The new Capital Adequacy Directive, CAD 3:

The transposition of the new Basel Accord into EU legislation

Consultation Document

December 2003

HM TREASURY

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CONTENTS

1 INTRODUCTION

1.1 The European Commission is expected to publish proposals to change the existing capital adequacy rules for banks, other credit institutions and investment firms in 2004. The European Commission will propose a new Capital Adequacy Directive, commonly known as CAD3[1], as the means by which the EU will implement the new Basel Capital Accord, Basel II, into legislation.

1.2 The current EU rules on capital adequacy standards largely result from the existing Basel Accord, Basel I, implemented into EU legislation via the Solvency Ratios Directive (now incorporated into the Consolidated Banking Directive), CAD 1 and CAD 2. Basel I was signed in 1988 and remains a stabilising force for the international banking system.

1.3 The new Basel Accord updates and significantly improves the existing Basel rules, for example, by providing incentives for good risk management, increased risk sensitivity and reducing opportunities for regulatory arbitrage. The Basel Committee is aiming to agree the new Accord by no later than mid-year 2004.

1.4 The FSA and Bank of England have represented the UK in the Basel discussions. HM Treasury will lead the negotiations for the UK in Brussels on CAD3. The EU implementation of the new Basel Accord by means of CAD3 will not only impact on internationally active EU banks, but is expected to apply to all EU credit institutions and investment firms, and, through them, it may potentially affect the wider economy. The EU Directive extends the scope of application of Basel II in the interest of maintaining a competitive level playing field within the single European market.

1.5 During both the Basel and EU discussions, a number of issues with the Basel Accord and its transposition into EU legislation have emerged. Although the Basel Committee has already undertaken much detailed analysis and consulted extensively with the international banking community and other interested parties, HM Treasury would like to ensure that it has a good understanding of all potential issues and linkages in advance of the Commission tabling its proposal and before the EU Council Working Group negotiation process starts next year.

1.6 This consultation document lays out key questions and issues as we currently see them. These issues are however not exhaustive and we therefore welcome comments on any other matters relating to CAD3, particularly from those interested parties not hitherto engaged in the Basel process.

[1] The European Commission refer to the process of implementing the new Basel Accord within the EU as the Capital Requirements framework, however their most recent consultation, CP3, was called the Directive on Risk Based Capital Requirements for credit institutions and investment firms.

1.7 The structure of this Consultation Document is as follows. Chapter 2 outlines the new Basel Accord and its transposition into EU legislation. Chapter 3 summarises the analysis of the potential impact of the new Basel Accord. Chapter 4 details the key issues that have been raised during both the Basel and EU discussions. Chapter 5 provides an initial Regulatory Impact Analysis (RIA) of CAD3 and Chapter 6 concludes.

RESPONDING TO THE CONSULTATION

The deadline for responses is **Friday 5 March 2004**. Please e-mail or post responses to this consultation paper to:

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1.8 This document is available on the Treasury website at www.hm-treasury.gov.uk.

2 The New Basel Accord

2.1 This Chapter gives some brief background to the existing Accord and outlines why the Basel Committee is updating the current regulatory capital requirements. It describes the latest proposals for a new Accord and outlines both the Basel and EU timetable for the next steps going forward.

Basel Accord

2.2 The Basel Committee on banking supervision formulates broad supervisory standards and guidance. The current Basel Accord is a non-binding agreement, concluded in July 1988, in response to concerns that internationally active banks were not all adequately capitalised and that a collapse could potentially have adverse consequences on the international banking sector and the global economy as a whole.

2.3 The current Accord had two objectives. First, that it should strengthen the soundness and stability of the international banking system. Second, that the framework should be fair and have a high degree of consistency in its application, reducing the potential for differences in regulatory treatment of banks across countries, and thus the scope for regulatory arbitrage. Both of these objectives were met. The current Accord has led to substantial increases in capital ratios during the period 1988-1992, which has helped to strengthen the soundness and stability of the international banking system. It has also helped enhance competition amongst internationally active banks.

Framework

2.4 The existing framework has been built around two main concepts. The first is an agreed categorisation of bank capital between core capital (tier 1), (essentially equity plus retained earnings) and supplementary capital (tier 2) (in the form of reserves, hybrid debt/equity capital instruments and subordinated debt)[1]. The second is risk weights, which vary (albeit very crudely) to reflect the relative riskiness of lending to different classes of counterparties. The framework was initially directed towards assessing capital in relation to credit risk (the risk that a borrower will not repay a loan).

2.5 The Accord introduced a minimum target ratio of capital to risk weighted[2] assets of 8 percent (of which the core capital element must account for at least half) which banks were expected to achieve by the end of 1992. A later amendment to the Accord in 1996[3] introduced specific additional capital requirements with respect to market risk (the risk of losses in on- and off-balance-sheet positions arising from changes in market prices) which banks were expected to implement from the end of 1997. The proposed New Basel Accord broadly leaves the market risk requirements unchanged.

[1] International convergence of capital measurement and capital standards, July 1988 – http://www.bis.org/publ/bcbs04A.pdf.
[2] The Basel risk weights are presented in Part II of the current Accord.
[3] Amendments to the capital accord to incorporate market risk, January 1996 – http://www.bis.org/publ/bcbs24.pdf.

Shortcomings of the current Accord

2.6 Although the 1988 Accord has served us well, providing a stabilising force for the international banking system, the global financial system has become increasingly complex over the past 15 years. As a consequence the Basel Committee on Banking Supervision has been working since 1998 to develop a new regulatory capital framework that recognises new and continuing developments in financial products, incorporates advances in risk measurement and management practices, and more precisely assesses capital charges in relation to risk.

Lack of risk sensitivity

2.7 One of the shortcomings in the 1988 Accord is that regulatory capital requirements do not accurately reflect risk. The purpose of regulatory capital requirements is to protect depositors or clients against risks taken by the firm, which could potentially result in financial losses. Under the current risk weights, there has been a widening gap between economic capital, the amount of capital banks would prudently chose to hold against a loan (including for other business reasons) and regulatory capital, the amount of capital they are required to set against a loan. This is primarily because the weights do not provide sufficient degrees of differentiation between different borrowers' default risks. For instance, an Internet start-up company would attract the same risk weight as a long-established firm such as Microsoft. As well as the lack of risk sensitivity, the current Accord has also failed to address changes in credit quality of counterparties over time.

2.8 This lack of differentiation is also apparent in the risk weights attached to lending to national governments. For instance, an AAA credit-rated government outside the OECD currently attracts a higher risk weight than a government inside the OECD, regardless of the credit rating of the OECD member. The risk weights may have also contributed to an increase in short term lending to non-OECD banks, as the regulatory capital requirements for exposures of less than a year are substantially lower then those that are over one year. The treatment of retail exposures may also not necessarily now be appropriate, requiring more regulatory capital in many instances than justified by the underlying risks on the bank's retail portfolio.

Other concerns of supervisors

2.9 Another supervisory concern is that some banks may have relied on regulatory capital requirements for pricing purposes, instead of investing in better risk management processes. This has the potential in aggregate to lead to a less effective management of bank assets, to the detriment of both bank shareholders and customers. The current Accord may also have given inappropriate incentives for financial innovation by focusing more on regulatory capital effects than on business needs.

Basel II

2.10 In 1998 the Basel Committee began working on a new framework for governing the capital adequacy of international banking (Basel II) that should constitute a more comprehensive approach to addressing risk[4]. The Committee decided at an early stage that the overall level of regulatory capital in the banking system should remain unchanged[5].

[4] Initial proposals for Basel II – A new capital adequacy framework (Basel 1999) http://www.bis.org/publ/bcbs50.pdf.

[5] The Basel Committee have never clarified exactly whether this was supposed to apply to "the banking system" at the Global, or G-10 level.

Chart 2.1: The structure of the Proposed New Basel Accord

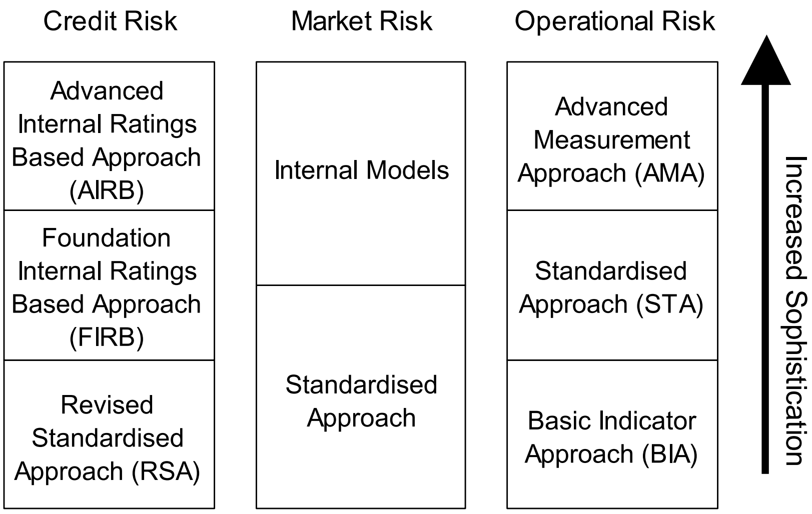
Pillar 1	Pillar 2	Pillar 3
Minimum Capital requirements to cover:	**Supervisory Review Process of Capital Adequacy**	**Market Discipline and Disclosure**
- Credit Risk - Market Risk - Operational Risk	To ensure banks have good monitoring and management of risk processes	Requirements that allow capital adequacy to be compared across institutions

2.11 The proposed new Accord is built on three interlocking pillars – minimum capital requirements, supervisory review and market discipline/disclosure (see Chart 2.1). Pillar 1 is designed to provide the financial institution with a framework for the calculation of minimum regulatory capital requirements, while Pillar 2 provides firms and supervisors the opportunity to review the risk management process and ensure appropriate action is taken to account for any failings. Pillar 3 is designed to allow for comparisons to be made by other market participants and encourage market discipline.

Pillar 1- Minimum Capital Requirements

2.12 The minimum capital requirement consists of elements to cover credit and market risk (the latter will be unchanged from the current Accord) and a new specific capital requirement for operational risk (the risk associated with internal failure of systems or people, or with external risks such as terrorism). The proposals offer a menu of approaches for both credit and operational risk as set out in Chart 2.2 below.

Chart 2.2: Menu of approaches to the minimum capital requirement available under the new Accord



2.13 The options for each risk type range from straightforward formulaic approaches to more sophisticated methods where firms use their own internal processes to calculate their regulatory capital requirements. The progression is designed to provide incentives, through reductions in regulatory capital requirements, for better risk management. This is in order to encourage firms to meet the additional costs required to achieve the increasingly high standards of risk management needed to qualify for the more sophisticated approaches offered under the new Accord.

Credit risk

2.14 Credit risk is the risk that a borrower will not repay a loan. The revised standardised approach (RSA) revises the current Accord requirements for credit risk by introducing more risk sensitive weights. Under Basel I, exposures are assigned to five risk weight categories, based on broad judgements of riskiness[6]. Under the RSA, the new risk weight categories for exposures to sovereigns, inter-bank lending and corporate exposures are based on external credit ratings, produced by recognised ratings agencies, for the borrowing institution or country[7].

2.15 In addition, retail exposures under the RSA attract a 75 per cent risk weight, provided they meet predefined criteria, and claims secured on residential property attract a 35 per cent risk weight, reflecting the lower risk of these types of lending compared with 100 per cent and 50 per cent respectively under Basel I. The recalibration of credit risk capital requirements, generally lower on average under Basel II, also reflects the introduction of a separate capital charges for operational risk, which was previously implicit in credit risk capital charges.

2.16 Basel II also provides scope for an even closer alignment of economic and regulatory capital through the introduction of two new options for Internal Ratings Based (IRB) approaches to credit risk. The IRB approaches (Foundation and Advanced) allow firms to use more sophisticated techniques (such as internal models) for assessing their regulatory capital. The objective is that they will be able to use some of their internal risk processes rather than having to implement separate systems for internal and regulatory purposes.

2.17 Subject to certain minimum conditions and disclosure requirements, banks that qualify for the IRB approaches may rely on their own internal estimates of risk components in determining the capital requirements for a given exposure. Firms using the Foundation IRB method will be required to use supervisory values as opposed to internal estimates for one or more risk components[8].

[6] Risk weights under Basel I are 0,10,20,50 and 100 per cent. The allocation of exposures to categories is set out in Annex 2 of "International Convergence of Capital Measurement and Capital Standards", July 1988 - http://www.bis.org/publ/bcbs04A.pdf.
[7] There are currently two options for the measurement of risk exposures to other banks – one based on the borrowers own credit rating (option 1) and a second, based on a rating one category less favourable than the country in which the bank is incorporated (option 2).
[8] Under the Foundation IRB approach banks are allowed to estimate Probability of Default (PD) and subject to national discretion Maturity (M). Those banks on the Advanced IRB are required to estimate the two other key risk drivers: the Loss Given Default (LGD) and Exposure at Default (EAD).

Operational risk

2.18 Operational risk is the risk associated with internal failure of systems or people, or the risks arising from external factors such as terrorism. Basel II introduces three alternative methods for calculating a separate capital requirement for operational risk[9]. The less complex of these approaches – the Basic Indicator Approach and the Standardised Approach – calculate requirements by taking a risk-weighted three-year average of gross income. For the Basic Indicator Approach the calculation uses a single risk weight, while the Standardised Approach divides gross income across eight business lines, with individual risk weights, to achieve a more risk sensitive approach.

2.19 Beyond these approaches, firms may choose to adopt the Advanced Measurement Approach. This approach allows firms to use internal models with pre-defined quantitative and qualitative criteria as laid down in the new Accord. Banks intending to use this approach will initially be allowed to use internal models for a subset of their business lines, with the remainder being calculated on one of the other approaches.

Securitisation and Credit Risk Mitigation

2.20 Securitisation generally involves the transfer of ownership of, and/or risks associated with, credit exposure(s) of a bank to other parties. Basel II will provide a specific treatment for securitisation, a technique that was not widely used when the original Accord was negotiated.

2.21 The Basel Committee believes that there should not be any artificial incentives in favour of securitisation. This implies that securitisations should be justified on economic grounds, in line with management aims, rather than purely regulatory capital considerations.

2.22 The new Accord also introduces new rules for credit risk mitigation. These provide a more comprehensive approach to the management of collateralised transactions, on-balance sheet netting of transactions, and the treatment of guarantees and credit derivatives[10]. The credit risk mitigation products allowed under the new Accord are also determined by the sophistication of each bank's internal risk management and thus the particular risk approach it is using.

Pillar 2 – Supervisory review

2.23 The second pillar of the new Accord introduces a process of supervisory review, a concept which is already practiced in the UK. The process is intended not only to ensure that banks have adequate capital, but also to ensure that they have appropriate systems in place to ensure good monitoring and management of their risks.

2.24 The supervisory review process recognises the responsibility of bank management for developing internal capital assessment processes and setting targets consistent with the bank's risk profile and control environment. Supervisors are expected to evaluate the bank's assessment and to intervene where appropriate. One type of intervention may simply be to adjust the overall capital requirement.

2.25 The Basel Committee recognises that an increase in capital requirements is not the only option available for addressing risks not captured in Pillar 1. For example, strengthening risk management, applying internal limits, strengthening the level of provisions and reserves, and improving internal controls, may also be considered.

[9] Under the Basel I Accord, operational risk was implicitly treated as part of credit risk. To compensate for the introduction of an explicit operational risk charge, credit risk charges will be lower on average under Basel II.
[10] See Glossary for definitions.

2.26 The proposed Accord identifies three main areas that might be particularly suitable for treatment under Pillar 2: risks not fully captured in Pillar 1 (e.g. credit concentration); internal factors not already taken into account (e.g. interest rate risk in the banking book); and external factors (e.g. the impact of the business cycle). Pillar 2 also requires an assessment of compliance with the minimum standards required for the more advanced approaches.

Pillar 3 – Market discipline

2.27 The third Pillar (market discipline) is designed to complement the minimum capital requirements and the supervisory review process. The purpose is to encourage market discipline by developing a set of disclosure requirements that will allow risk exposures, risk assessment processes, and hence capital adequacy be compared across institutions. The Basel Committee believes that such disclosures are particularly important where reliance on internal methodologies gives banks more discretion in assessing capital requirements.

The transposition of Basel proposals into EU legislation

2.28 The European Union implemented the current (1988) Basel Accord through the Solvency Ratio Directive and Own Funds Directive adopted in December 1989. Market risk was introduced through the first Capital Adequacy Directive in March 1993 (before Basel incorporated market risk), but was later amended in 1998 (hereafter referred to as CAD2), to allow for the use of Value at Risk (VAR) models.

Scope of CAD3

2.29 The new Capital Adequacy Directive (CAD3), which will implement Basel II, has a much wider scope of application than the current or proposed Accord. The intention of the new Directive is to ensure a level playing field between firms competing in the same markets. As with the existing CAD directive, the scope of CAD3 is expected to include all credit institutions and investment firms, as defined by the Investment Services Directive (ISD)[11].

2.30 The Commission's draft proposal has also looked at issues specific to the EU. For example the capital treatments of mortgage-backed bonds, a form of securitisation used across much of the EU, and a consideration of a different treatment for loans that are secured against real estate, reflecting differences in EU markets.

Voluntary agreement of Basel versus Legislation of CAD3

2.31 While the Commission's proposals for CAD3 are generally consistent with the new Basel Accord, there is an important difference in terms of their application. The Basel Accord is a voluntary agreement between G-10 supervisors, while the EU's implementation will be legislative, with the CAD3 being agreed under the co-decision process between the European Parliament and the Council.

Comitology Arrangements

2.32 The Commission's current thinking is that the draft proposal for CAD3 will be drawn up under existing legislative procedures. Under this framework the entire directive, both articles and the technical annexes, would need to pass through the co-decision process. This process often takes several years to complete. Modifications to existing legislation require further legislative cycles. The Commission however has suggested that the annexes would be updateable through comitology.

[11] A new Investment Service Directive is currently under negotiation. Once adopted this will determine the range of firms offering "investment services" which will be covered by the new EU regime.

2.33 A recent development in European financial services legislation has been the adoption of the so-called Lamfalussy process[12]. This process is designed to speed up the time it takes for legislative proposals to be agreed. Current arrangements for financial services legislation require the full text to be agreed by co-decision. The Commission may consider the adoption of this process for CAD3.

Timetable

Consultations

2.34 The Basel and EU processes have now been running for five years. Over this time both the Basel Committee and the Commission have consulted industry on the proposals as they have developed. The third Basel consultation exercise came to an end on 31 July 2003, while the latest European Commission consultation ended on 22 October 2003.

2.35 Supervisory authorities have also begun to look at how they might implement the new regime and have begun consultation exercises. The Financial Services Authority (FSA) has published its first consultation on the implementation of the new regime (CP189) covering key aspects of the requirements for credit and operational risk. These are areas where firms will need to begin work before CAD3 is formally agreed. The closing date for comments on this paper was 14 November 2003[13].

2.36 The US authorities' proposals for implementing the new Accord have naturally aroused great interest. The stated intention is to apply only the most advanced approaches[14] of the new Accord to only the ten largest US banks with the expectation that a similar number will adopt the proposals voluntarily. The US authorities have suggested that these banks account for roughly 95 per cent of US overseas assets and around 69 per cent of the domestic banking sector[15]. The remainder of banks in the US would remain on existing rules based on Basel I with some additional domestic requirements. This is of particular interest to EU banks with subsidiaries in the US[16].

2.37 The US authorities believe that implementing the new Accord for smaller banks would not be justified, as they are already required to hold capital in excess of Basel I minima and to meet supervisor review standards similar to those proposed in Basel II.

Timing

2.38 The Basel Committee aims to publish the final Accord by no later than mid-year 2004. We expect the European Commission to begin the process of issuing a formal proposal at around the same time.

2.39 Once the EU proposal has been formally made, both the Council and European Parliamentary processes will begin. We expect Council working groups to begin in 2004. The Parliamentary process will not begin before the autumn of 2004, due to the EU Parliamentary elections next spring.

[12] Only the principles (level 1) of the proposals are agreed through co-decision, while the implementing measures are agreed upon by a comitology committee, following a formal consultation with interested parties, including the European Parliament. More information on the Lamfalussy process can be found at http://europa.eu.int/comm/internal_market/en/finances/general/lamfalussyen.pdf.
[13] Copies of the consultation paper can be obtained from the FSA's website at http://www.fsa.gov.uk/pubs/cp/189/index.html.
[14] The Advanced IRB for credit risk and AMA for operational risk.
[15] This figure is only for commercial banking activities. The numbers decline when the larger investment banks are taken into consideration.
[16] Copies of the US's authorities Advanced Notice of Proposed Rulemaking (ANPR) can be found at http://www.federalreserve.gov/boarddocs/press/bcreg/2003/20030711/.

2.40 This would suggest that the first reading by the European Parliament might not occur until very early in 2005. Adoption of the Directive will have to be completed by the end of 2005 in order to ensure time for transposition into national laws and parallel implementation with Basel on 31 December 2006.

3 Analysis of Potential Impacts

3.1 This chapter briefly summarises the analysis of the impact of the proposed Accord undertaken by the Basel Committee and discusses some potential behavioural and wider economic effects of the proposals. It is important that we have a good understanding of all the potential impacts and we would welcome any comments on the issues raised in this chapter.

Impact on banks' regulatory capital requirements

3.2 The Basel Committee has quantified the global impact of the Pillar 1 requirements of the proposed Accord on internationally active banks' regulatory capital through a series of Quantative Impact Studies (QIS). These studies have assessed the impact of the new rules on banks' existing portfolios.

QIS3 results

3.3 The proposed Accord is not intended to either raise or lower the overall level of Pillar I regulatory capital currently in the banking system. Instead it is intended to make it more risk-sensitive. This is likely to result in a substantial re-distribution of regulatory capital, with higher risk business attracting more capital than it currently does and lower risk business less. Based on its assessment of the impact of the latest proposals (in QIS3), the Committee is confident that it has achieved these objectives.

3.4 Individual banks may therefore face increases or decreases in their minimum regulatory capital depending on the structure of their portfolios, and whether they qualify for the more sophisticated approaches. The QIS3 results show that there is considerable variation in the extent to which capital requirements will rise or fall for individual banks under Basel II as expected by the Committee. Table 3.1 below summarises the impact of the proposed changes on regulatory capital requirements[1].

Table 3.1 World-wide results – overall percentage change in capital requirements[2]

	Standardised			IRB Foundation			IRB Advanced		
	Average	Max	Min	Average	Max	Min	Average	Max	Min
G-10 Group 1	**11%**	84%	-15%	**3%**	55%	-32%	**-2%**	46%	-36%
G-10 Group 2	**3%**	81%	-23%	**-19%**	41%	-58%			
EU Group 1	**6%**	31%	-7%	**-4%**	55%	-32%	**-6%**	26%	-31%
EU Group 2	**1%**	81%	-67%	**-20%**	41%	-58%			
Other Groups 1 and 2	**12%**	103%	-17%	**4%**	75%	-33%			

Source: BIS (2003).

[1] Table 1 of the Basel Committee's QIS3 results shows the overall percentage change in capital requirements. Quantitative Impact Study 3 – Overview of Global Results available at http://www.bis.org/bcbs/qis/qis3results.pdf.
[2] Group 1 banks are large internationally active banks with Tier 1 capital in excess of €3 billion. Group 2 banks are smaller banks that in general are not internationally active.

3.5 Further QIS3 results[3] show that banks with a higher proportion of retail exposures generally have significantly lower Pillar 1 capital requirements relative to current levels, reflecting the lower risk weights attached to these portfolios. The results also show that the overall capital requirements for internationally active banks decline with the adoption of more sophisticated approaches[4].

3.6 The other major source of variation in the impact across banks stems from the capital requirements imposed by the new operational risk charge. This charge is likely to have a significant impact on some types of specialised banks and many investment firms. This is particularly the case, if they have not benefited from the reduction in capital requirements introduced elsewhere in the new Accord (for example because they do not have significant credit risk in their banking book).

Impact on UK banks

3.7 The quantitative work published by the Basel Committee and the Commission[5] has looked at the overall impact of the new Accord on banks within the G-10 and the EU. While these exercises drew on data from UK institutions, UK-specific data has not been published, due to issues of data confidentiality. The QIS3 results reveal a reduction in the Pillar 1 regulatory capital requirements for retail portfolios for both G10 and EU group 1 and 2 banks. Given the importance of retail banking activities to UK banks we would expect that the UK banking sector, as a whole, would be likely to see some reduction in regulatory capital requirements. However, UK banks may also face capital requirements as a consequence of Pillar 2, additional to those imposed by Pillar 1, where banks have risks that are not fully captured by the Pillar 1 requirements.

Dynamic effects

3.8 The QIS exercises have been crucial in calibrating the new Accord. Nevertheless the analysis did not capture the full range of impacts as it took banks' existing portfolios as given. Banks may alter their behaviour in response to the new incentives created by the proposed Accord. In addition, banks tend to hold more capital than current regulatory requirements dictate. A change in these requirements need not result, pari passu, in an equal change in actual capital held. Finally, the QIS exercises do not capture potential impacts on the wider economy. The next section considers these channels.

Behavioural effects

3.9 The new Accord is likely to lead to behavioural changes by giving incentives to banks to incorporate advances in risk measurement and management practices, and to assess more precisely capital charges in relation to risk. Banks wanting to qualify for the more advanced approaches will have an incentive to put in place more effective systems to capture the data required. This information in itself will provide a valuable analytical tool for banks and help to improve their decision-making.

[3] Tables 2-4 of the Basel Committee's QIS3 results breakdown the average change in capital requirements under each of the three approaches to credit risk by their component portfolios. Operational risk for these calculations is generally calculated on the Standardised Approach, although some banks have used the Basic Indicator Approach and one institution has used the AMA.
[4] Not all banks will benefit from moving to the more sophisticated approaches as there are higher regulatory capital requirements attached to higher risk portfolios under these approaches.
[5] The Commission has also published results for EU banks that participated in the QIS3 exercise. These results are presented on a weighted average basis, rather than a simple average basis. The paper also looks at the impact on six of the accession countries that submitted data as part of the QIS3 exercise. Results can be found on the Commission's website at http://www.europa.eu.int/comm/internal_market/regcapital/index_en.htm#qis.

3.10 International banks will have to satisfy a set of public disclosure requirements under Pillar 3, as a prerequisite for approval to use the advanced approaches. This will improve transparency and allow markets, shareholders and creditors to better monitor the conduct of banking business. In addition, Pillar 2 of the new Accord will require supervisors to review and evaluate banks' internal capital adequacy assessments and capital adequacy strategies, such as diversification in credit portfolios. All banks operating under the advanced approaches should be evaluated for their ability to account for deviations from the underlying assumptions in their own portfolios.

3.11 These elements of the three pillars underpinning the proposed new Basel Accord will lead to positive behavioural changes, increasing efficiency in the allocation of capital, and increasing global financial stability.

3.12 Basel II will also prompt banks to consider carefully how they allocate capital across a number of business lines. Some shifts in lending behaviour are expected to happen as a consequence of the changes to risk weights made by the new Basel Accord, although as we discuss below, regulatory capital is only one factor which impacts on pricing and lending decisions.

3.13 In particular, we would expect lending behaviour to be most influenced in those areas where the changes in regulatory capital requirements will be greatest. These may include:

- Mortgage and investment grade corporate lending, which will attract lower regulatory capital charges, through a reduction in risk weights;
- Lending to unrated, or non-investment grade corporates by banks, which will attract increased regulatory capital;
- There could be an increase in the classes of assets that can be used by banks as collateral, i.e. greater use of credit risk mitigants for securitisation;
- There will be a lower regulatory capital requirement for lending such as overdrafts and credit cards, i.e. forms of lending that are unsecured, revolve and are uncommitted, "Qualifying Revolvers"; and
- Banks that provide fee/service-based businesses may potentially be adversely affected because of the introduction of the new operational risk charge.

3.14 While the regulatory capital requirements may have an effect on the availability of loans and their pricing, the size of the effect will depend on other variables, such as riskiness of the loans in question, competitive structures in these markets, the firms' overall regulatory capital requirements and the demand for loans.

Question 1 – What is your assessment of the behavioural impacts of the proposed Accord?

Economic versus regulatory capital

3.15 Although banks are required to hold minimum capital requirements for regulatory purposes, the majority of banks hold total levels of capital well above the required regulatory minimum. The amount of capital that a firm assesses is prudent to hold, to meet regulatory and other business needs, is referred to as economic capital.

3.16 Banks may hold significant amounts of economic capital to avoid costs related to market discipline and supervisory intervention[6]. In addition, they can hold economic capital to: avoid the risk of losing market confidence; as insurance against difficulties in raising new capital; for strategic and reputational reasons, such as to finance mergers and acquisitions, or to satisfy rating agencies prior to expansion into other markets; and to allow flexibility in decision making[7]. Institutions will typically also hold economic capital to accommodate fluctuations in market risk requirements, which may be volatile.

3.17 The new Accord is designed to align regulatory capital more closely to economic capital. Nonetheless, banks facing a sharp rise in regulatory capital requirements following the new proposals may need to raise additional capital. In these circumstances, banks may restructure their portfolios away from those areas that attract higher regulatory capital requirements, or if the markets allow, pass on a significant proportion of the increased cost of capital to borrowers and end users. In this instance these banks may be sensitive to their regulatory minimum capital requirements.

3.18 Banks may also be sensitive to reductions in regulatory capital. Under the new Accord, regulatory capital requirements fall substantially for retail lending, reflecting the lower risk of this type of lending. Banks faced with falling regulatory capital are likely to respond in a number of way: they may use the regulatory capital savings to offset increases in other portfolios; use the capital to finance future business expansion; or reduce the overall level of economic capital. Reductions in economic capital requirements may be passed on to consumers through lower prices.

Question 2 – Are you aware of any analysis on the relationship between economic and regulatory capital that we might find useful?

Wider economic effects

3.19 The proposed Accord and its implementation in the EU through CAD3 has the potential to impact on a wide range of sectors of the economy, both directly on those required to implement the new proposals and indirectly on borrowers and other end users. Changes in economic capital and lending behaviour are likely to impact on the pricing and availability of some forms of lending. Some of these changes may lead to an expansion in lending activities, either through the reduction in cost, or by increasing the forms of credit available.

[6] Furfine (2000). http://www.bis.org/publ/work88.pdf.
[7] For a discussion of some of the reasons why banks hold levels of capital in excess of the regulatory minimum see Lindquist (2003), http://www.bis.org/bcbs/events/wkshop0303/p07lindq.pdf.

3.20 Under the new Accord, for example, the risk weight and hence regulatory capital requirement for residential mortgage lending falls. This may impact on the pricing of loans if financial institutions reduce the amount of economic capital held as a result. Increased risk weights may potentially lead to a reduction in the availability of certain types of lending, for example real estate lending to institutions that concentrate on acquisitions and developments that lack "substantial equity" or are not "sufficiently pre-leased"[8]. These attract higher risk weights under the IRB approach leading to an increase in regulatory capital.

3.21 One potential benefit of the proposed Accord is that it could reduce the probability and severity of banking crises. The banking crisis literature finds that inefficient management and imprudent lending decisions are amongst the most common causes of crises. Moreover, a recent cross-country study appears to provide evidence that stronger market discipline is able to influence banks' risk-taking behaviour. Enhanced disclosure[9] in particular is shown to provide incentives for banks to limit the risk of borrower default[10]. The potential benefit could be large. One estimate puts loan losses suffered by industrial countries between 1976-96 at 4 per cent of GDP[11]. Evidence also suggests that banking crises have become more severe and frequent, with 75 per cent of IMF member countries having experienced significant banking sector problems since the 1980s[12].

3.22 No comprehensive analysis has been undertaken on the aggregate impact of the proposed Accord on all borrowers and end users. The complexity of lending decisions makes it extremely difficulty to gauge the precise aggregate impact. A number of specific concerns have been raised over the potential impacts of the proposed Accord on particular sectors or groups that are detailed in the following chapter.

3.23 CAD3 has a greater potential to have wider economic impacts given that the EU will extend the scope of application, beyond that proposed in Basel II, in the interest of maintaining a competitive level field within the single European market. The expected extension of the regime to include all credit institutions and investment firms (consistent with the current CAD regime) means that all forms of lending and investment services[13] are potentially impacted. As a consequence, it is crucial that an assessment is made of the potential impact of the new regime on those financial institutions covered by CAD3 that were not included in the analysis undertaken by Basel.

Consequences Report

3.24 The European Council asked the Commission in March 2002 to prepare a report on the consequences of the Basel Accord for all sectors of the European economy, with particular attention to Small and Medium Sized Enterprises (SMEs)[14]. The Commission have been asked to report back to the Council and the European Parliament by the end of 2003.

[8] Termed High Volatility Commercial Real Estate (HVCRE).
[9] Rosengren (1998). http://www.bos.frb.org/economic/wp/wp1998/wp98_8.pdf.
[10] Baumann and Nier (2003), http://www.chicagofed.org/newsandevents/bankstructureconference/2003/ErlendNier&UrselBaumann.pdf.
[11] Calvo and Reinhart (1999), http://www.puaf.umd.edu/faculty/papers/reinhart/imfbook.pdf.
[12] Gupta (2002), http://www.imf.org/external/pubs/ft/wp/2000/wp0096.pdf.
[13] As defined by the Investment Services Directive
[14] http://ue.eu.int/pressData/en/ec/71025.pdf.

Question 3 – Are you aware of any analysis of the wider economic impacts which we would find helpful?

Procyclicality

3.25 A more risk-based regulatory capital regime has the potential to impact on the magnitude of economic cycles. Capital requirements could become more sensitive to changes in the credit quality of an institution's counterparties. As the credit ratings of these counterparties fall (rise) the amount of regulatory capital that needs to be held rises (falls). This could exacerbate downturns by creating credit crunches as banks have less capital available to lend to borrowers. Similarly during upswings, additional capital will become available to back further lending.

3.26 Historically, bank capital has always fluctuated over the economic cycle. This is largely the result of rising loan loss provisions at times of economic stress, which act to reduce capital buffers. The Basel Committee and the European Commission have long recognised that a combination of falling actual capital and rising required capital in the banking system could have implications for macro-economic stability. It has therefore taken a number of positive steps to reduce the extent of procyclicality in the proposed Accord[15].

3.27 First, all banks will be required to carry out stress tests under Pillar 2 which will be designed to show the impact on the firm's capital of an assumed economic downturn and provide an approximation of the amount of economic capital that a firm should hold as a margin against such eventuality. Second, the Basel Committee has flattened the IRB (Internal Ratings Based) curves, i.e. the function that relates credit quality to capital requirements. These modifications mean that a decline in ratings (e.g. in response to a deteriorating economic cycle) will now lead to a smaller change in capital requirements than in the previous draft proposals.

3.28 The Basel Committee has also emphasised the need for ratings to be set on the basis of a forward-looking view of the creditworthiness of the counterparty, rather than in relation only to the present credit rating. Pillar 2 also emphasises stress testing whereby the possibility of an economic downturn, where the economy is not already in recession, should be taken into account.

3.29 It will be necessary to keep these proposals under review during and after implementation. However, on the basis of evidence currently available, we do not expect the new Accord to exacerbate economic cycles. Rather better risk management, encouraged in the new Accord, should reduce over-lending in economic upswings.

Question 4 - Do you agree with our understanding of the impact on procyclicality?

Competition effects

3.30 The capital incentives offered by differing approaches to risk management could impact on the competitive structure of markets. There is a particular concern that competition may be distorted between those adopting the more sophisticated approaches and those not electing to adopt, or not qualifying for, those approaches. This may be

[15] See Caterineu-Rabell, Jackson and Tsomocos (2003) for a discussion of procyclicality and the new Accord http://www.bankofengland.co.uk/workingpapers/wp181.pdf.

more apparent where the capital charges differ between standardised and IRB approaches, for example for retail exposures, which could give lenders on advanced approaches significant regulatory capital advantages over banks on the RSA. Theoretically, this may also add to the barriers new entrants may face in specific product markets.

3.31 It is however important to strike the correct balance between giving the right incentives for improving risk management practices and the possible impact on competition within domestic and international markets. It is crucial that the implementation of the Basel Accord in the EU does not lead to an inconsistent application that gives rise to competitive distortion. A potential source of competitive distortion could lie in an uneven application of Pillar 2 across countries. Additionally, the increased scope of CAD3 in Europe could give rise to competitive distortions for those firms captured by the new regime vis-à-vis similar firms operating outside the EU who will be outside the scope of Basel II.

Question 5 – Do you agree with us that the Basel Accord strikes the correct balance between giving the right incentives for improving risk management practices while minimising competitive distortions?

Summary

3.32 The quantitative evidence available to date suggests that the proposed Accord will provide an increase in the risk sensitivity of regulatory capital. As expected, the proposed Accord will leave the overall level of Pillar I regulatory capital in the banking system unchanged. However, there will be a substantial re-distribution of regulatory capital, with higher risk business attracting more regulatory capital than it does now and lower risk business less. In particular, the Basel II proposals have recognised that banks were holding too much regulatory capital requirements for some forms of lending, in particular retail, under the existing Accord.

3.33 The proposed new Accord is expected to deliver a number of positive behavioural changes. In particular the new Accord will make regulatory capital requirements more risk sensitive and will provide incentives for firms to better measure and manage risk. This should ensure banks are well managed and more appropriately capitalised, so as reducing the potential risks to financial stability.

3.34 These changes may lead to increased global financial stability, contribute to reducing the number and severity of banking crisis, improve corporate governance and improve the stability in, and efficiency of, the allocation of capital. Given that banks may adjust their behaviour in response to the proposed new Accord, what will happen to overall, or total capital in the banking system is uncertain.

3.35 The new Accord is unlikely to exacerbate economic cycles as better risk management will reduce over-lending in economic upswings. However, as the Basel Committee has stated, it is important to monitor developments before and after the new regime is implemented. The impact on competitive distortions is difficult to gauge as much will depend on the application of Pillar 2 and differences in regulatory requirements of banks captured by the increased scope of CAD3 in relation to non-EU countries.

4 Detailed Issues

4.1 This chapter examines some of the issues raised in the Basel negotiaitions and EU discussions so far. Over the past five years, the Basel Committee and European Commission have made significant alterations to their respective proposals in order to mitigate some of the concerns that have been raised. For example, the Basel Committee has introduced a more favourable treatment for SME lending, reflecting concerns that the initially proposed regulatory capital requirements discouraged banks from this form of lending. In preparation for HM Treasury's negotiation of CAD3, we will want to have a full understanding of all issues, their potential impact and whether or not they are a concern. We would also welcome information on any additional points that are not raised in this chapter.

DETAILED ISSUES RAISED DURING DISCUSSIONS ON BASEL II AND CAD3

4.2 The Basel Committee's proposals have raised a number of concerns from those who perceive adverse, including unintended, consequences. Through a series of public consultations, the Basel Committee and the European Commission have been able to identify and address potential problems early on and in many cases they have modified their proposals in light of the comments received.

4.3 Nonetheless, HM Treasury needs to ensure that we understand all potential issues and concerns that interested parties have on the proposed Accord before the EU negotiation process starts. Some of these concerns have been raised in the context of the Basel process. Others arise out of the EU's implementation of the Basel Accord through CAD3.

ISSUES RAISED DURING DISCUSSIONS ON BASEL II

4.4 Concerns raised during discussions on the proposed new Accord fall into two categories: overarching regulatory and competition issues, and issues raised by borrowers and end users. While some concerns are specific to the group of institutions affected, others have been raised by a number of sectors, such as the calibration of the operational risk proposals and Pillar 2. Rather than cover these latter issues a number of times, they are only included once.

A. Overarching regulatory and competition issues

Application

4.5 An inconsistent implementation across countries would distort competition. It could also significantly increase regulatory burdens for those institutions operating in more than one country. A specific concern relates to Commission proposals requiring the calculation of capital requirements at a solo and sub-consolidated level, as well as at the aggregate holding company level. While it is important to ensure groups maintain an adequate distribution of capital within the group, the proposals could have consequences for the distribution of capital between different legal entities, and could potentially create additional reporting burdens for banks, depending on the approach to compliance and disclosure adopted.

Supervisory review process (Pillar II)

4.6 As already discussed, the new Accord introduces a second Pillar for supervisory review. While Pillar 2 is designed to make institutions consider the full extent of the risks they face, it also allows supervisors to impose additional capital requirements. This is likely if the supervisor believes financial institutions face credit, operational or market risks that have not been adequately captured under Pillar 1, or if there are significant additional risks not captured at all by Pillar 1 calculations. The existing UK regulatory framework already includes elements that are similar to the proposed Pillar 2 requirements.

4.7 Respondents to the Basel and Commission public consultations have indicated support for the principle of the supervisory review process. However, some feel that there is still too much uncertainty about how much additional capital requirements may be imposed under Pillar 2. Another concern is whether Pillar 2 requirements will be consistently applied, both across and within countries, and whether sufficient resources will be available within some supervisory bodies to undertake supervisory review effectively.

Complexity, over-prescriptiveness and cost

4.8 Concerns have also been raised that the proposed Accord involves too great a level of detail, complexity and prescription that may risk inadvertent non-compliance. In addition, some consider that the proposed Accord will stifle the ability of financial institutions to develop more sophisticated risk management models[1], and that the cost of compliance will be excessively high, outweighing the benefits of improved risk management.

[1] Basel I provides no incentive to improve risk management.

Competition impacts

4.9 As discussed earlier, the incentives offered by the more sophisticated approaches may impact on the competitive structure and innovative capacity of markets. There is a concern that competition between large and medium to small institutions will be distorted due to the latter not electing to adopt, or not qualifying[2], for the more sophisticated approaches which on average result in reduced capital requirements. From a regulatory point of view these differentiated approaches are designed to improve the incentives for firms to adopt more sophisticated risk management practices.

4.10 One area in particular where it is claimed that the proposals might have an adverse impact is on mortgage lending[3]. The Basel Committee is proposing different capital charges for retail exposures under the standardised approach compared with the IRB approaches. The differences in minimum regulatory capital charges could feed through to alter the competitive structure of the UK mortgage market, given that the UK has both a few very large, and a considerable number of very small, mortgage lenders.

4.11 This will however depend on the extent to which regulatory capital requirements influence the pricing of mortgages and the degree to which market pressure determines the levels of capital that firms, particularly smaller firms, hold. The more that it does so, the less impact changes in regulatory capital requirements would be expected to have.

B. Borrowers and end user issues

Emerging Markets

4.12 Basel II will improve the risk sensitivity of the regulatory capital requirements applied to lending to developing countries. A closer alignment of regulatory capital charges to risk may help encourage more sustainable bank lending to developing countries. Under the proposals, capital requirements for credit risk will be more explicitly linked to the credit quality of the borrower. As a result, lending to some developing countries will attract lower regulatory capital requirements, whilst lending to some others will experience higher requirements. Basel II will also remove the current bias towards short-term lending to developing countries, and the incentive for lending to lower credit rated OECD sovereigns rather than to higher-rated sovereigns outside the OECD[4].

[2] The concerns arise over the data requirements for qualification to the IRB approaches. It has been suggested that the amount of data necessary to have statistically valid models may be prohibitive for smaller firms. There are some possibilities for pooling data, but this would require firms to be operating in the same, or similar markets.
[3] Council of Mortgage Lenders (2003)
[4] Under the Current Accord loans to non-OECD sovereigns attract a 100 per cent risk weight, whilst foreign currency loans to OECD sovereigns attract a 0 per cent risk weight.

4.13 Concern has been raised by some that a closer alignment of regulatory capital to risk may increase capital requirements for cross-border and foreign currency sovereign exposures to borrowers with a low credit rating, and increase the cost of finance for these borrowers. Some have also argued that the proposed new Accord does not fully take into account diversification benefits[5]. Such benefits would arise through the lack of correlation between defaults on loans made to developed and developing countries. We understand that the Basel Committee has decided to postpone the consideration of such portfolio modelling issues until after Basel II has been finalised. Some commentators have also suggested that the risk weights for project finance, a more important source of EME finance than bank lending, are unduly high.

4.14 Although the precise impact of changes in regulatory capital on the pricing and availability of lending to emerging markets is difficult to forecast, data on market spreads suggests that banks already base the price of loans on economic, rather than regulatory, capital requirements[6]. In practice bank loans to EMEs with a credit rating below investment grade[7] are not a significant source of funding for EMEs[8].

Government backed export credits

4.15 The proposed Accord raises the potential for an increase in capital requirements for banks underwriting private sector guarantees through export credit agencies (ECAs), such as the Export Credit Guarantee Department (ECGD) in the UK. The rules allowing a guarantee to attract a zero risk weighting are to be tightened, and national supervisors will have responsibility for deciding which guarantees will qualify for capital relief (i.e. where banks would not be required to hold any capital against ECA backed assets).

4.16 Basel II proposes that the supervisor must be satisfied that the guarantee represents a direct claim on the guarantor; is explicitly linked to a specific exposure; and is irrevocable and unconditional, i.e. the guarantee must represent a full credit substitution for the guarantor's credit ratings to apply. This raises the possibility that national supervisors may have different opinions over whether an ECA meets the guarantor requirements to qualify for capital relief.

Small and Medium sized Enterprises (SMEs)

4.17 During the negotiations on the proposed Accord, concern was raised that risk weights for SMEs under the RSA would remain the same as for lending to large unrated corporates because most SME borrowers do not have external credit ratings. Where banks are using more sophisticated approaches, the concern was that they could face higher regulatory capital requirements than banks on less sophisticated approaches.

[5] Griffith-Jones, Spratt and Segoviano (2003).
[6] Bank of England (2002b).
[7] Rating of below BBB-.
[8] Bank of England (2002a) suggests that trading book assets (which are regarded as more important sources of finance) such as bonds and equities will not be affected by these proposals. In addition Emerging Market Sovereign lending only accounts for 6% of sovereign portfolios (see Table A: Based on data on consolidated claims of BIS reporting banks on countries in portfolio, March 2002).

4.18 The Basel Committee responded to these points by allowing small exposures to SMEs (below €1m) to be treated as retail rather than unrated corporate exposures[9]. The capital requirements on lending to small companies with a turnover of up to €50m have also been altered, which is expected to reduce capital requirements by 10 per cent on average and by 20 per cent for the smallest companies. As a result, lending to SMEs under the proposed new Accord is now seen by many as attracting a more favourable treatment than under existing arrangements.

Local authorities/PFI projects.

4.19 Another potential issue arises with lending to locally funded Private Finance Initiatives (PFI) projects[10]. Under the RSA proposals in Basel II, lending to Public Sector Entities (PSEs) will attract the same risk weights as inter-bank lending. Under Basel II, bank risk weights are either calculated on the risk weight of the bank (or PSE) itself, or based on a risk weight one category worse than its sovereign. Since most PSEs are unrated this would result in a 100 per cent risk weight under the first option and only 20 per cent under the second.

4.20 The proposed Accord currently gives supervisory authorities the option of two approaches for the calculation of regulatory capital requirements. Were this to be reduced to a single approach, which would be likely to be option 1, this would lead to a large increase in regulatory capital requirements, as many locally funded PFI projects in the UK do not have their own external credit ratings. This same point could also apply to local authority lending, where the authority does not have its own credit rating.

4.21 Potentially this may only be a concern for PFI projects funded from banks using the RSA. The majority of PFI projects in the UK are financed by large lenders, who are more likely to adopt the more sophisticated approaches to credit risk. These approaches rely on internal loss experience, rather than external ratings, and so would not unduly disadvantage these types of lending. There is however a concern over the impact on "Mezzanine" debt[11] and equity provisions (which receive different regulatory capital treatments under Basel II proposals) as it is expected that the regulatory capital requirements backing these loans are set to rise for PFI projects. This may impact on the liquidity in these markets.

Housing Associations

4.22 The proposed Accord should not have a negative impact on lending to Housing Associations as it allows banks to recognise the low level of loss experience on these exposures. However, the precise impact will depend on the complexity of the relationship between regulatory and economic capital.

[9] SMEs for example attract a 75% risk weight. This is, however, subject to criteria on the type of exposure, and on the size of the exposure in relation to size of the banks overall regulatory retail portfolio.

[10] These are public sector projects, such as a new hospital, which are funded and run by private businesses.

[11] Debt that incorporates equity-based options, such as warrants, with a lower-priority debt. Mezzanine debt is actually closer to equity than debt, in that the debt is usually only of importance in the event of bankruptcy.

4.23 There is however some concern that under the Foundation Internal Ratings Based Approach (FIRB), the Loss Given Default (LGD) value[12] is set at between 35 and 45 per cent for lending to housing associations. This compares with a minimum 10 per cent for residential mortgages (which must use AIRB). The industry has suggested that historically housing association lending has been low risk and should attract a lower LGD and consequently lower capital requirements. They also suggest that the FIRB approach does not provide a smooth transition from Standardised to the Advanced Internal Ratings Based approach (AIRB).

ISSUES RAISED THROUGH EU IMPLEMENTATION

4.24 In addition to those issues raised in the context of the Basel process, a number of concerns have been raised over the EU's implementation of Basel through CAD3. These can be grouped into issues relating to the transposition of Basel II into EU legislation, and issues arising from the extension in the scope of CAD3 beyond internationally active banks.

A. Issues relating to the transposition of Basel II into EU legislation.

Timing

4.25 The Commission are aiming to ensure that the new CAD3 Directive is implemented simultaneously with Basel II. If implementation is not simultaneous, compliance and operation costs for international banks will increase, particularly if they have to run different systems for their EU and non-EU operations. UK banks could also be placed at a competitive disadvantage if a prolonged delay in the introduction of an equivalent EU regime meant that institutions could benefit from locating in more favourable non-EU jurisdictions. The EU timetable will be tight, given the need to allow for events such as the European Parliament elections in 2004.

Flexibility

4.26 The Basel Committee has adopted an evolutionary approach to its work on capital requirements. This will enable banking supervision to keep pace with market innovation and future international developments. Regulation that is outdated will erode the efficiency of markets and, over time, may be damaging.

4.27 For these same reasons, it is important that any potential changes to future Basel agreements can readily be accommodated into EU legislation. The flexibility to allow current practices to be updated could be achieved through a Lamfalussy-styled Directive, or through the current comitology rules. Under either approach, there is a need to ensure that those areas that are likely to need changing more frequently are contained in the appropriate levels, or strands of the text, while at the same time allowing all those potentially impacted to be consulted.

[12] Loss Given Default values reflect the amount that would be lost should a counterparty default.

Supervisory Cooperation

4.28 An additional concern also exists as to how CAD3 will deal with supervisory arrangements and responsibilities where a consolidated banking group has a significant market presence in several Member States. The Financial Conglomerates Directive[13] requires the appointment of a lead supervisor for the regulation of a financial conglomerate[14]. Consideration needs to be given to whether similar arrangements might also be appropriate for a banking group, or whether the existing arrangements for supervisory cooperation within the European Union are sufficiently strong to meet the requirements in the proposed Directive.

B. Wider scope of CAD3

Investment firms

4.29 Basel II is designed for internationally active banks, while CAD3 is proposed to apply not only to all banks, but also to investment firms. The EU already applies the current Basel Accord to a wider range of firms than internationally-active banks[15]. Nevertheless, the wider scope raises the issue whether the calibration of specific parts of the proposed Accord is appropriate for firms whose sole business lies in these areas.

4.30 In principle, it is generally accepted that any alterations to the Basel proposals either internationally, or within the EU, would need to focus on the type of business, not on the regulatory classification of a firm, to ensure a competitive equality between banks and investment firms.

4.31 The structure of the UK investment firms sector differs from that in much of continental Europe. In parts of Europe, firms carrying out investment services are required to hold banking licenses, and investment services business lines are often integrated with the commercial banking activities of major banking groups. In the UK, there is no requirement for these firms to hold banking licenses and the UK has a very high number of specialised investment firms. There are over a thousand investment firms operating in the UK[16].

Concerns of investment firms

4.32 The investment firm community has raised several concerns with the Commission's proposals. These largely surround the risk weights for operational risk, the calibration of trading book exposures, the large exposure regime and consolidation.

[13] This is also sometimes referred to as the Financial Groups Directive.
[14] The Directive (2002/87/EC) is designed to provide for additional prudential standardised for firms operating in more than one market – for instance banking and insurance.
[15] Article 3 of Council directive 93/6/EEC (CAD) introduced minimum lump sum capital requirements for investment firms based on their business lines, depending on whether they hold client money, or are able to trade on their own account. The Directive also required these firms to calculate capital requirements for credit and market risk.
[16] Over there-quarters fall into the 50 and 125k categories.

Operational risk

4.33 Three broad issues have been raised regarding operational risk requirements. First, fears that the introduction of operational risk charges will disproportionately affect the sector, since investment firms do not benefit from the reduction in credit risk requirements elsewhere within the proposed Directive. Second, operational risk requirements are calculated as a function of investment firm income. This means that if a firm receives increased fee income in any given year then they are required to hold additional capital against operational risk, regardless of whether the true level of risk has increased (this concern applies equally to credit institutions).

4.34 Finally, it has been suggested that there are no incentives for firms to progress from the Basic Indicator to the Standardised Approach.[17] Under the latter approach, many core investment firm activities attract the higher risk weights (18 per cent for trading and sales, corporate financing, and payment and settlement). Given that the risk weight for the Basic Indicator approach is 15 per cent this implies that firms operating predominantly in these business lines would be required to hold additional capital under the more sophisticated approach.

4.35 The latest Commission consultation paper suggests an alternative treatment for limited licence[18], which retains the existing capital requirements based on expenditure, rather than switching to requirements based on income.

Trading book

4.36 Firms have also raised concerns over the treatment of credit and counterparty risk in the trading book. The restricted ability to use value at risk (VAR) models to calculate credit exposures for some business lines, including for some "repo-styled" transactions[19], and the relatively high multipliers set for VAR approaches, may mean that firms choose to use the standardised approaches instead[20]. Some firms have also suggested that subjecting collateral, which is deemed ineligible for inclusion in the banking book, but which is acceptable in the trading book, to large "haircuts" significantly increases the amount of regulatory capital needed.

[17] See Glossary for definitions. The Standardised Approach is designed to provide a more risk sensitive calibration by dividing income across 8 different business lines.
[18] 50 and 125K firms
[19] Agreements to sell bonds at one price with a simultaneous agreement to repurchase at a later date at a price agreed today.
[20] Firms are required to use the standardised risk weights included in the Basel proposal where transactions are not deemed to be repo-style transactions. These risk weights lead to higher regulatory capital requirement than firms would expect under VAR models.

4.37 The industry has also raised some other issues over the trading book requirements. First, that the calculations of regulatory capital requirements make no allowance for the short-term maturity of trading book transactions. Second, that the Commission's current proposals (not Basel) will introduce regulatory capital charges for unsettled transactions, i.e. transaction that have yet to take place, where there has previously been no requirement to hold capital. There is also an overall concern that the Basel Committee has not considered the overall calibration of the trading book, since this only represents a small proportion of many internationally active banks business.

Consolidation

4.38 Under the current CAD regime the supervisory authority is able to grant a waiver from consolidated supervision for groups not containing a credit institution provided they meet specific criteria[21]. It is possible that CAD3 could lead to a restriction in the waiver from consolidated supervision[22]. Under the proposals the waiver would only be available to firms operating in a single Member State, and then only to those firms who do not hold client money.

4.39 Were these provisions to remain in the final agreed Directive then it would lead to groups, who were previously granted a waiver, being required to meet consolidated requirements for the first time. This could result in many of these groups needing to raise additional regulatory capital, as their consolidated capital position may not be sufficient to meet all the groups' risks[23]. Firms who have grown through mergers and acquisition could potentially be the most adversely affected, as the goodwill on balance sheets is currently deducted from tier 1 capital for regulatory capital purposes.

Venture capital

4.40 The venture capital industry, i.e. firms offering equity-backed investment, is concerned about the impact of CAD3 on venture capital firms. The UK Venture Capital industry is fairly diverse, ranging from specialised partnerships (mainly limited partnerships), through ISD-regulated firms (where they undertake investment activities) to the equity investment activities of banks. For many of the smaller firms, it is our understanding that, the new requirements will have no impact, as they will remain outside the ISD regime.

4.41 Concern is however raised by those caught by the new regime over the introduction of the new operational risk charge which will unduly increase their regulatory capital requirements. One concern is that the use of income as a measure of operational risk essentially imposes a tax on the most successful firms. As fee income rises, firms are required to hold more regulatory capital regardless of the level of risk. The Commission has however put forward some proposals that mean "limited license" firms can continue to calculate their capital on an expenditure-based approach.

[21] Article 7 of the CAD directive (93/6/EEC) lays out the rules on consolidated supervision.
[22] Article 21of the Commission's CP3 text.
[23] This may be the result of the holding company having assets which are not deemed eligible for the calculation of prudential capital.

4.42 There is also concern, shared by many types of institutions, that insurance should be taken into account as a risk mitigant under all approaches to operational risk rather than just under the advanced approach (this issue is common across sectors). While it is generally agreed that firms should hold some insurance against operational risk, which is regarded as a normal cost of doing business (as part of contingency planning), it is suggested by some that the proposed regime offers no incentives for firms to hold insurance as well as capital, as the regulatory capital calculations for Basic Indicator and Standardised Approaches make no allowances for the insurance cover (while up to 20% is allowed as an offset against capital required in the calculation for Advanced Measurement Approaches). Finally, the industry would like the treatment that banks have been granted towards making bank loans to SMEs to be extended to venture capital investments to small firms.

Commodity derivatives

4.43 The new Investment Services Directive[24] (ISD) is currently being negotiated. The proposed extension of ISD instruments to include commodity derivatives could lead to increased regulatory capital requirements for certain market participants. While some market participants, such as banks and investment firms, are already meeting those requirements and others may be able to benefit to some extent from the proposed exemptions (e.g. for ancillary business), the economic impact for other firms could potentially be severe. Those potentially impacted include traders of "soft" commodities, such as cocoa; energy suppliers, such as oil companies; processors; refiners; growers and producers; and manufacturers.

4.44 The main concerns are: the appropriateness of applying bank capital rules to non-bank entities, especially commodity trade organisations; and whether it is appropriate to apply rules designed to cover securities dealings, to dealings in cash or physically settled commodity derivatives for all market participants. Many of the institutions caught be the proposals would be required to raise significant amounts of additional capital, as many of their assets would be deemed illiquid and therefore cannot be included as regulatory capital.

Summary

4.45 This Chapter has highlighted the major potential issues and concerns that interested parties have expressed on the proposed Accord. Some of these concerns have been raised in the context of the Basel process; however, many arise out of the EU's implementation of the Basel Accord through CAD3.

4.46 HM Treasury would like to know and understand all potential issues and concerns that all interested parties have on the proposed Accord before the negotiations process starts. As a consequence, we would be interested in hearing from interested parties who have views on either the issues this Chapter has highlighted, or on any other issues that are not documented.

[24] The Investment Services Directive (ISD) sets out the definition of investment firm activities. With some exceptions, firms caught by the scope of the ISD will be required to meet the capital requirements of the new CAD regime.

Questions:

(6) Do you agree with our understanding on each of these issues?

(7) Are there other issues that we have not documented that are equally matters of concern?

(8) Are there issues raised in this paper which the industry believe are no longer a concern?

5 Initial RIA

DRAFT REGULATORY IMPACT ASSESSMENT (RIA)

5.1 This chapter sets out an initial regulatory impact assessment (RIA) for the European Commission's proposed implementation of the new Basel Accord (Basel II) through the Directive commonly referred to as CAD3 (Capital Adequacy Directive 3). The purpose of the RIA is to provide an overview of the proposals, and to identify the sectors potentially impacted and the expected costs and benefits that arise.

TITLE OF THE PROPOSAL/PROPOSED REGULATION

5.2 CAD3 is the Directive through which the European Union is expected to implement Basel II. It has not yet been adopted by the Commission, but there has been consultation on a pre-adoption draft.

PURPOSE AND INTENDED EFFECT OF MEASURE

Objective

5.3 The purpose of Basel II is to provide a comprehensive approach to the assessment of capital required to meet the risks faced by internationally active banks. This is to be achieved through three interlocking pillars: setting the amount of regulatory capital that an institution is expected to hold (Pillar 1: minimum capital requirements); providing a framework for supervisory review of the process and capital held (Pillar 2: supervisory review); and transparency requirements (Pillar 3: disclosure requirements and market discipline).

5.4 The EU implementation expands the scope of application, in the interest of maintaining a competitive level playing field, to include all credit institutions and investment firms. The impact of the new proposals will predominantly fall on credit institutions and investment firms, but through them, the proposals could potentially affect borrowers and other end users, and the economy as a whole.

Background

5.5 The current regime in the EU (CAD2) is based on the original 1988 Basel Accord and the subsequent 1996 market risk amendment. The current Accord has served well and provided a stabilising force for the international banking sector, but the global financial system has become increasingly complex over the past 15 years. Regulation that is outdated will continue to erode the efficiency of markets and, over time, may be damaging.

5.6 There are also concerns that the current Accord and EU regime do not provide sufficient incentives for good risk management. The regulatory capital requirements do not provide sufficient differentiation between the riskiness of different counterparties and also introduce some distortions to sovereign and inter-bank lending, where risk weights currently depend on whether the country is a member of the OECD rather than the underlying risk of the counterparty.

Risk Assessment

5.7 Failure to update the EU regime may increase the probability of major bank failures occurring in the future. Should a major banking group collapse because it does not have sufficient capital to adequately cover the risks it faces, then this could feed through to other banks and sectors of the global economy, with potential impacts on economic growth and financial stability.

OPTIONS

5.8 As with all European legislation, the proposals on how to implement Basel II in the EU are the prerogative of the European Commission. Member States may influence debate, through Council or Parliament, once formal proposals have been made. Based on other countries' implementation plans, there appears to be three broadly different ways that the Commission could decide to implement the new Accord within the EU (the options below are therefore illustrative of these broad options).

Do Nothing

5.9 Remain on the current CAD2 regime. This option has potential competitive disadvantages for EU-based internationally active banks competing against non-EU banks that implement the proposed Basel II Accord. This disadvantage could arise through the reduced regulatory capital requirements available under Basel II, for instance mortgage lending under the Basel II proposals attracts a 35 per cent risk weight (which may be lower still for firms on the more sophisticated approaches) compared to 50 per cent under the current Accord.

5.10 There may however be regulatory capital advantages for some firms (particularly in countries where banks relate prices more to regulatory rather than economic capital) from remaining on the existing regime, particularly where their counterparties are more risky, as they would not be required to increase their regulatory capital requirements to reflect the riskiness of these portfolios.

5.11 EU financial groups operating in non-EU countries will still need to comply with Basel II requirements where those countries have adopted the proposed Accord. This would lead to an increase in compliance costs for these groups, as they would need to meet the requirements of both the current EU regime and Basel II.

5.12 Implementation of a new EU regime is also necessary to overcome the concerns raised over the existing Accord[1], such as the lack of risk sensitivity, incentives for short-term lending to non-OECD banks etc. The "do nothing" option would also forego the enhancement of financial stability expected from implementing the new Basel framework.

[1] See Chapter 2 for more details on the concerns raised.

Only implement for internationally active banks

5.13 An alternative would be to implement the Accord, only for internationally active banks. This option would be more consistent with the US' planned implementation of Basel II[2]. This approach would not, however, appear to be consistent with the objective of completing the single market for financial services within the EU, since it would not provide a level playing field.

5.14 This option could also potentially create competitive distortions with smaller institutions unable to benefit from the regulatory capital reductions available to larger firms using the more sophisticated approaches (or to firms on the revised standardised approach involved in retail activities). This could potentially harm smaller firms to the extent that they would be unable to compete if the regulatory capital savings were passed on in forms of lower prices[3]. Smaller firms may also become targets for acquisition, since larger firms offering similar business may see capital benefits from acquiring their portfolios and moving them into the new framework.

5.15 This approach could also increase regulatory arbitrage, with higher risk portfolios being moved to smaller firms not covered by the new requirements, since the regulatory capital requirements are unlikely to be as large. This has the potential of reducing financial stability within the EU, by undermining the benefits of increased risk sensitivity.

All credit institutions and investment firms

5.16 This is the option currently being proposed by the European Commission. Under this option the scope of the Basel II regime would be expanded to include all credit institutions and investment firms, consistent with the treatment applied in the current regime.

5.17 This option is designed to provide a competitive level playing field between institutions operating in the same markets and reduces regulatory arbitrage. However there are some concerns raised[4] that there may be some unintended consequences of the wider application. They suggest that the calibration may not be appropriate as some business lines, which may be perceived as more risky for an internationally active bank, may not be as risky for a firm whose sole business is focused on these activities[5].

COSTS AND BENEFITS

Business sectors affected

5.18 The proposals will directly impact on all banks, building societies, investment firms, as well as some venture capital (equity finance) firms and commodity derivatives dealers[6] and may indirectly impact on all borrowers and end users through changes in the price and availability of banking and investment services. There are 960 banks, 65 building societies, in excess of 1100 investment firms, and over 300 venture capital firms operating in the UK[7]. Many of these institutions are likely to be small specialist institutions operating in a single business line, or restricted geographical areas.

[2] See Chapter 2, paragraph 2.36 for more details.
[3] See Chapter 3 for a discussion of the difference between Economic and Regulatory capital.
[4] See Chapter 4 for a discussion of these concerns.
[5] Concern has been raised over the risk weights for the Standardised Approach provide no incentive to adopt more sophisticated risk management techniques, as capital requirements increase from 15 to 18 per cent for some business lines.
[6] Some commodity derivative dealers may be captured through the expanded definition of financial instruments in the Investment Services Directive currently under negotiation.
[7] Some institutions may fall in more than one category

5.19 Today there is currently £188 billion of regulatory capital held by banks and building societies in the UK[8]. This total is expected to broadly stay the same, or possibly fall, following implementation of CAD3 for the reasons outlined in Chapter 3. However, there will be a substantial re-distribution of regulatory capital, with higher risk business attracting more capital than it does now and lower risk business less. There will also be a greater alignment of economic and regulatory capital. An improvement in the resource allocation by the sector as whole should also have benefits which feed through to the wider economy.

5.20 Any impact on consumers and other end users will be felt through changes in the pricing and the availability of credit. Potential changes could be positive or negative, and will depend on the adjustment of a financial institution's economic capital in response to changes in regulatory capital. The changes are more likely to impact on consumers in countries who base the price of loans on regulatory capital. The CAD3 proposals are also designed to lead to a more stable banking system, which should be of prime concern to all consumers.

Assumptions

5.21 A better alignment of economic and regulatory capital brought about under these proposals should have a relatively small impact on most borrowers and other end users, as banks should already be basing lending decisions on the underlying counterparty risk. Chapter 3 provides a more detailed discussion of the interaction between economic and regulatory capital and of the potential behavioural impacts of Basel II and CAD3.

Benefits

5.22 The new regime should lead to a reduced risk of financial crisis through better alignment of regulatory capital and risk (see Chapter 3). The proposals also offer incentives for better management of risk, which should improve lending decisions and reduce the likelihood of a credit crunch.

5.23 The proposals also reduce the regulatory capital requirements for retail lending and for high quality corporate portfolios, potentially feeding through to lower pricing for loans for these borrowers.

Costs

5.24 The costs arising from the proposals are difficult to quantify. Firms will clearly need to invest money in building and operating more advanced systems in order to qualify for the more sophisticated approaches. There are also likely to be ongoing staff costs, as new staff will be needed to maintain these systems (this could also involve additional training and recruitment costs). The costs for implementation of the more sophisticated approaches in the proposals are likely to fall over time as firms may be able to buy more "off the shelf" solutions to some IT systems.

5.25 It is also however uncertain how much firms would have otherwise invested in these internal processes in the absence of the proposals and how much represents projects delayed by the development of the new proposals. To include all of the new systems expenditure as a cost of CAD3/Basel II would overstate the actual costs of implementation.

[8] Regulatory capital actually held as of 1 January 2001.

5.26 Other potential costs arising from CAD3 include increased costs in disclosing information under Pillar 3, where these are above current practice, and additional supervisory staff for the FSA in order to ensure firms are compliant with the regime. Some firms may also face costs in order to raise additional capital if their current regulatory capital is below the new minima, or if they wish to maintain excess capital for other reasons (see Chapter 3).

EQUITY AND FAIRNESS

5.27 There have been some concerns raised about the impact of the new proposals on investment firms and smaller firms in particular. The capital requirements in the new Basel Accord have been calibrated according to the type of activity carried out by internationally active banks. Some firms, particularly investment firms, who concentrate in selected business lines believe that the calibration leads to disproportionately large increases in capital requirements, which do not reflect the risk of the activity. Concerns have also been raised by the smaller credit institutions over the potential competitive advantages offered to larger institutions under the more sophisticated approaches to credit and operational risk. Smaller institutions may not be able to adopt these approaches as a result of cost or data concerns.

SMALL FIRMS IMPACT TEST

"Do nothing" option and implementation for only internationally active banks

5.28 The impact on small firms would vary across the different options. The "do nothing" option would have no direct impact on small firms, as the regime would remain unchanged. Implementation of the new regime for only internationally active banks could, however have a potentially negative impact on small institutions. They could be placed at a competitive disadvantage relative to larger firms, who could reduce prices by passing regulatory capital savings on to consumers (particularly for retail lending where the proposed new Accord offers substantial regulatory capital savings over the existing regime).

5.29 Non-implementation of the new proposals for smaller firms would also leave in place the distortions in the existing Accord, which are harmful to smaller firms. For smaller credit institutions, which are predominately retail-focussed, non-implementation would deny these firms the reduced regulatory capital for these forms of lending, under the new Basel Accord.

5.30 It could also imply that the benefits of reduced regulatory capital requirements for lending to Small and Medium sized Enterprises (which may result in a reduction in economic capital) could not be passed onto these firms in the form of lower priced loans and overdrafts.

Implement for all credit institutions and investment firms

5.31 The application of the new regime for all firms could still have some adverse consequences for small firms. They would face increased compliance costs under CAD3, but this may be offset by reduced regulatory capital requirements for some business lines, such as retail lending. There are still some concerns over the competitive equality between banks operating on the Revised Standardised Approach and the more sophisticated approach (see Chapters 3 and 4), although the Basel Committee has made some modifications to the proposals, which reduces the regulatory capital differences in mortgage lending.

COMPETITION ASSESSMENT

5.32 As discussed in the previous sections there are different competitive concerns arising under each option. The "Do nothing" option would have a negative impact on the competitive position of EU banking institutions in general as they would not benefit from the reduction in regulatory capital requirements available for lending to lower risk counterparties under the more sophisticated approaches. The "Do nothing" option would not overcome those distortions, which exist in the 1988 Accord (such as the OECD/Non-OECD split) and would not allow for lower prices to be passed onto EU consumers.

5.33 The second option, would maintain the competitive position of internationally active EU banks, vis-à-vis their non-EU competitors. As discussed above this could potentially have a negative impact on competition between these institutions and the smaller firms not covered by the new regime (see above). The application of the new regime to all credit institutions and investment firms could also potentially give rise to these competitive distortions (see Chapter 4), but to a lesser extent as smaller institutions would benefit from the reduced regulatory capital requirement for lending to lower risk counterparties (particularly for retail transactions), even under the less sophisticated approaches.

ENFORCEMENT AND SANCTIONS

5.34 The FSA would be largely responsible for implementing CAD3 through their prudential source book rules. The Directive would allow them to increase capital requirements, under Pillar 2, if they believed that risks were either not captured, or not sufficiently captured, by the Pillar 1 calculations. The FSA would also retain the current supervisory tools available to them under existing legislation.

CONSULTATION

5.35 The Basel Committee has carried out several consultations on the proposals over the last five years: the latest full consultation, CP3, concluded on 31 July 2003. The European Commission has also consulted interested parties on the proposals for CAD3; the last consultation exercise ended on the 22 October 2003.

5.36 In the UK, the FSA has held an industry advisory group on the Basel/Commission proposals and has issued their first consultation paper on their proposed implementation; this initial exercise concluded in mid November. The FSA will seek further formal consultation on its proposed Prudential Source Book text, the rules implementing the new Accord in the UK, over the next year. This document represents HM Treasury's first consultation on the CAD3 proposals and will form the basis of ongoing discussions.

MONITORING AND REVIEW

5.37 Basel II provides for a review of the proposed new Accord, two years after adoption. At this point it will be decided whether the floors on regulatory capital introduced for the transition period will be removed. The Basel Committee also proposes that the new Accord will follow an evolutionary approach and as such is likely to be updated more frequently (some work has already been identified for consideration once the proposed Accord is finalised). The European Commission has also stated that the technical provisions contained within the annexes of CAD3 will be amendable through comitology and will need to be updated in-line with developments in Basel.

6 Conclusions

6.1 This consultation document has outlined the background to the existing Accord and why the Basel Committee is updating the current regulatory capital requirements. It has described the latest proposals and how they will be implemented in the EU through the CAD3 Directive. This document has also provided a summary of the analysis on the potential impacts of the new proposals, looking at both the impact on banks as captured through the Basel Committee's Quantitative Impact Studies (QIS); and the potential impacts on the wider economy. It has also looked at issues raised during the Basel and European Commission consultations and set out an initial Regulatory Impact Assessment.

New Basel Accord

6.2 The 1988 Basel Accord has served us well, providing a stabilising force for the international banking system. However, there have been a number of shortcomings in terms of the risk sensitivity resulting from the Accord. The proposed new Accord, Basel II, is designed to address these shortcomings and provide a comprehensive approach to addressing risk. Basel II is based on three interlocking pillars – minimum capital requirements, supervisory review and market discipline.

6.3 The timetable for the adoption of the new Directive will be extremely tight. The Basel Committee aims to publish a finalised Accord by no later than mid-year 2004. Once the Basel II Accord is finalised we expect the Commission to begin the process of issuing a formal proposal. With the Parliamentary elections taking place in the EU next year, the first reading might not take place before early 2005. The Directive will need to be adopted by the end of 2005, to ensure CAD3 is implemented on 31 December 2006, in parallel with the Basel Accord.

Analysis of potential impacts

6.4 The Basel Committee's latest Quantitative Impact Study, QIS3, shows that the Committee has met its objectives increasing the risk sensitivity, while leaving unchanged the overall level of capital in the banking system. As intended however, there is a substantial redistribution of capital, with higher risk business attracting more capital than currently and the capital requirements for lower risk business reduced. The results also show that there is a wide variation in the extent to which capital requirements rise or fall for individual banks, based on their current mix of portfolios and the approaches which they are able to adopt.

6.5 The QIS exercises have been crucial in calibrating the new Accord. They do not, however, capture the full range of impacts as they take banks' existing portfolios as given. The new Accord is likely to lead to a fundamental change in behaviour by giving incentives to banks to incorporate advances in risk measurement and management practices. Banks are likely to respond to these new incentives through changes in lending behaviour.

6.6 The new Accord is also likely to have wider impacts on the economy through impacting on the probability and severity of financial crises, on the procyclicality of economic cycles, and on competition. The Basel Committee has been concerned with the potential impact of a more risk sensitive Accord on procyclicality, and has taken steps to attenuate this. The impact on competitive distortions is more difficult to gauge and will depend on the application of Pillar 2 and any differences in regulatory requirements applied to financial institutions captured by the increased scope of CAD3, relative to similar institutions in non-EU countries.

Detailed Issues

6.7 The Basel Committee's proposals have raised a number of concerns from various interested parties, who are concerned with potential adverse or unintended consequences of the new Accord. The document outlines these issues, many of which arise from the implementation of the Basel Accord through CAD3.

6.8 The concerns raised fall into four broad categories:

- Overarching regulatory and competition issues;
- Impacts on borrowers and end users;
- Issues relating to the implementation of the new Basel Accord, through the CAD3 directive; and
- Issues relating to the wider scope of the CAD3 regime.

6.9 HM Treasury needs to ensure that we understand all potential issues and concerns, before formal negotiations begin on the Commission's proposals. We therefore welcome comments on the issues raised in this consultation document and on any others that we may not currently be aware of.

Regulatory Impact Assessment

6.10 This document also contains an initial Regulatory Impact Assessment on the Commission's proposed implementation. The purpose of this RIA is to provide an overview setting out the sectors potentially impacted by the proposals and the expected costs and benefits that arise. We would welcome any comments that individuals may have on the contents of this assessment and any analysis that will help us to develop the RIA as the proposals progress.

Process

6.11 Responses to the questions raised in this document (repeated below), or on other issues surrounding the European Commission's proposed implementation of the new Basel Accord, are requested by Friday 5 March 2004. Over the consultation period we intend to hold a series of roundtable discussions on the contents of this document and on the issues raised. These roundtables will form the first stage of an ongoing dialogue with interested parties on the Commission's proposals.

6.12 The following questions were raised throughout the document:

From Chapter 3

Question 1 – What is your assessment of the behavioural impacts of the proposed Accord?

Question 2 – Are you aware of any analysis on the relationship between economic and regulatory capital that we might find useful?

Question 3 – Are you aware of any analysis of the wider economic impacts which we would find helpful?

Question 4 - Do you agree with our understanding of the impact on procyclicality?

Question 5 – Do you agree with us that the Basel Accord strikes the correct balance between giving the right incentives for improving risk management practices while minimising competitive distortions?

From Chapter 4:

Question 6 - Do you agree with our understanding on each of these issues?

Question 7 - Are there other issues that we have not documented that are equally matters of concern?

Question 8 – Are there issues raised in this paper that industry believe are no longer a concern?

GLOSSARY

50k Investment Firms	Investment firms that are not authorised to hold client money or securities, to deal for their own account, or to underwrite issues on affirm commitment basis. These firms are required to hold initial capital of €50,000.
125K Investment Firms	Investment firms which hold clients' money and/or securities and which offer to: (a) receive and transmit investor's orders for financial instruments; (b) execute investor's orders for financial instruments; or (c) manage individual portfolios of investments in financial instruments. They are required to hold initial capital of €125,000 (provided they do not deal for their own account, or underwrite issues of financial instrument on a firm commitment basis).
730K Investment Firms	Defined as 125K firms, except these firms are allowed to trade for their own account and underwrite issues of financial instruments on a firm commitment basis. These firms are required to hold initial capital of €730,000.
Adequate capital	The amount of capital a firm needs to cover all the risks it faces. This would be a combination of the requirements for credit, market and operational risk and any additional capital required for risks captured under Pillar 2.
Advanced Internal Ratings Based Approach (AIRB)	The most sophisticated of the three approaches available for the measurement of credit risk. It involves the use of internal models based on internally generated parameters for the calculation of regulatory capital requirements.
Advanced Measurement Approach (AMA)	The most sophisticated of the three approaches available for operational risk. Under AMA, the institutions internal operational risk models will generate the regulatory capital requirements. These models will need to meet set quantative and qualitative criteria.
Advanced Notice of Proposed Rulemaking (ANPR)	The United States' name for a consultation paper on implementation. In this document it specifically refers to the ANPR issued on the implementation of the new Basel Accord in the US.
Aggregate holding company	The company with ultimate control over the subsidiaries and sub groups within a financial group.
Appropriate systems	The tools and procedures that a firm has in place to manage the risks it faces in operating. The Accord attempts to ensure that these systems are appropriately designed to deal with the risks faced by the institution or group.
Banking book	Exposures arising through the issuing of credit to individuals, corporate entities, other non-corporate bodies, governments and countries.

GLOSSARY

Basel Accord	The 1988 Accord setting out the initial framework for the assessment of regulatory capital requirements for credit risk, subsequently amended in 1996 to add capital requirements for market risk.
Basel II	The name used to describe the proposed new Accord currently under discussion.
Basel Committee	The Committee established by the G-10 in 1974, with representation from individual countries' central banks and supervisory authorities, which formulates broad supervisory standards and guidelines and recommends statements of best practice.
Basic Indicators Approach (BIA)	The most simplistic of the three approaches to the measurement of operational risk. Under this method a firm calculates its operational risk regulatory capital requirements by taking a single risk-weighted (15 per cent for the majority of firms and 12 per cent for firms operating on a limited license) multiple of a three-year average of gross income to produce their regulatory capital requirements.
Business cycle	A cycle of economic activity around a trend growth rate typically characterised by a trough, upswing, peak and downswing.
Capital adequacy	The measure of the sufficiency of a firm to meet its business and regulatory obligations.
CAD	CAD or Capital Adequacy Directive was the name given to the 1993 European Directive (93/6/EEC) expanding the Basel regime to Investment Firms as well as introducing regulatory capital requirements for market risk.
Capital Assessment Process	Process under which a firm assesses whether it has adequate capital to meet its requirements.
Capital ratios	The ratio of an institution's own capital resources to its risk weighted assets.
Credit risk	The risk that a borrower (counterparty) will not repay a loan.
Co-decision	The process under which European Financial Service Directives are adopted. The process requires agreement to be reached in both the European Parliament and in the Council (ECOFIN).
Consolidated Banking Directive	European Directive (2000/12/EC) that consolidated previous EC directives on banking including the Solvency Ratios Directive. The directive also contains the current provisions for the large exposure regime.
Collateralised transactions	A transaction for which the borrower provides assets (physical or financial) as security against part, or the whole value, of a loan. The assets would become the property of the lender should the borrower fail to repay the loan; for example a mortgage, in which the property provides the collateral.
Comitology	The delegated authority process under which the technical provisions of a directive can be amended.

Consolidated supervision	The requirement to calculate capital requirements for an entire financial group rather than for an individual firm. This process is to ensure that the group as a whole has capital adequate to cover the risks in its regulated and unregulated entities.
Core capital	Also called Tier 1 capital. The equity (share capital) and retained earnings of a financial institution.
Corporate lending	Lending by a financial institution that is made to a incorporated company rather than to an individual.
Council Working Groups	Groups of Member State officials. Chaired by the EU Presidency and set up to discuss specific European legislative proposals before discussions by Council.
Counterparty	The party to which a financial institution has loaned money, offered an overdraft, accepted a deposit etc.
Credit concentration	A concentration of credit exposures to a single counterparty, sector or country, which may have the potential to increase the probability of co-default.
Credit derivatives	Products such as futures, options and swaps, which derive their values from the movement in price of the underlying bank assets on which they are secured.
Credit institution	An undertaking that receives deposits or other repayable funds from the public and grants credits from its own accounts (from the Consolidated Banking Directive).
Credit Risk Mitigation (CRM)	Techniques to reduce the credit risks to which a financial institution is exposed. Exposures may be collateralised, they may be guaranteed by a third party, or an institution may purchase a credit derivative to offset various forms of credit risk. Additionally they may agree to net loans owed to them against deposits from the same counterparty.
Default risk	The risk of failure by a party to fulfil its obligations on a loan repayment, future or options contract when they fall due.
Disclosure requirements	The requirements under Pillar 3 for a financial institution / group to disclose information demonstrating how they meet their capital requirements.
Economic capital	The amount of capital that a financial institution deems to be appropriate based on their own internal assessment, to meet the needs of their business undertaking.
Economic capital modelling	The use of internal models and processes to calculate the economic capital requirements of a firm.

European Commission	The European Commission embodies and upholds the general interests of the European Union. It is represented by 20 appointed Commissioners (including its President) and has the sole right of initiative on the proposal of legislation.
European Council	The European Council is formed of representatives of Member States governments (usually Ministers) who meet to discuss issues of importance and agree legislative proposals. For Financial Services the main Council is ECOFIN (Economic and Financial Affairs committee) at which the Chancellor represents the UK.
Emerging Market Economy (EME)	Also referred to as a developing country. An EME is an economy with low-to-middle per capita income.
Expenditure Based Requirements (EBR)	The current regulatory capital requirement for investment firms. Under this approach firms are required to hold capital equivalent to 6 weeks gross expenditure or 13 weeks fixed overheads (depending on jurisdiction).
Export Credit Agency (ECA)	An institution responsible for financing arrangement allowing a foreign buyer of exported goods and/or services to defer payment over a period of time, often providing an insurance or guarantee arrangement.
Exposure at Default (EAD)	The expected exposure of a credit institution, for a given loan upon default of the counterparty.
External credit rating	An assessment of a company's credit worthiness produced by an agency. These ratings are produced for a company on a fee-based basis.
Financial Conglomerate	A financial group with cross-sectoral financial activities. For instance a financial conglomerate may contain a combination of credit institutions, investment firms and insurance operations.
Foundation Internal Ratings Based Approach (FIRB)	The intermediate of the three approaches to credit risk. Firms are required to use internal models to calculate their regulatory capital requirements. The supervisory authority will supply some of the parameters for these models.
Goodwill	The difference between the total value of a business and the value of the net assets on its balance sheet. The value represents the ability of the business to generate profits and cash in the future.
Guarantees	An agreement by a third party to cover the potential loss to a credit institution should a specified counterparty default on their commitments.
High volatility commercial real estate (HVCRE)	Significant concentrations in certain property (normally commercial) acquisitions, development and construction loans that lack "substantial equity" or are not "significantly pre-leased". For instance lending where the performance of the lending will very much depend on the success of the underlying investment.
Inter-bank lending	Lending by one bank to another.

Interest rate risk	Interest rate risk is the exposure of a bank's financial condition to adverse movements in interest rates. Accepting this risk is a normal part of banking and can be an important source of profitability and shareholder value.
Internal controls	These include audits or other appropriate oversight mechanisms to ensure the integrity of the information used by senior officials in overseeing compliance with policies and limits.
Internal estimates	Internal estimates are those parameters for use in models that have been generated by using the firms own loss experiences. These estimates are normally subject to some qualitative criteria.
Internal limits	Self-imposed parameters designed to set boundaries for the levels of risks or exposure permitted. For instance a firm may limit the value of the amount of exposure it is allowed to have to some business lines.
Internal models or processes	The financial institutions process for generating estimates of risk components for use in the calculation of regulatory or economic capital requirements. These models are usually computer simulations that use past data or equivalent cohorts as a guide to estimating the characteristics of a type of risk. For instance past data on mortgage defaults may be used to generate the probability of default of a new mortgage borrower.
Internal Rating Based (IRB)	Approaches to credit risk under which a firm may use internal estimates to generate risk components for use in their credit risk regulatory capital requirements. There are two approaches: Foundation (FIRB) and Advanced (AIRB).
Internal risk management	A financial institution's internal process/strategy for handling the risk inherent in their operations. This will also include how management are involved in the monitoring of these risks and what systems the organisation has to reduce the probability or severity of risk events.
Investment firm	A firm responsible for dealing, arranging and managing qualifying investment items as defined within the scope of the Investment Services Directive.
Investment Services Directive (ISD)	Council Directive (1993/22/EEC). The Directive sets the legislative framework for investment firms and securities markets in the EU. The Directive is currently under revision.
Lamfalussy	The new processes for the development of legislation adopted for the securities sector and in the process of being implemented for banking and insurance. Under this approach, framework directives are adopted under the current co-decision procedures, but measures designed to implement the detailed requirements are approved through comitology.
Loss Given Default (LGD)	The Loss Given Default reflects the amount that would be lost should a counterparty default.

Market discipline	Pillar 3 of the new Accord. Encouragement made to financial institutions to improve effective risk management by allowing for comparison, through disclosure requirements, of the performance across the sectors (credit institutions and investment firms).
Market disclosure	See disclosure requirements.
Market risk	The risk of losses of on and off balance sheet positions arising from changes in market price. For instance if any individual buys shares at the current market price, the risk that they may fall in price.
Maturity	The remaining time in years that a borrower is permitted to take to fully discharge their contractual obligation (principal, interest and fees) under the terms of a loan agreement.
Minimum capital requirements	The minimum amount of regulatory capital that a financial institution must hold to meet the Pillar 1 requirements for credit, market and operational risk.
Minimum standards	The minimum requirements that a regime must meet in order to meet the requirements of the legislation.
Mortgage backed bonds	A form of capital raising instrument issued by a financial institution that is secured on a given portfolio of mortgages on its balance sheet. Should the firm be wound up the bondholders would have claim on these assets in preference to other creditors.
Netting of transactions	The ability of a firm to reduce its credit risk exposures, by offsetting the value of any deposits against loans to the same counterparty. For instance if an individual has deposits of £100 and borrowings of £300, then a bank could calculate its capital requirement by assuming the individual had only borrowed £200 (£300-£100).
OECD	Organisation for Economic Co-operation and Development. Group of 30 member countries sharing a commitment to democratic government and the market economy. With active relationships with some 70 other countries, NGOs and civil society, it has a global reach.
Operational risk	The risks associated with the internal failure of systems or people, or the risk arising from external events. These are risk events such as internal fraud, the failure of internal IT infrastructure (e.g. for payment and settlement) or external factors such as terrorism, which have the potential to impact on the institutions ability to carry out its business.
Own Funds Directive	Directive (1989/229/EC). The Directive introduced harmonised rules for the definition of tier 1 and tier 2 capital within the EU, implementing the requirements laid out in the 1988 Basel Accord.
Pillar I	See also Minimum Capital Requirements. The part of the new Basel Accord, which sets out the calculations of regulatory capital requirements for credit, market and operational risk.

Pillar 2	See also Supervisory Review. The part of the new Basel Accord which sets out the process by which a firm should review its overall capital adequacy and the processes under which the supervisors evaluate how well financial institutions are assessing their risks.
Pillar 3	See also Market Discipline and Disclosure. The part of the new Basel Accord, which sets out the disclosure requirements of the new regime.
Private Finance Initative (PFI)	Public Sector contracts to purchase quality services on a long-term basis so as to take advantage of private sector management skills incentivised by having private finance at risk.
Probability of Default (PD)	The probability that a counterparty will fail to meet their obligations under a contractual agreement.
Provisions	These are liabilities where the company is uncertain as to the amount, or timing of the expected future costs.
Public Sector Entity (PSE)	Any public sector entity, including regional governments, councils and local authorities that has independent revenue raising powers.
Qualifying revolvers	Forms of lending that are unsecured, revolve (i.e. they do not represent a fixed amount for a fixed time, can be added to and reduced), and are uncommitted (i.e. able to be withdrawn at any time). An example would be a credit card or an overdraft facility.
QIS 3	The third Quantitative Impact Study carried out by the Basel Committee, between November 2002 and February 2003, to assess the calibration of the latest Basel Proposals. Essentially firms were required to apply proposed rules to their existing portfolios. All firms needed to complete the Basic approaches, but could also submit data on the more sophisticated approaches.
Recognised rating agency	An agency that produces credit ratings, which meets the criteria laid down in the Directive. Ratings from these agencies may be used to calculate the capital requirements for credit risk under the revised standardised approach.
Regulatory capital requirements	The minimum capital that a financial institution is expected to hold against the risks it faces. This minimum is determined by the financial institutions calculations for credit, market and operational risk, plus any additional capital deemed appropriate under Pillar 2.
Regulatory Impact Assessment (RIA)	A tool that informs policy decisions. It is an assessment of the costs, benefits and risks of a policy option. It is not specific to the UK – many countries use a similar analysis to assess their proposed regulations and large organisations appraise their investment decisions in a similar way.
Reserves	Those resources that a financial institution holds on its balance sheet above the level necessary to carry on its current operations. These reserves are held against uncertainty and also to take advantage of future opportunities.

Residential property	Property is used for domestic occupation rather than commercial purposes. This would represent housing stock purchased for self-occupancy or for residential letting.
Retail lending/exposures	Loans and other commercial lending made to individuals or small businesses (typically not private or public limited companies).
Revised Standardised Approach to credit risk (RSA)	Revised Standardised or Standardised Approach to credit risk is the most basic approach to credit risk in the new Basel Accord. This approach is similar to the current Basel requirements, with regulatory capital requirements calculated by multiplying the value of a firm's exposure by an appropriate risk weight. The risk weights under the revised standardised approach are calculated by using external credit ratings that map onto defined credit steps.
Risk assessment processess	The process under which an institution identifies the risks to which it is exposed either through its commercial activities, or through its own internal business processes.
Risk exposures	The commercial operations and management of firms which create the possibility of potential financial loss.
Risk management	The processes by which an institution manages its various sources of risk. These include internal controls and procedures, tools to reduce or mitigate risks and the policies a firm adopt to reduce potential risk exposures.
Risk mitigants	Techniques and financial instruments designed to reduce a firm's risk exposures. These may include insurance against operational risk (under AMA) or techniques to reduce credit risk (see Credit Risk Mitigation).
Risk weight	A parameter reflecting the relative risk of a type of lending, counterparty (credit risk) or business activity (operational risk). These weightings are used in the calculation of regulatory capital requirements.
Securitisation	Relates to the transfer of ownership and/or risks associated with credit exposure of a bank to other parties.
Solo capital requirements	Calculation of capital requirements at the level of an individual bank.
Solvency Ratios Directive	The 1989 Directive (89/647/EEC) that implemented the Basel I Accord in the EU. The Directive is no longer in force as it was incorporated into the Consolidated Banking Directive.
Sovereign exposures	Loans and other commercial activities that are made to a country's central government or its departments and agencies.
Standardised Approach to Credit Risk (SA)	See Revised Standardised Approach.

Standardised Approach to Market Risk	The most basic approach available for the calculation of regulatory capital requirements for market risk. This approach is based on a more formulaic approach with supervisory determined parameters. These requirements are unchanged from those adopted in the 1996 Market risk amendment to the Basel Accord.
Standardised Approach to Operational Risk (STA)	The intermediate of the three approaches to operational risk. Under this approach regulatory capital requirements are calculated by taking a three-year average of gross income for eight defined business lines. Each of these eight income measures are then multiplied by a given risk weight (between 12 and 18 per cent) and then summed together to arrive at an overall capital requirement.
Subconsolidated requirements	Calculation of capital requirements for a consolidated sub-group within a larger group.
Supervisory review	Part of the Pillar 2 process, under which the supervisory authority assesses the firm/group's own calculation of regulatory capital requirements and its risk assessment and management processes. The supervisor will need to determine whether all risks have been captured under the firm's capital assessment processes and whether the firm or group's calculations of capital adequacy are sufficient to cover the risks which it faces.
Supervisory values	Parameters for use in internal models that are predetermined by the supervisor rather than the firms own internal estimation. These values are applied consistently across the industry for all firms adopting the approach.
Tier I capital	Also called Core capital. It is the equity (share capital) and retained earnings of a financial institution.
Tier 2 capital (Supplementary Capital)	Also called supplementary capital. These are the reserves, hybrid debt/equity capital and subordinated debt of a financial institution.
Trading book	A trading book consists of positions in financial instruments and commodities held either with intent to trade, or in order to hedge other elements of the trading book. To be eligible for trading book capital treatment, financial instruments must either be free of any restrictive covenants on their tradability, or able to be hedged completely. In addition, positions should be frequently and accurately valued, and a portfolio should be actively managed.
Transposition into national law	The process under which an EU directive is converted into a Member States' law. This may be through primary legislation (an Act of Parliament) or through secondary legislation (statutory instruments) or under delegated powers such as the Financial Services and Markets Act (2000), which gives the power for the FSA to implement proposals through their rulebook.
Unsettled transactions	Where a firm has committed to the sale of equity or other security, but the payment and delivery has not yet been settled.

GLOSSARY

Value at Risk models (VAR)	A statistical technique designed to give an estimate of the maximum loss that could be made for a given factor of confidence over a set time horizon under normal market conditions.
Venture Capital	Fund made available for start up firms and or small businesses with exceptional growth potential.

REFERENCES

Bank of England (2002) 'The impact of the new Basel Accord on the supply of capital to emerging market economies,' by Simon Hayes, Victoria Saporta and David Lodge, in the Financial Stability Review, December 2002.http://www.bankofengland.co.uk/fsr/fsr13art4.pdf.

Basel Committee (1988) 'International convergence of capital measurement and capital Standards'. http://www.bis.org/publ/bcbs04A.pdf.

Basel Committee (1996) 'Amendment to the Current Accord adding market risk'. http://www.bis.org/publ/bcbs24.pdf.

Basel Committee (1999) 'Initial proposal for Basel II – A new Capital Adequacy Framework'. http://www.bis.org/publ/bcbs50.pdf.

Basel Committee (2003) 'Results of the Basel Committee's third Quantitative Impact Study (QIS3)'. http://www.bis.org/bcbs/qis/qis3.htm.

Basel Committee (2003) 'Third Consultation Paper' (Basle Committee, April 2003). http://www.bis.org/bcbs/bcbscp3.htm.

Baumann and Nier (2003) 'Market discipline, disclosure and moral hazard in banking' Paper presented to the Federal Reserve Bank of Chicago conference on 'Bank structure and competition'. http://www.chicagofed.org/newsandevents/bankstructureconference/2003/ErlendNier&UrselBaumann.pdf

Board of Governors of the Federal Reserve System (2003) 'Implementation of the New Basel Accord in the United States' Advanced Notice of Proposed Rulemaking (ANPR). http://www.federalreserve.gov/boarddocs/press/bcreg/2003/20030711/.

Calvo and Reinhart (1999) 'When capital inflows come to a sudden stop: Consequences and policy options' mimeo. http://www.puaf.umd.edu/faculty/papers/reinhart/imfbook.pdf.

Caterineu-Rabell, Jackson and Tsomocos (2003) 'Procyclicality and the new Basel Accord – banks' choice of loan rating system' Bank of England Working Paper, number 181. http://www.bankofengland.co.uk/workingpapers/wp181.pdf.

Council of Mortgage Lenders (2003) 'The Basel II Capital Accord: Impact on UK mortgage lenders' by Andrew Capps, KPMG for CML Research.

European Commission (1989) 'Solvency Ratios Directive (1989/647/EEC)', repealed 15/6/2000. http://www.europa.eu.int/eur-lex/en/index.html.

European Commission (1993) 'Capital Adequacy Directive (CAD) (1993/6/EEC)'. http://www.europa.eu.int/eur-lex/en/index.html.

European Commission (2001) 'The Final Report of the Committee of Wise Men on the regulation of the securities markets (Lamfalussy Report).'

http://europa.eu.int/comm/internal_market/en/finances/general/lamfalussyen.pdf.

European Commission (2002) 'The Financial Conglomerates Directive (2002/87/EC)'. http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_035/l_03520030211en00010027.pdf.

REFERENCES

European Commission (2003) 'Proposal for a Directive of the European Parliament and of the Council on Investment Services and Regulated Markets, and amending Council Directives 85/611/EEC, Council Directive 93/6/EEC and European Parliament and Council Directive 2000/12/EC'. http://europa.eu.int/eur-lex/en/com/pdf/2002/com2002_0625en01.pdf.

European Commission (2003) 'Publication of the EU QIS3 results'. http://www.europa.eu.int/comm/internal_market/regcapital/docs/qis3/2003-05-quis3-results_en.pdf.

European Commission (2003) 'Third consultation exercise on CAD3'. http://www.europa.eu.int/comm/internal_market/regcapital/index_en.htm - cp3.

European Council (2002) 'Conclusions of the Barcelona European Council meeting held 15/16 March 2002'. http://ue.eu.int/pressData/en/ec/71025.pdf.

Financial Services Authority (2003) 'Report and first consultation on the implementation of the new Basel and EU Capital Adequacy Standards.' CP189. http://www.fsa.gov.uk/pubs/cp/189/index.html.

Furfine (2000) 'Evidence on the response of US banks to changes in capital requirements' BIS Working Paper, number 88. http://www.bis.org/publ/work88.pdf.

Griffith-Jones, Spratt and Segoviano (2003) 'Submission to the Basel Committee on Banking Supervision: CP3 and the Developing World' Institute of Development Studies, Sussex University. http://www.ids.ac.uk/ids/global/finance/pdfs/Basle_subSGJ_SS.pdf.

Gupta (2002) 'Aftermath of banking crises – effects on real and monetary variables' IMF Working Paper, number 00/96. http://www.imf.org/external/pubs/ft/wp/2000/wp0096.pdf.

Lindquist (2003) 'Banks buffer capital: How important is risk'. Paper presented at a Bank for International Settlement Workshop.
http://www.bis.org/bcbs/events/wkshop0303/p07lindq.pdf.

Rosengren (1998) 'Will greater disclosure and transparency prevent the next banking crisis?' Federal Reserve Bank of Boston Working Paper, number 98-8.
http://www.bos.frb.org/economic/wp/wp1998/wp98_8.pdf.