

# Saudi Arabian Monetary Agency

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Banking Supervision Dept.

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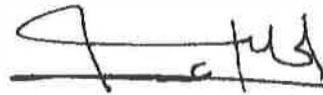
From : Saudi Arabian Monetary Agency  
To : All Banks  
Attention : Managing Directors, Chief Executive Officers and General Managers  
Subject : **Basel Committee's Revised Document of June 2011 Entitled "Basel III: Global Framework for More Resilient Banks and Banking Systems"**

As you are aware, in December 2010, the Basel Committee on Banking Supervision issued its initial rules entitled "Basel III: Global Framework for More Resilient Banks and Banking System". This text presented the details of global regulatory standards on Banks' Capital Adequacy and Liquidity.

The Committee has now published its Revised Document of June 2011, which can be accessed from BIS website [www.bis.org](http://www.bis.org). The major changes in the Revised Document are covered in the attached BCBS Press Release and generally relate to further refinements to Credit Value Adjustments (CVA).

This document is of interest to all banks in Saudi Arabia that have currently implemented the Basel II Framework and are now preparing to move on to Basel III. Banks are expected to review these documents and start developing their plans for implementation of Basel III. Banks should study these carefully and become familiar with the rules text. Over the next few months, SAMA will be issuing specific guidance documents to banks on these subjects including SAMA's position in areas where national discretion is to be applied. SAMA will also issue revised or new prudential returns related to these topics.

المرفقات



**Abdulrahman A. Al-Kalaf**  
*Deputy Governor  
for Technical Affairs*

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**Basel III: A global regulatory framework for more resilient banks and banking systems - revised version June 2011**

**Comments on the revision:**

On 1 June 2011, the Basel Committee on Banking Supervision announced that it has completed its review of and finalised the Basel III capital treatment for counterparty credit risk in bilateral trades. The review resulted in a minor modification of the credit valuation adjustment, which is the risk of loss caused by changes in the credit spread of a counterparty due to changes in its credit quality (also referred to as the market value of counterparty credit risk). See the related [press release](#).

A [revised version of the Basel III capital rules](#) (PDF, 77 pages, 345 kb) reflecting the CVA modification is now available on the BIS website. The original version was published in [December 2010](#).

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**1 June 2011**

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Under Basel II, the risk of counterparty default and credit migration risk were addressed but mark-to-market losses due to credit valuation adjustments (CVA) were not. During the financial crisis, however, roughly two-thirds of losses attributed to counterparty credit risk were due to CVA losses and only about one-third were due to actual defaults.

The Basel III framework, published in December 2010, sets out capital rules for CVA risk that include standardised and advanced methods. At the time it issued Basel III, the Committee noted that the level and reasonableness of the standardised CVA risk capital charge was subject to a final impact assessment targeted for completion in the first quarter of 2011.

The impact study has been completed. It showed that the standardised method as originally set out in the December 2010 rules text could be unduly punitive for low-rated counterparties with long maturity transactions. To narrow the gap between the capital required for CCC-rated counterparties under the standardised and the advanced methods, the Basel Committee agreed to reduce the weight applied to CCC-rated counterparties from 18% to 10%.

All other aspects of the regulatory capital treatment for counterparty credit risk and CVA risk remain unchanged from the December 2010 Basel III rules text. Overall, the Committee estimates that, with the addition of the CVA risk capital charge, the capital requirements for counterparty credit risk under Basel III will double the level required under Basel II (ie when counterparty credit risk was capitalised for default risk only). A revised version of the Basel III capital rules reflecting the CVA modification is now available.

The Committee is in the process of completing its review of capitalisation of bank exposures to central counterparties (CCPs) and expects to finalise its December 2010 proposals before year end.

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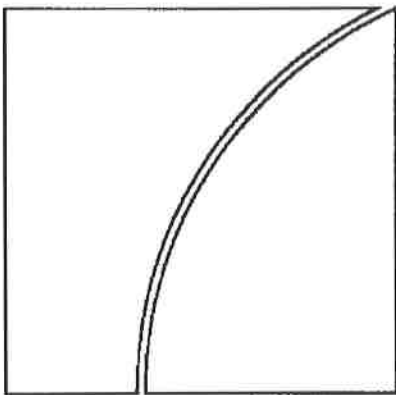
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Basel Committee  
on Banking Supervision



**Basel III: A global  
regulatory framework for  
more resilient banks and  
banking systems**

December 2010 (rev June 2011)



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## Abbreviations

|       |   |
|-------|---|
| ABCP  | Asset-backed commercial paper                           |
| ASF   | Available Stable Funding                                |
| AVC   | Asset value correlation                                 |
| CCF   | Credit conversion factor                                |
| CCPs  | Central counterparties                                  |
| CCR   | Counterparty credit risk                                |
| CD    | Certificate of Deposit                                  |
| CDS   | Credit default swap                                     |
| CP    | Commercial Paper  |
| CRM   | Credit risk mitigation                                  |
| CUSIP | Committee on Uniform Security Identification Procedures |
| CVA   | Credit valuation adjustment                             |
| DTAs  | Deferred tax assets                                     |
| DTLs  | Deferred tax liabilities                                |
| DVA   | Debit valuation adjustment                              |
| DvP   | Delivery-versus-payment                                 |
| EAD   | Exposure at default                                     |
| ECAI  | External credit assessment institution                  |
| EL    | Expected Loss   |
| EPE   | Expected positive exposure                              |
| FIRB  | Foundation internal ratings-based approach              |
| IMM   | Internal model method                                   |
| IRB   | Internal ratings-based                                  |
| IRC   | Incremental risk charge                                 |
| ISIN  | International Securities Identification Number          |
| LCR   | Liquidity Coverage Ratio                                |
| LGD   | Loss given default                                      |
| MtM   | Mark-to-market  |
| NSFR  | Net Stable Funding Ratio                                |
| OBS   | Off-balance sheet                                       |
| PD    | Probability of default                                  |
| PSE   | Public sector entity                                    |
| PvP   | Payment-versus-payment                                  |
| RBA   | Ratings-based approach                                  |
| RSF   | Required Stable Funding                                 |

## Introduction

1. This document, together with the document *Basel III: International framework for liquidity risk measurement, standards and monitoring*, presents the Basel Committee's<sup>1</sup> reforms to strengthen global capital and liquidity rules with the goal of promoting a more resilient banking sector. The objective of the reforms is to improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source, thus reducing the risk of spillover from the financial sector to the real economy. This document sets out the rules text and timelines to implement the Basel III framework.
2. The Committee's comprehensive reform package addresses the lessons of the financial crisis. Through its reform package, the Committee also aims to improve risk management and governance as well as strengthen banks' transparency and disclosures.<sup>2</sup> Moreover, the reform package includes the Committee's efforts to strengthen the resolution of systemically significant cross-border banks.<sup>3</sup>
3. A strong and resilient banking system is the foundation for sustainable economic growth, as banks are at the centre of the credit intermediation process between savers and investors. Moreover, banks provide critical services to consumers, small and medium-sized enterprises, large corporate firms and governments who rely on them to conduct their daily business, both at a domestic and international level.
4. One of the main reasons the economic and financial crisis, which began in 2007, 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 rapidly 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 taxpayers to large losses.

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<sup>1</sup> The Basel Committee on Banking Supervision consists of senior representatives of bank supervisory authorities and central banks from Argentina, Australia, Belgium, Brazil, Canada, China, France, Germany, Hong Kong SAR, India, Indonesia, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. It usually meets at the Bank for International Settlements (BIS) in Basel, Switzerland, where its permanent Secretariat is located.

<sup>2</sup> In July 2009, the Committee introduced a package of measures to strengthen the 1996 rules governing trading book capital and to enhance the three pillars of the Basel II framework. See *Enhancements to the Basel II framework* (July 2009), available at [www.bis.org/publ/bcbs157.htm](http://www.bis.org/publ/bcbs157.htm).

<sup>3</sup> These efforts include the Basel Committee's recommendations to strengthen national resolution powers and their cross-border implementation. The Basel Committee mandated its Cross-border Bank Resolution Group to report on the lessons from the crisis, on recent changes and adaptations of national frameworks for cross-border resolutions, the most effective elements of current national frameworks and those features of current national frameworks that may hamper optimal responses to crises. See *Report and recommendations of the Cross-border Bank Resolution Group* (March 2010), available at [www.bis.org/publ/bcbs169.htm](http://www.bis.org/publ/bcbs169.htm).

10. The Committee is introducing these changes in a manner that minimises the disruption to capital instruments that are currently outstanding. It also continues to review the role that contingent capital should play in the regulatory capital framework.

## **2. Enhancing risk coverage**

11. One of the key lessons of the crisis has been the need to strengthen the risk coverage of the capital framework. Failure to capture major on- and off-balance sheet risks, as well as derivative related exposures, was a key destabilising factor during the crisis.

12. In response to these shortcomings, the Committee in July 2009 completed a number of critical reforms to the Basel II framework. These reforms will raise capital requirements for the trading book and complex securitisation exposures, a major source of losses for many internationally active banks. The enhanced treatment introduces a stressed value-at-risk (VaR) capital requirement based on a continuous 12-month period of significant financial stress. In addition, the Committee has introduced higher capital requirements for so-called resecritisations in both the banking and the trading book. The reforms also raise the standards of the Pillar 2 supervisory review process and strengthen Pillar 3 disclosures. The Pillar 1 and Pillar 3 enhancements must be implemented by the end of 2011; the Pillar 2 standards became effective when they were introduced in July 2009. The Committee is also conducting a fundamental review of the trading book. The work on the fundamental review of the trading book is targeted for completion by year-end 2011.

13. This document also introduces measures to strengthen the capital requirements for counterparty credit exposures arising from banks' derivatives, repo and securities financing activities. These reforms will raise the capital buffers backing these exposures, reduce procyclicality and provide additional incentives to move OTC derivative contracts to central counterparties, thus helping reduce systemic risk across the financial system. They also provide incentives to strengthen the risk management of counterparty credit exposures.

14. To this end, the Committee is introducing the following reforms:

- (a) Going forward, banks must determine their capital requirement for counterparty credit risk using stressed inputs. This will address concerns about capital charges becoming too low during periods of compressed market volatility and help address procyclicality. The approach, which is similar to what has been introduced for market risk, will also promote more integrated management of market and counterparty credit risk.
- (b) Banks will be subject to a capital charge for potential mark-to-market losses (ie credit valuation adjustment – CVA – risk) associated with a deterioration in the credit worthiness of a counterparty. While the Basel II standard covers the risk of a counterparty default, it does not address such CVA risk, which during the financial crisis was a greater source of losses than those arising from outright defaults.
- (c) The Committee is strengthening standards for collateral management and initial margining. Banks with large and illiquid derivative exposures to a counterparty will have to apply longer margining periods as a basis for determining the regulatory capital requirement. Additional standards have been adopted to strengthen collateral risk management practices.
- (d) To address the systemic risk arising from the interconnectedness of banks and other financial institutions through the derivatives markets, the Committee is supporting the efforts of the Committee on Payments and Settlement Systems (CPSS) and the

#### **4. Reducing procyclicality and promoting countercyclical buffers**

18. One of the most destabilising elements of the crisis has been the procyclical amplification of financial shocks throughout the banking system, financial markets and the broader economy. The tendency of market participants to behave in a procyclical manner has been amplified through a variety of channels, including through accounting standards for both mark-to-market assets and held-to-maturity loans, margining practices, and through the build up and release of leverage among financial institutions, firms, and consumers. The Basel Committee is introducing a number of measures to make banks more resilient to such procyclical dynamics. These measures will help ensure that the banking sector serves as a shock absorber, instead of a transmitter of risk to the financial system and broader economy.

19. In addition to the leverage ratio discussed in the previous section, the Committee is introducing a series of measures to address procyclicality and raise the resilience of the banking sector in good times. These measures have the following key objectives:

- dampen any excess cyclicality of the minimum capital requirement;
- promote more forward looking provisions;
- conserve capital to build buffers at individual banks and the banking sector that can be used in stress; and
- achieve the broader macroprudential goal of protecting the banking sector from periods of excess credit growth.

#### ***Cyclicality of the minimum requirement***

20. The Basel II framework increased the risk sensitivity and coverage of the regulatory capital requirement. Indeed, one of the most procyclical dynamics has been the failure of risk management and capital frameworks to capture key exposures – such as complex trading activities, resecuritisations and exposures to off-balance sheet vehicles – in advance of the crisis. However, it is not possible to achieve greater risk sensitivity across institutions at a given point in time without introducing a certain degree of cyclicality in minimum capital requirements over time. The Committee was aware of this trade-off during the design of the Basel II framework and introduced a number of safeguards to address excess cyclicality of the minimum requirement. They include the requirement to use long term data horizons to estimate probabilities of default, the introduction of so called downturn loss-given-default (LGD) estimates and the appropriate calibration of the risk functions, which convert loss estimates into regulatory capital requirements. The Committee also required that banks conduct stress tests that consider the downward migration of their credit portfolios in a recession.

21. In addition, the Committee has put in place a comprehensive data collection initiative to assess the impact of the Basel II framework on its member countries over the credit cycle. Should the cyclicality of the minimum requirement be greater than supervisors consider appropriate, the Committee will consider additional measures to dampen such cyclicality.

22. The Committee has reviewed a number of additional measures that supervisors could take to achieve a better balance between risk sensitivity and the stability of capital requirements, should this be viewed as necessary. In particular, the range of possible measures includes an approach by the Committee of European Banking Supervisors (CEBS) to use the Pillar 2 process to adjust for the compression of probability of default (PD)

sufficiently flexible to allow for a range of supervisory and bank responses consistent with the standard.

### ***Excess credit growth***

29. As witnessed during the financial crisis, losses incurred in the banking sector during a downturn preceded by a period of excess credit growth can be extremely large. Such losses can destabilise the banking sector, which can bring about or exacerbate a downturn in the real economy. This in turn can further destabilise the banking sector. These inter-linkages highlight the particular importance of the banking sector building up its capital defences in periods when credit has grown to excessive levels. The building up of these defences should have the additional benefit of helping to moderate excess credit growth.

30. The Basel Committee is introducing a regime which will adjust the capital buffer range, established through the capital conservation mechanism outlined in the previous section, when there are signs that credit has grown to excessive levels. The purpose of the countercyclical buffer is to achieve the broader macroprudential goal of protecting the banking sector in periods of excess aggregate credit growth.

31. The measures to address procyclicality are designed to complement each other. The initiatives on provisioning focus on strengthening the banking system against expected losses, while the capital measures focus on unexpected losses. Among the capital measures, there is a distinction between addressing the cyclicity of the minimum and building additional buffers above that minimum. Indeed, strong capital buffers above the minimum requirement have proven to be critical, even in the absence of a cyclical minimum. Finally, the requirement to address excess credit growth is set at zero in normal times and only increases during periods of excessive credit availability. However, even in the absence of a credit bubble, supervisors expect the banking sector to build a buffer above the minimum to protect it against plausibly severe shocks, which could emanate from many sources.

## **5. Addressing systemic risk and interconnectedness**

32. While procyclicality amplified shocks over the time dimension, excessive interconnectedness among systemically important banks also transmitted shocks across the financial system and economy. Systemically important banks should have loss absorbing capacity beyond the minimum standards and the work on this issue is ongoing. The Basel Committee and the Financial Stability Board are developing a well integrated approach to systemically important financial institutions which could include combinations of capital surcharges, contingent capital and bail-in debt. As part of this effort, the Committee is developing a proposal on a methodology comprising both quantitative and qualitative indicators to assess the systemic importance of financial institutions at a global level. The Committee is also conducting a study of the magnitude of additional loss absorbency that globally systemic financial institutions should have, along with an assessment of the extent of going concern loss absorbency which could be provided by the various proposed instruments. The Committee's analysis has also covered further measures to mitigate the risks or externalities associated with systemic banks, including liquidity surcharges, tighter large exposure restrictions and enhanced supervision. It will continue its work on these issues in the first half of 2011 in accordance with the processes and timelines set out in the FSB recommendations.

33. Several of the capital requirements introduced by the Committee to mitigate the risks arising from firm-level exposures among global financial institutions will also help to address systemic risk and interconnectedness. These include:

longer time horizon by creating additional incentives for a bank to fund its activities with more stable sources of funding on an ongoing structural basis. The Net Stable Funding Ratio (NSFR) has a time horizon of one year and has been developed to provide a sustainable maturity structure of assets and liabilities.

39. These two standards are comprised mainly of specific parameters which are internationally "harmonised" with prescribed values. Certain parameters contain elements of national discretion to reflect jurisdiction-specific conditions. In these cases, the parameters should be transparent and clearly outlined in the regulations of each jurisdiction to provide clarity both within the jurisdiction and internationally.

### **1. Liquidity Coverage Ratio**

40. The LCR is intended to promote resilience to potential liquidity disruptions over a thirty day horizon. It will help ensure that global banks have sufficient unencumbered, high-quality liquid assets to offset the net cash outflows it could encounter under an acute short-term stress scenario. The specified scenario is built upon circumstances experienced in the global financial crisis that began in 2007 and entails both institution-specific and systemic shocks. The scenario entails a significant stress, albeit not a worst-case scenario, and assumes the following:

- 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.

41. High-quality liquid assets held in the stock should be unencumbered, liquid in markets during a time of stress and, ideally, be central bank eligible.

### **2. Net Stable Funding Ratio**

42. The NSFR requires a minimum amount of stable sources of funding at a bank relative to the liquidity profiles of the assets, as well as the potential for contingent liquidity needs arising from off-balance sheet commitments, over a one-year horizon. The NSFR aims to limit over-reliance on short-term wholesale funding during times of buoyant market liquidity and encourage better assessment of liquidity risk across all on- and off-balance sheet items.

### **3. Monitoring tools**

43. At present, supervisors use a wide range of quantitative measures to monitor the liquidity risk profiles of banking organisations as well as across the financial sector, for a macroprudential approach to supervision. A survey of Basel Committee members conducted in early 2009 identified that more than 25 different measures and concepts are used globally by supervisors. To introduce more consistency internationally, the Committee has developed a set of common metrics that should be considered as the minimum types of information which supervisors should use. In addition, supervisors may use additional metrics in order to capture specific risks in their jurisdictions. The monitoring metrics include the following and

## **D. Scope of application**

47. The application of the minimum capital requirements in this document follow the existing scope of application set out in Part I (Scope of Application) of the Basel II Framework.<sup>8</sup>

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<sup>8</sup> See BCBS, *International Convergence of Capital Measurement and Capital Standards*, June 2006 (hereinafter referred to as "Basel II" or "Basel II Framework").

## 1. **Common Equity Tier 1**

52. Common Equity Tier 1 capital consists of the sum of the following elements:

- Common shares issued by the bank that meet the criteria for classification as common shares for regulatory purposes (or the equivalent for non-joint stock companies);
- Stock surplus (share premium) resulting from the issue of instruments included Common Equity Tier 1;
- Retained earnings;
- Accumulated other comprehensive income and other disclosed reserves;<sup>10</sup>
- Common shares issued by consolidated subsidiaries of the bank and held by third parties (ie minority interest) that meet the criteria for inclusion in Common Equity Tier 1 capital. See section 4 for the relevant criteria; and
- Regulatory adjustments applied in the calculation of Common Equity Tier 1

Retained earnings and other comprehensive income include interim profit or loss. National authorities may consider appropriate audit, verification or review procedures. Dividends are removed from Common Equity Tier 1 in accordance with applicable accounting standards. The treatment of minority interest and the regulatory adjustments applied in the calculation of Common Equity Tier 1 are addressed in separate sections.

### *Common shares issued by the bank*

53. For an instrument to be included in Common Equity Tier 1 capital it must meet all of the criteria that follow. The vast majority of internationally active banks are structured as joint stock companies<sup>11</sup> and for these banks the criteria must be met solely with common shares. In the rare cases where banks need to issue non-voting common shares as part of Common Equity Tier 1, they must be identical to voting common shares of the issuing bank in all respects except the absence of voting rights.

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<sup>10</sup> There is no adjustment applied to remove from Common Equity Tier 1 unrealised gains or losses recognised on the balance sheet. Unrealised losses are subject to the transitional arrangements set out in paragraph 94 (c) and (d). The Committee will continue to review the appropriate treatment of unrealised gains, taking into account the evolution of the accounting framework.

<sup>11</sup> Joint stock companies are defined as companies that have issued common shares, irrespective of whether these shares are held privately or publically. These will represent the vast majority of internationally active banks.



- 
12. The paid in amount is neither secured nor covered by a guarantee of the issuer or related entity<sup>14</sup> or subject to any other arrangement that legally or economically enhances the seniority of the claim.
- 
13. It is only issued with the approval of the owners of the issuing bank, either given directly by the owners or, if permitted by applicable law, given by the Board of Directors or by other persons duly authorised by the owners.
- 
14. It is clearly and separately disclosed on the bank's balance sheet.
- 

**2. Additional Tier 1 capital**

54. Additional Tier 1 capital consists of the sum of the following elements:

- Instruments issued by the bank that meet the criteria for inclusion in Additional Tier 1 capital (and are not included in Common Equity Tier 1);
- Stock surplus (share premium) resulting from the issue of instruments included in Additional Tier 1 capital;
- Instruments issued by consolidated subsidiaries of the bank and held by third parties that meet the criteria for inclusion in Additional Tier 1 capital and are not included in Common Equity Tier 1. See section 4 for the relevant criteria; and
- Regulatory adjustments applied in the calculation of Additional Tier 1 Capital

The treatment of instruments issued out of consolidated subsidiaries of the bank and the regulatory adjustments applied in the calculation of Additional Tier 1 Capital are addressed in separate sections.

*Instruments issued by the bank that meet the Additional Tier 1 criteria*

55. The following box sets out the minimum set of criteria for an instrument issued by the bank to meet or exceed in order for it to be included in Additional Tier 1 capital.

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**Criteria for inclusion in Additional Tier 1 capital**

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1. Issued and paid-in

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2. Subordinated to depositors, general creditors and subordinated debt of the bank

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3. Is neither secured nor covered by a guarantee of the issuer or related entity or other arrangement that legally or economically enhances the seniority of the claim vis-à-vis bank creditors

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4. Is perpetual, ie there is no maturity date and there are no step-ups or other incentives to redeem

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<sup>14</sup> A related entity can include a parent company, a sister company, a subsidiary or any other affiliate. A holding company is a related entity irrespective of whether it forms part of the consolidated banking group.

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11. Instruments classified as liabilities for accounting purposes must have principal loss absorption through either (i) conversion to common shares at an objective pre-specified trigger point or (ii) a write-down mechanism which allocates losses to the instrument at a pre-specified trigger point. The write-down will have the following effects:
    - a. Reduce the claim of the instrument in liquidation;
    - b. Reduce the amount re-paid when a call is exercised; and
    - c. Partially or fully reduce coupon/dividend payments on the instrument.

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  12. Neither the bank nor a related party over which the bank exercises control or significant influence can have purchased the instrument, nor can the bank directly or indirectly have funded the purchase of the instrument

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  13. The instrument cannot have any features that hinder recapitalisation, such as provisions that require the issuer to compensate investors if a new instrument is issued at a lower price during a specified time frame

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  14. If the instrument is not issued out of an operating entity or the holding company in the consolidated group (eg a special purpose vehicle – “SPV”), proceeds must be immediately available without limitation to an operating entity<sup>18</sup> or the holding company in the consolidated group in a form which meets or exceeds all of the other criteria for inclusion in Additional Tier 1 capital
- 

*Stock surplus (share premium) resulting from the issue of instruments included in Additional Tier 1 capital;*

56. Stock surplus (ie share premium) that is not eligible for inclusion in Common Equity Tier 1, will only be permitted to be included in Additional Tier 1 capital if the shares giving rise to the stock surplus are permitted to be included in Additional Tier 1 capital.

### **3. Tier 2 capital**

57. Tier 2 capital consists of the sum of the following elements:
- Instruments issued by the bank that meet the criteria for inclusion in Tier 2 capital (and are not included in Tier 1 capital);
  - Stock surplus (share premium) resulting from the issue of instruments included in Tier 2 capital;
  - Instruments issued by consolidated subsidiaries of the bank and held by third parties that meet the criteria for inclusion in Tier 2 capital and are not included in Tier 1 capital. See section 4 for the relevant criteria;
  - Certain loan loss provisions as specified in paragraphs 60 and 61; and
  - Regulatory adjustments applied in the calculation of Tier 2 Capital.

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<sup>18</sup> An operating entity is an entity set up to conduct business with clients with the intention of earning a profit in its own right.

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7. The instrument cannot have a credit sensitive dividend feature, that is a dividend/coupon that is reset periodically based in whole or in part on the banking organisation's credit standing.

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  8. Neither the bank nor a related party over which the bank exercises control or significant influence can have purchased the instrument, nor can the bank directly or indirectly have funded the purchase of the instrument

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  9. If the instrument is not issued out of an operating entity or the holding company in the consolidated group (eg a special purpose vehicle – "SPV"), proceeds must be immediately available without limitation to an operating entity<sup>22</sup> or the holding company in the consolidated group in a form which meets or exceeds all of the other criteria for inclusion in Tier 2 Capital
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*Stock surplus (share premium) resulting from the issue of instruments included in Tier 2 capital;*

59. Stock surplus (ie share premium) that is not eligible for inclusion in Tier 1, will only be permitted to be included in Tier 2 capital if the shares giving rise to the stock surplus are permitted to be included in Tier 2 capital.

*General provisions/general loan-loss reserves (for banks using the Standardised Approach for credit risk)*

60. Provisions or loan-loss reserves held against future, presently unidentified losses are freely available to meet losses which subsequently materialise and therefore qualify for inclusion within Tier 2. Provisions ascribed to identified deterioration of particular assets or known liabilities, whether individual or grouped, should be excluded. Furthermore, general provisions/general loan-loss reserves eligible for inclusion in Tier 2 will be limited to a maximum of 1.25 percentage points of credit risk-weighted risk assets calculated under the standardised approach.

*Excess of total eligible provisions under the Internal Ratings-based Approach*

61. Where the total expected loss amount is less than total eligible provisions, as explained in paragraphs 380 to 383 of the June 2006 Comprehensive version of Basel II, banks may recognise the difference in Tier 2 capital up to a maximum of 0.6% of credit risk-weighted assets calculated under the IRB approach. At national discretion, a limit lower than 0.6% may be applied.

#### **4. *Minority interest (ie non-controlling interest) and other capital issued out of consolidated subsidiaries that is held by third parties***

*Common shares issued by consolidated subsidiaries*

62. Minority interest arising from the issue of common shares by a fully consolidated subsidiary of the bank may receive recognition in Common Equity Tier 1 only if: (1) the instrument giving rise to the minority interest would, if issued by the bank, meet all of the

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<sup>22</sup> An operating entity is an entity set up to conduct business with clients with the intention of earning a profit in its own right.

*Tier 1 and Tier 2 qualifying capital issued by consolidated subsidiaries*

64. Total capital instruments (ie Tier 1 and Tier 2 capital instruments) issued by a fully consolidated subsidiary of the bank to third party investors (including amounts under paragraph 62 and 63) may receive recognition in Total Capital only if the instruments would, if issued by the bank, meet all of the criteria for classification as Tier 1 or Tier 2 capital. The amount of this capital that will be recognised in consolidated Total Capital will be calculated as follows:

- Total capital instruments of the subsidiary issued to third parties minus the amount of the surplus Total Capital of the subsidiary attributable to the third party investors.
- Surplus Total Capital of the subsidiary is calculated as the Total Capital of the subsidiary minus the lower of: (1) the minimum Total Capital requirement of the subsidiary plus the capital conservation buffer (ie 10.5% of risk weighted assets) and (2) the portion of the consolidated minimum Total Capital requirement plus the capital conservation buffer (ie 10.5% of consolidated risk weighted assets) that relates to the subsidiary.
- The amount of the surplus Total Capital that is attributable to the third party investors is calculated by multiplying the surplus Total Capital by the percentage of Total Capital that is held by third party investors.

The amount of this Total Capital that will be recognised in Tier 2 will exclude amounts recognised in Common Equity Tier 1 under paragraph 62 and amounts recognised in Additional Tier 1 under paragraph 63.

65. Where capital has been issued to third parties out of a special purpose vehicle (SPV), none of this capital can be included in Common Equity Tier 1. However, such capital can be included in consolidated Additional Tier 1 or Tier 2 and treated as if the bank itself had issued the capital directly to the third parties only if it meets all the relevant entry criteria and the only asset of the SPV is its investment in the capital of the bank in a form that meets or exceeds all the relevant entry criteria<sup>25</sup> (as required by criterion 14 for Additional Tier 1 and criterion 9 for Tier 2). In cases where the capital has been issued to third parties through an SPV via a fully consolidated subsidiary of the bank, such capital may, subject to the requirements of this paragraph, be treated as if the subsidiary itself had issued it directly to the third parties and may be included in the bank's consolidated Additional Tier 1 or Tier 2 in accordance with the treatment outlined in paragraphs 63 and 64.

## **5. Regulatory adjustments**

66. This section sets out the regulatory adjustments to be applied to regulatory capital. In most cases these adjustments are applied in the calculation of Common Equity Tier 1.

*Goodwill and other intangibles (except mortgage servicing rights)*

67. Goodwill and all other intangibles must be deducted in the calculation of Common Equity Tier 1, including any goodwill included in the valuation of significant investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation. With the exception of mortgage servicing rights, the full amount is to be deducted net of any associated deferred tax liability which would be extinguished if the

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<sup>25</sup> Assets that relate to the operation of the SPV may be excluded from this assessment if they are de minimis.

*Cumulative gains and losses due to changes in own credit risk on fair valued financial liabilities*

75. Derecognise in the calculation of Common Equity Tier 1, all unrealised gains and losses that have resulted from changes in the fair value of liabilities that are due to changes in the bank's own credit risk.

*Defined benefit pension fund assets and liabilities*

76. Defined benefit pension fund liabilities, as included on the balance sheet, must be fully recognised in the calculation of Common Equity Tier 1 (ie Common Equity Tier 1 cannot be increased through derecognising these liabilities). For each defined benefit pension fund that is an asset on the balance sheet, the asset should be deducted in the calculation of Common Equity Tier 1 net of any associated deferred tax liability which would be extinguished if the asset should become impaired or derecognised under the relevant accounting standards. Assets in the fund to which the bank has unrestricted and unfettered access can, with supervisory approval, offset the deduction. Such offsetting assets should be given the risk weight they would receive if they were owned directly by the bank.

77. This treatment addresses the concern that assets arising from pension funds may not be capable of being withdrawn and used for the protection of depositors and other creditors of a bank. The concern is that their only value stems from a reduction in future payments into the fund. The treatment allows for banks to reduce the deduction of the asset if they can address these concerns and show that the assets can be easily and promptly withdrawn from the fund.

*Investments in own shares (treasury stock)*

78. All of a bank's investments in its own common shares, whether held directly or indirectly, will be deducted in the calculation of Common Equity Tier 1 (unless already derecognised under the relevant accounting standards). In addition, any own stock which the bank could be contractually obliged to purchase should be deducted in the calculation of Common Equity Tier 1. The treatment described will apply irrespective of the location of the exposure in the banking book or the trading book. In addition:

- Gross long positions may be deducted net of short positions in the same underlying exposure only if the short positions involve no counterparty risk.
- Banks should look through holdings of index securities to deduct exposures to own shares. However, gross long positions in own shares resulting from holdings of index securities may be netted against short position in own shares resulting from short positions in the same underlying index. In such cases the short positions may involve counterparty risk (which will be subject to the relevant counterparty credit risk charge).

This deduction is necessary to avoid the double counting of a bank's own capital. Certain accounting regimes do not permit the recognition of treasury stock and so this deduction is only relevant where recognition on the balance sheet is permitted. The treatment seeks to remove the double counting that arises from direct holdings, indirect holdings via index funds and potential future holdings as a result of contractual obligations to purchase own shares.

Following the same approach outlined above, banks must deduct investments in their own Additional Tier 1 in the calculation of their Additional Tier 1 capital and must deduct investments in their own Tier 2 in the calculation of their Tier 2 capital.

common equity holdings as a percentage of the total capital holdings. This would result in a common equity deduction which corresponds to the proportion of total capital holdings held in common equity. Similarly, the amount to be deducted from Additional Tier 1 capital should be calculated as the total of all holdings which in aggregate exceed 10% of the bank's common equity (as per above) multiplied by the Additional Tier 1 capital holdings as a percentage of the total capital holdings. The amount to be deducted from Tier 2 capital should be calculated as the total of all holdings which in aggregate exceed 10% of the bank's common equity (as per above) multiplied by the Tier 2 capital holdings as a percentage of the total capital holdings.

82. If, under the corresponding deduction approach, a bank is required to make a deduction from a particular tier of capital and it does not have enough of that tier of capital to satisfy that deduction, the shortfall will be deducted from the next higher tier of capital (eg if a bank does not have enough Additional Tier 1 capital to satisfy the deduction, the shortfall will be deducted from Common Equity Tier 1).

83. Amounts below the threshold, which are not deducted, will continue to be risk weighted. Thus, instruments in the trading book will be treated as per the market risk rules and instruments in the banking book should be treated as per the internal ratings-based approach or the standardised approach (as applicable). For the application of risk weighting the amount of the holdings must be allocated on a pro rata basis between those below and those above the threshold.

*Significant investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation<sup>29</sup>*

84. The regulatory adjustment described in this section applies to investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation where the bank owns more than 10% of the issued common share capital of the issuing entity or where the entity is an affiliate<sup>30</sup> of the bank. In addition:

- Investments include direct, indirect and synthetic holdings of capital instruments. For example, banks should look through holdings of index securities to determine their underlying holdings of capital.<sup>31</sup>
- Holdings in both the banking book and trading book are to be included. Capital includes common stock and all other types of cash and synthetic capital instruments (eg subordinated debt). It is the net long position that is to be included (ie the gross long position net of short positions in the same underlying exposure where the maturity of the short position either matches the maturity of the long position or has a residual maturity of at least one year).

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<sup>29</sup> Investments in entities that are outside of the scope of regulatory consolidation refers to investments in entities that have not been consolidated at all or have not been consolidated in such a way as to result in their assets being included in the calculation of consolidated risk-weighted assets of the group.

<sup>30</sup> An affiliate of a bank is defined as a company that controls, or is controlled by, or is under common control with, the bank. Control of a company is defined as (1) ownership, control, or holding with power to vote 20% or more of a class of voting securities of the company; or (2) consolidation of the company for financial reporting purposes.

<sup>31</sup> If banks find it operationally burdensome to look through and monitor their exact exposure to the capital of other financial institutions as a result of their holdings of index securities, national authorities may permit banks, subject to prior supervisory approval, to use a conservative estimate.

#### *Former deductions from capital*

90. The following items, which under Basel II were deducted 50% from Tier 1 and 50% from Tier 2 (or had the option of being deducted or risk weighted), will receive a 1250% risk weight:

- Certain securitisation exposures;
- Certain equity exposures under the PD/LGD approach;
- Non-payment/delivery on non-DvP and non-PvP transactions; and
- Significant investments in commercial entities.

#### **6. Disclosure requirements**

91. To help improve transparency of regulatory capital and improve market discipline, banks are required to disclose the following:

- a full reconciliation of all regulatory capital elements back to the balance sheet in the audited financial statements;
- separate disclosure of all regulatory adjustments and the items not deducted from Common Equity Tier 1 according to paragraphs 87 and 88;
- a description of all limits and minima, identifying the positive and negative elements of capital to which the limits and minima apply;
- a description of the main features of capital instruments issued;
- banks which disclose ratios involving components of regulatory capital (eg "Equity Tier 1", "Core Tier 1" or "Tangible Common Equity" ratios) must accompany such disclosures with a comprehensive explanation of how these ratios are calculated.

92. Banks are also required to make available on their websites the full terms and conditions of all instruments included in regulatory capital. The Basel Committee will issue more detailed Pillar 3 disclosure requirements in 2011.

93. During the transition phase banks are required to disclose the specific components of capital, including capital instruments and regulatory adjustments that are benefiting from the transitional provisions.

#### **C. Transitional arrangements**

94. The transitional arrangements for implementing the new standards will help to ensure that the banking sector can meet the higher capital standards through reasonable earnings retention and capital raising, while still supporting lending to the economy. The transitional arrangements include:

- (a) National implementation by member countries will begin on 1 January 2013. Member countries must translate the rules into national laws and regulations before this date. As of 1 January 2013, banks will be required to meet the following new minimum requirements in relation to risk-weighted assets (RWAs):
- 3.5% Common Equity Tier 1/RWAs;
  - 4.5% Tier 1 capital/RWAs, and
  - 8.0% total capital/RWAs.

- For an instrument that has a call and a step-up on or after 1 January 2013 (or another incentive to be redeemed), if the instrument is not called at its effective maturity date and on a forward looking basis will meet the new criteria for inclusion in Tier 1 or Tier 2, it will continue to be recognised in that tier of capital. Prior to the effective maturity date, the instrument would be considered an "instrument that no longer qualifies as Additional Tier 1 or Tier 2" and will therefore be phased out from 1 January 2013.
- For an instrument that has a call and a step-up between 12 September 2010 and 1 January 2013 (or another incentive to be redeemed), if the instrument is not called at its effective maturity date and on a forward looking basis does not meet the new criteria for inclusion in Tier 1 or Tier 2, it will be fully derecognised in that tier of regulatory capital from 1 January 2013.
- For an instrument that has a call and a step-up on or after 1 January 2013 (or another incentive to be redeemed), if the instrument is not called at its effective maturity date and on a forward looking basis does not meet the new criteria for inclusion in Tier 1 or Tier 2, it will be derecognised in that tier of regulatory capital from the effective maturity date. Prior to the effective maturity date, the instrument would be considered an "instrument that no longer qualifies as Additional Tier 1 or Tier 2" and will therefore be phased out from 1 January 2013.
- For an instrument that had a call and a step-up on or prior to 12 September 2010 (or another incentive to be redeemed), if the instrument was not called at its effective maturity date and on a forward looking basis does not meet the new criteria for inclusion in Tier 1 or Tier 2, it will be considered an "instrument that no longer qualifies as Additional Tier 1 or Tier 2" and will therefore be phased out from 1 January 2013.

95. Capital instruments that do not meet the criteria for inclusion in Common Equity Tier 1 will be excluded from Common Equity Tier 1 as of 1 January 2013. However, instruments meeting the following three conditions will be phased out over the same horizon described in paragraph 94(g): (1) they are issued by a non-joint stock company<sup>33</sup>; (2) they are treated as equity under the prevailing accounting standards; and (3) they receive unlimited recognition as part of Tier 1 capital under current national banking law.

96. Only those instruments issued before 12 September 2010 qualify for the above transition arrangements.

## **II. Risk Coverage**

### **A. Counterparty credit risk**

97. 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. Failure to capture major on- and off-balance sheet risks, as well as derivative related exposures, was a key factor that amplified the crisis. This section outlines the reforms to the counterparty credit risk framework, which become effective on 1 January 2013.

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<sup>33</sup> Non-joint stock companies were not addressed in the Basel Committee's 1998 agreement on instruments eligible for inclusion in Tier 1 capital as they do not issue voting common shares.



### Capitalisation of the risk of CVA losses

99. To implement the bond equivalent approach, the following new section VIII will be added to Annex 4 of the Basel II framework. The new paragraphs (97 to 105) are to be inserted after paragraph 96 in Annex 4.

#### VIII. Treatment of mark-to-market counterparty risk losses (CVA capital charge)

##### - CVA Risk Capital Charge

97. In addition to the default risk capital requirements for counterparty credit risk determined based on the standardised or internal ratings-based (IRB) approaches for credit risk, a bank must add a capital charge to cover the risk of mark-to-market losses on the expected counterparty risk (such losses being known as credit value adjustments, CVA) to OTC derivatives. The CVA capital charge will be calculated in the manner set forth below depending on the bank's approved method of calculating capital charges for counterparty credit risk and specific interest rate risk. A bank is not required to include in this capital charge (i) transactions with a central counterparty (CCP); and (ii) securities financing transactions (SFT), unless their supervisor determines that the bank's CVA loss exposures arising from SFT transactions are material.

##### A. Banks with IMM approval and Specific Interest Rate Risk VaR model<sup>34</sup> approval for bonds: Advanced CVA risk capital charge

98. Banks with IMM approval for counterparty credit risk and approval to use the market risk internal models approach for the specific interest-rate risk of bonds must calculate this additional capital charge by modelling the impact of changes in the counterparties' credit spreads on the CVAs of all OTC derivative counterparties, together with eligible CVA hedges according to new paragraphs 102 and 103, using the bank's VaR model for bonds. This VaR model is restricted to changes in the counterparties' credit spreads and does not model the sensitivity of CVA to changes in other market factors, such as changes in the value of the reference asset, commodity, currency or interest rate of a derivative. Regardless of the accounting valuation method a bank uses for determining CVA, the CVA capital charge calculation must be based on the following formula for the CVA of each counterparty:

$$CVA = (LGD_{MKT}) \cdot \sum_{i=1}^T \text{Max} \left( 0; \exp \left( -\frac{s_{i-1} \cdot t_{i-1}}{LGD_{MKT}} \right) - \exp \left( -\frac{s_i \cdot t_i}{LGD_{MKT}} \right) \right) \cdot \left( \frac{EE_{i-1} \cdot D_{i-1} + EE_i \cdot D_i}{2} \right)$$

Where

- $t_i$  is the time of the  $i$ -th revaluation time bucket, starting from  $t_0=0$ .
- $t_T$  is the longest contractual maturity across the netting sets with the counterparty.

<sup>34</sup> "VaR model" refers to the internal model approach to market risk.

$$\text{Regulatory CS01} = 0.0001 \cdot \sum_{i=1}^T \left( t_i \cdot \exp\left(-\frac{s_i \cdot t_i}{\text{LGD}_{\text{MKT}}}\right) - t_{i-1} \cdot \exp\left(-\frac{s_{i-1} \cdot t_{i-1}}{\text{LGD}_{\text{MKT}}}\right) \right) \cdot \left( \frac{\text{EE}_{i-1} \cdot D_{i-1} + \text{EE}_i \cdot D_i}{2} \right)$$

If the bank's approved VaR model uses second-order sensitivities to shifts in credit spreads (spread gamma), the gammas must be calculated based on the formula in paragraph 98.

Banks using the short cut method for collateralised OTC derivatives (paragraph 41 in Appendix 4), must compute the CVA risk capital charge according to paragraph 98, by assuming a constant EE (expected exposure) profile, where EE is set equal to the effective expected positive exposure of the shortcut method for a maturity equal to the maximum of (i) half of the longest maturity occurring in the netting set and (ii) the notional weighted average maturity of all transactions inside the netting set.

Banks with IMM approval for the majority of their businesses, but which use CEM (Current Exposure Method) or SM (Standardised Method) for certain smaller portfolios, and which have approval to use the market risk internal models approach for the specific interest rate risk of bonds, will include these non-IMM netting sets into the CVA risk capital charge, according to paragraph 98, unless the national supervisor decides that paragraph 104 should apply for these portfolios. Non-IMM netting sets are included into the advanced CVA risk capital charge by assuming a constant EE profile, where EE is set equal to the EAD as computed under CEM or SM for a maturity equal to the maximum of (i) half of the longest maturity occurring in the netting set and (ii) the notional weighted average maturity of all transactions inside the netting set. The same approach applies where the IMM model does not produce an expected exposure profile.

For exposures to certain counterparties, the bank's approved market risk VaR model may not reflect the risk of credit spread changes appropriately, because the bank's market risk VaR model does not appropriately reflect the specific risk of debt instruments issued by the counterparty. For such exposures, the bank is not allowed to use the advanced CVA risk charge. Instead, for these exposures the bank must determine the CVA risk charge by application of the standardised method in paragraph 104. Only exposures to counterparties for which the bank has supervisory approval for modelling the specific risk of debt instruments are to be included into the advanced CVA risk charge.

100. The CVA risk capital charge consists of both general and specific credit spread risks, including Stressed VaR but excluding IRC (incremental risk charge). The VaR figure should be determined in accordance with the quantitative standards described in paragraph 718(Lxxvi). It is thus determined as the sum of (i) the non-stressed VaR component and (ii) the stressed VaR component.

- i. When calculating the non stressed VaR, current parameter calibrations for expected exposure must be used.
- ii. When calculating the stressed VaR future counterparty EE profiles (according to the stressed exposure parameter calibrations as defined in paragraph 61 of Annex 4) must be used. The period of stress for the credit spread parameters

$$K = 2.33 \cdot \sqrt{h} \cdot \sqrt{\left( \sum_i 0.5 \cdot w_i \cdot (M_i \cdot EAD_i^{total} - M_i^{hedge} B_i) - \sum_{ind} w_{ind} \cdot M_{ind} \cdot B_{ind} \right)^2 + \sum_i 0.75 \cdot w_i^2 \cdot (M_i \cdot EAD_i^{total} - M_i^{hedge} B_i)^2}$$

Where

- $h$  is the one-year risk horizon (in units of a year),  $h = 1$ .
- $w_i$  is the weight applicable to counterparty 'i'. Counterparty 'i' must be mapped to one of the seven weights  $w_i$  based on its external rating, as shown in the table of this paragraph below. When a counterparty does not have an external rating, the bank must, subject to supervisory approval, map the internal rating of the counterparty to one of the external ratings.
- $EAD_i^{total}$  is the exposure at default of counterparty 'i' (summed across its netting sets), including the effect of collateral as per the existing IMM, SM or CEM rules as applicable to the calculation of counterparty risk capital charges for such counterparty by the bank. For non-IMM banks the exposure should be discounted by applying the factor  $(1 - \exp(-0.05 \cdot M_i)) / (0.05 \cdot M_i)$ . For IMM banks, no such discount should be applied as the discount factor is already included in  $M_i$ .
- $B_i$  is the notional of purchased single name CDS hedges (summed if more than one position) referencing counterparty 'i', and used to hedge CVA risk. This notional amount should be discounted by applying the factor  $(1 - \exp(-0.05 \cdot M_i^{hedge})) / (0.05 \cdot M_i^{hedge})$ .
- $B_{ind}$  is the full notional of one or more index CDS of purchased protection, used to hedge CVA risk. This notional amount should be discounted by applying the factor  $(1 - \exp(-0.05 \cdot M_{ind})) / (0.05 \cdot M_{ind})$ .
- $w_{ind}$  is the weight applicable to index hedges. The bank must map indices to one of the seven weights  $w_i$  based on the average spread of index 'ind'.
- $M_i$  is the effective maturity of the transactions with counterparty 'i'. For IMM-banks,  $M_i$  is to be calculated as per Annex 4, paragraph 38 of the Basel Accord. For non-IMM banks,  $M_i$  is the notional weighted average maturity as referred to in the third bullet point of para 320. However, for this purpose,  $M_i$  should not be capped at 5 years.
- $M_i^{hedge}$  is the maturity of the hedge instrument with notional  $B_i$  (the quantities  $M_i^{hedge} \cdot B_i$  are to be summed if these are several positions).
- $M_{ind}$  is the maturity of the index hedge 'ind'. In case of more than one index hedge position, it is the notional weighted average maturity.

For any counterparty that is also a constituent of an index on which a CDS is used for hedging counterparty credit risk, the notional amount attributable to that single name (as per its reference entity weight) may, with supervisory approval, be subtracted from the index CDS notional amount and treated as a single name hedge ( $B_i$ ) of the individual counterparty with maturity based on the maturity of the index.

national supervisor, the full maturity adjustment function, given by the formula  $(1 - 1.5 \times b)^{-1} \times (1 + (M - 2.5) \times b)^{39}$  should apply.

- ii. The advanced CVA risk capital charge determined pursuant to paragraphs 98 to 103.

**B. Banks with IMM approval and without Specific Risk VaR approval for bonds**

The total CCR capital charge for such a bank is determined as the sum of the following components:

- i. The higher of (a) the IMM capital charge based on current parameter calibrations for EAD and (b) the IMM capital charge based on stressed parameter calibrations for EAD.

- ii. The standardised CVA risk capital charge determined by paragraph 104.

**C. All other banks**

The total CCR capital charge for such banks is determined as the sum of the following two components:

- i. The sum over all counterparties of the CEM or SM based capital charge (depending on the bank's CCR approach) with EADs determined by paragraphs 91 or 69 respectively.

- ii. The standardised CVA risk capital charge determined by paragraph 104.

***In addition, the following paragraph will be inserted after paragraph 9 in Annex 4.***

"Outstanding EAD" for a given OTC derivative counterparty is defined as the greater of zero and the difference between the sum of EADs across all netting sets with the counterparty and the credit valuation adjustment (CVA) for that counterparty which has already been recognised by the bank as an incurred write-down (ie a CVA loss). This CVA loss is calculated without taking into account any offsetting debit valuation adjustments which have been deducted from capital under paragraph 75.<sup>40</sup> RWAs for a given OTC derivative counterparty may be calculated as the applicable risk weight under the Standardised or IRB approach multiplied by the outstanding EAD of the counterparty. This reduction of EAD by incurred CVA losses does not apply to the determination of the CVA risk capital charge.

***Wrong-way risk***

100. Paragraph 57 of Annex 4 in Basel II will be revised as follows:

57. Banks must identify exposures that give rise to a greater degree of general wrong-way risk. Stress testing and scenario analyses must be designed to identify

<sup>39</sup> Where "M" is the effective maturity and "b" is the maturity adjustment as a function of the PD, as defined in paragraph 272 of the Basel Accord.

<sup>40</sup> The incurred CVA loss deducted from exposures to determine outstanding EAD is the CVA loss gross of all debit value adjustments (DVA) which have been separately deducted from capital. To the extent DVA has not been separately deducted from a bank's capital, the incurred CVA loss used to determine outstanding EAD will be net of such DVA.

that of an unsecured transaction. For equity derivatives, bond options, securities financing transactions etc. referencing a single company where there exists a legal connection between the counterparty and the underlying company, and where specific wrong way risk has been identified, EAD equals the value of the transaction under the assumption of a jump-to-default of the underlying security. Inasmuch this makes re-use of possibly existing (market risk) calculations (for IRC) that already contain an LGD assumption, the LGD must be set to 100%.

## 2. **Asset value correlation multiplier for large financial institutions**

102. In order to implement the AVC multiplier, paragraph 272 of the Basel framework would be revised as follows:

272. Throughout this section, PD and LGD are measured as decimals, and EAD is measured as currency (eg euros), except where explicitly noted otherwise. For exposures not in default, the formula for calculating risk-weighted assets is:<sup>42</sup>

$$\text{Correlation (R)} = \frac{0.12 \times (1 - \text{EXP}(-50 \times \text{PD}))}{0.24 \times [1 - (1 - \text{EXP}(-50 \times \text{PD})) / (1 - \text{EXP}(-50))]} + \frac{(1 - \text{EXP}(-50))}{(1 - \text{EXP}(-50))}$$

$$\text{Maturity adjustment (b)} = (0.11852 - 0.05478 \times \ln(\text{PD}))^2$$

$$\text{Capital requirement}^{43} \text{ (K)} = \frac{[\text{LGD} \times \text{N}[(1 - \text{R})^{-0.5} \times \text{G}(\text{PD}) + (\text{R} / (1 - \text{R}))^{0.5} \times \text{G}(0.999)] - \text{PD} \times \text{LGD}] \times (1 - 1.5 \times \text{b})^{-1} \times (1 + (\text{M} - 2.5) \times \text{b})}{1}$$

$$\text{Risk-weighted assets (RWA)} = \text{K} \times 12.5 \times \text{EAD}$$

The capital requirement (K) for a defaulted exposure is equal to the greater of zero and the difference between its LGD (described in paragraph 468) and the bank's best estimate of expected loss (described in paragraph 471). The risk-weighted asset amount for the defaulted exposure is the product of K, 12.5, and the EAD.

A multiplier of 1.25 is applied to the correlation parameter of all exposures to financial institutions meeting the following criteria:

- Regulated financial institutions whose total assets are greater than or equal to US \$100 billion. The most recent audited financial statement of the parent company and consolidated subsidiaries must be used in order to determine asset size. For the purpose of this paragraph, a regulated financial institution is defined as a parent and its subsidiaries where any substantial legal entity in

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risk weight and capital treatment associated with an unsecured transaction (ie assuming such underlying exposure is an unsecured credit exposure).

<sup>42</sup> Ln denotes the natural logarithm.

N(x) denotes the cumulative distribution function for a standard normal random variable (ie the probability that a normal random variable with mean zero and variance of one is less than or equal to x). G(z) denotes the inverse cumulative distribution function for a standard normal random variable (ie the value of x such that N(x) = z). The normal cumulative distribution function and the inverse of the normal cumulative distribution function are, for example, available in Excel as the functions NORMSDIST and NORMSINV.

<sup>43</sup> If this calculation results in a negative capital charge for any individual sovereign exposure, banks should apply a zero capital charge for that exposure.