil market abuse regime in place today, introduced by FSMA and since modified by the EU Market Abuse Directive, applies only to behaviour in relation to qualifying investments admitted to trading on a prescribed market, and therefore has only limited application to FICC markets. However, the FCA (previously FSA) Principles for Businesses (see Section (ii) below) apply generally to conduct by authorised firms, including conduct relating to regulated and, in some circumstances, unregulated FICC instruments; and over the past decade, various EU and domestic regulations have introduced new obligations regarding conduct that apply to certain FICC markets.

(ii) The FCA Principles for Businesses

44 Box 8 in Section 5.4 shows the eleven FCA Principles for Businesses (the Principles), which set out high-level standards of conduct applicable to all firms authorised by the FCA. Corresponding standards for approved individuals are contained in the FCA Statements of Principle for Approved Persons. These requirements have statutory backing under FSMA and many of them are directly relevant to market conduct; they include, in particular, a requirement to observe proper standards of market conduct (Principle 5 and Statement of Principle 3).

45 The FCA can take enforcement action for misconduct against firms and individuals who contravene these requirements, and has used the Principles, where necessary, to respond to misconduct in FICC markets. The FCA applies the Principles to the regulated activities of authorised firms, to activities ancillary to the performance regulated activities and

(1) BIS.

to unregulated activity in limited circumstances, including where that trading has a negative effect on the integrity of the UK financial system or the ability of the firm to meet certain minimum standards for being authorised, giving them broad scope. For example the FCA has fined authorised firms for misconduct in unregulated markets because the misconduct was ancillary to derivative transactions in regulated markets.

(iii) Conduct of business and market structure rules (MiFID)

46 The EU Markets in Financial Instruments Directive (MiFID) took effect in the United Kingdom in November 2007. MiFID requires the authorisation of investment firms and sets out rules determining how such firms must behave when dealing with clients and other market participants. It also sets out rules governing the operation of exchanges and other trading venues.

47 MiFID governs all transactions in *financial instruments*, which are broadly defined and include shares, fixed income securities and derivatives, all commodity derivatives traded on authorised venues, and most currency derivatives.(1) However, spot FX and, depending on context and purpose, some forward contracts in foreign exchange and physical commodities, are not specifically covered. *Investment services* are defined as transactions involving financial instruments including providing advice, all forms of agency trading and many forms of principal trading. Any firm that provides an *investment service* relating to *financial instruments* must obtain authorisation from the FCA or PRA, observe specified organisational requirements, and hold capital.

48 The regulatory regime for *investment services*, derived from MiFID, calibrates the application of the Principles and other regulatory requirements according to the nature of the client and the activities that firms are undertaking. For participants in wholesale markets, there are two classes of client: professionals and eligible counterparties (ECPs).

49 ECPs are considered to be the most sophisticated investors or capital market participants and many participants in wholesale FICC markets fall into this category. Most MiFID investor protection rules can be disapplied for business done with or for an ECP, notably the requirement to act in clients' best interests, rules over the receipt of third party payments, the obligation to provide best execution, rules governing the use of dealing commission, and many of those covering communications with clients. For this ECP business, firms are also not required to apply the FCA Principles of Integrity (Principle 1), Skill, care and diligence (Principle 2), Customers' interests (Principle 6), and Suitability of advice (Principle 9). However, importantly, firms dealing with ECPs are still subject to the requirements to identify and manage any conflicts of interest that may arise from their activities.

50 For professional clients the MiFID investor protection rules and Principles generally apply, but there are some differences compared to when dealing with retail clients. Firms are able to presume a certain level of knowledge and experience for professional clients and a professional client may be entitled to a higher level of regulatory protection in some FICC markets than in others.

51 MiFID also sets out rules for the organisation and operation of *exchanges and other trading venues* such as platforms. In the United Kingdom the FCA must authorise venues to trade MiFID instruments and authorised venues must observe organisational and operational requirements. Most importantly, venues are subject to transaction *transparency rules*, which require venues to advertise all offers and quotes publicly prior to trading ('pre-trade transparency') and publish details of all completed transactions ('post-trade transparency'). At present, transparency rules apply only to equity markets.

52 Under the recently-agreed revision to MiFID (known as MiFID 2), which is due to come into effect in January 2017, regulation of the FICC markets will grow considerably. First, MiFID 2 will create a new category of regulated trading venue, the *organised trading facility* (OTF). OTFs will capture interdealer brokers and a range of platforms that previously were not regulated as venues, meaning that a substantial amount of FICC business previously classified as OTC will now be subject to greater regulation. Second, rules on pre and post-trade transparency will apply to many of the FICC markets for the first time. These transparency obligations will apply to all liquid bonds, structured finance products, emission allowances and derivatives. Finally, the range of financial instruments covered by MiFID will also be extended to cover a greater number of commodity derivatives and to cover EU emission allowances. However, spot FX and, depending on context and purpose, some forward contracts in foreign exchange and physical commodities will not be specifically covered.

53 Certain aspects of the client categorisation regime will also change under MiFID 2, which introduces high-level principles for firms, in their dealings with ECPs, to act honestly, fairly and professionally, and communicate in a way that is fair, clear and not misleading. This is a change from the current standard under the Principles for Businesses and reflects the idea that conduct risk should not be judged solely at the transaction level as ECPs will have responsibilities to the integrity of the market as a whole.

(1) A full list of financial instruments covered by MiFID can be found in Annex I Section C of the Directive: http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1398325978410&uri=CELEX:02004L0039-20110104.

(iv) Market abuse rules

54 Market abuse in the United Kingdom is covered by both civil regulations and criminal laws.

55 The EU Market Abuse Directive deals with the civil regime for market abuse, and defines two broad categories of offence: insider dealing and market manipulation. The current UK regime (implemented through FSMA) has seven specific offences covering these two categories, namely: insider dealing; improper disclosure of inside information; misuse of information not generally available to market users; manipulating transactions; manipulating devices; dissemination of false or misleading information; and market distortion.

56 The application of the current UK market abuse regime to FICC markets is limited. Although broadly all FICC instruments governed by MiFID fall within its scope, the regime applies only to behaviour in relation to (i) instruments admitted to trading on a prescribed market (a list of which is maintained by HM Treasury), (ii) instruments for which an application for admission has been made, and (iii) certain related instruments. This produces a somewhat wider scope than might appear because a number of instruments that are in practice traded largely or wholly OTC are brought into scope by virtue of being admitted to trading on a prescribed market, and also because physical trading in the commodity underlying an exchange-traded derivative can be caught as behaviour that occurs 'in relation to' the derivative. However, significant parts of FICC activity currently fall outside the scope of the regime: for example, many unlisted bonds, interest rate swaps and credit derivatives traded OTC, spot FX, and spot commodities and OTC-traded commodity derivatives are out of scope.

57 From July 2016, the new EU Market Abuse Regulation will replace the current UK regulatory framework on market abuse. The new regime will significantly extend coverage in the FICC markets. First, the new regime will apply to all instruments admitted to trading on venues(1) rather than only regulated exchanges. In practice, this will mean that a far greater range of FICC instruments (which often are not admitted to trading on regulated exchanges) are covered. Second, the scope of the regime will be extended expressly to cover transactions in the commodity spot markets (where trading in spot affects a financial instrument traded on a venue). Finally, the regime will create a new civil offence of benchmark manipulation. This offence will cover any financial benchmark, regardless of whether the instruments that generate the benchmark are covered by financial regulation.

58 The main areas of FICC not covered by the new Market Abuse Regulation will be the spot FX market (with spot FX not falling within the MiFID definition of *financial instrument*) and those markets which trade exclusively OTC (for example bespoke derivative contracts). However, abusive behaviour in the foreign exchange markets will nonetheless be covered by the new Market Abuse Regulation if such behaviour relates to the manipulation of a benchmark, or is linked to an exchange-based trade.

59 In addition to the civil regulations outlined above, the United Kingdom has an established criminal market abuse regime consisting of insider dealing offences set out in Part V of the Criminal Justice Act 1993 and criminal offences of market manipulation through misleading statements or impressions and benchmark manipulation under the Financial Services Act 2012. The Chancellor of the Exchequer announced in his Mansion House Speech on 12 June 2014 that the United Kingdom will introduce a new domestic criminal market abuse regime to replace the existing legislation.(2)

(v) Other regulations

60 There are a number of other recent regulatory initiatives which, whilst not dealing directly with conduct issues, have an important bearing on the fairness and the effectiveness of FICC markets:

Reform of the OTC derivatives markets

61 In 2009, the G20 agreed to a range of measures designed to reduce counterparty risks and raise the transparency of the OTC derivatives markets. In the EU, these measures are implemented by the European Market Infrastructure Regulation (EMIR) and elements of MiFID 2 (the latter due to be implemented in January 2017). In the United States, these measures are implemented by the Dodd-Frank Act. The new trading venue categories created by these regulations (swap execution facilities (SEFs) in the United States and, following implementation of MiFID 2, organised trading facilities (OTFs) in the EU) seek to deliver on the G20's pledges regarding the reform of derivatives markets and their migration from an OTC to an exchange traded market model.

Basel III capital/liquidity requirements

62 Recent developments in prudential regulation are also cited by market participants as having a major impact on the 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: higher trading book capital requirements to ensure adequate capitalisation of positions that cannot be exited quickly; a non-risk based leverage ratio, requiring banks to assess capital as a percentage of total exposure; and measures to ensure that firms have sufficient liquidity coverage in times of stress.

(1) Whereas the current UK regulatory regime only applies to financial instruments admitted to trading on regulated markets and to markets established under the rules of a regulated market, the EU Market Abuse Regulation will also apply to financial instruments traded on all MTFs and OTFs.
(2) Mansion House 2014: Speech by the Chancellor of the Exchequer, the Rt Hon George Osborne MP. www.gov.uk/government/speeches/mansion-house-2014-speech-by-the-chancellor-of-the-exchequer.

These new provisions will only apply to banks and other credit institutions (not to firms such as hedge funds and interdealer brokers), and some are not due to be fully implemented internationally for several years. Taken together these measures are designed to ensure greater prudential stability of financial firms, including those playing a key role in the FICC markets. The implications for liquidity in FICC markets are discussed in Box 4 in Section 4.

Structural reforms to banks

63 Various structural reforms are also being introduced globally to address the 'too big to fail' problem of banks, which through their impact on market-makers may indirectly affect liquidity in the FICC markets. In the United Kingdom, the Banking Reform Act requires that, by 2019, banks ring-fence their 'core' activities (broadly, taking deposits from individuals and small businesses) from those activities which generate exposures to the global financial system. Following the Liikanen Report, the European Commission has proposed that the largest European banks should be prohibited from undertaking proprietary trading, and that their supervisors have powers to require the separation of other trading activities. In the United States, the Volcker Rule differs in that it is an activity based rule applied at desk level to all deposit-taking banks and their affiliates, prohibiting them from engaging in proprietary trading. It provides limited exemptions for systemically important activities, such as market-making and hedging.

Dark pools and high-frequency trading

64 While there may be interaction between dark pool trading and high-frequency trading (HFT) (for example a firm may utilise HFT when trading via a dark pool), it should be noted that the two are distinct topics and give rise to different risks and regulatory implications. The FCA recently set out its current approach on the supervision of dark pools and firms employing HFT.(1)

65 In Europe, MiFID 2 (due to be implemented in January 2017) addresses the regulation of both dark pools and HFT. MiFID 2 will significantly reduce the volume of equity trading taking place in dark pools. Within FICC, automated dark trading (in the form of internalisation) is most common in foreign exchange; the issue of internalisation is considered in more detail in the main body of this document (see Section 5.1). MiFID 2 rules on HFT will also apply to FICC financial instruments, however given that the volume of HFT is significantly higher in relation to equities, the majority of these rules will relate to trading in the equity market.

Alternative Investment Fund Managers Directive

66 The EU's Alternative Investment Fund Managers Directive (AIFMD) was transposed into UK law in July 2013. The broad scope of AIFMD covers the management, administration and marketing of alternative investment funds (which include hedge funds, private equity funds and investment companies), with a focus on the regulation of alternative investment fund managers. In relation to the FICC markets and conduct concerns within these, AIFMD contains specific conduct of business rules (for example, in relation to the fair treatment of investors, and appropriate disclosure to investors and regulators).

(vi) Voluntary market codes of practice covering UK-based FICC markets

67 In addition to the regulations detailed above, a number of voluntary, non-statutory market codes of practice exist in the FICC markets. In the United Kingdom the most established market code covering certain parts of the FICC markets is the Non-Investment Products Code (the NIPs Code),(2) which applies to wholesale market dealings in non-investment products, specifically the sterling, foreign exchange and bullion wholesale deposit markets, and the spot and forward foreign exchange and bullion markets.

68 The NIPs Code is drawn up by a wide cross section of market participants (including the Bank of England and the FCA) and its content is consistent with the relevant parallel provisions in the FCA and PRA Handbooks. The NIPs Code is maintained and published by the London Foreign Exchange Joint Standing Committee, in conjunction with the Sterling Money Markets Liaison Group and the London Bullion Market Association in relation to the sterling wholesale deposits and the bullion markets respectively.

69 A number of trade associations and professional bodies have endorsed the NIPs Code, including: the Association of Corporate Treasurers, British Bankers' Association, Building Societies Association, Chartered Institute of Public Finance and Accountancy, London Bullion Market Association, Association of Financial Markets in Europe and the Wholesale Market Brokers' Association.

70 The NIPs Code comprises good practice guidelines which apply equally to broking firms, PRA and FCA regulated entities and other 'principals', as defined by the code itself. It has no statutory underpinning except where it refers to existing legal requirements. It consists of three general sections (General Standards, Controls, Confirmations and Settlements) as well as more specific Appendices on the sterling wholesale deposit market, the foreign exchange market and the bullion market.

71 The General Standards section covers, among other things, best practice regarding the responsibilities of firms/employees, the negotiation of contractual terms, the use of intermediaries, commissions/brokerage fees, obtaining

(1) Letter from Martin Wheatley (CEO of FCA) to Andrew Tyrie MP of 23 July 2014, available here: www.parliament.uk/documents/commons-committees/treasury/Letter_and_briefing_on_HFT.pdf.
(2) www.bankofengland.co.uk/markets/Pages/forex/FXjsc/default.aspx.

data for mark-to-market purposes and electronic trading. The NIPs Code Controls section deals with best practice in relation to items such as 'know-your-customer', dealing with unidentified principals, confidentiality, taping, conflicts of interest (both when dealing for personal account and when using a connected broker), marketing/incentives/entertainment/gifts policies, drugs and alcohol abuse and the use of mobile phones for transacting business. Finally, the Confirmation and Settlement section of the NIPs Code, includes provisions regarding best practice for payment/settlement instructions, written/electronic confirmations and settlement of differences.

72 It should be noted that the NIPs Code is just one of a number of non-statutory, voluntary market codes covering various parts of the wholesale FICC markets internationally. Other examples are listed in Box 9 in Section 5.4.

73 The question of how market codes might be made more effective is considered in Section 5.4.