

FS 11/4

Financial Services Authority

The prudential regime for trading activities

A fundamental review
Feedback on DP10/4

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This Feedback Statement reports on the main issues arising from Discussion Paper 10/4
The prudential regime for trading activities: a fundamental review.

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Copies of this Feedback Statement are available to download from our website – www.fsa.gov.uk. Alternatively, paper copies can be obtained by calling the FSA order line: 0845 608 2372.

Acronyms used in this paper

BCBS	Basel Committee on Banking Supervision
CDO	Collateralised Debt Obligation
CDS	Credit Default Swap
CVA	Credit Valuation Adjustment
EBA	European Banking Authority
FSA	Financial Services Authority
IFRS	International Financial Reporting Standards
IRC	Incremental Risk Charge
LGD	Loss Given Default
P&L	Profit and loss
PD	Probability of Default
PRDC	Power Reverse Dual Currency Note
RNIV	Risks Not In VaR
SIG	Standards Implementation Group
VaR	Value at Risk

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Overview

Purpose of this paper

- 1.1 In August 2010 we published Discussion Paper DP10/4, *The prudential regime for trading activities: a fundamental review*. The DP presented a detailed discussion of the issues that we believed should form part of the Fundamental Review which continues to be developed internationally by the Basel Committee on Banking Supervision (BCBS). The purpose of the DP was to stimulate debate, and to generate feedback that could inform the international discussions on the Fundamental Review at the BCBS through the FSA's involvement in that forum.
- 1.2 We received 13 responses from a range of financial institutions, accountancy bodies, trade bodies, and consultancies. We are grateful to those who took the time to respond. A full list of non-confidential respondents is set out in Annex 1.
- 1.3 In this Feedback Statement we set out the feedback we received to the questions in the DP, and our responses to that feedback.

Background

- 1.4 In July 2009, the BCBS agreed a range of amendments to the Basel II market risk framework¹, targeting specific weaknesses highlighted by the financial crisis. On average, these changes will increase the capital held against trading activities in large banks to between two and three times current levels.² Trading activities have grown enormously in recent years, and the financial crisis was in part triggered by losses crystallised in the trading books of large banks. It is therefore necessary to build on the changes already in progress with a fundamental reappraisal of the prudential approach to trading activities.

1 Revisions to the Basel II market risk framework – final version: www.bis.org/publ/bcbs193.htm

2 See 'Results of Comprehensive Impact Study', December 2010: www.bis.org/publ/bcbs186.pdf

- 1.5 We expressed this view in *The Turner Review* where we called for a ‘Fundamental Review’ of the prudential regime for trading activities, which was subsequently instigated by the BCBS.

Summary of key themes from responses

- 1.6 Overall, respondents were supportive of the opportunity to provide input to the Fundamental Review process. Many emphasised that the Fundamental Review must be truly fundamental and begin with the first principles of the regime, however many major industry participants also commented that in their view the level of capital required following the review should not exceed that set by Basel III.
- 1.7 We have set out below the key themes from responses on the scope of the DP and the three core areas for which recommendations were made: valuation; coverage and coherence of the capital framework; and risk management and modelling.

Scope of the DP

- 1.8 The first two questions of the DP focused on the scope of issues addressed in the paper. The first question asked respondents to consider whether the interactions between the Fundamental Review and other ongoing policy development work (set out in the DP) were complete:

Q1: Are the most important interactions with a fundamental review of prudential requirements for trading activities covered in this chapter? If not what other key interactions need to be considered?

- 1.9 Most respondents agreed that most of the interactions that need to be taken into account in developing the fundamental review were identified in the paper.
- 1.10 In addition to the interactions set out in the paper, one respondent highlighted that developments since we published DP10/4 also need to be considered (in particular the calibration of the Basel III package). Other respondents identified more conceptual issues considered as being equally important in developing a new framework including:
- articulation of the soundness standard of the framework;
 - a statement of the purpose of the various elements of the prudential framework (for example Pillar 1 versus Pillar 2);
 - finding an appropriate balance between detailed rules and a principles-based approach;
 - a holistic view of all changes and their impact in aggregate on trading activity; and
 - the importance of extensive calibration studies.

- 1.11 Our second question was closely related to our first and asked whether the scope of issues to be addressed by the fundamental review identified in the DP was adequate:
- Q2:** Do you agree that the issues described above are the key issues that should be addressed in the fundamental review? If not, what other issues should also be addressed?
- 1.12 Where possible, we have amalgamated the points raised by respondents in reply to this question under the most relevant topic in the summary of key themes below. This is because respondents typically used this question to highlight key topics under each core area that they believed needed to be addressed in the Fundamental Review. There were, however, some general themes from the responses received that are set out here.
- 1.13 The responses received provided varied views on whether the issues set out in the paper constituted a complete and relevant list of issues that need to be considered. There was broad agreement, however, with the need to achieve a more coherent overall framework through the fundamental review.
- 1.14 A number of respondents thought the paper placed too much emphasis on what went wrong in the crisis and did not adequately consider which firms performed well during the crisis and why this was the case. One respondent believed the main market failure was the mispricing of risk and that addressing this failure should be the core goal of the fundamental review. The same respondent felt that the failures we highlighted were grounded in an inconsistent application of the existing rules and we should address this by producing a framework that is clear and capable of being consistently implemented.

Our response

We agree with respondents that the focus of the Fundamental Review should not be restricted to addressing what went wrong during the financial crisis, and instead should be truly fundamental. The DP used the evidence from the financial crisis to highlight particular points of weakness in the current trading book regime. However, we believe the topics covered in the paper went beyond addressing those issues and covered a much broader range of areas. We agree that there may be lessons to learn from firms that performed well during the crisis, but we must take into consideration that many of them benefitted indirectly from the actions of governments to stabilise markets, and in the absence of that government support they may not have performed as well. The conceptual issues raised by respondents, while not articulated in the DP, underpinned the development of many of the proposals we set out. On the particular issue of the purpose of Pillar 1 versus Pillar 2, underlying many of our proposals is a belief that risks should be captured in Pillar 1 as far as possible

where they can be appropriately reflected in terms of capital requirements (this does not preclude these risks being subject to review under Pillar 2). We acknowledge, however, that there are some risks and risk types that are more difficult to measure in Pillar 1 and that will always be more appropriately addressed through the use of supervisory judgement in a Pillar 2 assessment.

The responses received highlighted two key overarching issues that we also support and continue to push forward in the BCBS in addition to the range of proposals set out in the DP:

- the need to produce a regime that can be implemented consistently across jurisdictions; and
- the importance of ensuring the regulatory framework does not simply focus on recent historical data when considering risk.

Valuation

1.15 A range of views were received on the recommendations set out in the valuation section on how valuation uncertainty could be treated in the prudential regime. However, there was broad agreement that valuation uncertainty is an important issue that needs to be addressed. An overarching comment made by many respondents was that a longer term aim should be closer collaboration with accounting standard setters to develop accounting valuations that could be appropriate for regulatory purposes.

1.16 We agree with the aim of closer collaboration with accounting standard setters and have been continuing to develop our links with these bodies. However, we note that the accounting and regulatory regimes have differing objectives³ and in the absence of an accounting regime that meets regulatory valuation requirements we believe it is right to work towards prudent ways to deal with valuation uncertainty inherent in reported valuations.

Coverage, coherence and the capital framework

1.17 Most respondents agreed with the idea of a more coherent prudential regime including a consistent approach to credit default risk, although there was no consensus on how the coherence could be best achieved.

1.18 Central to a large number of responses on the coherence of the framework was a debate over the trading book boundary. There was no consensus amongst respondents. Some argued that the boundary should be based on whether positions are actively risk managed, in order to encourage good risk-management practices and recognise where firms are likely to read market signals in order to exit a declining market (although, as we stated in the DP, it cannot be possible for all firms to exit positions ahead of a decline in the market, regardless of the signals available). Some respondents did not agree with our proposal that the trading book boundary should be based on accounting treatment (implying all fair

³ International Accounting Standards, for example, use the concept of neutrality rather than prudence. As such, valuation adjustments for concentrated positions, or positions in illiquid markets, would typically not be allowed under the accounting regime.

valued positions should have market risk capital requirements). They argued that the perception that there were large unrealised losses on amortised cost assets was one of the main drivers of the loss in confidence in firms during the crisis, rather than movements in fair valued positions.

- 1.19** On the coverage of the regime, some respondents commented that the system of overlapping capital charges introduced under the July 2009 changes (Value at Risk (VaR), Stressed VaR, and Incremental Risk Charge (IRC)) may lead to double-counting of risk, potentially resulting in capital charges that exceed the maximum loss that a firm can experience on a particular position, and therefore should be reconsidered. Most respondents felt that risks not well captured at present such as interest rate risk in the banking book, gap risk and hedging risks, may be better captured via stress tests in Pillar 2 rather than a rules-based approach in Pillar 1, which could be difficult to achieve.
- 1.20** We continue to believe that as far as possible a Pillar 1 capital standard should be achieved for risks held in the trading book. The dynamic nature of trading activities can render the relatively infrequent Pillar 2 assessments insufficient to set a prudent capital requirement for a firm's trading book. We do, however, accept the views expressed by respondents that that goal may not be achievable in all cases.

Risk management and modelling

- 1.21** Respondents broadly agreed with the importance of improving risk management standards, but disagreed that more rules were required to achieve this. They argued that risk-management standards as set out in the DP were already applied in best practice firms, and higher standards are best achieved by close cooperation between supervisors and firms' management, with 'deep dives' on particular products or business lines and benchmarking between firms.
- 1.22** There was a strong theme throughout all of the responses that the regulatory capital framework should not move away from the use of internal models for market risk. While acknowledging that models are often far from perfect, firms argued that they produce the most accurate measure of risk available, and that moving to a standardised approach would reduce risk sensitivity and encourage regulatory arbitrage.
- 1.23** While we agree that principles-based approaches can be effective in driving improved risk-management standards, there will always remain a need for sufficient rules to drive consistency in approach across jurisdictions. We also accept that there are some benefits to be derived from the use of models in the market risk framework; however, these benefits must be balanced against the potential drawbacks of using VaR-type models in the regulatory regime. It is clear following the crisis that stronger controls must be in place within the prudential framework where firms are using internal models to produce a regulatory capital outcome. In particular it is important that there is an increased focus on the capture of low probability, high impact risks. This necessitates a focus on more than just the recent trading history of a product. We see achieving this balance as a key goal for the Fundamental Review.

The structure of this paper

- 1.24** This Feedback Statement is organised into two chapters, including this Overview. Chapter 2 summarises the key issues raised by respondents to each question in the DP and our related responses.

Who should read this Feedback Statement?

- 1.25** This paper focuses on the prudential requirements for banks and investment firms that engage in trading activities. However, many elements could be applied more broadly and will be of general interest in the financial services industry, including policy makers and supervisors in other countries. The outcome of the Fundamental Review has implications for the global regulatory framework and global banking system, which will have implications for consumers.

Next steps

- 1.26** Work on the Fundamental Review continues at the BCBS, and we remain actively involved. The feedback has helped to inform our discussions in that forum, and provided useful perspectives to inform the debate. In addition to considering the feedback, we will continue to engage with trade bodies and industry representatives on this subject.

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Summary of responses and feedback

Introduction

- 2.1 The recommendations set out in the DP were grouped under three main headings:
- Valuation;
 - Coverage, coherence and the capital framework; and
 - Risk management and modelling.
- 2.2 Most of the feedback that we received related to the questions raised in these sections.
- 2.3 In addition to these targeted areas for recommendations, the DP ended with a chapter setting out examples of how the recommendations could be combined in practice to form four different future trading book regimes. These paradigms were intended to show the spectrum of approaches that a future regime could take.
- 2.4 This chapter follows the same structure as the DP, summarising responses under the three main recommendation headings and then the responses related to the paradigms set out in the DP for the future trading book regime.

Valuation

- 2.5 Chapter 6 of the DP set out our recommendations on how the prudential treatment of valuation could be improved. We have grouped questions according to the key themes within the chapter as follows:

- Valuation uncertainty;
- Prudent valuation rules; and
- Pro-cyclicality of fair value.

2.6 The DP set out three questions that related to valuation uncertainty:

Q3: Do you agree that valuation uncertainty should be dealt with via additional capital requirements? If not, what alternative approaches could be used?

Q4: In practice how can valuation uncertainty be consistently calculated?

Q10: Do you agree that a carefully designed valuation uncertainty charge could help to mitigate leverage enabled by reliance on exuberant market prices?

2.7 While most respondents agreed that valuation uncertainty is an issue that regulators should consider, there were differing views on whether a Pillar 1 capital charge for the issue, recommended in the DP, would be appropriate, with some believing a Pillar 1 charge was appropriate and others expressing concern over how consistency could be achieved. One respondent felt that provided the trading book boundary was sufficiently strengthened to prevent illiquid products being held in the trading book then valuation uncertainty would not be a material issue.

2.8 Some respondents who were in favour of a capital charge for valuation uncertainty felt that the charge would be too subjective to be captured in Pillar 1 and therefore a Pillar 2 charge would be the most appropriate policy approach. Others considered that valuation uncertainty relating to the valuation of a position at a point in time was best dealt with through valuation adjustments, whereas valuation uncertainty relating to the resilience of liquidity over time could be treated as a Pillar 1 capital charge.

2.9 Those respondents who were in favour of a Pillar 1 capital charge for valuation uncertainty favoured simple approaches that could be applied consistently across firms. One respondent suggested that a pre-defined ‘hair-cut’ could be applied based on an adapted version of the accounting categories for financial assets and liabilities (Levels 1, 2 and 3 valuation parameters as defined in International Financial Reporting Standard (IFRS) 7). Another preferred a stress-test based approach and one suggested the underlying risk factors that caused uncertainty should be identified and used as the basis for a capital charge.

2.10 With respect to the leverage that can develop due to reliance on exuberant prices, most respondents believed that a valuation uncertainty charge could partially mitigate this.

However, the vast majority believed the impact would be limited. A large number of respondents noted that exuberant prices during asset bubbles may not display clear signs of valuation uncertainty, and in these situations a capital charge would have no impact to limit the build-up of leverage.

Our response

We continue to believe that valuation uncertainty is an important issue that the prudential regime needs to address. We recognise, however, the concerns of respondents that in practice the quantification of valuation uncertainty may be difficult to achieve in a consistent manner. So we prefer to ensure that there is a sufficient level of prudence in regulatory valuations of positions to capture all material valuation uncertainty (through stronger, more specific prudent valuation rules discussed below). We believe this aim is achievable. However, where this level of prudence is not achieved in a new regime, a capital-based approach to capturing any remaining material valuation uncertainty would be appropriate to ensure that this risk is adequately addressed. In this case, we believe the dynamic nature of valuation uncertainty would necessitate a Pillar 1 charge rather than a Pillar 2 approach.

2.11 The DP raised four questions on the related issue of the prudent valuation rules:

- Q5:** Do you agree that detailed regulatory valuation rules be defined to ensure consistent standards in the application of fair value? If so, what areas would most benefit from such guidance?
- Q6:** Do you agree that a separate regulatory valuation model is not justified? If not, why not?
- Q7:** Do you agree that regulators should be able to adjust valuation approaches based on principles agreed at an international level? If not, how can regulators address the problem of significant differences in valuation approaches?
- Q8:** How should a set of rules that form the basis of a regulatory approach to valuation be constructed?

2.12 Most respondents agreed that there were areas of the current prudent valuation rules where additional guidance is required from regulators in order to make applying fair value for

regulatory purposes consistent. However, most were opposed to the introduction of detailed rules and preferred regulatory guidelines that would increase consistency in firms' practice and the supervisory review process. One respondent believed that the current fair value standard set by financial reporting standards, if applied appropriately, would be sufficiently prudent.

- 2.13** One respondent in particular felt that the current prudent valuation rules would be sufficient provided international bodies such as the European Banking Authority (EBA) and Standards Implementation Group (SIG) in Basel play a stronger role in ensuring consistent application of these rules.
- 2.14** Those respondents who identified a need for additional guidance suggested the following areas should be addressed:
- Credit Valuation Adjustment (CVA) calibration;
 - Bid-offer adjustments;
 - Risk premia adjustments; and
 - Correlation, delinquency and prepayment calibration for securitised products.
- 2.15** All respondents agreed that a separate regulatory valuation model is not justified, with a number citing the excessive burden of a separate regime and the potential for it to undermine confidence in accounting valuations.
- 2.16** Most respondents also agreed, however, that there may be situations where the valuation approach which is appropriate for regulatory purposes differs from the accounting approach, and in those cases regulatory adjustments should be applied to the valuation. Most believed this should only be applied in a few cases, or as a last resort, with a significant preference expressed for continued efforts towards convergence in accounting valuation approaches.
- 2.17** All respondents in favour of this limited application of adjustments to valuation approaches for regulatory purposes highlighted a need for agreement on adjustments at an international level in order to ensure they are applied consistently.

Our response

As we stated in the DP, we believe that an entirely separate regulatory and accounting valuation approach would be too burdensome. However, given that the objectives of accounting standards setters and regulators differ there will inevitably be some differences between the valuations applied for each purpose. It is clear from the responses received that there was agreement on this point and also agreement that the current prudent valuation rules are not detailed enough to ensure they are applied consistently. We understand the arguments respondents presented for retaining a more principles-based approach of

publishing guidelines for prudent valuation. But we still believe that without clearer and more specific rules, it will be difficult to apply the prudent valuation rules consistently across jurisdictions.

We will continue to work with the industry to identify the areas where the application of prudent valuation rules is inconsistent to inform the international debate on how the prudent valuation rules can be improved as part of the Fundamental Review. As we stated above, a satisfactory improvement to prudent valuation rules which incorporates consideration of valuation uncertainty would mitigate the need to consider additional capital requirements for valuation uncertainty. In parallel, as set out in FS11/1: *Enhancing the auditor's contribution to prudential regulation*, we are working on enhancing the interaction between firms' supervisors and auditors. We hope this will lead to an improvement in the quality of audit work, including that related to financial instrument valuation which is the foundation of the prudent valuation framework.

- 2.18** In the context of the recommendations made on valuation uncertainty and prudent valuation, the DP set out a question on the pro-cyclicality of fair value and whether there were other appropriate tools for mitigating this issue:

Q11: What other measures could be used to mitigate the pro-cyclicality of fair value?

- 2.19** Respondents generally felt that fair value must be cyclical by its nature, and that any attempt to mitigate its effects should be through measures outside Pillar 1. Some suggested stress tests via Pillar 2 were the most appropriate way to ensure adequate capital is held against potential shocks due to the cyclicity of fair value, others suggested the issue was a macro-prudential one and therefore should be dealt with through other means.
- 2.20** On a related issue, a number of respondents expressed concerns over the potential pro-cyclical nature of a valuation uncertainty charge also recommended in the DP and the potential systemic risks that could arise if the charge was used to produce the same valuation of each product by every firm.

Our response

We believe that the pro-cyclicality of the entire regime is an important issue that needs to be addressed not only in the context of the trading book. While we accept that fair value, by its nature, will have elements of cyclicity we believe that prudent valuation rules should to some extent act to dampen cyclicity by tempering highly imprudent valuations in the up-swing. Inevitably, the dampening will be limited as lack of prudence in pricing during market upswings will always be difficult to identify and in instances of high liquidity there may

be very little valuation uncertainty. Other measures in the capital framework, such as calibration of capital standards to stressed market conditions or the incorporation of stress tests, can also have an effect to reduce cyclicality.

On the issue of the cyclicality of the proposed valuation uncertainty charge, as we have stated in our earlier responses we believe the primary tool for mitigating valuation uncertainty is the prudent valuation framework – with an adequate framework in place we believe pro-cyclicality can to some extent be reduced and the need for an additional separate valuation uncertainty charge could be reduced or removed completely.

2.21 Finally, the DP asked readers whether we had considered the right set of issues and responses in relation to valuation:

Q9: Do you believe the series of adjustments presented in this chapter would address the weaknesses identified during the crisis? If not, what other measures could be introduced?

2.22 Respondents had a variety of views on the completeness of the measures presented in the DP for valuation, some agreed with all proposals and felt they were comprehensive, some partially agreed, and others expressed the view that the best approach to resolve valuation issues is greater supervisory oversight rather than additional capital or valuation adjustments.

2.23 A number of respondents believed the prime cause of the crisis was not valuation, and that any proposals should seek to incentivise identification, quantification, and management of uncertainty.

Our response

As we set out in the DP, a wide range of factors caused the financial crisis, one of which we believe was weaknesses in valuation practices. Other factors, such as management of uncertainty and identification of risks were also clearly important. So, for the purpose of the Fundamental Review, we believe it is right that one of the issues considered is valuation.

With regards to the choice between supervisory oversight or additional capital/valuation adjustments, we think there is a role for both aspects in a new regime. Clear rules that deal with valuation are necessary to underpin supervisory oversight at a consistent level across jurisdictions.

Coverage, coherence and the capital framework

2.24 Chapter 7 of the DP set out our recommendations related to coverage and coherence of the prudential regime for the trading book, including questions about the architecture of the framework such as how the boundary of the trading book should be defined. We have grouped questions according to the key themes within the chapter as follows:

- Is credit different?
- Market liquidity risks;
- Interest rate risk on amortised cost positions;
- Credit valuation adjustments; and
- Other issues.

Is credit different? (Q12-18)

2.25 In the DP we discussed whether credit markets were structurally different from other markets, and whether it is desirable to include traded credit in the trading book given the interaction and feedback loops between the banking system and the provision of credit in the real economy.

2.26 We asked several questions on this issue:

Q12: Do you agree that the structure of credit markets means that credit positions have a different risk profile to those in other markets? If not, why not?

Q13: Do you agree that a consistent approach to credit default risk should be applied across all positions? If not, why not?

Q14: Do you agree that a net position in a fair-valued credit product should have a higher capital requirement than a net position in an amortised cost position? What type of netting should be allowed for each position and should it be consistent across all positions?

Q15: Do you agree that the three options presented are the main options available to capture credit risk? If not, what other approaches could be applied?

- Q16:** How could rules around netting in the restricted modelling approach for credit assets be applied in practice?
- Q17:** How could complexity be defined in a consistent way to tailor the approach to credit risk?
- Q18:** Do you agree that whether a position is fair valued should determine whether it attracts a market risk capital charge? If not, what alternative approaches could be used to improve the boundary issue?

- 2.27** Respondents had mixed views about whether credit markets are ‘different’ in the way described. Some accepted that credit markets were different but argued that there are other markets which have similar characteristics, e.g. where investors are similarly concentrated and where there are illiquid risks such as correlation (e.g. Power Reverse Dual Currency bonds (PRDCs)). Some noted that parts of credit markets remained liquid during the financial crisis, such as single-name Credit Default Swaps (CDS). Others accepted that credit is structurally different, but questioned whether this justified special regulatory attention. One reason cited for this is that where credit risk is retained within the banking sector, if it is distributed amongst banks with different business models, this diversification may reduce the risk of firms failing. A further view expressed by respondents was that the retention of credit risk within the banking sector was the consequence of Basel II which incentivised banks to retain senior tranches of securitisations.
- 2.28** Most respondents agreed that a consistent approach to credit default risk should be applied across all positions, although they also considered that the consistent approach which is applied should be one that results in lower capital charges where credit risk can be traded in liquid markets. Viewed through this lens some respondents saw the current banking book/trading book approach as a consistent approach to credit risk since it gives benefit for positions trading in liquid markets by including them in the trading book.
- 2.29** On the question of how to model credit risk, respondents were mostly in favour of full modelling of the risks for regulatory capital purposes, and there was very little support for options that restrict modelling and introduce a greater role for standardised rules. Respondents argued that it is important for regulatory capital rules to recognise hedging, offsetting and diversification in order to incentivise good risk management. Several respondents suggested ways in which the standard rules could be made more risk sensitive, by allowing firms to take more recognition of hedging. For example, firms might be allowed to offset positions where they are on the same name or within the same corporate group, maturity band or level of seniority. However, the overall view was that it would be very difficult to recognise hedging in the standard rules in a sufficiently risk sensitive way.

- 2.30** We asked whether it would be possible to take complexity into account when determining credit risk capital charges. Respondents were generally very doubtful whether this would be possible, given the difficulty of finding a workable definition of complexity. In particular, the relative complexity of a given position may vary between firms depending on their portfolio or risk management processes, and simple products may become more complex to manage in stressed market conditions. Products may also become relatively less complex over time as markets become used to more exotic features. A definition of complexity might also be vulnerable to abuse by firms who might be able to use financial engineering to get around the definition. However, some respondents did suggest that there should be a relatively conservative treatment of new products and/or products where a large part of the value depends on unobservable parameters or modelling assumptions, since these can indicate an inability to trade or hedge the risk in stressed conditions.
- 2.31** In the DP we pointed out that a consistent approach to credit risk could mean that fair valued credit positions would have higher capital requirements than other positions, since market risk charges might be added on top of the credit risk requirements. More broadly, we asked whether market risk charges should be applied to all fair value positions. Respondents did not generally agree with this proposal, since they argued that the underlying economic risk of a position is the same whether it is accounted for at fair value or amortised cost, and amortised cost treatment could in fact conceal this risk to the eventual detriment of the firm and could increase risk due to the lack of transparency around losses. Respondents believed that extending market risk charges to all fair value positions would also increase the volatility of capital requirements, and could cause problems if a position and its hedge are on different sides of the fair value boundary. However, some respondents supported the general idea of basing the trading book boundary on the accounting boundary between fair value and amortised cost assets, on the basis that this would remove the need for firms to operate two parallel regimes.
- 2.32** There were other views on how the boundary should be set, expressed in response to a variety of questions in the DP. A number of respondents agreed that a boundary based on trading intent or the ability to trade can deliver highly cyclical capital charges, since markets tend to dry up in stressed market conditions. Several respondents suggested that the boundary should be linked to whether banks are actively risk managing products or business lines, on the basis that the liquidity and other risk characteristics of these positions are likely to be much better understood by those firms.

Our response

We continue to believe that large parts of the credit markets, including the market for securitisations and other structured credit products, are structurally different from most other markets in that a large part of the risk tends to stay in the banking system rather than being passed outside. While certain credit markets, such as highly-rated government debt, may stay liquid during stressed

market conditions, traded credit markets involving bank-originated loans and similar exposures appear particularly vulnerable to a withdrawal of liquidity during stressed market conditions, as was seen during the financial crisis. As set out in the DP, we believe this is because when market conditions deteriorate and the financial sector is in distress, there are few or no non-bank buyers of these positions to facilitate the off-loading of risk from the financial sector. This calls into question whether it is prudentially sound to allow traded credit to be included in a trading book-style approach, which delivers a lower capital standard based on the assumption that banks can offload risk when losses start to materialise. We agree with respondents that the source of this difference is the market structure, and as such this issue could also be present in other markets. Respondents argued that models are the best way to reflect hedging and offsetting and hence incentivise good risk management for this market. The use of models to measure credit risk often means that the risk measure is driven by historical market conditions including the performance of hedges and correlations. Our concern here is that these market dynamics are likely to change substantially under stressed conditions due to the structural characteristics of the market as described above, which can result in the non-performance of hedges and adverse movements in correlations. While we recognise the arguments of respondents on the benefit of models, we believe that better controls on the use of models are required to ensure they are robust to stressed market conditions, and in this context, a greater role for standardised rules or stress tests may be desirable. We will return to this issue in the next section on risk management and modelling.

On our proposal to apply market risk capital charges to all fair value positions, we agree with respondents that fluctuations in the value of a position can affect the firm's prudential soundness whether it is held at fair value or amortised cost. However, we believe that short-term fluctuations in the value of positions over and above movements in the underlying credit risk, for example due to a withdrawal of liquidity in markets and the associated variations in liquidity premia, pose most risk to a firm's solvency where they are directly reflected in the firm's capital position via fair value accounting. On that basis we believe it is not prudent to have a large number of fair valued positions without capital charges that reflect this market risk. An exception to this point could be fair value hedges of banking book positions which qualify for hedge accounting treatment for accounting purposes.

Market liquidity risks (Q19-22)

- 2.33** The DP set out a number of questions about the role of market liquidity in the trading book framework.

- Q19:** Do you agree that there should be a differential approach to market risk capital standards based on an assessment of liquidity during adverse market conditions? If not, why not?
- Q20:** Do you agree that the calibrations of the prudent valuation requirements and the market risk capital requirements should be linked in a consistent manner? If not, why not?
- Q21:** How do you believe asset market liquidity should be measured?
- Q22:** How should regulators look to implement a liquidity market charge in a way that would not be pro-cyclical or stifle innovation?

2.34 Respondents were generally supportive of the idea that capital requirements should reflect liquidity during adverse market conditions, and suggested a number of criteria which could be used. These included:

- the bid-ask spread;
- the degree of leverage of market participants (since levered participants can be forced out of the market by a withdrawal of funding);
- the extent to which markets are one-sided;
- the number and variety of participants in a market;
- the degree to which assets are funded to term;
- the complexity of products traded;
- the degree to which the volumes traded are concentrated within a few participants; and
- the organisation's own characteristics such as the credit rating and standard size of deals entered into.

Respondents pointed out that a number of these criteria would need to be assessed by the regulator as they involve data from across the market rather than data from one firm.

2.35 However, a number of respondents expressed concerns about whether ex ante liquidity could be assessed in a meaningful way. The main reason given was that asset market liquidity is a dynamic phenomenon which can change rapidly in unpredictable ways during a crisis, and therefore it may not be possible to define or capture stressed market liquidity. Since it is extremely difficult to predict crisis episodes and every episode looks different, the outcome could be a procyclical standard that becomes stricter when conditions worsen

rather than being stable. It may also be difficult to find a definition that is consistent and comparable across firms. Instead, some argued for a more principles-based approach whereby firms make a judgement about liquidity and this is reviewed by regulators, perhaps with extreme liquidity stresses addressed through stress testing.

- 2.36** A number of respondents were optimistic that market liquidity can be captured within the new modelling techniques introduced by the July 2009 market risk changes. For example, stressed VaR should capture distortion of markets under stressed conditions while IRC models have a longer liquidity horizon which captures the possibility that firms are forced to hold onto trading book assets in declining markets. Another possibility mentioned by respondents was that liquidity can be captured via stress tests in Pillar 2, which has the advantage that it would not be as procyclical as other methods, given that stress scenarios can be ‘through-the-cycle’.
- 2.37** An additional point noted by many respondents was that that the regime should be concerned with the liquidity of risks rather than the ability to unwind positions, since when it is not possible to sell a position, a firm may be able to hedge the risk of the position. This would involve an assessment of hedge performance, the extent to which firms can set up new hedges, and the costs of hedging in stressed markets.

Our response

We welcome respondents’ support for consideration of the risk that liquid markets can rapidly become illiquid under stressed market conditions, and that this should be reflected in the market risk regime. We agree that liquidity can change in unpredictable ways during a crisis episode, making an ex-ante assessment of liquidity a challenging process. An assessment of ex-ante liquidity in markets could be made on the basis of criteria such as those listed in the DP and above, although making this assessment is unlikely to be a straightforward process and is likely to require a large degree of judgement on the part of regulators. A possible approach would be for the capital framework to assume that a firm will be forced to hold on to positions in stress unless the firm can prove that these positions can be sold, or their risks hedged, even in stressed market conditions. If this were the case, lower capital requirements for liquid positions, or risks, would only be available where there is convincing evidence that a market is resiliently liquid during stressed market conditions. In any case, we believe the capital regime needs to take account, where possible, of the risk of fluctuations in liquidity premia in times of stress.

Interest rate risk on amortised cost positions (Q23)

2.38 The DP asked one question on interest rate risk on amortised cost positions:

Q23: Do you believe that IRRBB should form part of the Pillar 1 Framework? If not, why not?

2.39 All respondents to the DP agreed that interest rate risk in the banking book needed to be covered by the regulatory regime, due to the potential impact on the bank's profit and loss (P&L) via net interest margins, and the risk associated with realising losses during fire-sales of amortised cost assets. However, most respondents did not agree that there should be a Pillar 1 capital charge, on the grounds that there is no standard risk measurement methodology for this risk and it may be difficult to develop one given that many of the assets in the banking book are very difficult to value (due to the lack of contractual maturities for example). Respondents tended to favour a Pillar 2 approach in which interest rate risk can be captured via stress testing.

Our response

We recognise that there are several challenges in dealing with the risks posed by Interest Rate Risk in the Banking Book. This is an important area of the prudential framework and we continue to work on ways to overcome the challenges presented. We are grateful for the responses we have received to this question, and they will feed into the development of our views on this area of the policy framework.

Credit Valuation Adjustments (Q24)

2.40 The Basel Committee have published proposals to deal with volatility in Credit Valuation Adjustments (CVAs). In the DP we set out three options for a longer-term approach to calculating capital for CVA volatility that integrates the charge with the market risk framework, ranging from a standardised approach to an integrated modelling approach.

Q24: Do you agree that the three options represent the main alternatives in producing a long-term approach for CVA volatility? If not, what other alternatives could be considered?

2.41 Respondents generally favoured an integrated modelling approach (option 3 of the DP). The main reason given is that more risk-sensitive approaches give the right incentives for firms to reduce exposure on names that become more risky. By contrast, an approach based on standardised rules (option 1) or one that does not take into account interactions with market and credit risk (option 2) may distort firms' portfolios in ways that do not reflect

the underlying risks from CVA volatility. Some respondents were concerned about a prescriptive approach that penalises certain business models. For example, for firms which calculate CVA based on a buy and hold strategy and historic Loss Given Default (LGD)/ Probability of Default (PD) approach, risk will best be captured by a capital calculation based on variation of internal ratings. However, several respondents noted that a standardised approach would need to be made available to ensure methods are available for all types of firm. Respondents also noted that the current approach can result in higher capital requirements for firms that actively manage CVA compared to a firm that does not do so.

Our response

We support the measures to deal with CVA volatility which are included in the Basel III package, and we continue to believe that the long-term approach to this issue should be considered as part of the Fundamental Review. The approach implemented in the Basel III rules includes recognition of hedges of CVA where these meet strict criteria. We recognise firms' concerns that such an approach may be imperfectly risk-sensitive, but we are also mindful of the need to ensure that any hedging relationships or interactions with other risks in the trading portfolio are robust to adverse conditions before they can be taken into account in an approach to CVA volatility.

Other issues (Q25-27)

2.42 The DP set out a question on whether contingent market risk should be better captured in the prudential regime. By contingent market risk, we are referring to the risk caused by the non-performance or withdrawal from the market of a counterparty which is relied upon for hedging purposes.

Q25: Do you agree that contingent market risk should be captured in the regulatory framework? If not, why not? If yes, how can it be captured – would stress tests be sufficient and if so how could they be applied consistently?

2.43 Most respondents to this question agreed that contingent market risk needed to be covered by regulatory capital, but favoured a Pillar 2 based approach based on stress testing rather than a Pillar 1 approach. Others argued that much contingent risk would already be captured alongside other tail risks in VaR and IRC models, and it may be difficult to separate the portion of contingent market risk that is not already included, which may result in double-counting. Several respondents noted that risk management is just as important if not more important than regulatory capital in this area given the high degree

of subjectivity in defining contingent market risks, and that contingent risk may be something best identified by the regulator, with support from the industry, given that it tends to be a system-wide phenomenon.

Our response

We agree with respondents that contingent market risk is relatively difficult to identify given the unpredictable ways in which it manifests itself. In particular, it may be difficult for the regulatory regime to identify contingent market risk that is genuinely incremental to other risks captured in the regulatory framework, for example many elements of this risk are already captured under the counterparty credit risk regime. We will continue to explore which elements of contingent market risk are not captured elsewhere in the capital framework, and ways in which this contingent market risk could be captured in the regulatory regime within the Fundamental Review, either through Pillar 1 or Pillar 2.

- 2.44 An additional risk which we believe is poorly captured and therefore highlighted in the DP was gap risk, which refers to the risk that market moves cause a gapping or discontinuity in the value of a position, which can cause significant complexity in hedging the risk.

Q26: Do you agree that capture of Gap risk within the regulatory framework should be improved? Is stress testing the best approach to quantify the risk, if not how could this be done?

- 2.45 Respondents agreed that gap risk was a concern and was not adequately captured in the regulatory framework, but most did not support Pillar 1 style capital charges given that gap risk takes unpredictable forms and including it in Pillar 1 may distort capital calculations and result in poorer risk capture overall. Most respondents preferred a stress test based approach, although this was not a universally held view. A small number of respondents thought that a Pillar 1 approach might be feasible in time if methodological hurdles can be overcome.

Our response

We agree with respondents that gap risk is difficult to measure or model due to instances being rare and specific to a particular set of market conditions. It is, however, an important contributor to losses in a crisis scenario and hence we will continue to examine the case for a regulatory capital treatment.

- 2.46 This chapter of the DP finally discussed the risk that dynamic hedging strategies might fail in stressed market conditions, which is not well captured by risk models such as VaR that

operate using a short-run ‘snapshot’ of the portfolio. We argued that these need to be captured in the capital charge given that they can be substantial drivers of loss in stressed market conditions.

Q27: It is clear that firms face significant hedging risk/costs that can be material loss drivers. How should this be captured in the regulatory framework? Should this be done through internal models being required to reflect the risks of a dynamic portfolio rather than using a constant risk assumption?

2.47 Respondents were divided into those that thought hedging risks/costs should be included in firms’ internal models and those that thought the risks were better included in stress tests. One reason for caution on modelling these risks is that there are significant challenges associated with incorporating dynamic hedging behaviour into existing risk models, and there was some scepticism these challenges can be overcome.

Our response

We agree with respondents that it is desirable to capture hedging risks within the regulatory regime in some way. It is not appropriate from a prudential point of view to assume that hedges can be maintained, without any cost, over the capital horizon when they need to be renewed and rebalanced during that horizon, leaving the bank exposed to the risk of a withdrawal of liquidity in the relevant markets. We continue to believe therefore that the Fundamental Review should examine whether it may be possible to capture the risk of dynamic hedging strategies failing to perform within the regulatory framework. While we agree with firms that stress tests may be a useful way of identifying risks that are not captured in the minimum capital requirements, we would question whether they can act as an effective driver of capital requirements through the cycle given the difficulty in assigning a probability to particular stress scenarios.

Risk management and modelling

2.48 In Chapter 8 of the DP we set out our views on risk management and modelling. We summarise the responses to these issues in three areas:

- Risk management;
- Internal models; and
- Other issues.

- 2.49** The DP set out proposals for greater oversight of firms' risk management, including a list of possible standards in Boxes 8.2 and 8.3. We asked firms whether they agreed that there was a need for greater regulatory oversight of risk management within firms, and what their views were on the proposed standards.
- Q28:** Do you agree there should be greater oversight of risk-management functions in firms, including front office activities? If so, are the standards set out in Box 8.2 and Box 8.3 the type of requirements regulators should expect to see? What tools could regulators use to achieve these outcomes?
- 2.50** Several respondents disagreed with the need for greater oversight on the basis that regulators already have sufficient powers to assess the adequacy of firms' risk-management systems under SYSC, and that the proposed standards are already best practice in large firms.
- 2.51** Some other respondents agreed with us that the suggested standards would be helpful for supervisors. However, they raised several considerations on this matter:
- Standards for risk management should not become too bureaucratic or rules-based since that would prevent good risk management that is appropriate to each firm's business.
 - Regulation should not disincentivise good risk management and should recognise good practice already present in firms. This may include capital incentives for active risk management of portfolios.
 - Responsibility for risk management should remain with the firm, i.e. we should not seek a situation where supervisors are imposing decisions on firms or overseeing the work of risk committees. Responsibility should lie with senior front office management.
 - The proposal for supervisory approval of risk management before a trading desk is allowed to trade may be unduly burdensome and very challenging to implement.
 - Risk management needs to look across a business to identify correlations between positions in different areas and the overall portfolio implications.
- 2.52** A number of respondents argued that adequate regulatory supervision of risk management within firms is best ensured by having skilled and experienced supervisors who interact regularly with a firm's management through close and continuous supervision and deep dives of particular product or business lines. Other options suggested included supervisors challenging practices based on benchmarks from other firms, placing more reliance on internal audit, holding senior members of staff accountable, and making sure there are credible penalties for non-compliance.

Our response

We continue to believe that supervisors should have greater oversight of risk management within individual firms, although we agree that ultimate responsibility for risk management should remain with the firm. At present, the FSA's powers derive from general risk management standards in GENPRU and SYSC, as well as from standards specific to the trading book in BIPRU. The most substantial of these standards are reserved for firms with approval to use internal models for capital purposes. We believe that adequate risk-management standards are relevant to trading activities and should be applied regardless of whether capital requirements are produced under the internal models or the standardised approach.

We recognise some respondents' concerns that an overly prescriptive approach to oversight of risk management could penalise firms which already have good risk management systems that are appropriate for their own businesses, and that approval of risk management before a firm can trade could be burdensome depending on its implementation, and so it is right that we aim to achieve a balance. We also agree that the best way of implementing this is to have skilled and experienced supervisors who understand firms' business models and are able to avoid a 'one-size fits all' approach in favour of an approach that recognises the nuances and idiosyncrasies of each particular firm.

2.53 In the DP we asked whether internal models are the most appropriate way to calculate the capital requirement for trading book exposures and whether they should continue to have a role or should be supplemented by back-stops or stress tests. We asked the following questions:

Q29: Do you think that internal models should remain part of the regulatory capital framework? If not, what other ways could a risk-sensitive capital requirement be assessed?

Q30: Do you agree that improved modelling approaches should be developed to measure risk? If so, what alternative modelling approaches could be investigated?

Q31: Do you agree that back-stops and stress testing should have a more significant role in setting capital requirements? If not, why not?

Q32: Do you agree that internal model approval should be supplemented at a Basel level to improve consistency? If not, why not, are there alternative options?

- 2.54** All respondents were in favour of continued use of internal models in the regulatory capital framework. Although they acknowledged the problems associated with internal models, respondents argued that they are nevertheless preferable to standardised methods. There were two main reasons given for this:
- Internal models provide a more accurate measure of risk, since they capture the complex dynamics of markets and the differences in business model between firms. Respondents thought this would make regulatory arbitrage less likely and would avoid regulatory capital that distorted portfolio risk measures. They thought standardised rules could be worse at capturing risk factors than models.
 - Using internal models incentivises good risk measurement in firms. Separating risk models and regulatory capital could weaken risk management.
- 2.55** A number of respondents added that the best way to deal with the problems of VaR is to add additional requirements on top of the model, as in the FSA's Risks Not In VaR (RNIV) framework⁴, the new IRC model or Pillar 2 stress testing. Several respondents also said that problems with models could be resolved by better enforcement of the existing standards. One argued that the use test is an impediment to the development of models that are of use to both firms and regulators, meaning there is too much focus on managing risk through capital. It was argued that greater emphasis should be placed on developing models which increase risk transparency. However, this view was not shared by other respondents, who argued that the use test is an important requirement for ensuring that the model is relevant to the firm since it shows that the model is regarded as useful by the internal risk management function.
- 2.56** On the related issue of standard rules and their use in the capital framework, several respondents saw a continued role for standardised rules, for less sophisticated firms or for small portfolios where development of models is not proportionate. One respondent also said that the scope of models could be restricted only to the most appropriate risk factors. Those risk factors which are not well captured in models could be subject to a standardised approach instead. Respondents did not agree with the idea of reducing the difference between models-based capital charges and the equivalent standardised approach. Respondents said there should be a regulatory capital incentive for better risk management, which they claimed was delivered by the use of internal models for regulatory capital purposes. For this reason they thought it was appropriate for models to deliver lower regulatory capital requirements. Others argued that more sophisticated standard rules would be very demanding in terms of firms' resources, particularly if firms are required to maintain standardised calculations even when they have permission to use models.
- 2.57** Respondents agreed that internal models need to be continually improved in the light of market developments and improvements in the understanding of market behaviour. Most firms focused on improvements within the context of the existing regime, such as greater

⁴ The RNIV framework requires firms to hold capital buffers for risk factors relevant to their modelled portfolios that are not incorporated in the VaR model.

use of back-testing, the RNIV framework and stress testing, as well as development of the All Price Risk measure⁵ and IRC. However, some respondents cautioned against having detailed validation and back-testing requirements for models with long horizons such as the IRC, since given the very low frequency with which the extreme events occur, these are difficult to implement in practice.

- 2.58** A few respondents made specific suggestions about new modelling methods that could be adopted, such as expected shortfall or liquidity adjusted VaR. Respondents suggested that the development of more advanced methods should be encouraged by regulators allowing firms to use them for regulatory capital purposes. Another recommendation was that regulators should make more use of standard test portfolios to assess the relative performance of models.
- 2.59** On the issue of whether stress tests should play a greater role in supporting supervision of modelled approaches to calculating capital requirements, respondents generally agreed with the use of stress tests but disagreed on what exactly they should be used for. Some thought that stress tests should be used as benchmarks of risk taking in individual firms, i.e. to be used in risk review and model approval or more generally to trigger closer investigation by supervisors. Others thought that stress tests should be used to identify risks not captured elsewhere in the regulatory capital framework and should therefore have additional capital charges associated with them, for example through Pillar 2 or RNIV. On the latter, respondents noted that the stresses chosen should ensure that models are robust to stresses other than those captured by historical portfolios or correlations.
- 2.60** More specifically, firms specified several ways in which stress tests can be helpful:
- as a benchmark for identifying problems in statistical risk models, since stress tests represent the most extreme outcomes in the distribution inherent in models; and
 - as a tool for assessing risk in new products with limited historical data for models to work on.
- 2.61** However, some concerns were raised about how stress testing is done in practice, with respondents citing the need for stresses to be applied consistently but also adapted appropriately to each firm's business model if they are to be relevant. Stress tests are generally confined to a small number of stresses and the specifics tend to be highly subjective, suggesting that they may not capture the stresses that will occur in practice. For example, stress tests focus on plausible scenarios, but real stressed periods are rarely regarded as plausible before they occur, calling in to question whether stress tests can capture the shock scenarios that will occur.
- 2.62** Respondents noted the following concerns about the role of stress testing:
- The outcomes of stress tests should not be added where this does not make sense, e.g. where the stress tests assume opposite market movements, and where adding the outcomes discourages hedging activity.

⁵ The 'All-Price Risk' (APR) measure is the European Union implementation of the Comprehensive Risk Measure (CRM) which is the equivalent terminology in the Basel Accord.

- Firms can pre-position risk to gain favourable results from stress tests, so stress tests could be specified by regulators without prior notice to the firm to minimise the opportunity for pre-positioning.

2.63 Respondents did not agree with the use of backstops, since they may diminish incentives for good risk management and distort firms' business decisions due to a lack of risk sensitivity. Several respondents discussed whether stress tests could be used as backstops, and generally concluded that this would not be a good idea as stress tests may not be sufficiently risk-sensitive due to the subjective nature of stresses and limited scope in terms of different risk factors etc. Several respondents suggested that the capital charge generated by a combination of models and standardised rules should not exceed the maximum loss that a firm can experience on a particular position.

2.64 Finally, on the issue of whether model review should be subject to international co-operation, perhaps via peer review or review at the Basel level, respondents agreed with the objective of trying to ensure consistency in standards across jurisdictions, and suggested that this could be achieved by greater discussion amongst local regulators and review at the Basel level. Specifically, supervisory colleges could be used for discussion, Basel could review decisions to identify best practice and inconsistencies, and also EBA and the Standards Implementation Group may be important fora. Although it was not proposed in the DP, respondents also took the opportunity to say that they did not agree with model review becoming a Basel function, or with sign-off of local decisions by Basel, on the grounds that this would be unduly burdensome in the context of what is already a long and resource intensive process.

Our response

We agree with respondents that the main argument for retaining a substantial role for internal models in the regulatory framework is that they are more risk sensitive, and give recognition to hedging and other tools for active risk management. However, while use of models such as VaR (as currently implemented) may be a useful tool for day-to-day risk management of firms' portfolios, given prevailing market conditions, there are several problems with using them to determine regulatory capital requirements. In particular:

- Models tend to measure risk from an individual firm's perspective and do not take into account system-wide risks resulting from the behavioural responses of market participants (e.g. widespread and co-ordinated sell-offs leading to a withdrawal of liquidity). It is possible this could be mitigated by ensuring models use distributions incorporating 'fatter tails' and are subject to robust stress testing.
- They tend to be backward-looking, since their outputs tend to reflect prevailing market conditions and historical experience with particular markets

or product lines (e.g. lack of good valuation models and complete stressed history of risk factors for Collateralised Debt Obligations (CDOs) and other structured credit products resulted in a low capital charge for these even though they triggered the financial crisis of 2008-09).

- Due partly to the above issues, the stochastic properties of models based on 'normal' market data may be a poor guide to the magnitude and source of losses in stressed market conditions.
- The relative opacity and variety of internal models and lack of consistency of implementation relative to standard rules means that it is difficult for supervisors to monitor the level of risk, and makes it difficult to compare the level of risk across firms and over time.

In determining the extent of use of internal models in the regulatory framework, the Fundamental Review must weigh up the known problems with models against their ability to measure the risks specific to a given portfolio, e.g. the extent of hedging and portfolio diversification. The adoption of the stressed VaR measure under Basel 2.5/CRD3 is an important step in this area. On balance, we consider that there may be a case for giving a greater role to measures such as stress tests or other back-stops to supplement modelled approaches. We believe this approach should be considered in the Fundamental Review as one option alongside ways in which the output of models could be improved, for example by improvements in modelling technologies or enhanced supervision of models.

2.65 Finally, the DP asked about the completeness of the issues covered related to risk management and modelling:

Q33: Do you believe that the measures presented in this chapter would address the issues related to risk management and modelling identified during the crisis? If not, what other measures could be introduced?

2.66 Respondents broadly accepted the relevance of the issues set out in the DP. Those who provided further details used this question to highlight that analysis in the Fundamental Review should focus on firms that are seen as having acted prudently before the crisis as well as those who did not.

A new framework in practice

2.67 The final chapter of the DP set out what we believed were the key policy questions that the Fundamental Review needs to address. These were:

- Are market implied measures of risk suitable for regulatory capital purposes, and are the alternatives any better?

- Is risk inherent in a position or is it affected by valuation?
- Are there any positions for which market liquidity can truly be relied on to warrant a lower capital standard?

2.68 The DP asked for views on whether these were the right questions, or if others should also be considered:

Q34: Do you agree with the key policy questions that will determine the appropriate course of action? If not, what other key questions need to be addressed?

2.69 Most respondents agreed that these questions were valid. However, most provided additional policy questions that they believe need to be answered as part of the Fundamental Review, often with greater granularity than those presented in the paper. One respondent noted that the review should begin by setting out the principles of the market risk framework before any policy questions should be considered.

Our response

There are a wide range of issues for the Fundamental Review to consider, and reducing them to a small number of agreed key questions will naturally be a difficult task. We believe it is necessary, however, to attempt to distil these issues into key questions in order to focus the debate. We believe these key questions are useful tools for directing the thoughts of the Fundamental Review, however the substance of work is much more wide ranging as shown by the range of recommendations set out in the DP. All of these areas continue to be important topics for the Fundamental Review process.

2.70 The DP then presented four paradigms setting out the spectrum of frameworks that could be developed by combining the key recommendations of the DP. The final questions of the DP asked for views on these:

Q35: Do you agree that these paradigms represent the spectrum of frameworks that could be developed to address the key issues identified in this DP? If not, what other ways could a framework be developed?

Q36: Which paradigm do you believe represents the most successful solution presented in the DP and why?

Q37: Do you agree that these proposals will bring economic benefits by improving financial stability and market confidence? Do you agree with our high-level impact analysis for each paradigm? If not, what other costs and benefits do you think each paradigm may have on the market and the economy?

- 2.71** Most respondents agreed that the paradigms did represent useful illustrations of the spectrum of ways in which a new framework could be developed. However, a number argued that it was premature to consider in any detail what a new framework could look like at this stage.
- 2.72** A number of respondents felt it was too early to judge paradigms at this stage, with one highlighting that it would be wrong to assume that there is a simple best solution represented by one of these examples. Those respondents who expressed a preference all indicated that Paradigm 3 (Valuation Based Approach) represented the most successful solution out of the paradigms presented. The main reason given for preferring this paradigm was the simplicity and coherence of aligning the accounting and regulatory treatment of positions.
- 2.73** On the issue of economic benefits respondents believed that there is a risk that the aggregate impact of new measures (including those being introduced through other packages such as Basel 2.5 and Basel 3) would make trading activity less attractive which could lead to migration of trading to unregulated entities, or make trading firms less attractive to investors – each of which could have a significant impact on financial stability.
- 2.74** One respondent inferred from the paper that all of the proposals presented would lead to significantly increased capital requirements which could have a significant impact on market dynamics.

Our response

The paradigms set out in the DP were intended to provide illustrations of what new frameworks could look like, rather than to act as clear proposals. We continue to agree with most respondents who expressed a preferred paradigm that the Valuation Based Approach (where all positions held at fair value receive a market risk capital charge) appears to be the most coherent solution. In practice, the final framework developed through the Fundamental Review will, of course, not exactly match any of the paradigms in the DP as these are just high-level illustrations. Finally, with respect to the economic benefits and potential capital impact, it is important to note that in the DP we expressed the view that there was no base assumption on the level of capital that would be desirable following the Fundamental Review. A calibration exercise would be required, and we would need to decide later in the process whether the current level of capital (at the

time of the calibration) should be maintained or increased. So we do not believe it is right at this stage to infer that the attractiveness of trading or market dynamics would be affected by the process.

Annex 1:

List of non-confidential respondents

Association for Financial Markets in Europe (AFME)

Bank of America Merrill Lynch

Barclays Capital

British Bankers' Association

Deloitte

Futures and Options Association

Goldman Sachs

HSBC

International Swaps and Derivatives Association

Japanese Bankers Association

Morgan Stanley

PWC

Royal Bank of Scotland

Standard Chartered

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