Reforming financial markets VIII: implementing the new Basel regulatory capital rules

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Section Business & Transport Section

This is one of a series of notes which looks at actual or proposed reforms of either certain parts of the financial services sector or reforms of certain activities.

The entire sector has received worldwide attention from regulators, governments, consumer and intra-industry and professional groups following the financial crisis which began in 2007. Whilst the 'rescue and recovery' phase of the crisis is (mainly) past, and the consultation and consideration phase nearing its climax, the legislative phase is still to come.

These notes attempt to describe the progress made on individual issues through these phases. This note focuses upon the standards for prudential capital and liquidity control put forward at various levels of national and international authority.

Another (considerably shorter) standard note sets out the culmination of what the new rules are and what they hope to achieve but ignores the detailed processes that have led up to their final adoption.

Contents

1 Introduction: International regulatory standards

International standards for the amount of capital banks and other financial institutions have to keep are set by the Basel Committee on Banking Supervision (BCBS), a committee of the Bank for International Settlements (BIS). Basel standards were first issued in 1988 (Basel I) and these were revised in 2004 (Basel II).

At its simplest regulatory capital is supposed to be the money set aside for a 'rainy day'. When that day came, in 2008, it was found to be inadequate and banks worldwide had to resort to substantial extra injections of capital from their national governments or from better provisioned former competitors. Whilst argument raged about the real cause of the credit crunch and who was to blame, there was near unanimity on the fact that these standards needed revising. Thus, the BCSB started to look at major revisions to the Basel II standards, first agreed in June 2004. In order to understand the direction of the reforms it is helpful to bear in mind the Committee's fundamental analysis of what went wrong. This is summed up in a press release of December 2009 accompanying the publication of its major analytical document: *Strengthening the resilience of the banking sector*:

> One of the main reasons the economic and financial crisis became so severe was that the banking sectors of many countries had built up excessive on- and off-balance sheet leverage. This was accompanied by a gradual erosion of the level and quality of the capital base. At the same time, many banks were holding insufficient liquidity buffers. The banking system therefore was not able to absorb the resulting systemic trading and credit losses nor could it cope with the reintermediation of large off-balance sheet exposures that had built up in the shadow banking system. The crisis was further amplified by a procyclical deleveraging process and by the interconnectedness of systemic institutions through an array of complex transactions. During the most severe episode of the crisis, the market lost confidence in the solvency and liquidity of many banking institutions. The weaknesses in the banking sector were transmitted to the rest of the financial system and the real economy, resulting in a massive contraction of liquidity and credit availability. Ultimately the public sector had to step in with unprecedented injections of liquidity, capital support and guarantees, exposing the taxpayer to large losses.[1]

At this stage in this note readers should be aware that the detailed subject matter is incredibly technical and extensive. It is beyond the scope of this paper (and author) to describe aspects in detail. The next sections deal with proposals, consultation documents and recommendations, generated at several layers of authority, all of which cover similar areas but at different times and orders. The sections contain references to the most important documents as they appeared. If readers wish to establish what is on the table for the UK, now, they may wish to skim the sections below until they reach the section 'UK implementation'.

2 Basel II

The BIS website summarises the aims of the Basel II Accord, which was generally designed to set requirements in line with the risk of bank strategies:

> It seeks to improve on the existing rules by aligning regulatory capital requirements more closely to the underlying risks that banks face. In addition, the Basel II Framework is intended to promote a more forward-looking approach to capital supervision, one that encourages banks to identify the risks they may face, today and

1 BCBS press release December 2009

> in the future, and to develop or improve their ability to manage those risks. As a result, it is intended to be more flexible and better able to evolve with advances in markets and risk management practices.[2]

The requirements under the Basel II Accord are grouped into three main areas, or pillars:

- *Pillar 1: Minimum Capital Requirements* – requirements sensitive to credit, operational and market risk;
- *Pillar 2: Supervisory Review* – a framework laying out the tools with which regulators may actively regulate banks;

  Pillar 3: Disclosure Requirements.

At its July 2009 meeting, the BCBS issued *Revisions to the Basel II market risk* aimed at strengthening the 1996 rules governing trading book capital. The proposals took effect at the end of 2010, introducing higher capital requirements to capture the credit risk of complex trading activities. They also include a stressed value-at-risk (VaR) requirement, which the Committee believed will help dampen the cyclicality of the minimum regulatory capital framework.

Other proposals finalised in July include strengthening the treatment for certain securitisations in Pillar 1 (minimum capital requirements). It includes higher risk weights for re-securitisation exposures to better reflect the risk inherent in these products and also requires that banks conduct more rigorous credit analyses of externally rated securitisation exposures.

The supplemental Pillar 2 (supervisory review process) guidance addresses several notable weaknesses in banks' risk management processes that were revealed during the financial crisis. The areas addressed include:

- firm-wide governance and risk management;
- capturing the risk of off-balance sheet exposures and securitisation activities;
- managing risk concentrations;
- providing incentives for banks to better manage risk and returns over the long term; and
- sound remuneration practices.

The Pillar 3 (market discipline) requirements have been strengthened in several key areas, including:

- securitisation exposures in the trading book;
- sponsorship of off-balance sheet vehicles;
- re-securitisation exposures; and
- pipeline and warehousing risks with regard to securitisation exposures

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[2] BIS, Basel II: Revised international capital framework, retrieved on 5 June 2009

Banks and supervisors began implementing the Pillar 2 guidance immediately. The new Pillar 1 capital requirements and Pillar 3 disclosures were scheduled for implementation no later than 31 December 2010.

A separate package of measures were announced in December 2009. A summary of the changes proposed are shown below:

- Strengthen the quality of bank capital;
- Promote the build up of capital buffers that can be drawn down in periods of stress;
- Introduce a leverage ratio as a backstop to Basel II;
- Enhance counterparty credit risk (CCR) management requirements by 1) addressing general wrong-way risk, 2) making the qualitative requirements for stress testing more explicit, 3) revising the model validation standards, and 4) issuing supervisory guidance for sound back-testing practices of CCR.

The full set of Basel II regulations is available online.[3]

2.1 Securitisation exposure

The first Basel Accord in 1988, Basel I, failed to fully address the risks and profits associated with securitisation. This was one of the driving forces behind the establishment of Basel II. Before Basel II, the capital charges (or the 'haircuts' that firms must book on their balance sheet valuations to reflect the risk of their assets) on securitised products were relatively minimal and thus incentivised banks to shift their portfolios toward riskier high-profit securities that were actually booked as lower risk.

Basel II, however, established a complex set of valuation rules. Under Basel II, securities received risk weights determined by three different methods: most preferred is the Ratings-Based Approach where assets were weighted by their credit rating weighting, their seniority and their granularity; next was the Internal Assessment Approach which mainly applies to asset-backed commercial paper; finally, the Supervisory Formula, the most complex measure, was only expected to be employed by the most sophisticated banks.[4] An article in *Financial Regulation International* has underlined the importance of credit ratings to this process. It is also worth noting that significant supervisory discretion is permitted under the Basel standards; accordingly, different countries allowed differing securitisation practices.

A number of problems – including lax monitoring and management by the issuers of asset-backed securities, inaccurate credit ratings and accounting rules forcing dramatic devaluations in accordance with market prices – caused the securitisation model to breakdown.[5]

2.2 Market Risk Framework

The Market Risk Framework (MRF), which is part of the regulatory rules for banks' capital, allowed banks in the vast majority of countries to use internal risk models when measuring market risks. Through an amendment to Basel I, it was determined that two methods of calculating risk could be employed – the (somewhat cumbersome) standardised approach

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3 BIS, Basel II: Basel II: International Convergence of Capital Measurement and Capital Standards: a Revised Framework, retrieved on 5 June 2009

4 Ibid., p4

5 For more details please see House of Commons Library, The financial crisis in the US: key events, causes and responses, Research Paper 09/34, 22 April 2009

using a series of conversion factors for different types of instrument, and the use of internal models based in the concept of Value at Risk (VaR) that are assessed by the relevant supervisors.[6]

A number of problems have been identified with this framework – not least, that increases in risk across the system may cause significant under-estimation of VaR.[7] Although revisions to the framework were implemented in 2005 and 2006, worries about the system continued to be raised during the course of the financial crisis.

In 2008, it was proposed that, reflecting the experience of the credit crisis, the scope of the incremental default charge on trading accounts needed to be expanded to capture price risk beyond default. The proposed Incremental Risk Charge, which seeks to address the need to capture risks such as heightened credit spreads, will contain a set of high-level principles although allow for considerable flexibility in the approach to risk calculation; given the paucity of securitisation risk models, these new rules will not apply to securitised products. Changes to the capital charges for securitisation and re-securitisation have also been proposed (see subsection 3.1). The recommendations also proposed that firms be allowed to employ adjustments to market prices in the case of market illiquidity.

Summarising the recommendations of two consultative papers, the BCBS explained:

> Since the financial crisis began in mid-2007, the majority of losses and most of the build up of leverage occurred in the trading book. An important contributing factor was that the current capital framework for market risk, based on the 1996 amendments to Basel I, does not capture some key risks. In response, the Committee proposes to supplement the current value-at-risk-based trading book framework with an incremental risk capital charge (IRC), which includes default risk as well as migration risk, for unsecuritised credit products. For securitised products, the capital charges of the banking book would apply. Once implemented, the IRC will reduce the incentive for regulatory arbitrage between the banking and trading books.
>
> An additional proposed response is the introduction of a stressed value-at-risk (VaR) requirement. Losses in banks' trading books during the financial crisis have been significantly higher than the minimum capital requirements under the Pillar 1 market risk rules. The Committee therefore proposes to require banks to calculate a stressed VaR taking into account a one-year observation period relating to significant losses, which would be in addition to the VaR based on the most recent one-year observation period. The additional stressed VaR requirement will help reduce the procyclicality of the minimum capital requirements for market risk.
>
> The Committee also proposes to discontinue the preferential treatment of a 4% capital charge for specific risk of equities that is currently applicable to portfolios that are both liquid and well-diversified. As a result, an 8% capital charge for specific risk of equities would apply in all cases.
>
> In addition to the proposed changes noted above, the Committee will be initiating a longer-term, fundamental review of the risk-based capital framework for trading activities.[8]

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6 Where a model is shown to have performed poorly, the supervisor will then attach a greater multiplicative factor to the estimated VaR. Accordingly, where a greater factor is ascribed capital requirements will also increase.

7 *Financial Regulation International*, “The Basel 2 agenda for 2009: progress so far”, Issue 12.4, May 2009, p9

8 BCBS, Revisions to the Basel II market risk framework, January 2009

Secondly,

> The Basel Committee proposes to supplement the current value-at-risk (VaR) regulatory capital framework for trading exposures with an incremental risk capital charge (IRC). Since the financial market crisis that began in mid-2007, a number of major banking organisations have experienced large losses resulting from trading exposures. The IRC proposal follows the Committee's efforts, in collaboration with the International Organization of Securities Commissions (IOSCO), to improve the capital regime for trading book positions.
>
> The IRC would represent an estimate of the default and migration risks of unsecuritised credit products over a one-year capital horizon at a 99.9% confidence level, taking into account the liquidity horizons of individual positions or sets of positions. For securitised products, the capital charges of the banking book would apply. The IRC is intended to complement additional standards being applied to the VaR modelling framework (see the consultative document *Revision to the Basel II market risk framework* for more details regarding the proposed changes to the trading book regime).[9]

Details of the precise changes proposed by the BCBS are available online.[10]

A paper, published in April 2009, provided supervisory guidance regarding the assessment of bank instrument valuation procedures. The BCBS summarised its focus as:

> The application of fair value accounting to a wider range of financial instruments, together with experiences from the recent market turmoil, have emphasised the critical importance of robust risk management and control processes around fair value measurements. Moreover, given the significance of fair value measurements for regulatory capital adequacy and internal bank risk management it is equally important that supervisors assess the soundness of banks' valuation practices through the Pillar 2 supervisory review process under the Basel II Framework.
>
> The paper provides guidance to banks and banking supervisors to strengthen valuation processes for financial instruments. The principles promote strong governance processes around valuations; the use of reliable inputs and diverse information sources; the articulation and communication of valuation uncertainty to internal and external stakeholders; the allocation of sufficient banking and supervisory resources to the valuation process; independent verification and validation processes; consistency in valuation practices for risk management and reporting purposes, where possible; and strong supervisory oversight around bank valuation practices.[11]

Details of the advice proposed by the BCBS are available online.[12]

2.3 Liquidity management

One revealing aspect of the credit crisis was the extent to which liquidity, as opposed to capital reserves, had been largely ignored as a regulatory instrument. In a report published in September 2008, the BCBS proposed a number of principles that should underpin liquidity

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9 BCBS, Guidelines for computing capital for incremental risk in the trading book, January 2009

10 BCBS Consultative Document, Revisions to the Basel II market risk framework, January 2009; BCBS Consultative Document, Guidelines for computing capital for incremental risk in the trading book, January 2009

11 BCBS, Supervisory guidance for assessing banks' financial instrument fair value practices - final paper, April 2009

12 BCBS Final Paper, Supervisory guidance for assessing banks’ financial instrument fair value practices, April 2009

management in the financial system. The BCBS identified liquidity as a critical issue in the financial crisis, and noted:

> Liquidity risk management is of paramount importance because a liquidity shortfall at a single institution can have system-wide repercussions. Financial market developments in the past decade have increased the complexity of liquidity risk and its management.
>
> The market turmoil that began in mid-2007 re-emphasised the importance of liquidity to the functioning of financial markets and the banking sector. In advance of the turmoil, asset markets were buoyant and funding was readily available at low cost. The reversal in market conditions illustrated how quickly liquidity can evaporate and that illiquidity can last for an extended period of time. The banking system came under severe stress, which necessitated central bank action to support both the functioning of money markets and, in a few cases, individual institutions.[13]

The BCBS has provided increased guidance to firms regarding liquidity:

Principles for the management and supervision of liquidity risk

Fundamental principle for the management and supervision of liquidity risk

Principle 1: A bank is responsible for the sound management of liquidity risk. A bank should establish a robust liquidity risk management framework that ensures it maintains sufficient liquidity, including a cushion of unencumbered, high quality liquid assets, to withstand a range of stress events, including those involving the loss or impairment of both unsecured and secured funding sources. Supervisors should assess the adequacy of both a bank's liquidity risk management framework and its liquidity position and should take prompt action if a bank is deficient in either area in order to protect depositors and to limit potential damage to the financial system.

Governance of liquidity risk management

Principle 2: A bank should clearly articulate a liquidity risk tolerance that is appropriate for its business strategy and its role in the financial system.

Principle 3: Senior management should develop a strategy, policies and practices to manage liquidity risk in accordance with the risk tolerance and to ensure that the bank maintains sufficient liquidity. Senior management should continuously review information on the bank's liquidity developments and report to the board of directors on a regular basis. A bank's board of directors should review and approve the strategy, policies and practices related to the management of liquidity at least annually and ensure that senior management manages liquidity risk effectively.

Principle 4: A bank should incorporate liquidity costs, benefits and risks in the internal pricing, performance measurement and new product approval process for all significant business activities (both on- and off-balance sheet), thereby aligning the risk-taking incentives of individual business lines with the liquidity risk exposures their activities create for the bank as a whole.

Measurement and management of liquidity risk

Principle 5: A bank should have a sound process for identifying, measuring, monitoring and controlling liquidity risk. This process should include a robust framework for

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[13] BCBS, Principles for Sound Liquidity Risk Management and Supervision, September 2008

comprehensively projecting cash flows arising from assets, liabilities and off-balance sheet items over an appropriate set of time horizons.

Principle 6: A bank should actively monitor and control liquidity risk exposures and funding needs within and across legal entities, business lines and currencies, taking into account legal, regulatory and operational limitations to the transferability of liquidity.

Principle 7: A bank should establish a funding strategy that provides effective diversification in the sources and tenor of funding. It should maintain an ongoing presence in its chosen funding markets and strong relationships with funds providers to promote effective diversification of funding sources. A bank should regularly gauge its capacity to raise funds quickly from each source. It should identify the main factors that affect its ability to raise funds and monitor those factors closely to ensure that estimates of fund raising capacity remain valid.

Principle 8: A bank should actively manage its intraday liquidity positions and risks to meet payment and settlement obligations on a timely basis under both normal and stressed conditions and thus contribute to the smooth functioning of payment and settlement systems.

Principle 9: A bank should actively manage its collateral positions, differentiating between encumbered and unencumbered assets. A bank should monitor the legal entity and physical location where collateral is held and how it may be mobilised in a timely manner.

Principle 10: A bank should conduct stress tests on a regular basis for a variety of short-term and protracted institution-specific and market-wide stress scenarios (individually and in combination) to identify sources of potential liquidity strain and to ensure that current exposures remain in accordance with a bank's established liquidity risk tolerance. A bank should use stress test outcomes to adjust its liquidity risk management strategies, policies, and positions and to develop effective contingency plans.

Principle 11: A bank should have a formal contingency funding plan (CFP) that clearly sets out the strategies for addressing liquidity shortfalls in emergency situations. A CFP should outline policies to manage a range of stress environments, establish clear lines of responsibility, include clear invocation and escalation procedures and be regularly tested and updated to ensure that it is operationally robust.

Principle 12: A bank should maintain a cushion of unencumbered, high quality liquid assets to be held as insurance against a range of liquidity stress scenarios, including those that involve the loss or impairment of unsecured and typically available secured funding sources. There should be no legal, regulatory or operational impediment to using these assets to obtain funding.

Public disclosure

Principle 13: A bank should publicly disclose information on a regular basis that enables market participants to make an informed judgement about the soundness of its liquidity risk management framework and liquidity position.

The role of supervisors

Principle 14: Supervisors should regularly perform a comprehensive assessment of a bank's overall liquidity risk management framework and liquidity position to determine whether they deliver an adequate level of resilience to liquidity stress given the bank's role in the financial system.

Principle 15: Supervisors should supplement their regular assessments of a bank's liquidity risk management framework and liquidity position by monitoring a combination of internal reports, prudential reports and market information. Principle 16: Supervisors should intervene to require effective and timely remedial action by a bank to address deficiencies in its liquidity risk management processes or liquidity position.

Principle 17: Supervisors should communicate with other supervisors and public authorities, such as central banks, both within and across national borders, to facilitate effective cooperation regarding the supervision and oversight of liquidity risk management. Communication should occur regularly during normal times, with the nature and frequency of the information sharing increasing as appropriate during times of stress.[14]

Details of the 17 specific guidelines proposed by the BCBS are available online.[15]

The BCBS liquidity proposals "*International framework for liquidity risk measurement, standards and monitoring*", published in December 2009, along with the capital strengthening consultation document, contain two key ratios that firms will be required to meet under the proposed liquidity regime:

Liquidity Coverage Ratio

11. The liquidity coverage ratio identifies the amount of unencumbered, high quality liquid assets an institution holds that can be used to offset the net cash outflows it would encounter under an acute short-term stress scenario specified by supervisors. The specified scenario entails both institution-specific and systemic shocks built upon actual circumstances experienced in the global financial crisis. The scenario entails:

- a significant downgrade of the institution's public credit rating;
- a partial loss of deposits;
- a loss of unsecured wholesale funding;
- a significant increase in secured funding haircuts; and
- increases in derivative collateral calls and substantial calls on contractual and non contractual off-balance sheet exposures, including committed credit and liquidity facilities.

12. As part of this metric, banks are also required to provide a list of contingent liabilities (both contractual and non-contractual) and their related triggers.

Net Stable Funding Ratio

13. The net stable funding (NSF) ratio measures the amount of longer-term, stable sources of funding employed by an institution relative to the liquidity profiles of the assets funded and the potential for contingent calls on funding liquidity arising from off-balance sheet commitments and obligations. The standard requires a minimum amount of funding that is expected to be stable over a one year time horizon based on liquidity risk factors assigned to assets and off-balance sheet liquidity exposures. The

[14] BCBS Final Paper, Principles for Sound Liquidity Risk Management and Supervision, September 2009, pp3-5
[15] Ibid.

> NSF ratio is intended to promote longer-term structural funding of banks' balance sheets, off-balance sheet exposures and capital markets activities.[16]

The December 2009 document was a consultation and responses to this were published in April 2010 and can be seen here.

The BCBS published its impact assessment of the effect of the new capital and liquidity rules in August 2010: *An Assessment of the long term economic impact of stronger capital and liquidity requirements*.

The press release accompanying the document included the following assessment:

> The FSB-BCBS MAG assessment of the macroeconomic transition costs, prepared in close collaboration with the International Monetary Fund, concludes that the transition to stronger capital and liquidity standards is likely to have a modest impact on aggregate output. If higher requirements are phased in over four years, the group estimates that each one percentage point increase in bank's actual ratio of tangible common equity to risk-weighted assets will lead to a decline in the level of GDP relative to its baseline path by about 0.20% after implementation is completed. In terms of growth rates, this means that the annual growth rate would be reduced by an average of 0.04 percentage points over a four and a half year period, with a range of results around these point estimates. A 25% increase in liquid asset holdings is found to have an output effect less than half that associated with a one-percentage point increase in capital ratios. The projected impacts arise mainly from banks passing on higher costs to borrowers, which results in a slowdown in investment. A two-year implementation period leads to a slightly larger reduction from the baseline path, with the trough occurring after two and a half years, while extending the implementation period beyond four years makes little difference. In all of these estimates, GDP returns to its baseline path in subsequent years.[17]

As with other aspects of the Basel procedures the proposals have to be turned into law which then involves, usually initiatives from the EU and the domestic regulator – though not necessarily in that order. Like in several other streams of regulatory work, for example remuneration principles and reform, the FSA did not wait for the higher level decisions to be made, but pressed ahead with its own rules, whilst performing a sort of retrospective compliance check with international requirements.

The FSA published documents setting out its preferred liquidity rules in December 2008[18], June 2009[19] and finally in October 2009.[20]

Strengthening Liquidity standards includes the following introduction:

> 1.5 A general concern many stakeholders raised was the potential detrimental impact of our proposals on the international competitiveness of UK firms and the overall attractiveness of London as a financial centre.
>
> 1.6 We maintain that, even though our new regime will require a considerable change to firms' liquidity risk-management practices, strengthened liquidity requirements can bring substantial long-term benefits to the competitiveness of the UK financial services

16 *International framework for liquidity risk measurement, standards and monitoring* BCBS, December 2009
17 BIS press release August 2010
18 CP08/22
19 CP/09/14
20 PS09/16

> sector. London's competitive position depends importantly on counterparties' perception of the financial soundness of the firms that operate here.
>
> Low levels of financial soundness cannot provide sustainable long-term competitive advantage. It is in every firm's interest to demand strong liquidity standards for its competitors, as the current crisis has shown that the weakest firm can precipitate a market-wide crisis of confidence affecting all firms.
>
> 1.7 Our regime is designed to protect customers, counterparties and other participants in the financial services markets from the potentially serious consequences of imprudent liquidity risk-management practices. If any firm makes a deliberate judgement to circumvent or avoid UK liquidity regulation by moving offshore it is assuming that its counterparties place little value on the tough liquidity risk management standards set under that regulation. We have observed that, in practice, counterparties place significant value on prudent liquidity risk management by the firms with which they deal.
>
> The key elements are:
>
> • over-arching principles of self-sufficiency and adequacy of liquidity resources;
>
> • enhanced systems and control requirements, which implement the BCBS's updated Principles for Sound Liquidity Risk Management and Supervision (September 2008);
>
> • updated quantitative requirements (Individual Liquidity Adequacy Standards (ILAS)), coupled with a narrow definition of liquid assets;
>
> • a new modifications regime for branches and subsidiaries; and
>
> • granular and frequent reporting requirements.[21]

The FSA also made clear that although banks would have to meet much tougher requirements with respect to liquidity, there was some latitude in how soon that would be:

> We have already said we would not seek to tighten quantitative standards before economic recovery is assured. We will therefore notify firms individually of the prospective impact on them of the new quantitative requirements, assuming they are fully implemented. We will then agree with each firm other than those operating under the simplified regime a timetable of potentially some years for completing transition to the new quantitative requirements. Because of the long transitional period, we do not expect that our policy will, in the short term, put significant downwards pressure on levels of bank lending.[22]

One area that drew considerable criticism from industry was the FSA's self reliance principle. In effect, each entity should be self sufficient for liquidity in a crisis and it shouldn't be reliant on intra group transfers for example. The FSA rejected this criticism in its final rules. It said:

> Our proposal that, by default, UK entities and branches should be self-sufficient for liquidity purposes drew most concern from respondents. Some said that the proposal was draconian, with several stating that it could be seen as protectionist and potentially damaging to cross-border capital flows, possibly leading to the fragmentation of the global economy if other regulators were to follow suit and 'trap' liquidity locally.

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[21] Ibid p4-5

[22] PS09/16, p7

> 4.8 Some respondents stated that our proposal could trigger a fragmentation of the global financial system. Whenever regulations are tightened some firms are impacted to a greater extent than others. Our new standards, while tough, do not place undue restrictions on cross-border activity and financial integration; they will, however, affect certain business models. Many internationally-active firms have successfully operated liquidity models that will not be impacted materially by the new UK regime. We expect other supervisors to implement equally risk-based and non-discriminatory liquidity requirements. For these reasons we disagree with the respondents' concerns.[23]

For reasons connected with data availability and the fact that the FSA only supervises entities in its national jurisdiction, some modifications of this policy can be applied for by firms, and the FSA thinks that many will.[24] Chapter six of the document sets out in detail the regulatory framework that the FSA will employ.

The twin track development of policy and the retrospective checking of national rules allows for an extended period of debate about them. This appears to be the source of the following article:

> George **Osborne** is looking at ways in which Britain's tough bank **liquidity** rules might be eased, potentially saving banks hundreds of millions of pounds and releasing funds for lending to businesses and homeowners.
>
> The chancellor is said to be looking sympathetically at claims by the banks that Britain's regulators have gone too far in their efforts to avoid another Lehman Brothers-style crisis and have put the City at an international disadvantage.
>
> "The chancellor thinks there may be something in this," said one Treasury official. Nick Clegg, deputy prime minister, and Vince Cable, business secretary, agree.
>
> The banks stepped up their demands for a looser liquidity regime as they pressed for a "level playing field" in the protracted peace talks, labelled Project Merlin, between the Treasury and the Square Mile.
>
> Barclays said this week that funding its liquidity buffer, up 21 per cent to £154bn, had cost it £900m last year.
>
> Although the Financial Services Authority, which sets liquidity requirements, is independent of government, the Treasury is involved in policy co-ordination. Mr Osborne is also negotiating the implementation of the European Union's new liquidity rules, under the Basel III deal.
>
> As part of those reforms, global banking regulators agreed in December that all banks would be required to hold a stock of easy-to-sell assets equal to their potential losses during a 30-day market crisis. That global rule is not mandatory until 2015.
>
> Banks say that FSA supervisors are pressing them to hold more cash and government bonds than competitors abroad, and to do so sooner. "If we have to hold large portfolios of gilts, we can't deploy the assets in other ways," said Simon Hills of the British Bankers' Association.[25]

The November 2009 FSA document included a section on costs-benefits of the proposals. It

[23] Ibid p20
[24] See p21-22
[25] Financial Times 17 February 2011

says:

> The initial results of our cost benefit work with NIESR show that, up to a point, there is a net economic benefit associated with tougher liquidity standards. The initial results, which must be regarded as subject to significant uncertainty, suggest that if firms were to increase the level of high-quality liquid assets on the balance sheets by roughly up to 10 percentage points there could be a net benefit to economic output; we are undertaking further work to consider the level of confidence we can place in this range. Our policy impacts the wider economy as firms pass on costs to their customers, with consequent lower growth. But this effect is offset by lowering the probability of banking sector crises, which have large economic costs. The analysis indicates a range within which increased liquidity regulation provides a net economic benefit in terms of output. It is also possible, in principle, to justify regulations beyond this point by taking into account the welfare benefits associated with a more stable, lower-growth economy. However the FSA, in line with international consensus, is also planning a significant tightening of capital standards which will interact with increased liquidity regulation. We intend to approximate the joint impact of increases in both capital and liquidity standards to inform our final liquidity calibration.

In more detail:

> **Costs to firms arising from the new quantitative standards**
>
> The cost to firms will depend upon how we calibrate Individual Liquidity Guidance (ILG) relative to the stress tests set out in BIPRU 12.5 and the actions firms choose in response to our new regime. For example, many firms will lengthen the maturities of their short-term wholesale funding; whilst some firms will restructure their balance sheets. Given the degrees of freedom involved it is hard to be definitive on the exact costs.
>
> However, if during the first year of the application of the new regime we assume a calibration of ILG where the firm would need to cover 60% of outflows under the Individual Liquidity Adequacy Assessment (ILAA) stresses and that firms were to lengthen the maturity of 20% of their short-term wholesale funding then we estimate that firms would need to increase their holdings of high-quality government bonds by £110bn.This would give rise to an annual cost of £2.2bn (see later tables).
>
> We assume that, in practice, most branches of credit institutions operating within the UK would receive modifications, and so would not incur any specific costs from our quantitative standards. However, if all branches decided to be self-sufficient, we would require those branches to build up local liquidity buffers over several years. We estimate that in the first few years, depending on the calibration decision, the cost could be £250mn in aggregate, rising to £2.6bn after the end of the transition. For the 90 or so simplified Individual Liquidity Adequacy Standards (ILAS) firms we expect an annual cost of £14m across the industry.
>
> Other compliance costs to firms We expect reporting costs to be in line with those estimated in CP09/13. Reporting requirements have been reduced and we have contacted vendors of liquidity management software solutions to verify our previous estimates.
>
> **Costs to the FSA**
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> Our current estimate of the total cost of the programme to the FSA is at £18mn (in the range £16mn to £21mn).

Wider costs to the economy The FSA has been working to design a methodology for assessing the wider economic transfers, costs and benefits of significantly tighter prudential regulation. The methodology was developed with the National Institute of Economic and Social Research (NIESR), using the highly regarded NIESR Econometric Model (NIGEM) of the UK economy.

The FSA has used this model to look at the net impact of applying liquidity regulation at various different calibrations. The results are preliminary and we wish to understand both the results and the underlying assumptions more fully before coming to a final calibration decision.

We intend to publish, by the end of Q1 2010, a fuller quantitative description of the net macro-economic impact of liquidity regulation, along with a description of the key underlying modelling assumptions.

A reduction in the probability of bank failure

The new regime will reduce the probability of banks failing and the associated costs of such events to shareholders, depositors and bondholders.

A reduction in the likelihood and costs of systemic crises

The new regime will reduce the frequency of systemic financial crises, which historically have had large negative impacts on gross domestic product (GDP) in a range of countries.[26]

2.4 Deposit insurance systems

The BCBS set out a number of core principles for creating effective deposit insurance systems going forward. Stressing the importance of an international approach to deposit protection in the context of the current financial crisis, the report identified 18 core principles:

Setting objectives

- Principle 1 – Public policy objectives: The first step in adopting a deposit insurance system or reforming an existing system is to specify appropriate public policy objectives that it is expected to achieve. These objectives should be formally specified and well integrated into the design of the deposit insurance system. The principal objectives for deposit insurance systems are to contribute to the stability of the financial system and protect depositors.

- Principle 2 – Mitigating moral hazard: Moral hazard should be mitigated by ensuring that the deposit insurance system contains appropriate design features and through other elements of the financial system safety net (see Preconditions paragraph 16).

Mandates and powers

- Principle 3 – Mandate: It is critical that the mandate selected for a deposit insurer be clear and formally specified and that there be consistency between the stated public policy objectives and the powers and responsibilities given to the deposit insurer.

- Principle 4 – Powers: A deposit insurer should have all powers necessary to fulfill its mandate and these powers should be formally specified. All deposit insurers require the power to finance reimbursements, enter into contracts, set

26 PS09/16 p84-85

internal operating budgets and procedures, and access timely and accurate information to ensure that they can meet their obligations to depositors promptly.

Governance

- Principle 5 – Governance: The deposit insurer should be operationally independent, transparent, accountable and insulated from undue political and industry influence.

Relationships with other safety-net participants and cross-border issues

- Principle 6 – Relationships with other safety-net participants: A framework should be in place for the close coordination and information sharing, on a routine basis as well as in relation to particular banks, among the deposit insurer and other financial system safety-net participants. Such information should be accurate and timely (subject to confidentiality when required). Information-sharing and coordination arrangements should be formalised.

- Principle 7 – Cross-border issues: Provided confidentiality is ensured, all relevant information should be exchanged between deposit insurers in different jurisdictions and possibly between deposit insurers and other foreign safety-net participants when appropriate. In circumstances where more than one deposit insurer will be responsible for coverage, it is important to determine which deposit insurer or insurers will be responsible for the reimbursement process. The deposit insurance already provided by the home country system should be recognised in the determination of levies and premiums.

Membership and coverage

- Principle 8 – Compulsory membership: Membership in the deposit insurance system should be compulsory for all financial institutions accepting deposits from those deemed most in need of protection (eg retail and small business depositors) to avoid adverse selection.

- Principle 9 – Coverage: Policymakers should define clearly in law, prudential regulations or by-laws what an insurable deposit is. The level of coverage should be limited but credible and be capable of being quickly determined. It should cover adequately the large majority of depositors to meet the public policy objectives of the system and be internally consistent with other deposit insurance system design features.

- Principle 10 – Transitioning from a blanket guarantee to a limited coverage deposit insurance system: When a country decides to transition from a blanket guarantee to a limited coverage deposit insurance system, or to change a given blanket guarantee, the transition should be as rapid as a country's circumstances permit. Blanket guarantees can have a number of adverse effects if retained too long, notably moral hazard. Policymakers should pay particular attention to public attitudes and expectations during the transition period.

Funding

- Principle 11 – Funding: A deposit insurance system should have available all funding mechanisms necessary to ensure the prompt reimbursement of depositors' claims including a means of obtaining supplementary back-up funding for liquidity purposes when required. Primary responsibility for paying the cost of deposit insurance should be borne by banks since they and their clients directly benefit from having an effective deposit insurance system.

- For deposit insurance systems (whether ex-ante, ex-post or hybrid) utilising risk adjusted differential premium systems, the criteria used in the risk-adjusted differential premium system should be transparent to all participants. As well, all necessary resources should be in place to administer the risk-adjusted differential premium system appropriately.

Public awareness

- Principle 12 – Public awareness: In order for a deposit insurance system to be effective it is essential that the public be informed on an ongoing basis about the benefits and limitations of the deposit insurance system.

Selected legal issues

- Principle 13 – Legal protection: The deposit insurer and individuals working for the deposit insurer should be protected against lawsuits for their decisions and actions taken in "good faith" while discharging their mandates. However, individuals must be required to follow appropriate conflict-of-interest rules and codes of conduct to ensure they remain accountable. Legal protection should be defined in legislation and administrative procedures, and under appropriate circumstances, cover legal costs for those indemnified.

- Principle 14 – Dealing with parties at fault in a bank failure: A deposit insurer, or other relevant authority, should be provided with the power to seek legal redress against those parties at fault in a bank failure.

Failure resolution

- Principle 15 – Early detection and timely intervention and resolution: The deposit insurer should be part of a framework within the financial system safety net that provides for the early detection and timely intervention and resolution of troubled banks. The determination and recognition of when a bank is or is expected to be in serious financial difficulty should be made early and on the basis of well defined criteria by safety-net participants with the operational independence and power to act.

- Principle 16 – Effective resolution processes: Effective failure-resolution processes should: facilitate the ability of the deposit insurer to meet its obligations including reimbursement of depositors promptly and accurately and on an equitable basis; minimise resolution costs and disruption of markets; maximise recoveries on assets; and, reinforce discipline through legal actions in cases of negligence or other wrongdoings. In addition, the deposit insurer or other relevant financial system safety-net participant should have the authority to establish a flexible mechanism to help preserve critical banking functions by facilitating the acquisition by an appropriate body of the assets and the assumption of the liabilities of a failed bank (eg providing depositors with continuous access to their funds and maintaining clearing and settlement activities).

Reimbursing depositors and recoveries

- Principle 17 – Reimbursing depositors: The deposit insurance system should give depositors prompt access to their insured funds. Therefore, the deposit insurer should be notified or informed sufficiently in advance of the conditions under which a reimbursement may be required and be provided with access to depositor information in advance. Depositors should have a legal right to reimbursement up to the coverage limit and should know when and under what conditions the deposit insurer will start the payment process, the time frame over which payments will take place, whether any advance or interim payments will be made as well as the applicable coverage limits.

- Principle 18 – Recoveries: The deposit insurer should share in the proceeds of recoveries from the estate of the failed bank. The management of the assets of the failed bank and the recovery process (by the deposit insurer or other party carrying out this role) should be guided by commercial considerations and their economic merits.[27]

3 Proposed changes to Basel II

At its July 2009 meeting, the Basel Committee approved a final package of measures to strengthen the 1996 rules governing trading book capital (*Revisions to the Basel II market risk framework* and *Guidelines for computing capital for incremental risk in the trading book*), which were scheduled to take effect at the end of 2010, which introduced higher capital requirements to capture the credit risk of complex trading activities. They also include a stressed value-at-risk (VaR) requirement, which the Committee believes will help dampen the cyclicality of the minimum regulatory capital framework.

Proposals to enhance the three pillars of the Basel II framework were also agreed a press release accompanying the meeting is shown below:

> The proposals for enhancing the Basel II framework have been finalised. The Committee is strengthening the treatment for certain securitisations in Pillar 1 (minimum capital requirements). It is introducing higher risk weights for resecuritisation exposures to better reflect the risk inherent in these products and is also requiring that banks conduct more rigorous credit analyses of externally rated securitisation exposures.
>
> The supplemental Pillar 2 (supervisory review process) guidance addresses several notable weaknesses that have been revealed in banks' risk management processes during the financial turmoil that began in 2007. The areas addressed include:
>
> - firm-wide governance and risk management;
> - capturing the risk of off-balance sheet exposures and securitisation activities;
> - managing risk concentrations;
> - providing incentives for banks to better manage risk and returns over the long term; and
> - sound compensation practices.
>
> The Pillar 3 (market discipline) requirements have been strengthened in several key areas, including:
>
> - securitisation exposures in the trading book;

[27] BCBS Consultative Document, Core Principles for Effective Deposit Insurance Systems, March 2009

- sponsorship of off-balance sheet vehicles;
- resecuritisation exposures; and
- pipeline and warehousing risks with regard to securitisation exposures

Banks and supervisors are expected to begin implementing the Pillar 2 guidance immediately. The new Pillar 1 capital requirements and Pillar 3 disclosures should be implemented no later than 31 December 2010.[28]

A further package of measures were announced in December 2009. A summary of the changes proposed are shown below:

- Strengthen the quality of bank capital;
- Promote the build up of capital buffers that can be drawn down in periods of stress;
- Introduce a leverage ratio as a backstop to Basel II;
- Enhance counterparty credit risk (CCR) management requirements by 1) addressing general wrong-way risk, 2) making the qualitative requirements for stress testing more explicit, 3) revising the model validation standards, and 4) issuing supervisory guidance for sound back-testing practices of CCR.

More information regarding the CCR proposals are detailed below;

Require that the Effective EPE[29] metric be calculated on data that includes a period of stress;

- Incorporate a simple capital add-on to better capture CVA[30] risk that recognises a clearly defined set of hedges;
- Implement an explicit Pillar 1 capital charge for specific wrong-way risk;
- Apply a multiplier of 1.25 to the asset value correlation of exposures to regulated financial firms (with assets of at least $25 billion) and to all exposures to unregulated financial firms (regardless of size). The Committee continues to conduct analysis to assess the appropriate calibration of the proposed multiplier and asset size threshold;
- Extend the margin period of risk to 20 days for OTC derivatives and securities financing transactions (SFTs) netting sets that are large (ie over 5,000 trades), have illiquid collateral, or represent hard-to-replace derivatives. The requirements would double the margin period of risk for netting sets which have recently experienced a material number of extended disputes;
- Update the “shortcut method” (used by banks that cannot model EPE with margin agreements) to recognise that some of the simplifying assumptions related to collateral management and margining did not reflect actual practice;
- Implement various improvements in the calculation of exposure at default (EAD)[31] to promote more robust collateral management practices (eg failure to address the risk of

[28] BCBS press release July 2009
[29] EPE: expected positive exposure ie potential for loss
[30] CVA credit valuation adjustment – adjusted for risk
[31] EAD – expected loss

downgrade triggers and the inability of some banks to model collateral jointly with exposures) and in the operations and risk analysis supporting the collateral management process (eg re-use of collateral);

- Create a separate supervisory haircut category for repo-style transactions using securitisation collateral and prohibit resecuritisations as eligible financial collateral for regulatory capital treatment purposes;

- Increase the incentives to use CCPs[32] for OTC[33] derivatives and recognise that collateral and mark-to-market exposures to CCPs could have a zero percent risk weight if they comply with the stricter CPSS/IOSCO recommendations for CCPs,

- Enhance counterparty credit risk management requirements by 1) addressing general wrong-way risk, 2) making the qualitative requirements for stress testing more explicit, 3) revising the model validation standards, and 4) issuing supervisory guidance for sound back-testing practices of CCR; and

- Place additional constraints on firms' own estimates of Alpha[34] to avoid misspecification of the risk and promote greater consistency across firms.[35]

4 Putting Basel into practice

Whilst 'Basel' may be the fount of international good practice, it does not make law. This translation takes effect by way of a Community directive and thence, in the UK, by an FSA application of these rules. HM Treasury also consider whether any changes to the primary or secondary legislation (*Financial Services Market Act 2000* and relevant Banking Regulations) governing the operation of FSA are necessary to give FSA the relevant powers and obligations required of a competent authority under the directive.

4.1 The EU implementation

The directive is the Capital Requirements Directive (CRD). The capital requirements directive was adopted in June 2006 – giving effect to Basel II – following a lengthy consultation process. Changes to the directive have been introduced according to a much shorter timeline. Full documentation history of the changes proposed and discussed with respect to CRD can be found on the Commission's website.[36] Changes to the directive (CRD III) were made in 2008, described below:

Improving the management of large exposures: banks will be restricted in lending beyond a certain limit to any one party. As a result, in the inter-bank market, banks will not be able to lend or place money with other banks beyond a certain amount, while borrowing banks will effectively be restricted in how much and from whom they can borrow.

Improving supervision of cross-border banking groups: 'colleges of supervisors' will be established for banking groups that operate in multiple EU countries. The rights and responsibilities of the respective national supervisory authorities will be made clearer and their cooperation will become more effective.

[32] CCPs: central counterparties – traded exchanges
[33] OTC: over the counter – non exchange traded deals
[34] Alpha: Alpha is a multiplier applied to Effective EPE to determine exposure at default
[35] *Strengthening the resilience of the banking sector,* BIS, p30
[36] EU Commission at: http://ec.europa.eu/internal_market/bank/regcapital/index_en.htm

Improving the quality of banks' capital: there will be clear EU-wide criteria for assessing whether 'hybrid' capital, i.e. including both equity and debt, is eligible to be counted as part of a bank's overall capital – the amount of which determines how much the bank can lend.

Improving liquidity risk management: for banking groups that operate in multiple EU countries, their liquidity risk management – i.e. how they fund their operations on a day-to-day basis – will also be discussed and coordinated within 'colleges of supervisors'. These provisions reflect the on-going work at the Basel Committee on Banking Supervision and the Committee of European Banking Supervisors.

Improving risk management for securitised products: rules on securitised debt – the repayment of which depends on the performance of a dedicated pool of loans – will be tightened. Firms (known as 'originators') that re-package loans into tradable securities will be required to retain some risk exposure to these securities, while firms that invest in the securities will be allowed to make their decisions only after conducting comprehensive due diligence. If they fail to do so, they will be subject to heavy capital penalties.[37]

Further changes were made in 2009 concerning issues such as remuneration policies and controls and transparency requirements on trading books and complex securities described in a press release below:

Capital requirements for re-securitisations

Re-securitisations are complex financial products that have played a role in the development of the financial crisis. In certain circumstances, banks that hold them can be exposed to considerable losses. The proposal will impose higher capital requirements for re-securitisations, to make sure that banks take proper account of the risks of investing in such complex financial products.

Disclosure of securitisation exposures

Proper disclosure of the level of risks to which banks are exposed is necessary for market confidence. The new rules will tighten up disclosure requirements to increase the market confidence that is necessary to encourage banks to start lending to each other again.

Capital requirements for the trading book

The trading book consists of all the financial instruments that a bank holds with the intention of re-selling them in the short term, or in order to hedge other instruments in the trading book. The proposal will change the way that banks assess the risks connected with their trading books to ensure that they fully reflect the potential losses from adverse market movements in the kind of stressed conditions that have been experienced recently.

Remuneration policies and practices within banks

The proposal will tackle perverse pay incentives by requiring banks and investment firms to have sound remuneration policies that do not encourage or reward excessive

[37] EU Commission, October 2008 website: http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/1433&format=HTML&aged=0&language=EN&guiLanguage=fr

risk-taking. Banking supervisors will be given the power to sanction banks with remuneration policies that do not comply with the new requirements.[38]

A further consultation was launched in February 2010 comprising proposals described below:

Liquidity standards: Introducing liquidity standards that include a liquidity coverage ratio requirement underpinned by a longer-term structural liquidity ratio.

Definition of capital: Raising the quality, consistency and transparency of the capital base.

Leverage ratio: Introducing a leverage ratio as a supplementary measure to the Basel II risk-based framework based on appropriate review and calibration.

Counterparty credit risk: Strengthening the capital requirements for counterparty credit risk exposures arising from derivatives, repos and securities financing activities.

Countercyclical measures: A countercyclical capital framework will contribute to a more stable banking system, which will help dampen, instead of amplify, economic and financial shocks.

Systemically important financial institutions: The Commission is consulting on appropriate measures to deal with the risk posed by such institutions.

Single rule book in banking: The Commission is consulting on areas where more stringent requirements might be necessary. In addition, the Commission is consulting on the appropriate prudential treatment of real estate lending. This is part of the Commission's commitment to create a single rule book in Europe.[39]

Some of these issues are the key Basel rule changes. However, it is not a strict translation. Many of the CRD III proposals are not key Basel proposals as much of the package takes the EU beyond the content of internationally agreed standards of the BCBS: they are also aimed at achieving greater harmonisation of the Single Market for financial services. A final CRD III text was published in December 2010.[40]

Before CRD III was complete the Commission had begun work on CRD IV – reflecting the work done by BIS which both amended Basel II (sometimes referred to now as Basel 2.5) and started on Basel III at the same time.

CRD IV includes matters such as liquidity standards, definition of capital, leverage ratio, counterparty credit risk, counter-cyclical buffers and the application of a single rule book. A brief guide to its provisions can be found in the proposed Directive published in July 2011:

1.1. Reasons for and objectives of the proposal

1.1.1. Sanctions

Effective, proportionate and dissuasive sanctioning regimes are key to ensure compliance with EU banking rules, protect users of banking services and ensure safety, stability and integrity of banking markets.

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[38] EU Commission July 2009 website: http://europa.eu/rapid/pressReleasesAction.do?reference=IP/09/1120&format=HTML&aged=0&language=EN&guiLanguage=en

[39] EU Commission February 2010 website: http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/197&format=HTML&aged=0&language=EN&guiLanguage=en

[40] DIRECTIVE 2010/76/EU

The analysis of national sanctioning regimes in the areas covered by this Directive and the Regulation has revealed divergences and weaknesses in the legal framework of sanctioning powers and the investigative powers available to national authorities.

Sanctions which are divergent and too weak risk being insufficient to effectively prevent violations of this Directive and the Regulation to ensure effective supervision and the development of a level playing field. The Commission therefore proposes to reinforce and approximate Member States' legal framework concerning administrative sanctions and measures by providing for sufficiently deterrent administrative sanctions applicable to the key violations of this Directive and the Regulation, appropriate personal scope of administrative sanctions, publication of sanctions and mechanisms encouraging the reporting of violations.

1.1.2. Corporate Governance

The collapse of financial markets in autumn 2008 and the credit crunch that followed can be attributed to multiple, often inter-related, factors at both macro- and micro-economic levels, as identified in the Report of the High-Level Group on Financial Supervision in the EU published on 25 February 2009, and in particular to the accumulation of excessive risk in the financial system. This excessive accumulation of risk was in part due to the weaknesses in corporate governance of financial institutions, especially in banks. Whilst not all banks suffered from systemic weaknesses of governance arrangements, the Basel Committee on Banking Supervision (BCBS) referred to "a number of corporate governance failures and lapses".

The need for change in this area has been widely recognised. Firms, competent authorities and international bodies (OECD, Financial Stability Board (FSB) and the BCBS) have reviewed their existing practices and guidelines or are in process of doing so. Strengthening corporate governance is a priority for the Commission, especially in the context of its financial markets reform and crisis prevention programme.

1.1.3. Overreliance on external ratings

Over reliance on external credit ratings occurs when financial institutions and institutional investors rely solely or mechanistically on ratings issued by credit rating agencies while neglecting their own due diligence and internal risk management obligations. Overreliance on credit ratings may lead to herding behaviour of financial actors, e.g. parallel selling-off of debt instruments after that instrument has been downgraded below investment grade, which may affect financial stability – in particular when the few big rating agencies err collectively in their assessments.

1.1.4. Pro-cyclicality of institution lending

Pro-cyclicality effects are defined as those which tend to follow the direction and amplify the economic cycle. One feature of current-risk based capital requirements is that they vary over the economic cycle. Provided that credit institutions could meet them there is no explicit regulatory constraint on the amount of risk they can take on, and then on their leverage.[41]

The proposed Directive has achieved political support at Ecofin in May 2012 and is currently with the European Parliament.

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[41] Proposed Directive COM(2010)716 final

4.2 UK implementation

In implementing the new rules, the FSA was hampered by the fact that it took far longer to agree these at the European level than had been originally intended. This meant that the time between the rules being finalised and their intended implementation date (December 2010) was too short for the FSA to consult on a finalised version of the requirements. It had therefore to start the consultation process on the basis of what it thought was the likely outcome of the negotiations it was having in Europe.

The most accessible document outlining the changes is the FSA's consultation paper, CP09/29[42] which sets out the proposals for implementing changes that are required following the first major amendments to the CRD (CRD II and III – the 2008 and 2009 proposals but not those on remuneration).

The wide range of changes address some of the lessons learned from the financial crisis and follows up on aspects of the Turner Review.[43] Since, to an extent, it is a 'distillation' of both the Basel and EU proposals the proposed changes are looked at in some detail.

Hybrid capital

Hybrid capital is capital whilst not equity based, is long term and has the potential for absorbing capital losses; an example is permanent income bearing shares, or PIBS.

The new proposals allow hybrids to be included in the top tier of capital and they must continue to meet characteristics of permanence, subordination, loss absorption and be fully paid up. Depending on their characteristics hybrids fall into one of three classes (buckets) and these buckets will be limited to 15%, 35% and 50% of tier 1 capital depending on their permanence and ability to absorb losses. The FSA outline the extent to which hybrids will be allowed to operate:[44]

> Hybrid capital will be subject to a limit of 50% of tier one after deductions. In practice, this means that any deductions from tier one capital will be made from core tier one items for the purposes of these limits. This requires a change to GENPRU [the banking prudential rulebook] for banks and building societies, which are subject to a requirement that a minimum of 50% of tier one after deductions should be in the form of core tier one. This means that under the current rules non-core tier one instruments can effectively absorb tier one deductions.
>
> The 15%, 35% and 50% buckets are not additive. For example, a firm could include 15% of 15% bucket items within hybrid tier one capital, 20% of 35% items and 15% of 50% items. So, the overall total of hybrid tier one capital is capped at 50% of total tier one after deductions, but the 15% and 35% buckets are sub-limits within that framework (i.e. the combination of 15% bucket and 35% bucket items cannot exceed 35% of total tier one after deductions with 15% bucket items being limited to 15% of total tier one after deductions).

The characteristics of hybrid instruments are set out below:[45]

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42 *Strengthening Capital Standards 3,* FSA, December 2009
43 FSA, Turner Review: A regulatory response to the global banking crisis, 18 March 2009
44 *Strengthening Capital Standards 3,* FSA, December 2009, p25
45 Ibid p41

Undated capital

Cannot have an option to redeem in the first five years

No incentives to redeem allowed within first ten years

Can be included within any bucket depending on features

Calls allowed in 35% and 15% buckets

Dated capital

Must have an original maturity of at least 30 years

No incentive to redeem allowed Must have a 'lock-in' feature (i.e. may not be repaid if in breach of capital requirements at maturity) and supervisors may stop repayment

Calls allowed after five years Included within the 15% bucket

The new rules will put restrictions on the admissibility of certain classes of capital to act as tier 1 capital. For example, new preference shares will need to be modified if they are to count:

> The CRD amendments require that, in order to be counted as hybrids, preference shares require a mechanism that will enable the principal to absorb losses on a going concern basis and not hinder recapitalisation. Preference shares currently in issue do not have such a loss absorbency mechanism. We do not regard the preference shares' legal form as shares to be a sufficient loss absorbency mechanism to meet the CRD requirements. Nor do we regard the share reduction mechanism in the Companies Act to be a sufficient loss absorbency mechanism due to its uncertainty.
>
> 3.55 Preference shares will be eligible to be grandfathered within tier one,. However, future preference share issues will require a suitable loss absorbency mechanism (such as a conversion feature) in order to be included within hybrid capital.[46]

PIBS will require new features too if they are to qualify in future:

> PIBS were developed to provide building societies with a form of tier one capital other than reserves and one that could be raised externally. PIBS do not, however, have a mechanism to enable the principal amount of a PIBS to absorb losses in a going concern and not hinder recapitalisation. So, traditional PIBS currently in issue will not be eligible as hybrid capital under the CRD amendments44. They will be eligible to be grandfathered, as outlined in paragraphs 3.57 to 3.62 below. In future, however, PIBS will have to contain a loss absorbency mechanism such as write-down in order to be eligible as hybrid capital.[47]

However, current tier one instruments that do not comply with the new requirements as at 31 December 2010 will be allowed to maintain their current tier one capital eligibility for ten years after implementation of the new rules. During that ten-year period, instruments that are refinanced would cease to be grandfathered. So, any new instruments issued would have to meet the new requirements in order to count as tier one capital.

[46] Ibid pp 30-31
[47] Ibid

The instruments will also have restrictions on when they are able to make payments of interest:[48]

- a requirement that payments of coupons or dividends on hybrids can only be made if the firm has distributable reserves;
- • a requirement that dividend stoppers should not act in a way that hinders recapitalisation; and
- • guidance outlining the circumstances under which we would oblige firms to cancel coupons.

Loss absorbency will require:[49]

- be legally binding;
- • provide for principal loss absorbency as well as coupon cancellation - it will not be sufficient for an instrument only to absorb losses through subordination and coupon discretion; and
- • not hinder recapitalisation through appropriate mechanisms.

All the new rules are subject to a cost benefit analysis by the FSA. Most of the benefits (on these and the other measures which follow) are captured as a more resilient banking system and reputational benefits, i.e. firms are likely to be better regarded by investors. Since these are common benefits, for the sake of brevity alone they are not repeated in the following sections, nor, in general, are they costed. However, it would be unfortunate if the fact that the benefits are not as prominent in the text as the costs, gave the impression that there are not huge and obvious benefits of not repeating the experience of the previous two years.

The costs of the capital changes are shown below:

Major ongoing capital costs	**Cost estimate for a year (discounted to 2011 values:)**
Loss absorbency in PIBS for building societies	Upper-bound estimate of £54m
Loss absorbency in preference shares for banks and investment firms	Combined upper-bound estimate of £0.9bn
Reduction in limit for preference shares	
Loss absorbency in innovative capital instruments	Upper-bound estimate of £0.9bn
Opportunity cost of maintaining SPV limit to 15% bucket	Upper-bound estimate of £1.1bn
Total:	Upper-bound estimate of £3.0bn
Total excluding opportunity cost:	Upper-bound estimate £1.9bn

Source: Strengthening capital standards CP09/29

48 Ibid p26
49 Ibid p27

The FSA conclude that the cost of these changes will be about £3bn a year,

> However, firms will not incur this entire cost directly as it includes our estimate of the opportunity cost of potential tax savings that firms could have enjoyed, which they otherwise might have used to offset other costs. Excluding our opportunity cost estimate, the upper-bound estimate of costs directly faced by firms is £1.9bn per annum by 2040.
>
> 3.105 We expect that these costs will largely be passed on to the customers of banks, building societies and investment firms. So a likely result of this policy is that the 'lending wedge' – i.e. the difference between saving and borrowing rates – will be larger than would otherwise be the case. There may also be behavioural responses by affected institutions, through limiting the availability of credit and reducing their regulatory capital requirements.[50]

Large exposures

Part of the regulatory capital rules include a limit on the amount of any exposure to a single borrower. The basic large exposure limit is set at 25% of a firm's capital resources, although any exposure above 10% is defined as a 'large exposure'. The key changes proposed are:

- The first of these key changes has resulted in the exemption from the large exposure regime for 'limited licence' and 'limited activity' investment firms.
- A second key change relates to the removal of the current 'inter-bank exemption', which allowed for exposures to institutions with a maturity of one year or less to be exempt from the large exposure limit.
- A further key area relates to the provisions for intra-group exposures. The revised provisions seek to address the market failures in this area more clearly while aiming to address concerns over the complexity of the current provisions and resolvability of groups.

Limited licence

This relaxes the current rules as these type of firms were assessed by the Commission as not contributing to financial stress.

Interbank exemption

One feature of the events of 2007-08 was the speed with which inter bank lending froze. The previous prudential regime had assumed that short term liquidity funding (less than a year) was a permanent reliable feature of credit markets. The Commission, and therefore the FSA, decided in the light of experience to remove the exemption from large exposure risks that applied to the inter bank market.

> The Commission recognised that smaller firms are not always able to diversify their exposures or seek appropriate collateral in order to reduce their exposures. The CRD amendments have therefore provided a 'smaller firm exemption' in order to avoid a disproportionate impact on these firms in this area.
>
> 4.20 The exemption allows for firms to have exposures to other institutions greater than 25% of their capital resources, as long as the exposure is below €150m.
>
> 4.21 Based on analysis of the relevant data, extracted from firms' large exposure returns, we believe an exemption limit lower than €150m can be justified for the UK

[50] Ibid p41

> market while remaining proportionate. Such a lower limit would reduce the number of firms that have large inter-bank exposures and bring about benefits in terms of lower financial contagion if a firm were to default.
>
> 4.22 We propose to set the exemption limit at €100m.
>
> 4.23 The amended CRD allows firms to make use of the smaller firm exemption as long as the size of their exposure does not exceed 100% of their capital resources. There is, however, scope within the CRD on a case-by-case basis to allow for firms to extend exposures greater than 100% of their capital resources. We propose to allow firms to do this, although firms will be required to submit a waiver application to the FSA detailing why they need to extend exposures in excess of their entire capital base.[51]

The capital requirements directive (CRD) permits some 'national discretions' and the FSA has taken advantage of this, disapplying some aspects not applicable to the London market, but making other regulations tighter than the EU minimum. These are described in the consultation paper.[52] UK exemption therefore is likely to be slightly less extensive than the minimum required by the Commission. The FSA also propose to introduce further controls on exposures on bank's trading books because:

> In theory, trading book exposures are short term. There is, however, an increasing blur between the trading and non-trading book, partially due to the nature of some of the underlying derivatives, and also due to the fact that some short term exposures are continually rolled over. The ability of a firm to trade out of the position which has created the exposure, without significant loss, is therefore questionable. Additionally, there is evidence to suggest that it is difficult to monitor rapidly deteriorating counterparty creditworthiness and act appropriately in times of extreme stress.[53]

The FSA is also reviewing intra-group exposures and whether the existing exemptions and rules should continue. As the consultation paper notes:

> The market failure mentioned in paragraph 4.2 (an unanticipated and hence unprovisioned for failure] has another dimension for intra-group exposures as they are not always made on an arm's length basis and may continue to be extended even when it is not prudent for the solo firm to do so.[54]

The CRD made 'no significant change' to the regime particularly where the groups are all established within the same Member State. The FSA propose to enhance the intra-state requirements, i.e. require companies to set up 'core UK groups' if they wish to continue to gain full exemption from such exposures. There will be a more significant tightening of the limits on intra group exposures when part of that group is outside of the UK. The current large exposure regime allows firms to extend total cross border intra-group exposures in excess of 100% of their capital resources. In time, this will be reduced to 100% of assets.

Again, the FSA conducted a cost benefit analysis of these measures. It found (this is an edited version of this section of the paper, more details can be found in the appropriate section):

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[51] Ibid p45
[52] Ibid p46
[53] Ibid p49
[54] Ibid

Removing the inter-bank exemption :for exposures above €150m would impose total one-off costs on all firms affected of £15m (including estimated costs of £0.2m associated with applying for waivers to cover exceptional exposures). These relate to legal, professional and IT costs resulting from the change. The ongoing costs of removing this exemption primarily arise from the loss of yield firms would incur from diversifying their exposures away from their current levels, we estimate that these total £117m per year and range from £0 to £30m per year for each firm.

4.109 The UK is exercising its national discretion to set the exemption for exposure at €100m rather than €150m. We estimate that reducing the level from which the basic 25% limit applies from €150m to €100m will impose an additional total of £10-15m in one-off costs on firms. This is based on our estimate that around 100 more firms would be affected than with a €150m higher limit. In terms of ongoing costs, based on our survey we estimate that reducing the level from which the basic 25% limit applies from €150m to €100m increases aggregate ongoing costs by £35m per year to around £150m a year.

Costs to firms of third-party trading book exposure limits

4.115 Currently only a few firms have significant third-party exposures in their trading book. However, with the removal of the inter-bank exemption firms have indicated that they will use the trading book to a greater extent for third-party exposures. In response to this change we expect most firms to collateralise these exposures.

4.116 Collateralising exposures incurs a cost. Regulatory returns suggest that firms would need to cut a total of £5.6bn of exposures that are currently within their trading books. Hence this would yield a total cost of £14-28m a year.

4.117 However, under current rules firms have a considerable amount of exposures that are exempt under the inter-bank exemption. The CRD amendments have removed this exemption, bringing an estimated £49bn of currently exempt exposures within the large exposures regime. Firms have indicated that they intend to use the trading book treatment for some of their currently exempt exposure. As such, at the extreme, costs of removing the trading book treatment could be as high as £270m a year (though we are aware that firm responses to our survey tend to over-estimate exposures, as they are generally based on internal limits rather than actual exposures as reported in regulatory returns).

4.118 In addition to the collateral costs, firms will have administrative, reporting, IT and restructuring costs. Based on our survey we estimate one-off costs of up to £15m. Depending on the number of firms affected, we estimate annual costs from such sources of £1-15m.

Intra-group exposures

Costs to firms of intra-group exposure limits

4.125 Firms have three options in responding to these proposals:

• avoid large exposure restrictions by turning subsidiaries into branches or by relocating;

• reduce exposures by funding locally, through collateralisation, reorganisation or by ceasing to do business; and

• raise capital in order to increase the size of their (large exposures) capital base.

Branching and relocating

4.126 One method for firms to circumvent intra-group exposure limits is to branch their overseas subsidiaries, as there are no limits on exposures to branches.

4.127 Another method to exempt all exposures from these limits is to relocate the parent to another EU country where there are no intra-group limits and to branch UK entities.

4.128 Turning subsidiaries into branches or relocating and branching subsidiaries will impose one-off legal and restructuring costs on firms. However, firms have not been able to estimate these. The cost estimates below focus on the cost of firms reducing their exposures.

Funding subsidiaries locally

4.129 Firms could reduce cross-border exposures by requiring overseas subsidiaries to fund themselves locally. Local debt would be more expensive than funding subsidiaries centrally, as subsidiaries generally receive lower credit ratings than their parents.

4.131 A major UK retail bank has estimated, using market data on the likely credit rating their subsidiaries would get and the cost of funding a company with that rating, that issuing debt for subsidiaries locally would cost between 100 and 350 bps more than their centrally issued debt, with an average of 250 bps. This should be considered as an upper-bound.

4.132 This data can be used to calculate an upper bound for the cost of locally funding non-UK subsidiaries to ensure exposures meet a 100% limit. If the six largest UK retail banks were to meet a 100% cross-border exposure limit by funding their subsidiaries locally and they were to face an incremental cost of funding of 250 bps, then an upper-bound for their combined incremental costs would be £2.1bn per year.

4.133 Actual costs for affected firms are likely to be substantially lower than the estimate above. This is due to the 250 bps being an upper-bound and the fact that the total exposure figures for some banks are taken from the internal upper limits they set for their exposures. Actual exposures will be lower than these, though firms state that at times they do go up to these limits.[55]

Securitisation

One acknowledged cause of the financial crisis was the over use and poor valuation of securitised credit products. The previous regulatory regime actively encouraged companies to move risks off-balance sheet as this then freed up capital resources. Much of the securitisation business model was outside significant regulatory control. The new proposals seeks to improve risk management for securitised products by only allowing firms to invest in the securities after they have conducted comprehensive due diligence. If firms fail to do so, they will be subject to heavy capital penalties. The document gives an example of the consequences of such failure:

> Where the due diligence and disclosure requirements are not met in a material way, we will use our powers under section 45 of FSMA to impose an additional risk weight of not less than 250% of the risk weight which would apply. For example, if a firm has a AAA securitisation position of 100 its risk weighted exposure amount will be 20 (100*20%) and where the requirements are no longer met they will have at minimum a

[55] Ibid pp55-63

risk weighted exposure amount of 70 (100*(20% + (250%*20%))). We may increase this risk weight to a maximum of 1250% with each subsequent infringement of the requirements.[56]

In addition firms may only be exposed to the credit risk of a securitisation if the originator or sponsor has retained 5% of the net economic interest, a provision which aims to address incentive distortions. Previously, the securitising firm had no economic interest in the worth or value of the product it was selling on. The key target for such firms was the attainment of a favourable credit rating. Investing firms relied excessively on such ratings for their valuations and did not, apparently, conduct much in the way of their own independent research.

Much of the changes recommended in the Commission's directive affected re-securitisation – where products are sold on – and generally raise capital holding requirements against unexpected defaults for example, a CDO backed by residential mortgage-backed securities (RMBS).

One issue the regulators have to deal with is the extent to which firms have really passed on risk when they sell securitised profits. There is scope for firms to engage in regulatory arbitrage if the rules for credit risk are different from those applying to securitised products. If assets are securitised but the risk on those assets does not pass too, firms will be able to exploit this:

> An extreme example of a potential arbitrage is firms retaining all securitised exposures (i.e. there is no economic change in the firms' risk profile) while still obtaining a reduction in regulatory capital by applying the securitisation framework rather than the credit risk framework.[57]

The paper proposes various mathematical prudential standards or, with FSA approval, would allow a firm to make its own assessment. In this case:

> We are proposing that firms give us certain information where they are seeking to reduce their capital requirements by undertaking securitisation. We will then be able to make a case-by-case assessment of whether the reduction in risk-weighted exposure amounts is justified by a commensurate transfer of credit risk to third parties. Where we determine that the reduction in risk weighted exposure amounts is not justified the firm will be required to increase its risk weighted exposure amount to an amount commensurate with the transfer of credit risk to third parties.
>
> 5.20 The notification should include all relevant details for us to make an assessment. We recognise that the information will vary depending on the structure of the securitisation, assets underlying the securitisation and firm specific factors. So we do not intend to specify all elements which may be relevant to make our analysis.
>
> 5.21 However, as a minimum, we would expect firms to provide:
>
> • details of the risk weighted exposure amount before and after the securitisation;
>
> • details of the exposure value before and after the securitisation;
>
> • details of the capital structure, including rating and exposure value broken down by positions sold and retained;

[56] Ibid p71
[57] Ibid p66

• a statement of how the firm is satisfied the reduction in risk weighted exposure amounts is justified by a commensurate transfer of credit risk to third parties; and

• any supporting documents, for example, a summary of the transaction.[58]

Regulatory standards for assessing the risk weighted value of securities and the associated liquidity requirements will be raised from 6% to 7% and from 20% to 50%. The consultation document has an extensive cost benefit analysis section on these proposals; the summary position is shown in the table below:

[58] Ibid p67

	Costs for firms with over £500bn of assets	Costs for firms with less than £500bn of assets
Costs to firms - capital compliance costs	Based on firms' responses to our survey, the average increase in capital requirements due to the amendments in relation to securitisation and re-securitisation was estimated to be £750m. We estimate an upper-bound for the costs of funding this capital to be approximately £35m a year.	Based on survey responses there would be no impact.
	Overall we estimate that the additional capital requirement for the industry is approximately £3.6bn, which would result in an upper-bound cost to firms of around £170m a year. However, in practice, banks may seek to reduce or change the composition of their asset holdings, thus giving rise to a smaller increase in capital requirements, which would reduce the costs estimated above.	
Costs to firms - non capital compliance cost	Based on firms' responses to our survey, firms' estimated incremental one-off compliance costs would be between £370k and £1.6m. Corresponding ongoing costs are estimated to be around £750k a year.	Based on firms' responses to our survey, firms' incremental ongoing costs are estimated to be between £20k and £40k a year.
	Overall, we estimate the industry one off non-capital compliance costs to be between £2m and £8m and the ongoing costs between £4m and £5m a year.	
Indirect market impact	Smaller demand and reduced market liquidity for securitisation products could make the securitisation process more expensive for originators and could in turn increase the cost and reduce the availability of credit to households and businesses.	
Benefits	The securitisation proposals will bring benefits by mitigating three types of market or regulatory failures : 1. Mitigation of originators moral hazard in their underwriting process; 2. reduction in information asymmatries between originators/sponsors and investors; and 3. increase in certain capital requirements against risks that were underestimated in the current framework. These will improve investor protection and market confidence in the securitisation market as well as help to reduce probability (and the expected costs) of individual firms' failure and systemic crisis.	

Source : Strengthening capital standards CP09/29

Trading Book

Some of the very largest episodes of bank losses have happened as a result of failures with bank's internal trading books, either because of 'rogue' traders or inadequate trading controls. Reflecting these failures the proposed FSA rules aim to:

- increase the level of capital held against trading book risks;
- reduce the relative cyclicality of the market risk capital requirements;
- reduce the opportunity for arbitrage between the non-trading book and the trading book; and
- improve the capture of credit risk and illiquidity in the trading book.

The consultation document outlines the proposed changes thus:

> Following implementation of these requirements all firms with a VaR (value at risk) model permission will be required to:
>
> • Calculate an additional charge for a stressed calibration of the VaR capital charge, based on a historical period of stressed market conditions (stressed VaR). This charge is in addition to the current regulatory VaR requirements.
>
> • Apply the new standardised securitisation charges to all securitisation positions (other than where the correlation trading carve-out applies).
>
> • Improve the modelling standards being applied to VaR models.
>
> 6.7 Firms with a VaR model permission covering specific interest rate risk will be required to:
>
> • Calculate an incremental risk charge (IRC), which addresses default and migration risk for positions in the trading book that are subject to credit risk. This charge will be applied to all trading book positions subject to specific interest rate risk that are not securitisations and replaces the incremental default risk charge (IDRC).
>
> • Calculate an all price risk measure for correlation trading positions.
>
> 6.8 Firms using the standard rules will be subject to:
>
> • new standardised charges for securitisation positions;
>
> • an increase in the equity specific risk requirement to 8%; and
>
> • amended standardised charges for nth-to-default credit derivatives.[59]

Put simply, firms will be required to improve their risk evaluation methods, make higher provisions against them and evaluate these risks against a more demanding (stressed) criteria. The concept of stressed market conditions, features throughout the new rules. The Basel Committee nominated 2007/8 as the benchmark. However, the FSA propose a more flexible designation, one that may be more appropriate to a particular firm[60]

[59] Ibid p85
[60] Ibid

The standard cost benefit analysis is shown below.

Trading book cost benefit analysis

Costs to firms - capital compliance costs	We estimate that firms with significant trading books that are subject to UK prudential regulation will, in total, require approximately £29bn extra in market risk capital. We estimate an upper-bound for the cost of funding this capital to be approximately £1.4bn a year. However, in practice, affected firms may seek to reduce or change the composition of their trading book assets, thus giving rise to a smaller increase in capital requirements which would reduce the costs estimated above.
Costs to firms - non capital compiance costs	Based on responses to our survey, we estimate that affected firms' average one-off costs will be between £1.2m and £7m, and their ongoing costs between £0.4m and £6m a year. Overall, we estimate the industry one-off costs to be between £11m and £71m and the ongoing costs to be between £4m and £56m a year, depending on firms' business models, systems and policies.
Indirect market impact - lending.	Ten years after implementing the policy (Decemeber 2020), the aggregate stock of real loans granted by the banks responsbile for most of the lending stock in the country is estimated to be 1.9% smaller than it would bw without the policy changes. However, the impact in trading assets is likely to be more significant.
Indirect market impact - others	Overall, the amendments will raise capital requirements held against a wide variety of products for which VaR modelling is pemitted. This is likely to raise the cost of trading for all market participants whether or not they are directly affected by the proposals, and could impact liquidity in the affected markets due to a reduced volume of trading. The application of standardised charges to securitisation positions (and the all price risk measure for correlation trading) may have a similar effect in securitisation markets, and could increase the cost of credit to businesses and consumers. It could also limit any recovery in the securitisation markets and affect the availability of credit during the recovery from the recent financial crisis. Restricting the use of internall modelling of securitisation positions could also affect firms' incentives to hedge such positions.
Benefits	By mitigating some of the shortcomings in the current framework and increasing capital requirements against trading book positions, the proposals will improve the ability of firms with significant trading activities to withstand severe market downturns such as those we have witnessed in the recent financial crisis. This should reduce the likelihood that individual firms will default and lower the risk of systemic crisis. A reduction in the frequency and magnitude of systemic crisis will have a signficant positive benefit for society as a whole.

Source : Strengthening capital standards CP09/29

The cost of the proposals reflects the step change in regulation being proposed:

> we estimate that implementation of the new requirements will increase the regulatory capital requirements of firms with significant trading books that are subject to UK prudential regulation by approximately £29bn[61]

The FSA estimate that the cost of funding this figure at £1.4bn a year, although behavioural changes by firms might reduce this cost. Other ongoing costs will increase such as legal and compliance costs

Pillars 2 and 3

The pillars refer to the structure of the Basel Accord. Pillar 1 is the system of universal capital requirements determined in a formula driven way (capital/ (assets x risk). The Basel II Pillar 2 system, gives bank regulators the discretion to increase required bank capital above that indicated by Pillar 1 calculations. A discretionary system has the advantage of allowing a nuanced analysis of macroeconomic and macro-prudential conditions to guide decisions and although it was not originally designed to serve countercyclical purposes, this has become an important factor in the thinking of regulators post crisis.

Pillar 3 is composed of rules regarding the disclosure of bank activities.

The FSA welcomed the 'clarity and strengthening of the text' proposed by the capital requirements directive (CRD) with respect to pillar 2. In practice the FSA believe that no significant changes are required to their rules in order to implement pillar 2 changes made by CRD.

They similarly welcomed the strengthening of the pillar 3 requirements recommended by both the Basel committee and in the CRD. On pillar 3 they note:

> For Pillar 3 to improve market discipline, the disclosures should increase the amount of potentially useful information available to market participants, and market participants should be willing and able to respond to the information. We believe that the first condition has been met by the introduction of existing Pillar 3 requirements: a recent report by the CEBS notes that 'a huge effort has been made to provide market participants with information allowing for better assessment of a bank's risk profile and capital adequacy'.115 We expect that the additional disclosures proposed in the CRD will provide further information that could be useful to market participants.
>
> 8.7 Since Pillar 3 disclosure requirements have only been implemented relatively recently (with the first full sets of disclosures being produced during 2009), it is difficult to draw firm conclusions on the use made by market participants. We understand, from discussions with industry members, that market participants have shown interest in Pillar 3 reports produced so far, although it is too early to comment on the use made of such information.
>
> 8.8 Following the financial crisis, disclosures by financial services firms have been subject to increased scrutiny by a wide range of stakeholders. We believe that this greater focus on disclosures more generally makes it likely that market participants will respond to the information required by Pillar 3. Although, following our discussions in *The Turner Review*, we have doubts about whether market discipline can play a major

[61] Ibid

role in constraining risk taking in an absolute sense, Pillar 3 disclosures may still facilitate comparisons by market participants between firms.[62]

Currently disclosure is required of those material facts relevant to the pillar 1 requirements. The changes extend the requirements beyond this. There is, for example a significant increase in the disclosure requirements with respect to securitisations:

> Firms must disclose information on their links with sponsored or affiliated off-balance sheet vehicles, with regard to risks other than credit risk inherent in securitised assets (including liquidity risk).
>
> 8.17 Re-securitisation positions, and their associated capital requirements, must be disclosed separately, with sufficient granularity on risk-weight bands and credit risk mitigation.
>
> 8.18 Further disclosures must be provided on the following:
>
> • qualitative information on the regulatory capital approach applying to each type of securitisation position, with a description of use of the internal assessment approach (where applicable);
>
> • methods and key assumptions for valuing securitisation positions;
>
> • assets that are awaiting securitisation; and
>
> • an explanation of any significant changes in any of the quantitative disclosures since the last reporting period.[63]

The costs of the implementation of the pillar 3 proposals are relatively minor: "At industry level, we estimate the one-off costs from these proposals to be approximately £12.6m and the corresponding ongoing costs to be around £8m". The benefits are hard to quantify as they will depend on what use the users of the new information will make of it:

> The enhancements proposed aim to address areas of observed weaknesses in public disclosure. These are likely to result in an increase in the amount of information available to the market, which, if market participants respond to the information provided, should improve market participants' understanding of a firm's risk profile. This could also lead to an increase in market discipline (although, as noted above, we are not convinced that market discipline plays a major role in constraining risk taking in an absolute sense).[64]

Technical amendments and other issues

There are a substantial number of what the FSA describe as technical amendments covering many of the thematic areas described above. A summary list of these may be found in a table on pages 123-125 of the consultation paper.

The paper also has a list of measures proposed by the FSA that go beyond the requirements of the CRD. These are shown below, and can be found in Annex 2 of the paper.

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[62] Ibid p106
[63] Ibid p108
[64] Ibid p109

Directive reference	Description of issue	Superequivalent policy approach	CP reference
Hybrid capital			
BCD Article 57ca	The directive permits indirectly issued hybrid tier one capital instruments to be included within any of the hybrid tier one capital 'buckets'.	We propose to restrict indirectly issued hybrid tier one capital instruments to the 15% hybrid tier one bucket. This maintains our current policy for BIPRU firms, which is to limit minority interests in capital-raising SPVs to 15% of tier one capital after deductions.	3.23 - 2.24
Large exposures.			
BCD Article 113 (4) (c)	The availability of the exemption for intra-group exposures within the same Member State that meets certain criteria for 0% RW under the standardised approach is not limited to wholly-owned subsidiaries, but may be available to subsidiaries over which the firm effectively exercises a dominant influence and entities linked by unified management absent capital ties.	We propose to restrict the exemption to group entities that are fully owned. This requirement helps to ensure there are no other interests that could interfere with the firm's control over the subsidiaries and on the ability of the firm to require prompt movement of capital around the group.	4.66 - 4.71
BCD Article 113 (4) (c)	The availability of the intra-group exemption is not limited to wholly-owned subsidiaries, but may be available to majority-owned subsidiaries over which the firm exercises a dominant influence.	We propose to restrict the exemption to group entities that are fully owned. This requirement helps to ensure there are no other interests that could interfere with the firm's control over the subsidiaries and on the ability of the firm to require prompt	4.72 - 4.82
Market risk			
CAD Annex 1 Point 16 (a) and 16(b)	Firms are required to calculate their market risk capital requirements on all net securitisation positions in the trading book, including securitisation credit derivatives, using standard rules which require firms to apply the relevant banking book risk weights to the net securitisation positions.	We currently have superequivalent standard rules for the calculation of market risk capital requirements on securitisation credit derivatives in the trading book. These rules require firms to hold the higher of the superequivalent amount and the CRD minimum. With the CRD minimum changing we are reassessing the need for these rules.	6.46 - 6.51

4.3 Subsequent announcements

The proposed changes outlined in the preceding section were set out as a consultation exercise. Because the FSA is in effect a rule making body, all its functions are subject to a long, statutory consultation and feedback procedures. The follow up to the consultation was published in July 2010 as CP10/17: *Strengthening Capital Standards 3*. Few significant changes were proposed, however, because the final text of the Directive had still not been agreed at that point there was still the possibility that further changes could be made at a later stage.

As a result of the responses to the consultation, the FSA proposed the following amendments to its previous proposals:

> Hybrid capital
>
> 3.2 In response to respondents' feedback we have revised our proposal to require firms to obtain a legal opinion with regard to potential SPV cross-border risks. We have amended our requirement to state that firms will need to conduct an analysis of crossborder legal and operational risks and how they have been mitigated. We have also clarified the scope of the legal opinion on whether instruments meet the requirements for inclusion within hybrid capital and added guidance on how it should cover the requirement that a hybrid capital instrument should not hinder recapitalisation.
>
> Large exposures
>
> 3.3 The large exposure rules and guidance are being deferred to the September board for making. This is because, before finalising the rules, we need to consult (in Chapter 14 of this Paper) on amendments to the 0% risk weighting of intra-group exposures under The Standardised Approach (TSA) for credit risk. This area references the same criteria as that used to exempt certain intra-group exposures from the large exposures limit, which we proposed to change in CP09/29. This further consultation will close in August. The feedback will be relevant to informing the final outcome as regards the criteria used for these intra-group provisions. We are therefore publishing 'near final' large exposure rules in Appendix 2 of this Paper; however any changes will be limited to the intra-group criteria only. Further detail is given in Chapter 5.
>
> 3.4 Most respondents did not agree with our proposal to set the 'smaller firm interbank exemption' limit at €100m. After considering the feedback received and reconsidering the costs and benefits of a reduced smaller firm exemption limit set at €100m, we plan to alter our planned implementation and set the limit at €150m.
>
> Financial Services Authority 15
>
> 3.5 Several respondents raised concerns regarding the new intra-group proposals. We have worked with members of the industry since CP09/29 was published to identify areas where the rules can be clarified. The 'near final' Handbook text has been revised to reflect these discussions. It also now includes an appendix of diagrams to assist users, together with updated large exposure requirements for non-EEA sub groups.
>
> Securitisation
>
> 3.6 Several respondents raised concerns with the potential timing of our implementation of the CRD3 securitisation provisions. It was not our intention to implement the CRD3 requirements prior to the Directive being agreed. We have summarised the feedback received on the CRD3 amendments, but have not provided our detailed responses, or included final Handbook text. Now that the Directive is

agreed, we will provide further feedback, re-consult as necessary, and make final Handbook text as soon as practicable.

3.7 Several respondents expressed concerns with our proposed notification approach for implementing the new CRD2 provisions in respect of SRT. We still believe that the notification approach is the most appropriate available to us. The new SRT provisions provide for a mechanistic approach to assessing SRT, and while meeting the mechanistic tests may result in firms taking capital relief commensurate with the credit risk transferred to third parties, we continue to believe that it is possible to satisfy the mechanistic tests and subsequently benefit from a disproportionate amount of capital relief relative to the amount of risk transferred. We therefore consider it important that we are notified of securitisation transactions so we can exercise an appropriate level of supervisory oversight over firms' assessment of SRT.

3.8 Respondents were also concerned with how the SRT waivers process would work in practice. We are discussing the operation of the waiver approach with the industry, in particular via the Securitisation Standing Group, to reach a common understanding of how the process will operate. We continue to believe that a waiver based approach is the most appropriate means of implementing the CRD2 provisions that provide for an alternative to the mechanistic approach for assessing SRT. The waiver approach will ensure a formal and consistent process is used to enable us to determine whether firms have appropriate policies and methodologies in place to assess SRT.

Trading book

3.9 Most concerns respondents raised were about the ongoing uncertainty surrounding the final content of the CRD3 amending Directive and ensuring the overall package is consistent with international agreements. We have therefore not included our proposed final CRD3 rules in this Paper and will provide further feedback and make final Handbook text, or re-consult should there be material changes, once we have had an opportunity to consider the final text agreed in Europe.

3.10 Firms have stated they do not require further detailed guidance in implementing a stressed Value-at-Risk (VaR) measure, implementing the Incremental Risk Charge (IRC) and the all price risk measure requirements. However, after reviewing their responses to our CP and CRD3 implementation questionnaire, and after our bilateral and multilateral discussions with firms, we believe firms would benefit from some general guidance. We will supply further detail on the outcome of this exercise in the subsequent CP for CRD3.[65]

The Basel III proposals (which form the basis of both the FSA and EU Directive's proposals) were published in July 2010, however in October 2010 BIS published *The Basel's Committee response to the financial crisis: report to the G20.* This is the most accessible guide to the new broad regulatory capital ratios required of banks and other deposit takers. The most fundamental reform is that:

The minimum requirement for common equity, the highest form of loss absorbing capital, **will be raised from the current 2% level, before the application of regulatory adjustments, to 4.5% after the application of stricter adjustments. In addition, factoring in the capital conservation buffer brings the total common equity requirements to 7%**

And

65 Strengthening Capital Standards, CP10/17

The Tier 1 capital requirement, which includes common equity and other qualifying financial instruments whose inclusion is based on stricter criteria, **will increase from 4% to 6%** (before factoring in the conservation buffer).

Key sections are shown below:[66]

Quality and level of the capital base

The Basel Committee reached agreement on a new definition of capital in July 2010. Higher quality capital means more loss-absorbing capacity. This in turn means that banks will be stronger, allowing them to better withstand periods of stress.

A key element of the new definition is the greater focus on common equity, the highest quality component of a bank's capital. Credit losses and write downs come directly out of retained earnings, which are part of a bank's common equity base. The Committee therefore has adopted a stricter definition of common equity, requiring regulatory capital deductions to be taken from common equity rather than from Tier 1 or Tier 2 capital as is currently the case. As a result, it will no longer be possible for banks to display strong Tier 1 capital ratios with limited common equity net of regulatory deductions. As part of its reforms, the Committee also recognised the unique circumstances of non-joint stock companies, which are not in a position to issue common shares to the public.

The Basel Committee is of the view that all regulatory capital instruments must be capable of absorbing a loss at least in gone concern situations. The Committee has consulted on a proposal to ensure that all non-common Tier 1 and Tier 2 capital instruments are able to absorb losses in the event that the issuing bank reaches the point of non-viability.

By itself, the new definition of capital constitutes a significant improvement in the global capital regime, which will be enhanced further by better risk coverage, the introduction of buffers and higher minimum capital requirements.

Risk coverage

In addition to raising the quality and level of the capital base, there is a need to ensure that all material risks are captured in the capital framework. During the crisis, many risks were not appropriately covered in the risk-based regime. For example, some banks held significant volumes of complex, illiquid credit products in their trading books without a commensurate amount of capital to support the risk. Moreover, failure to capture major on- and off-balance sheet risks, as well as derivative related exposures, was a key factor that amplified the crisis.

In response, in July 2009 the Committee introduced a set of enhancements to the capital framework that, among other things, considerably strengthen the minimum capital requirements for complex securitisations. This includes higher risk weights for resecuritisation exposures (eg CDOs of ABS) to better reflect the risk inherent in these products, as well as raising the capital requirements for certain exposures to off-balance sheet vehicles. The Committee also required that banks conduct more rigorous credit analyses of externally rated securitisation exposures.

Increasing regulatory capital for the trading book has been another crucial element of the Committee's reform programme. In July 2009 the Committee substantially strengthened the rules that govern capital requirements for trading book exposures. This included a stressed value-at-risk requirement, an incremental risk charge for

[66] The Basel Committee's response to the financial crisis: Report to the G20, p4-6

migration and default risk, as well as higher requirements for structured credit products held in the trading book. The revised trading book framework, on average, requires banks to hold additional capital of around three to four times the old capital requirements, thus better aligning regulatory capital requirements with the risks in banks' trading portfolios. These higher capital requirements for trading, derivative and securitisation activities reinforce the stronger definition of capital and will be introduced at the end of 2011.

Deterioration in the credit quality of counterparties also was a significant source of credit-related loss. In response, the Committee has focused on increasing regulatory capital requirements and improving risk management for counterparty credit risk. This includes the use of stressed inputs to determine the capital requirement for counterparty credit default risk, as well as new capital requirements to protect banks against the risk of a decline in the credit quality of a counterparty, for example, as occurred in the case of the monoline insurers.

Raising the level of capital

Basel III also introduces higher levels of capital. The minimum requirement for common equity, the highest form of loss absorbing capital, will be raised from the current 2% level, before the application of regulatory adjustments, to 4.5% after the application of stricter adjustments. In addition, factoring in the capital conservation buffer brings the total common equity requirements to 7%. The higher level of capital is in addition to the stricter definition of common equity and the increase in capital requirements for trading activities, counterparty credit risk and other capital markets related activities. Taken together, these measures represent a substantial increase in the minimum capital requirement to help ensure that banks are able to withstand the type of stress experienced in the previous crisis. Moreover, as discussed below, supervisors can require additional capital buffers during periods of excess credit growth and, in the case of systemically important banks, they can demand additional loss absorbency capacity.

The Tier 1 capital requirement, which includes common equity and other qualifying financial instruments whose inclusion is based on stricter criteria, **will increase from 4% to 6%** (before factoring in the conservation buffer).

Containing leverage

Another key element of the Basel III regulatory capital framework is the introduction of a non-risk-based leverage ratio that will serve as a backstop to the risk-based capital requirement. In the lead up to the crisis, many banks reported strong Tier 1 risk-based ratios while still being able to build high levels of on- and off-balance sheet leverage. The use of a supplementary leverage ratio will help contain the build-up of excessive leverage in the system. It will also serve as an additional safeguard against attempts to "game" the risk-based requirements and will help address model risk.

The Committee's governing body in July 2010 agreed on the design and calibration of the leverage ratio, which will serve as the basis for testing during a parallel run period. It is proposing to test a minimum Tier 1 leverage ratio of 3% over this period that begins in 2013. The leverage ratio will capture both on- and off-balance sheet exposures and derivatives. The treatment of derivatives will be harmonised across accounting regimes using the regulatory definition of netting. While there is a strong consensus to base the leverage ratio on the new definition of Tier 1 capital, the Committee also will track the impact of using total capital and tangible common equity.

For global banks with significant capital market activities, the 3% calibration is likely to be more conservative than the traditional measures of leverage that have been in place in some countries. The main reasons for this are the new definition of capital and the inclusion of off-balance sheet items in the calculation of the leverage ratio.

4.4 Reactions to the changes

It is worth remembering, particularly at times when they are being criticised for not doing so, that banks make money from lending. They have a strong profit incentive to lend as much as they can. Generally two things act as constraints. First, their own estimations of whether they will get the money they lend back. Second, whether they are allowed to by the rules. The changes to Basel II, the CRD and finally the FSA's proposed rules, as can be seen from the above, increase restrictions where they existed before and introduce new ones that didn't exist – for example on liquidity and the use of derivatives. Taken together the rules increase the cost of making loans in terms of the capital banks must keep and hence which they cannot use to lend with (and make money). The reaction from financial institutions has tended to be one of acceptance of increased controls, whilst at the same time pointing out what the industry sees as their consequences.

Standard Chartered bank produced the following resume of their position, which is typical of many industry responses:

> "The Standard Chartered Group is currently reviewing and assessing the potential impact of the proposals contained within the Basel Committee's two consultative documents ("Strengthening the resilience of the banking sector" and "International framework for liquidity risk measurement, standards and monitoring"), published in December 2009. We are broadly supportive of many of the Basel Committee's proposals, but are concerned about the aggregate impact of these changes on the banking sector and the wider economy. The proposals also have to be considered in the context of the unprecedented levels of government intervention during the financial crisis and need to recognise the impact of unwinding the various guarantee and special liquidity schemes operated by governments and central banks in many countries.
>
> We believe that there has been too much emphasis placed on capital in the package of proposals. We are concerned that a number of the proposals will not address the underlying causes of the financial crisis, including inadequate balance sheet and liquidity management, poor risk management practices and ineffective regulatory oversight. There is a clear need for a comprehensive assessment of the impact of the Basel Committee's proposals, as well as more recent proposals including the US levy and restrictions on proprietary trading. This assessment must include a careful analysis of the impact of the proposals on the banking sector and on the global economy to ensure that any unintended consequences are identified. It is also important that the measures eventually introduced are implemented on an internationally consistent basis to maintain a level playing field and avoid regulatory arbitrage, and for this to be achieved, there needs to be a balance between introducing more regulation and increasing the complexity of regulation. We advocate a measured and straightforward approach that addresses the key issues identified by the financial crisis.
>
> We recognise the significance of the regulatory reforms being proposed on the many markets in which we operate, and we welcome the opportunity to engage with the regulators and other authorities in those markets. Our views and those of the banking industry are evolving as we work through the details of the proposals and their impact. We will continue to engage with the regulators in our markets during the Basel Committee's consultation period. Beyond that, we plan to continue to share our views

> as they evolve, during the period of impact assessment, calibration and implementation."

The British Bankers Association response to CP09/29 covered a wide range of points.

Regulatory interaction
They pointed out that there is a lot of interaction remaining between Basel proposals, the CRD and the FSA. The CRD [3 proposals] is still in draft and not all the Basel Committee proposals have been finalised. They warn of the UK getting out of step with an international consensus.

Implementation
The BBA want more time, transitional arrangements and phasing in of proposals. Again, they warn of some of the new regulations being introduced ahead of an internationally agreed standard.

Super equivalence
They do not agree with the FSA going beyond the requirements of CRD in some areas, for example, with respect to hybrid capital.

Comments on specific proposals can be found in the BBA response document available on their website.

G20 Update
At their meeting in Toronto in June 2010, governments considered the Basel proposals. Their conclusion can be seen in the official communiqué, part of which is shown below:

> The first pillar is a strong regulatory framework. We took stock of the progress of the Basel Committee on Banking Supervision (BCBS) towards a new global regime for bank capital and liquidity and we welcome and support its work. Substantial progress has been made on reforms that will materially raise levels of resilience of our banking systems. The amount of capital will be significantly higher and the quality of capital will be significantly improved when the new reforms are fully implemented. This will enable banks to withstand – without extraordinary government support – stresses of a magnitude associated with the recent financial crisis. We support reaching agreement at the time of the Seoul Summit on the new capital framework. We agreed that all members will adopt the new standards and these will be phased in over a timeframe that is consistent with sustained recovery and limits market disruption, with the aim of implementation by end-2012, and a transition horizon informed by the macroeconomic impact assessment of the Financial Stability Board (FSB) and BCBS. Phase-in arrangements will reflect different national starting points and circumstances, with initial variance around the new standards narrowing over time as countries converge to the new global standard.
>
> 19. We agreed to strengthen financial market infrastructure by accelerating the implementation of strong measures to improve transparency and regulatory oversight of hedge funds, credit rating agencies and over-the-counter derivatives in an internationally consistent and non-discriminatory way. We re-emphasized the importance of achieving a single set of high quality improved global accounting standards and the implementation of the FSB's standards for sound compensation.[67]

Reactions to the statement varied between those which could be filed under 'crackdown' and those under 'climbdown': the new rules will come, but, not yet. This can be taken either as a

[67] G20 Toronto Summit Declaration; June 26-27 2010. http://www.g20.org/Documents/g20_declaration_en.pdf

cooling of reforming zeal as the crisis passes (a common phenomenon) or as a sensible recognition of the possible risks of moving too soon. It is clear that the combined impact of stricter capital rules, revenue raising national bank levies and taxes, plus the possible impact of bank splitting measures could have a significant effect on banks' profitability. Certainly, it has provoked a serious campaign by banks to alert politicians and regulators to the danger. Thus, the Communiqué builds in more flexibility than had previously been envisaged when reforms were first suggested. The key section of the Communiqué says:

> members will adopt the new standards and these will be phased in over a timeframe with the *aim* of implementation by end-2012, and a transition horizon informed by the macroeconomic impact assessment of the Financial Stability Board (FSB) and BCBS. Phase-in arrangements will reflect different national starting points and circumstances, with initial variance around the new standards narrowing over time as countries converge to the new global standard.

The Basel Committee published its impact assessment of the effect of the new capital and liquidity rules in August 2010: *An Assessment of the long term economic impact of stronger capital and liquidity requirements*.

The press release accompanying the document included the following assessment:

> The FSB-BCBS MAG assessment of the macroeconomic transition costs, prepared in close collaboration with the International Monetary Fund, concludes that the transition to stronger capital and liquidity standards is likely to have a modest impact on aggregate output. If higher requirements are phased in over four years, the group estimates that each one percentage point increase in bank's actual ratio of tangible common equity to risk-weighted assets will lead to a decline in the level of GDP relative to its baseline path by about 0.20% after implementation is completed. In terms of growth rates, this means that the annual growth rate would be reduced by an average of 0.04 percentage points over a four and a half year period, with a range of results around these point estimates. A 25% increase in liquid asset holdings is found to have an output effect less than half that associated with a one-percentage point increase in capital ratios. The projected impacts arise mainly from banks passing on higher costs to borrowers, which results in a slowdown in investment. A two-year implementation period leads to a slightly larger reduction from the baseline path, with the trough occurring after two and a half years, while extending the implementation period beyond four years makes little difference. In all of these estimates, GDP returns to its baseline path in subsequent years.[68]

In December 2010, BIS published its full quantitative impact assessment of the impact of the new proposals on the banks (as opposed to the macroeconomic effects). The press release states:

> Including the effect of all changes to the definition of capital and risk-weighted assets, as well as assuming full implementation as of 31 December 2009, the average common equity Tier 1 capital ratio (CET1) of Group 1 banks was 5.7%, as compared with the new minimum requirement of 4.5%. For Group 2 banks, the average CET1 ratio stood at 7.8%. In order for all Group 1 banks in the sample to meet the new 4.5% CET1 ratio, the additional capital needed is estimated to be €165 billion. For Group 2 banks, the amount is €8 billion.
>
> Relative to a 7% CET1 level, which includes both the 4.5% minimum requirement and the 2.5% capital conservation buffer, the Committee estimated that Group 1 banks in

[68] BIS press release August 2010

aggregate would have had a shortfall of €577 billion at the end of 2009. As a point of reference, for this sample of banks the sum of profits after tax and prior to distributions in 2009 was €209 billion. Group 2 banks with CET1 ratios less than 7% would have required an additional €25 billion; the sum of these banks' profits after tax and prior to distributions in 2009 was €20 billion. Since the end of 2009, banks have continued to raise their common equity capital levels through combinations of equity issuance and profit retention.

The Committee also assessed the estimated impact of the liquidity standards. Assuming banks were to make no changes to their liquidity risk profile or funding structure, as of end-2009:

The average LCR for Group 1 banks was 83%; the average for Group 2 banks was 98%.

The average NSFR for Group 1 banks was 93%; the average for Group 2 banks was 103%.

Banks have until 2015 to meet the LCR standard and until 2018 to meet the NSFR standard, which will reflect any revisions following each standard's observation period. Banks that are below the 100% required minimum thresholds can meet these standards by, for example, lengthening the term of their funding or restructuring business models which are most vulnerable to liquidity risk in periods of stress. It should be noted that the shortfalls in the LCR and the NSFR are not additive, as decreasing the shortfall in one standard may also result in a decrease in the shortfall in the other standard.[69]

[69] BIS press release December 2010