

Regulatory Capital Requirements for European Banks

Implications of
Changing Markets and a New Regulatory Environment

July 2009



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Colour Key used within Presentation:

Proposals to modify the
Basel II Capital Accord
coloured in rose

Proposals to modify EU
Capital Requirements
Directive coloured in
yellow

Impact of regulatory
capital changes on
“sample bank” coloured
in grey

Chapter 1

Basel II Basics



Basel II – Key Concepts

Overview

- Original version of Basel II Accord sought to eliminate “regulatory capital arbitrage” available under Basel I by aligning regulatory capital more closely with risk
- However, 2007-2009 credit crisis showed that Basel II Accord and CRD gave undue benefit to some risks and failed adequately to address other risks:
 - originate-to-distribute model too loosely regulated
 - certain risk weights for off-balance sheet liquidity commitments remained too low
 - trading book (with lower capital charges) used for certain illiquid exposures, with VaR and market risk models failing to capture full risks of such positions
 - disclosure of off-balance sheet structured funding activities too limited
- Recently proposed amendments to Basel II Accord and CRD, and recently enacted changes to CRD, will address certain perceived “failings” of Basel II Accord and CRD
 - Overall effect: increase materially required regulatory capital held by banks and increase materially public disclosure by banks of structured funding activities
 - Genuine issue: whether new capital and disclosure requirements are realistic, or whether regulators have over-reacted to complex circumstances underlying the 2007-2009 credit crisis

Basel II – Key Concepts

Impact on Banks

Basel II Accord and CRD will affect bank behaviour materially:

- Risk management: Banks motivated to adopt more sophisticated risk management systems in order to qualify for the lower capital afforded to Advanced IRB Banks
- Balance sheet: Banks motivated in current environment to reduce overall risk weighted assets:
 - Required regulatory capital increasing in many areas – whether due to ratings migrating on banking book assets, proposed changes to trading book capital charges or otherwise
 - Necessary additional capital-raising difficult and expensive in aftermath of 2007-2009 credit crisis
 - Greatest reductions in regulatory capital available via banks divesting (or creating and then divesting) junior risk positions in banking book exposures
- Off-balance sheet structured funding activities: Banks motivated to reduce off-balance sheet funding activities:
 - Will become more difficult to achieve economically due to proposed increases in re-securitisation risk weights
 - Will be subject to materially enhanced public disclosure of banks' commitments to structured finance vehicles

Introduction

Basel I

- In effect since 1988
- Very simple in application
- Easy to achieve significant capital reduction with little or no risk transfer



Basel II introduced to:

- combat regulatory arbitrage
- improve bank risk management

Basel II

- Complex and risk sensitive
- Treats exposures very unequally depending on exposure characteristics
- Treats banks very unequally depending on sophistication of risk management systems



Has profoundly altered bank behaviour and will continue to do so

Basel I – Capital Charges

Risk weights

- OECD sovereigns: 0%
- OECD banks: 20%
- Residential mortgages: 50%
- Synthetic: 20% super-senior, 0% cash-collateralised mezzanine, deduction or 100% first loss (with national variations)
- Unfunded commitments under one year: 0%
- Unfunded commitments over one year: 50%
- Everything else: 100%

Sample capital calculation

- €100 million corporate exposure
- 100% risk weight = €100 million risk weighted assets (RWA)
- Capital charge = $\frac{\text{Capital}}{\text{RWA}} = 8\%$ minimum
- Capital charge: €8 million

Basel II – Scope of Application

Banks

- Applied on consolidated basis to internationally active banks (¶ 20)
- All banking and other financial activities (whether or not regulated) captured through consolidation (¶ 24)
- Financial activities do not include insurance (¶ 24, fn. 6)
- Majority-owned subsidiaries not consolidated: deduct equity and capital investments (¶ 27)
- Significant minority investments without control: deduct equity and capital investments (¶ 28)
- Deduction of investments 50% from tier 1 and 50% from tier 2 capital (¶ 37)
- But CRD applies to solo entities as well as groups, and to investment firms

Insurance entities

- Generally, banks must deduct equity and other capital investments held in insurance subsidiaries (¶ 30)
- However, some G10 countries will retain current risk weighting treatment (100% for standardised banks) for competitiveness reasons (¶ 31)
- Supervisors may permit recognition by bank of excess capital invested in insurance subsidiary over required amount (¶ 33)

Commercial entities

- Generally, banks must deduct “significant investments” in commercial entities above materiality thresholds (¶ 35)
- “Significant investments” in commercial entities below materiality thresholds carry risk weight of 100% (¶ 36)

Basel II – Types of Banks

Standardised

- Measure credit risk pursuant to fixed risk weights based on external credit assessments (ratings)
- Least sophisticated capital calculations; least differentiation in required capital between safer and riskier credits
- generally highest capital burdens

Foundation IRB

- Measure credit risk using sophisticated formulas using internally determined inputs of probability of default (PD) and inputs fixed by regulators of loss given default (LGD), exposure at default (EAD) and maturity (M).
- More risk sensitive capital requirements; more differentiation in required capital between safer and riskier credits

Advanced IRB

- Measure credit risk using sophisticated formulas and internally determined inputs of PD, LGD, EAD and M
- Most risk-sensitive (although not always lowest) capital requirements; most differentiation in required capital between safer and riskier credits
- Transition to Advanced IRB status only with robust internal risk management systems and data

Under Basel II, banks have strong incentive to move to IRB status by improving risk management systems, thereby reducing required total regulatory capital

Basel II – Implementation and Timing

Basel II Accord

- “International Convergence of Capital Measurement and Capital Standards” originally published by BIS Committee June 2004
- Current version published June 2006 combining original June 2004 Accord, provisions in 1988 Basel I Accord remaining unchanged, 1996 Market Risks Amendment (specifying trading book capital charges) and 2005 rules regarding double-default
- In effect from 1/1/2007 for standardised and foundation IRB banks (¶ 2); in effect from 1/1/2008 for advanced IRB banks (¶ 2)
- Transition period (with minimum capital charges) for IRB banks ending 31 December 2009 (¶¶ 45-49)
- BIS Committee proposed amendments to Accord in January 2009, to become effective from end 2010

Capital Requirements Directive (CRD)

- Directive 2006/48/EC and Directive 2006/49/EC adopted June 2006
- Implements Basel II within EU; Member States required to adopt national legislation implementing CRD
- Must be implemented and in effect from 1 January 2007 for standardised banks and most IRB bank rules
- In effect from 1 January 2008 for certain advanced IRB bank rules
- Generally mirrors Basel II, but varies in material respects (some highlights summarised below)
- EU Parliament approved amendments to CRD in May 2009, to become effective from 31 December 2010

Unless otherwise indicated, all references to paragraph numbers in these materials refer to paragraphs in the June 2006 Basel II Accord

Transition Period (IRB Banks only)

2007

IRB capital requirements for credit risk, operational risk and market risk may not fall below 95% of the current minimum required for credit and market risks (¶ 46) (applicable only to Foundation IRB, as Advanced IRB not introduced until 2008)

2008

IRB capital requirements for credit risk, operational risk and market risk may not fall below 90% of the current minimum required for credit and market risks (¶ 46)

2009

IRB capital requirements for credit risk, operational risk and market risk may not fall below 80% of the current minimum required for credit and market risks (¶ 46)

**2010
and after**

BIS Committee and/or national supervisors may extend floor if warranted (¶ 48)

Basel II – Three Pillars

Pillar I

Regulatory Capital Charges: Minimum capital requirements based on market, credit and operational risk to (a) reduce risk of failure by cushioning against losses and (b) provide continuing access to financial markets to meet liquidity needs, and (c) provide incentives for prudent risk management (¶¶ 40-718)

Pillar II

Supervision: Qualitative supervision by regulators of internal bank risk control and capital assessment process (¶¶ 719-807), including ability to require banks to hold more capital than required under Pillar I

Pillar III

Market Discipline: New public disclosure requirements to compel improved bank risk management (¶¶ 808-826)

Basel II – Components of Regulatory Capital

Credit risk charges (¶¶ 40-643)

- Revised
- To ensure capital charges are more sensitive to risks of exposures in banking book
- Enhancements to counterparty risk charges also applicable to trading book

Operational risk charges (¶¶ 644-683)

- New
- To require capital for operating risks (fraud, legal, documentation, etc.)

Market risk charges (¶¶ 684-718)

- Initially unchanged; January 2009 BIS Committee consultation paper proposes material changes and floors
- Definition of trading book slightly amended
- Originally in 1996 Market Risk Amendment (MRA); now incorporated into June 2006 Accord text

Basel II – Types of Eligible Capital and Provisions

Definition of eligible regulatory capital

- Generally unchanged (¶ 41)
- CRD being changed to permit dated hybrid capital instruments; CRD to change limits on certain hybrid capital instruments modified (See Annex A)
- CRD also being changed to treat large exposures differently (See Annex B)

Treatment of provisions

- Standardised approach: general provisions can be included in tier 2 capital up to limit of 1.25% of risk-weighted assets (¶ 42)
- IRB approach:
 - Securitisation and certain equity exposures: expected loss (EL) amount must be deducted from capital (¶ 43)
 - Other exposures: bank must compare total eligible provisions against total EL amount and deduct any excess EL amount over eligible provisions (excess of provisions over EL amount may be added to tier 2 capital up to maximum of 0.60% of risk-weighted assets (¶ 43, ¶¶ 374-386)

Scaling Factor

- Scaling factor of 1.06 (subject to recalibration) introduced to ensure same aggregate amount of capital to remain in banking system following Basel II adoption (¶ 44, fn. 11)

Criteria for Recognition of External Ratings

Recognition

External credit assessment institution (ECAI)(rating agency) must be recognised/approved by national supervisor on basis of objectivity, independence, transparency, disclosure, resources and credibility (¶ 91)

Multiple ratings

If two assessments, higher risk weight applied (¶ 97)
If three or more assessments, two lowest risk weights referred to and higher of those two applied (¶ 98)

Assessment

Ratings assessment must take into account entire exposure (principal only ratings will not qualify) (¶ 100)

CRM

Credit risk mitigation (CRM) not recognised if taken into account in rating (¶ 101)

Solicited

Subject to national discretion, unsolicited ratings not recognised (¶ 108)

Chapter 2

Basel II Capital Charges (Pillar 1)



Basel II – Sample Bank

Assumptions:

- Using inputs of average rating agency values for PD, LGD of 45%, supervisory value for EAD and M of 2.5.

Asset Class	Rating	PD	RW	FIRB
Sovereigns	AA	0.0095%		7%
Banks	A+	0.0531%		20%
Corporates	BBB	0.3158%		56%
Residential Mortgage		0.5000%		35%
Hedge Funds				370%
SME	BB	1.8347%		87%
ABS	AA	0.0095%		15%

- To provide quantitative examples for capital charges we introduce a sample bank which holds investments in seven different asset classes
- The sample bank determines risk weights using the Foundation IRB approach across asset classes

Basel II – Sovereign Capital Charges

Sovereigns – In a Nutshell

Basel I		Basel II						
Type of Sovereign	Risk Weight	Standardised bank risk weights			Sample est. FIRB bank risk weights*		Rating	
OECD	0%	External Rating	AA- or above	0%	Country	Poland	40%	A2/A-
non-OECD	100%		A	20%		Russia	49%	Baa1/BBB
			BBB	50%		Turkey	125%	Ba3/BB-
			BB+ to B-	100%		Bulgaria	68%	Baa3/BBB
			below B-	150%		Czech Republic	20%	A1/A
			unrated	100%		Hungary	49%	Baa1/BBB-

Winners

- non-OECD rated above BB+
- Examples: Chile, China, Thailand

Losers

- OECD rated below AA-
- Examples: Czech Republic, Greece, Hungary, Mexico, Turkey

* Using inputs of average rating agency values for PD, LGD of 45%, supervisory value for EAD and M of 2.5. Foreign Currency Moody's Ratings as of June 2009 are applied.

Basel II – Sovereign Capital Charges

Sovereigns – Standardised Banks (¶¶ 53-59)

- Risk weights for sovereign exposures:

Rating	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Unrated
Risk Weight	0%	20%	50%	100%	150%	100%

- Risk weights may also be based on ECA risk scores
- Claims on non-central government public sector entities based on corporate exposure risk weights
- Claims on multilateral development banks have 0% risk weight if conditions are met, including: (i) majority of MDB's ratings are AAA, (ii) significant portion of shareholders are AA- or better rated sovereigns, (iii) funding is in form of paid-in equity with little or no leverage, and (iv) conservative lending criteria
- At national discretion, lower risk weight for banks' exposures to their sovereign (or central bank) in domestic currency; if adopted, other regulators may permit same risk weight

Basel II – Sovereign Capital Charges

Sovereigns – IRB Banks (¶¶ 270-272)

- Formula for exposure not in default:

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

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

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

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

- Capital requirement for defaulted exposure equals greater of zero and difference between exposure's LGD and bank's best estimate of loss
- Input characteristics (applicable to all types of exposures) (¶¶ 285-325):
 - PD
 - LGD:
 - FIRB: 45% (senior)/75% (subordinated); adjusted ($\text{LGD}^* = \text{LGD} \times (\text{E}^* / \text{E})$) for CRM recognition
 - AIRB: own estimates; adjusted for CRM recognition
 - EAD: not less than sum of (a) amount by which bank capital would reduce if exposure written-off fully and (b) specific provisions and partial write-offs
 - M: 2.5 years for FIRB (6 months for repos); own est. for AIRB for each exposure; max. 5 years

Basel II – Bank Capital Charges

Banks – In a Nutshell

Basel I		Basel II						
Type of Bank	Risk Weight	Standardised Option 1		Standardised Option 2		FIRB est. risk weights*		
OECD	20%	External Rating	AA- or above	20%	20%	External Rating	AA- or above	14%
non-OECD	100%		A+ to A-	50%	50%		A+ to A-	20% - 40%
			BBB+ to BBB-	100%	50%		BBB+ to BBB-	49% - 68%
			BB+ to B-	100%	100%		BB+ to B-	91% - 202%
			below B-	150%	150%		below B-	228% - 245%
			unrated	100%	50%		Unrated**	NA

Winners

- non-OECD rated above BB+ under Option 2
- Examples: May Bank, Public Bank Berhad

Losers

- OECD rated A or below under either option
- Examples: Bradesco

* Using inputs of average rating agency values for PD, LGD of 45%, supervisory value for EAD and M of 2.5. Ratings as of June 2009

** Internal PD estimate to be applied

Basel II – Bank Capital Charges

Banks – Standardised Banks (¶¶ 60-65)

2 options, selected by national regulator to apply for all banks in jurisdiction:

- Option 1: Banks risk weighted one category below risk weights of banks' sovereigns:

Rating	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Unrated
Risk Weight	20%	50%	100%	100%	150%	100%

- Option 2: At national discretion, banks risk weighted on basis of own external ratings (plus more favourable risk weight if claim maturity < 3 months)

Rating	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Unrated
Risk Weight	20%	50%	50%	100%	150%	50%

- Local currency reduction: National regulators may reduce by one notch risk weight of local currency bank debt having maturity of less than 3 months, subject to floor of 20%
- Exposures to securities firms treated as bank claims if regulatory arrangements comparable

Basel II – Bank Capital Charges

Banks – IRB Banks (¶¶ 270-272)

- Formulas for bank exposures same as for sovereign exposures, but with *floor for PD of 0.03%*
- Effective floor of 16 to 48 basis points for highest quality credits (depending on maturity assumption):
 - Generally, PD for high-quality bank debt will be below 0.03% floor (so floor must be used)
 - More realistic 10% LGD for Advanced IRB bank (rather than 45% supervisor-imposed LGD for Foundation IRB banks) results in significant capital reductions
 - Compare to 56 basis point floor for highest quality ABS

Basel II – Corporate Capital Charges

Corporates – In a Nutshell

Basel I		Basel II				
Risk Weight	100%	Standardised Option 1	Standardised Option 2	FIRB est. risk weights*		
External Rating	AA- or above	20%	100%	External Rating	AA- or above	14%
	A	50%	100%	A	20% - 40%	
	BBB+ to BB- below BB-	100%	100%	BBB	49% - 68%	
	BB-	150%	100%	BB+ to B-	91% - 202%	
	unrated	100%	100%	below B-	228% - 243%	
				Unrated**	NA	

* Using inputs of rating agency values for PD, LGD of 45%, supervisory value for EAD and M of 2.5.

** Internal PD estimate to be applied

Winners

- Corporates rated above BBB+

Losers

- Corporates rated below BB-

Basel II – Corporate Capital Charges

Corporates – Standardised Banks (¶¶ 66-68)

2 options, selected by national regulator to apply for all banks in jurisdiction:

- Option 1: Corporates risk weighted as set out in following chart (supervisory authority to increase 100% risk weight for unrated corporates where warranted by higher default rates):

Rating	AAA to AA-	A+ to A-	BBB+ to BB-	Below BB-	Unrated
Risk Weight	20%	50%	100%	150%	100%

- Option 2: At national discretion, all corporates risk weighted at 100% without regard to external ratings
- SME Adjustment: 75% risk weight for unrated SME if exposure under €1 million and either treated by bank as retail or guaranteed by individual
- Includes claims on insurance companies

Basel II – Corporate Capital Charges

Corporates – IRB Banks (¶¶ 270-274)

- Formulas for corporate exposures same as for bank exposures, including floor for PD of 0.03%
- SME Adjustment for firms setting total annual sales (S) at €50 million or less and €5 million or more:

$$\text{Correlation (R)} = 0.12 \times (1 - \text{EXP}(-50 \times \text{PD})) / (1 - \text{EXP}(-50)) + 0.24 \times [1 - (1 - \text{EXP}(-50 \times \text{PD})) / (1 - \text{EXP}(-50))] - 0.04 \times (1 - (S-5)/45)$$

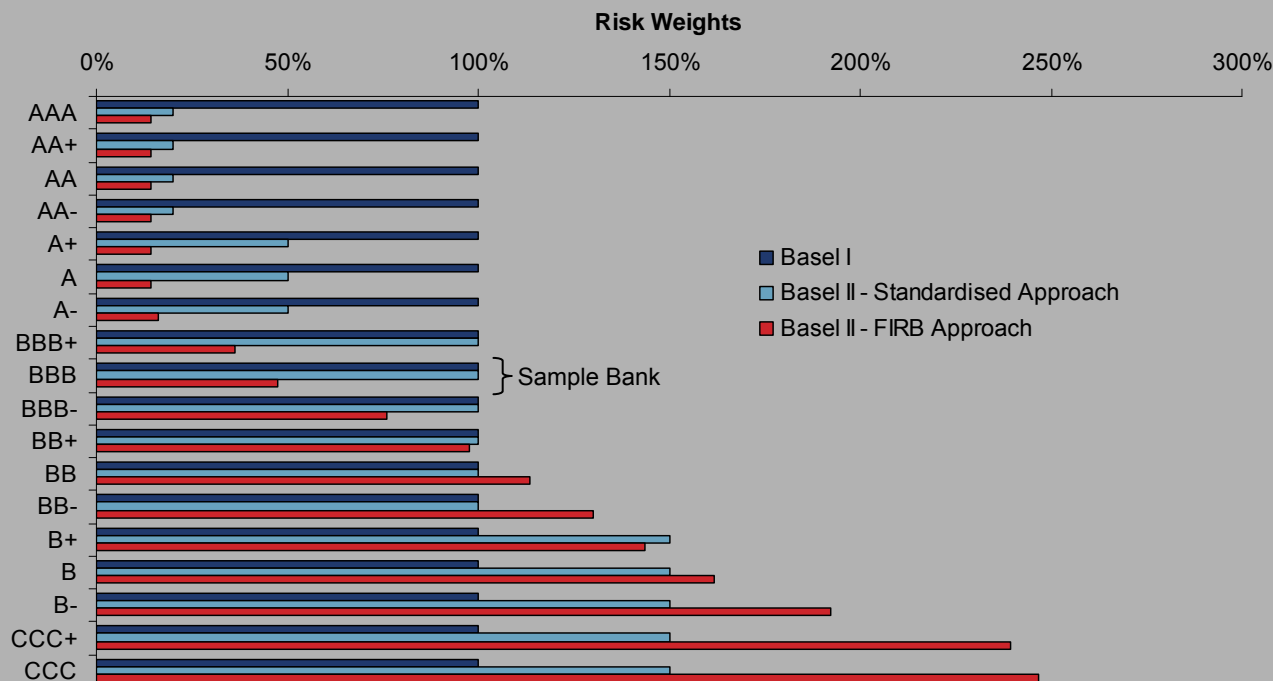
- Subject to national discretion, supervisors may allow banks to substitute total assets for total sales
- SME adjustment generates approx. 20% reduction in risk weights (depending upon original creditworthiness)
- Effective floor of 14% risk weighting for foundation IRB banks due to minimum PD of 0.03% representing a capital charge of 112 bps

Basel II – Corporate Capital Charges

Corporates – Comparison of Risk Weights

Assumptions:

- Using inputs of average rating agency values for PD, LGD of 45%, supervisory value for EAD and M of 2.5.



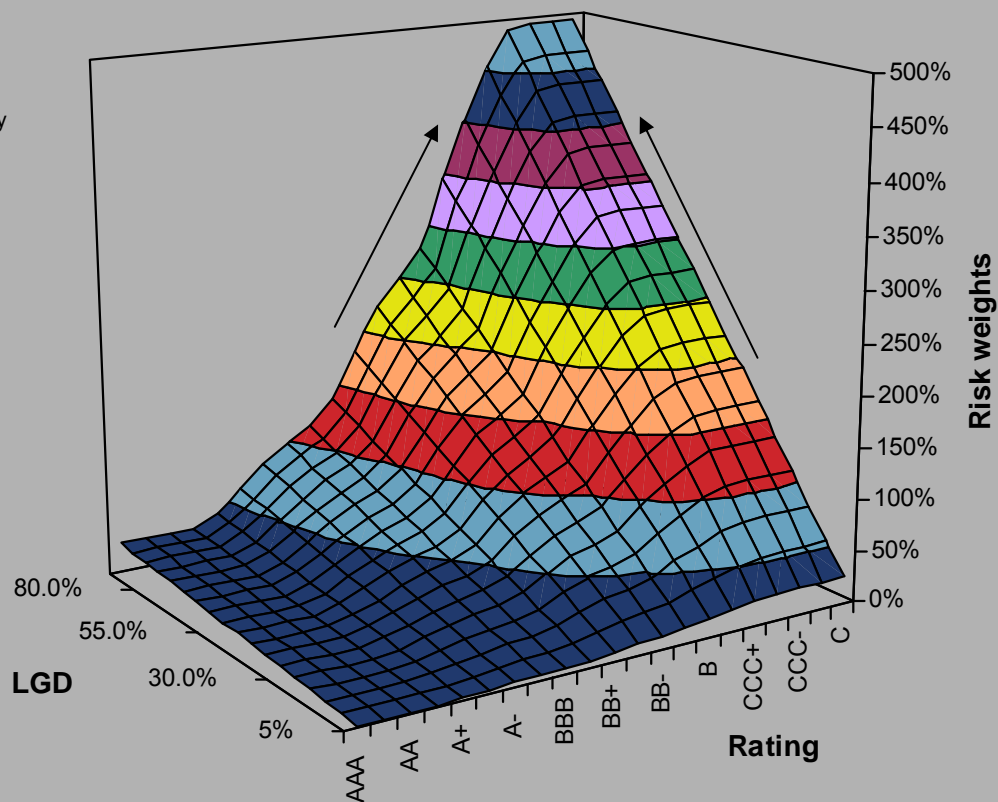
- Basel I was a framework built around exposure type (100% risk weight for corporates, 20% for banks, 0% for OECD sovereigns). Basel II focuses on the risk of exposure using rating as a proxy for risk
- The transition from Basel I to Basel II implies lower capital on high-rated exposures and higher capital on low-rated exposures

Basel II – Corporate Capital Charges

Corporates – Effect of Changing LGD on Risk Weights under AIRB

Assumptions:

- Using inputs of average rating agency values for PD, supervisory value for EAD and M of 2.5.



- Banks using the advanced approach rely on own estimates of LGD
- Typically, LGD estimates increase with rating downgrades
- Due to this relationship the capital requirements of advanced banks are particularly exposed to worsening credit environment



Basel II – Corporate Capital Charges

Corporates – Recovery Rates

Recently recovery rates turned out to be lower than expected and will impact LGD assumptions of AIRB Banks

Date	Company	Default Event	Total Amount	Sector	Average Recovery Rate	
					Secured	Unsecured
12/01/08	Hawaiian Telecom	Chapter 11	\$500	Telecom		3.9
12/01/08	Pilgrim's Pride	Chapter 11	\$657	Consumer, Non-cyclical		17.7
12/08/08	Tribune	Chapter 11	\$2,519	Telecom	4.1	2.5
12/30/08	Constar International	Prepackaged Ch 11	\$395	Industrial	62.8	2.0
01/06/09	Equistar Chemicals	Chapter 11	\$150	Basic Materials	32.0	
01/06/09	Lyondell Chemical	Chapter 11	\$325	Basic Materials	20.6	
01/06/09	Millenium America	Chapter 11	\$241	Basic Materials		6.0
01/09/09	Merisant Co.	Chapter 11	\$225	Consumer, Non-cyclical		10.0
01/09/09	Merisant Worldwide	Chapter 11	\$136	Consumer, Non-cyclical		0.1
01/12/09	Tronox Worldwide	Chapter 11	\$350	Basic Materials		11.5
01/14/09	Nortel Networks	Chapter 11	\$3,825	Telecom		12.2
01/26/09	Smurfit-Stone Container	Chapter 11	\$2,275	Industrial		9.5
02/03/09	Spectrum Brands	Prepackaged Ch 11	\$1,050	Consumer, Non-cyclical		21.5
02/11/09	Pliant Corporation	Chapter 11	\$546	Industrial	24.2	
02/12/09	Aleris International	Chapter 11	\$1,000	Industrial		0.0
02/13/09	Young Broadcasting	Chapter 11	\$484	Telecom		0.0
02/17/09	Trump Entertainment Resorts Holdings	Chapter 11	\$1,250	Telecom	8.8	
03/18/09	Great Lakes Chemical Corp.	Chapter 11	\$370	Basic Materials		18.3
03/18/09	Chemtura Corporation	Chapter 11	\$650	Basic Materials		45.0
03/27/09	Charter Communications Holdings	Prepackaged Ch 11	\$443	Telecom	1.0	0.6
03/31/09	Idearc, Inc.	Chapter 11	\$2,850	Telecom		2.0
Dec - Mar Dollar weighted average recovery rate					15.4	9.0

Basel II – Corporate Capital Charges

Corporates – Recovery Rates

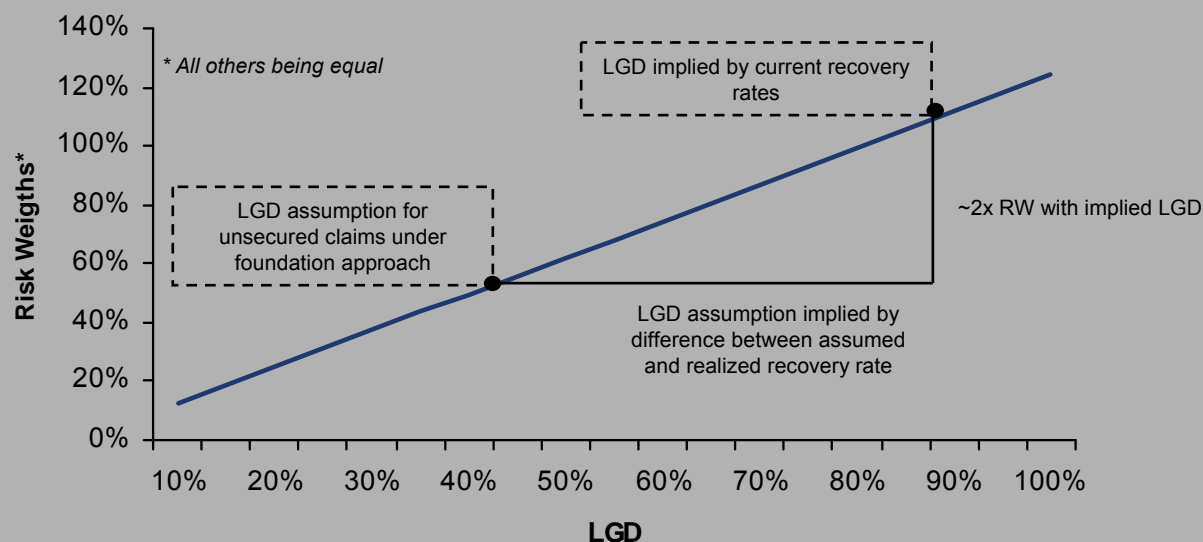
Assumptions:

- Using inputs of average rating agency values for PD, supervisory value for EAD and M of 2.5.

Note:

Isolating the LGD parameter yields a linear relationship between LGD and Risk Weights. However, advanced IRB banks are likely to adapt internal ratings based on changing LGD assumptions which will in turn affect PDs.

Risk Weights for changing LGD assumptions
(Sample Bank: BBB Corporates)

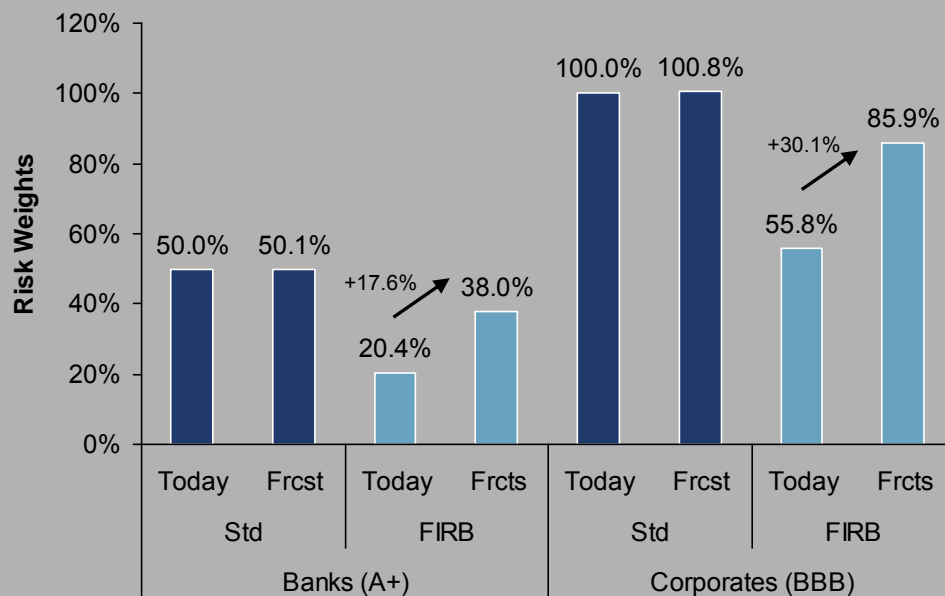


- Applying a LGD based on recovery rates from early 2009 (see previous page) produces a risk weight under the advanced approach which is almost twice as high as compared to that under the foundation approach
- It shows that in an environment like the credit crisis from 2007 to 2009 using the advanced as opposed to the foundation approach may be detrimental to a bank's capital requirements

Basel II – Corporate Capital Charges

Corporates – Rating Migration

Risk Weights: Today vs. 1y-Forecast



Assumptions:

- Using inputs of average rating agency values for PD, LGD of 45%, supervisory value for EAD and M of 2.5.
- Forecasted ratings based on Moody's Global 1 Year Rating Migration Rates Forecast Ending February 2010



- In general, risk weights are more sensitive to ratings under the IRB approach than under the standardised approach
- As a result, the anticipated rating migrations should have a much greater impact on the regulatory capital requirements of IFB banks compared to standardised banks

Basel II – Retail Capital Charges

Retail – In a Nutshell

Basel I		Basel II	
Risk Weight	100%	Standardised bank risk weights	FIRB est. risk weights*
		Generally	Credit cards
		75% if conditions met	70% - 110%**
		Default	Other Retail
		From 150% to 50% depending on level of specific provisions against exposure	60% - 90%***

* PD and LGD inputs provided by bank (¶ 331); PD floor at 0.03%

** Using PD of 3% and LGD of 80% and PD of 5% and LGD of 90%, respectively

*** Using PD of 5% and LGDs of 40% and 60%, respectively

Basel II – Retail Capital Charges

Retail – Standardised Banks (¶¶ 69-71)

Generally

- 75% risk weight if:
 - Exposure to individual or small business
 - Exposure takes form of revolving credit, line of credit, personal loan, lease, or small business facility (mortgage loan excluded to extent otherwise covered (see below))
 - Portfolio diversified (granular); Basel II accord suggests no aggregate exposure to any one counterparty should exceed 0.2% of overall portfolio
 - Maximum aggregate counterparty exposure €1 million or less
- Effective floor of 600 basis points

Past Due

- Unsecured portion of exposure past due for more than 90 days, net of specific provisions, risk weighted as follows:
 - 150% when specific provisions less than 20% of outstanding amount of exposure
 - 100% when specific provisions 20% or more of outstanding amount of exposure
 - 100% when the specific provisions 50% or more of outstanding amount of exposure, with supervisory discretion to reduce risk weight to 50% in such case

Basel II – Retail Capital Charges

Retail – IRB Banks (¶¶ 326-338)

- Formula for qualifying revolving retail exposure not in default:

$$\text{Correlation (R)} = 0.04$$

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

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

- Formula for other retail exposure not in default:

$$\text{Correlation (R)} = 0.03 \times (1 - \text{EXP}(-35 \times \text{PD})) / (1 - \text{EXP}(-35)) + 0.16 \times [1 - (1 - \text{EXP}(-35 \times \text{PD})) / (1 - \text{EXP}(-35))]$$

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

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

- When only drawn balances securitised, bank must hold required capital against unfunded commitment

Basel II – Real Estate Capital Charges

Real Estate – In a Nutshell

Basel I		Basel II			
Type of Exposure	Risk Weight	Standardised bank risk weights		FIRB est. risk weights	
Residential	50%	Residential	35%*	Residential	10% - 50%***
Commercial	100%	Commercial	100%**	Commercial	20% - 90%****

* Subject to conditions

** Reduced 50% risk weight possible, subject to performance criteria conditions that will likely be difficult to satisfy (¶ 74, fn. 29)

*** Using PD of 1% and LGD of 10% and PD of 2% and LGD of 25%

**** Using PD range of 0.07% and 2.1% and LGD of 35%

Basel II – Real Estate Capital Charges

Real Estate – Standardised Banks

Residential Real Estate (¶¶ 72-73)

- 35% risk weight for exposures fully secured by mortgages on residential property occupied by the borrower or rented
- Strict prudential criteria (including loan to value ratios) determined by national regulators
- Supervisors may require increased risk weight if data warrant
- Effective floor of 280 basis points

Commercial Real Estate (¶ 74)

- Generally 100% risk weight, given experience in numerous countries with troubled credits over the past few decades
- However, 50% risk weight possible in certain markets if (among other conditions): (i) tranche not greater than lower of 50% of market value and 60% of mortgage lending value, (ii) losses on tranche do not exceed 0.3% in any year, and (iii) overall losses from commercial real estate in relevant market do not exceed 0.5% in any year

Basel II – Real Estate Capital Charges

Real Estate – IRB Banks

- Residential Mortgages – Formula for exposure not in default (¶¶ 327-328):

Correlation (R) = 0.15

Capital requirement (K) = $LGD \times N[(1 - R)^{-0.5} \times G(PD) + (R / (1 - R))^{0.5} \times G(0.999)] - PD \times LGD$

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

- High volatility commercial real estate (HVCRE) (¶¶ 280-284):

Supervisory Rating	Strong	Good	Satisfactory	Weak	Default
Risk Weight	95%	120%	140%	250%	0%

- At national discretion, banks may assign preferential risk weights of 70% to “strong” and 95% to “good” where maturity is less than 2.5 years or supervisor determines bank’s underwriting criteria and other risk characteristics are substantially stronger

Basel II – Real Estate Capital Charges (CRD)

However, capital charges for real estate exposures are treated differently under CRD

Standardised Banks

- Commercial mortgages “fully and completely” secured by mortgages on offices or other commercial premises may be assigned risk weight of 50%:
 - at discretion of national authorities, and
 - subject to certain conditions, such as exposure not exceeding 50% of lower of market value or lending value of property and property value not being materially dependent on creditworthiness of obligor
- 100% risk weight on other commercial mortgages

IRB Banks

- Generally, real estate exposures are determined under the rules for exposures to corporates (where, as usual, the obligor is a company)
- As an exception, risk weights for retail exposures secured by real estate are determined pursuant to the corporate exposure formula, but with a correlation assumption (R) of 0.15 instead of R determined pursuant to the corporate formula

Basel II – Covered Bond Capital Charges

Covered Bonds – In a Nutshell

Basel I (CRD)		Basel II (CRD)						
Type of Exposure	EU Risk Weight	Standardised bank risk weights				FIRB est. risk weights***		
UCITS qualifying	10%	Senior debt RW	20%*	50%**	100%	150%	PD of 0.03%	4%
Exceptions*	20%	Covered bond RW	10%	20%	50%	100%	PD of 0.15%	10%

* Italy, Portugal, Sweden, UK

* Requires rating of AAA to AA-

** Requires rating of A+ to A- under Option 1 and rating of A+ to BBB- under Option 2

*** LGD of 12.5% required in CRD with PD floor of 0.03%. Using inputs PD as noted, LGD of 12.5%, supervisory value for EAD and M of 2.5.

CRD provides preferential capital treatment for covered bonds not available under Basel II

Basel II – Covered Bond Capital Charges

Covered Bonds

Terms and conditions

- Applies only to bonds as defined in Article 22(4) of Directive 85/611/EEC collateralised by qualifying eligible assets, including
 - certain EU sovereign exposures
 - certain non-EU sovereign exposures qualifying for credit quality step 1 (but limited to 20% of all covered bonds issued by any institution)
 - certain exposures to institutions qualifying for credit quality step 1 (but limited to 15% of all covered bonds issued by any institution) (subject to certain other conditions and exclusions)
 - certain residential real estate exposures (up to 80% of value) (subject to certain other conditions and exclusions)
 - certain commercial real estate exposures (up to 60% of value) (subject to certain other conditions and exclusions)
 - certain loans secured by ships (up to 60% of value)

(CRD Annex VI, Part 1, ¶¶ 60-71)

Basel II – Specialised Lending Capital Charges

Specialised Lending – In a Nutshell

Basel I		Basel II	
	Risk Weight	Standardised bank risk weights (¶ 80)	IRB bank risk weights (¶¶ 275-284)
All	100%	All	100%
			<p>Five Classes of Specialised Lending:</p> <ul style="list-style-type: none"> ▪ Project finance ▪ Object finance ▪ Commodities finance ▪ Income-producing real estate ▪ High-volatility commercial real estate <p>Generally: For exposures other than HVCRE, banks that do not meet requirements for estimation of PD will map internal grades to five supervisory categories (70% for strong, 90% for good, 115% for satisfactory, 250% for weak and 0% for default) (¶ 275)</p> <p>At national discretion, supervisors may allow 50% for “strong” and 70% for “good” if remaining maturity less than 2.5 years or supervisor determines underwriting or other risk characteristics are substantially stronger (¶ 277)</p>

Basel II – Equity Capital Charges

Equity – In a Nutshell

Basel I		Basel II†					
Type of Exposure	Risk Weight	Standardised bank risk weights		Simple Model*	PD/LGD Model**	Rating	
Non-consol equity	100%	Corporates	100%*				
		Banks	100%				
		Securities firms	100%				
				Company			
				Daimler	290%	81%***	A3/BBB+
				Siemens	290%	41%***	A1/A+
				Fresenius Med. Care	290%	182%	Ba1/BB
				GE	290%	29%***	Aa2/AA+
				Sony	290%	81%***	A3/A-
				Vivendi Universal	290%	112%***	Baa2/BBB
				Bertelsmann	290%	98%***	Baa1/BBB

† For banking book exposures. National supervisors may exempt from IRB treatment for up to ten years particular equity exposures held at publication date of Basel II accord (¶ 267)

* Unless deducted under Part 1 (rules relating to equity holdings in banks); supervisors may increase to 150% for venture capital and private equity investments (¶ 80)

** Inputs: average rating agency PDs, LGD of 90%, supervisory value for EAD and M of 5. Moody's Ratings as of June 2009 are applied.

*** Under Basel II (¶ 353) a floor risk weight of 200% applies to listed equities. CDR applies min. PDs and LGDs

Basel II – Equity Capital Charges

IRB Banks – Three Approaches

Simple risk method (¶¶ 344-345)

- 300% risk weight for publicly traded exposures
- 400% risk weight for all other holdings

Internal models method (¶¶ 346-349)

- Taken from VaR models as 12.5 times difference between
 - 99% percentile one-tail quarterly return and
 - Risk free rate over long-term sample period
- Floor: capital charge under simple risk model but using 200% (traded) and 300% (not traded)

PD/LGD method under CRD (¶¶ 350-361)

- Generally, use normal corporate exposure formulas if possible (results in risk weights substantially below 200% and 300% floor in Basel II)
 - If bank does not have sufficient information to use definition of default, then apply scaling factor of 1.5 to risk weights
 - Unfunded credit protection on equity exposure recognised, subject to LGD of 90%, with reduced LGD of 65% for private equity exposures

CRD Equity Capital Charges (simple risk method)

- 190% risk weight for private equity exposures in sufficiently diversified portfolios (not in Basel II Accord)
- 290% risk weight for exchange traded equity exposures
- 370 % risk weight for all other equity exposures

Basel II – Fund Capital Charges

Funds – In a Nutshell

Basel I	
	Risk Weight
All	100%

Fund Capital Charges

- Only CRD deals explicitly with capital charges for funds
- Under Basel II Accord, capital charges for funds must be determined pursuant to rules for corporate exposures, equity exposures or securitisation exposures (including look-through), as applicable

Basel II		
	Standardised bank risk weights*	IRB bank risk weights
Credit Quality Step	1	20%
	2	50%
	3	100%
	4	100%
	5	150%
	6	150%

Alternatives:

- If exposure to collective investment undertaking (CIU) satisfies certain criteria and underlying exposures known, bank looks through to underlying exposures
- If exposure to CIU, but criteria not met or not all underlying exposures known, bank looks through to underlying exposures and treats all as some type of equity exposure (treated as “other” equity if not otherwise allocated)
- Alternatively, can have third party calculate average risk weighted amounts of underlying exposures if correctness of calculation is adequately ensured

* For rated exposures to CIUs. Alternative risk weights possible via “look through” approach or treatment of fund exposure as equity exposure or securitisation exposure

Basel II – Fund Capital Charges

Standardised Banks (CRD Annex VI, Part 1, ¶¶ 74-81)

- 100% risk weight for exposures to collective investment undertakings (CIUs) unless other rules (below) apply
- Rated CIU exposures assigned following risk weights:

Credit Quality Step	1	2	3 and 4	5 and 6
Risk Weight	20%	50%	100%	150%

- National regulators may assign 150% risk weight if CIU exposure has particularly high risks
- Eligibility criteria for above treatment:
 - CIU is managed by company subject to supervision in EU or if managed outside EU then relevant supervisor determines supervisory equivalence and adequate supervisor cooperation
 - CUI's prospectus specifies categories of investment assets and, if any, investment limits
 - CUI's business is reported on at least annual basis
- Institution may “look through” to determine regulatory capital
 - on basis of actual assets where known to institution
 - on basis of average risk weights if only investment categories (but not assets) are known, assuming maximum investment in highest risk weighted categories first

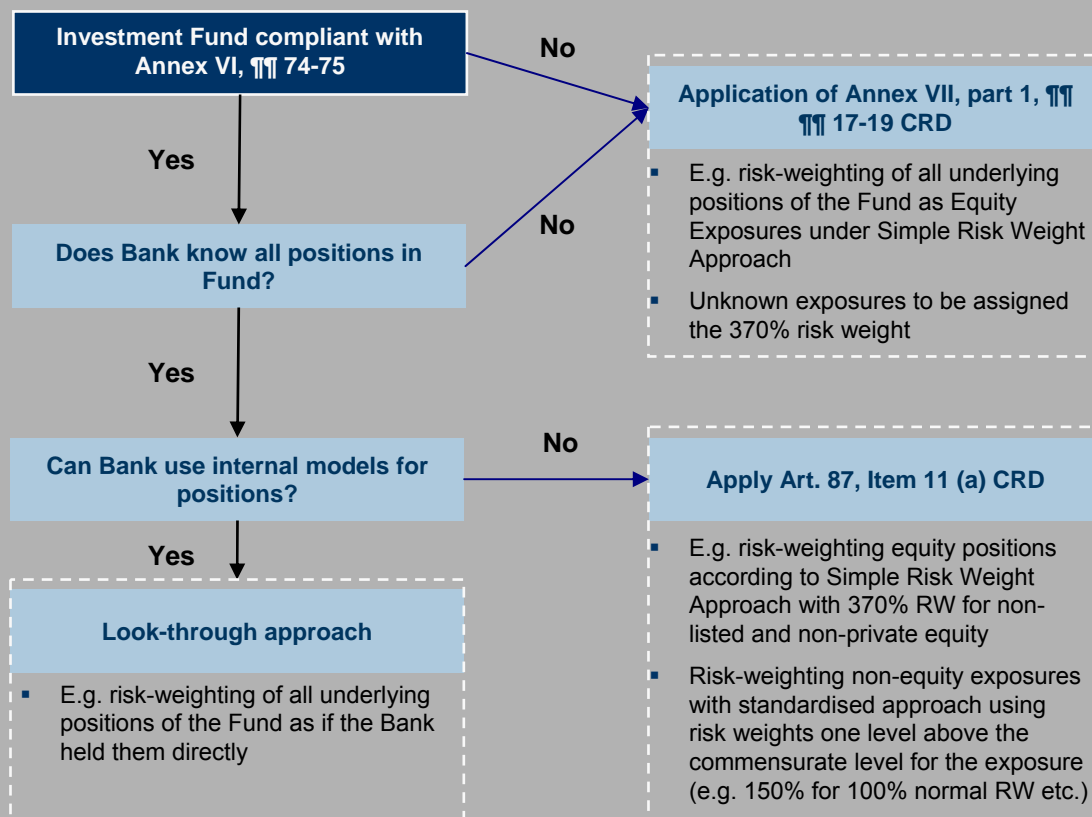
Basel II – Fund Capital Charges

IRB Banks (CRD Article 87, ¶¶ 11-12)

- Paragraph 11: If exposure to CIU satisfies criteria in Annex VI, Part 1, ¶¶ 77-78, and underlying exposures known, bank looks through to underlying exposures to calculate risk weighted exposure amounts and expected loss amounts under rules applicable to underlying exposures
- If bank does not meet conditions to use rules applicable to underlying exposures
 - for equity exposures, bank applies rules to equity exposures (allocating exposure to “other” equity category if not otherwise allocated)
 - for all other exposures, (i) for unrated or highest risk weight exposures, risk weights for standardised banks times two subject to cap of 1250% and (ii) for all other exposures risk weights for standardised banks times two subject to a floor of 5%
- Paragraph 12: If exposure to CIU does not satisfy criteria in Annex VI, Part 1, ¶¶ 77-78, or not all underlying exposures known, bank looks through to underlying exposures and calculates risk weighted exposure amounts as if all exposures equity exposures (allocating exposures to “other” equity category if not otherwise allocated)
- Alternatively, bank or third party (if calculation accuracy ensured) calculates risk weight as follows:
 - for equity exposures, bank applies rules to equity exposures (allocating exposure to “other” equity category if not otherwise allocated)
 - for all other exposures, (i) for unrated or highest risk weight exposures, risk weights for standardised banks times two subject to cap of 1250% and (ii) for all other exposures risk weights for standardised banks times two subject to a floor of 5%

Basel II – Fund Capital Charges

Look-through Approach for Fund Exposures for IRB Banks Simplified Scheme Based on CRD



Basel II – Fund Capital Charges

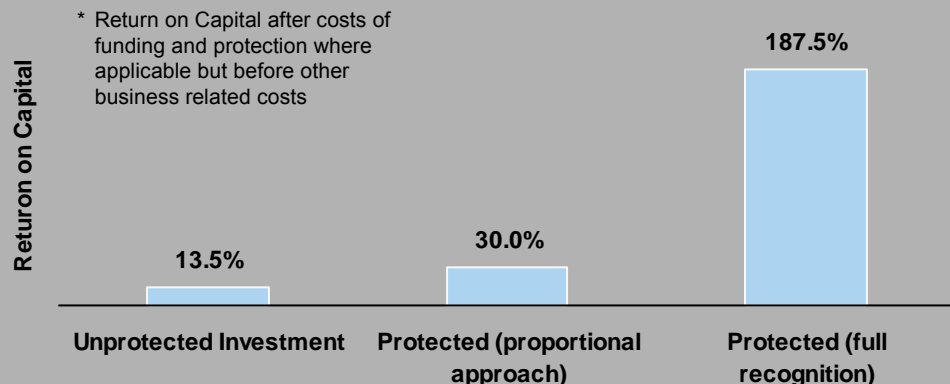
Capital Protection

*Anticipated Benefits of Principal Protection
Simplified Return on Capital Calculation*

Assumptions

- FIRB bank
- No effective look through to underlying fund exposures possible, therefore fund exposures are treated as other equity exposures (Art. 87 No. 12 CDR)
- Risk weight for Fund exposure **370%** (simple risk weight method, Annex VII CRD)
- Fund Return: 7.6% p.a.
- Cost of funding: 3.6% p.a.
- Cost of VPPP principal guarantee: 1% p.a.
- RW of protecting party: 20%
- Day 1 PV of protection: 70%

Return on Capital Comparison

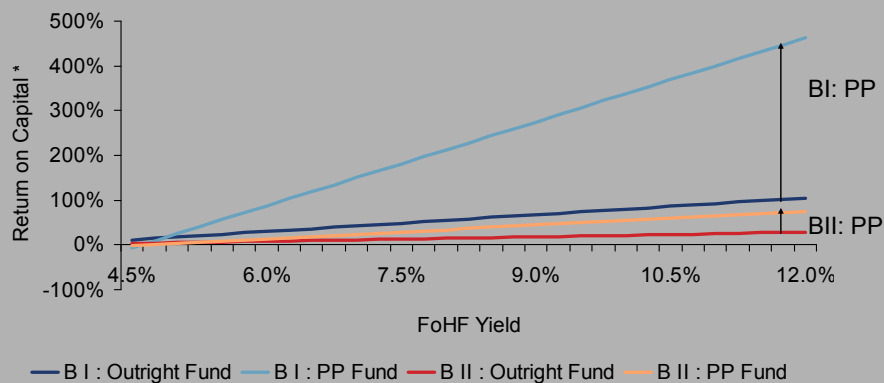


- Unprotected investment in Fund yields the lowest RoC
- Even under more conservative proportional approach under Basel II, **the protected investment generates an RoC more than double compared to an equivalent unprotected investment**
- In case the guarantee is recognized for the full amount, capital required would be minimal and the return on capital becomes almost 200% p.a. for a protected investment
 - If fund appreciates above par and appreciation is not paid out, the higher equity RW should apply to the appreciated portion

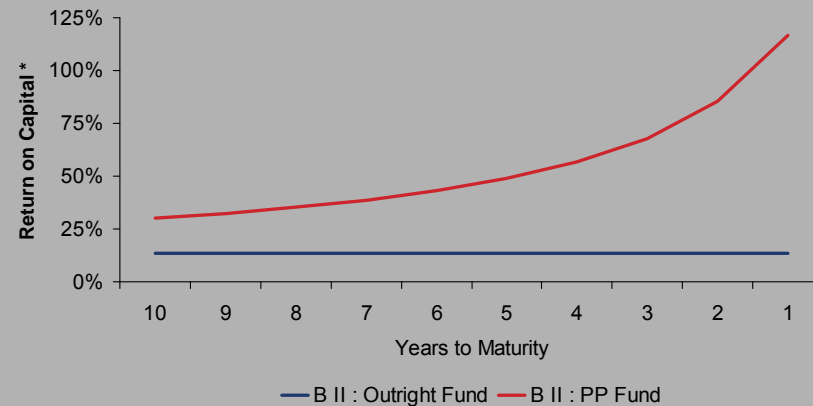
Basel II – Fund Capital Charges

Capital Protection - Comparison of Alternatives

Fund Investment : Basel I vs Basel II,
Outright vs Principal-Protected



Fund Investment: Outright vs Principal-Protected over Time



* Return on Capital after costs of funding and protection where applicable but before other business related costs

Basel II – Off-Balance Sheet Items

Each off-balance sheet item is converted into credit exposure equivalent using applicable credit conversion factor (CCF); each credit exposure equivalent is then risk weighted under rules applicable to that exposure

Off-Balance Sheet Items – Standardised Banks (¶¶ 82-89)

Direct credit substitutes

- General guarantees of indebtedness (including standby letters of credit): 100% CCF
- Acceptances (including endorsements with characteristics of acceptances): 100% CCF

Commitments

- Original maturity of up to one year: 20% CCF
- Original maturity in excess of one year: 50% CCF
- Unconditionally cancelable: 0% CCF

Forward commitments

- Sale and repurchase agreements and asset sales with recourse: 100% CCF
- Lending of bank securities or posting as collateral: 100% CCF
- Forward asset purchases, forward deposits and partially paid shares and securities: 100% CCF
- Transaction-related contingent items such as performance bonds, bid bonds, warranties and standby letters of credit relating to specific transactions: 50% CCF
- Note issuance facilities (NIFs) and revolving underwriting facilities (RUFs): 50% CCF

Basel II – Off-Balance Sheet Items

Off-Balance Sheet Items – Standardised Banks (¶¶ 82-89) (cont'd)

Other items

- Short-term self-liquidating trade letters of credit arising from the movement of goods: 20% CCF
- Undertaking to provide commitment on off-balance sheet item: CCF equal to lower of two items
- Counterparty credit risk: Complex calculations per Annex 4 of Accord

Failed transactions

- For delivery-versus-payment (DvP) transactions overdue more than five days following settlement date, capital charge equal to product of positive exposure value times following risk multiplier:

Working days following settlement date	Risk multiplier
From 5 to 15	8%
From 16 to 30	50%
From 31 to 45	75%
46 or more	100%

- For free-delivery transactions, bank delivering first leg must treat exposure as a loan if second leg not delivered to it by end of business day

Basel II – Securitisation Capital Charges

Securitisation – In a Nutshell

Basel I		Basel II							
Type of Exposure	Risk Weight	Standardised bank risk weights (¶ 567)			IRB bank ratings-based risk weights (¶¶ 615-616)				
Generally	100%	External Rating	AA- or above	20%	External Rating	Most senior**	Base case	Non-granular	
First loss	Deduct		A	50%		AAA	7%	12%	20%
Unfunded < one year	0%		BBB	100%		AA	8%	15%	25%
			BB+ to BB-	350%*		A+	10%	18%	35%
			B+ or below	Deduct		A	12%	20%	35%
			unrated	Deduct		A-	20%	36%	35%
				BBB+		35%	50%	50%	
				BBB		60%	75%	75%	
				BBB-		100%	100%	100%	
				BB+		250%	250%	250%	
				BB		425%	425%	425%	
				BB-	650%	650%	650%		
				<BB- or unrated	Deduct	Deduct	Deduct		

Preferential 6% risk rate in CRD for super-senior synthetic exposures to be increased to 7% (to equal risk weight in Basel II Accord)

* Originating banks must also deduct BB+ to BB- exposures (¶ 569)

** NEW: 6% risk weight for “super senior” tranches under CRD

Basel II – Securitisation Capital Charges

Operational requirements – generally (¶ 553)

- Originating banks must satisfy operational criteria before exposures can be risk weighted under securitisation rules rather than rules relating to transferred exposures

Operational requirements for traditional (cash) securitisations (¶ 554)

- Significant credit risk must be transferred to third parties
 - “significant risk” not defined in either Basel II Accord or CRD
 - CRD being amended to define (see below)
- Transferor does not maintain effective or indirect control over transferred exposures; assets are legally isolated from transferor even in bankruptcy
 - repurchase right deemed effective control
 - obligation to retain risk of exposures deemed effective control
 - servicing not necessarily effective control
- Securities issued not obligations of transferor; investors only have claim to underlying assets
- Transferee is special purpose entity (SPE); investors have right to pledge or exchange investments without restriction
- Clean-up calls must satisfy ¶ 557
- Securitisation documents do not require originating bank to
 - alter pool composition systematically to maintain weighted average credit quality
 - allow for increases in originator’s retained first loss position or credit enhancement after transaction’s inception
 - increase yield payable to parties other than originating bank on account of deterioration in pool credit quality

Basel II – Securitisation Capital Charges

Operational requirements for synthetic securitisations (¶ 555)

- Credit risk mitigants must comply with CRM rules
- Eligible collateral limited to ¶¶ 145-146
- Eligible guarantors specified in ¶ 195 (SPEs not recognised)
- Banks must transfer significant credit risk associated with underlying exposures to third parties
- Instruments used to transfer credit risk may not contain terms or conditions that limit amount of credit risk transferred, for example:
 - Clauses that materially limit credit protection or credit risk transference (e.g., significant materiality thresholds below which credit protection not triggered even if credit event occurred)
 - Clauses that require originating bank to alter underlying exposures to improve pool's weighted average credit quality
 - Clauses that increase bank's cost of credit protection in response to deterioration in pool's credit quality
 - Clauses that increase yield payable to parties other than originating bank on account of deterioration in pool credit quality
 - Clauses that increase originator's retained first loss position or credit enhancement after transaction's inception
- Opinion from qualified legal counsel confirming enforceability of contracts in all relevant jurisdictions
- Clean-up calls satisfy ¶ 557

Basel II – Securitisation Capital Charges

Proposed CRD Amendment – Significant Credit Risk Transfer

- “Significant credit risk” must be transferred to third parties in order for bank permitted to determine regulatory capital on basis of securitisation rules rather than rules applicable to assets on bank’s balance sheet
- In original Basel II Accord and the CRD, “significant risk transfer” not defined
- Supervisors adopted very inconsistent rules defining “significant risk transfer”, for example:
 - United Kingdom: credit risk transferred must be broadly commensurate with, or exceed, the proportion by which risk weighted exposure amounts reduced
 - Germany: bank must transfer 50% or more of mezzanine risk (i.e., very similar to the CRD rules being adopted)
 - Netherlands: bank must transfer everything but AAA-rated tranches
 - United States: transfer must be off-balance sheet for accounting (implying disposition of majority of residual risks if FIN 46R applies)

Proposed amendments to CRD to define “significant credit risk transfer” aim to ensure consistent application across all EU Member States

Basel II – Securitisation Capital Charges

Proposed CRD Amendment – Significant Credit Risk Transfer (cont'd)

- Safe harbour
 - Significant credit risk considered transferred if risk-weighted exposure amounts of mezzanine securitisation positions held by originator in securitisation do not exceed 50% of risk weighted exposures amounts of all mezzanine securitisation positions in securitisation
 - Where no mezzanine positions exist, and if 1250% risk-weighted positions (“first-loss exposures”) exceed “conservative estimate” of expected loss “by substantial margin”, significant risk considered transferred if originator does not hold more than 20% of first-loss exposures
- “mezzanine” positions means those to which a risk weight lower than 1250% applies and that are more junior than most senior position and more junior than any position in credit quality step 1 (for standardised banks) or credit quality steps 1 or 2 (for IRB banks)
- Case-by-case alternative
 - Supervisors may also decide on case-by-case basis that significant credit risk transferred, if reduction in regulatory capital justified by commensurate and material transfer of credit risk to third parties and credit institution can demonstrate that such risk transfer recognised for internal risk management and capital purposes by credit institution

Basel II – Securitisation Capital Charges

Securitisation – Standardised Banks

Except as provided below, unrated securitisation exposures must be deducted (¶ 567)

Most senior exposures (¶¶ 572-573)

- If the most senior tranche is unrated, the bank that holds or guarantees that position may “look through” to the underlying pool to determine the risk weight (and may assign a risk weight equal to average of risk weight assigned to exposures in underlying pool), provided that the composition of the pool is known at all times

Second loss positions or better (¶¶ 574-575)

- Qualifying exposures provided by sponsor banks in ABCP programs that are in second loss position or better may apply a risk weight equal to the greater of (x) 100% and (y) the highest risk weight assigned to any exposure in underlying pool, but only if:
 - The first loss position provides significant credit protection
 - The associated credit risk is investment grade or better
 - The bank holding the exposure does not hold the first loss position

Eligible liquidity facilities (¶ 576)

- Banks may apply risk weight to eligible liquidity facilities equal to highest risk weight assigned to any exposure in underlying pool

Basel II – Securitisation Capital Charges

Securitisation – Standardised Banks

Liquidity facilities (¶¶ 579-580)

Generally

- 20% credit conversion factor (CCF) for eligible liquidity commitments with an original maturity of one year or less
- 50% CCF for eligible liquidity commitments of more than one year
- 100% CCF for all other liquidity commitments, including rated commitments

Credit conversion factor of 0% *theoretically* possible if:

- Commitment qualifies as “eligible liquidity”
- Commitment can only be drawn if general market disruption (*i.e.*, where more than one SPE across different transactions is unable to roll over maturing commercial paper – *i.e.*, not as result of impairment in credit quality of specific SPE or its pool)
- Commitment must be secured by underlying assets and rank *pari passu* with conduit’s securities

Proposed changes to Accord and to CRD (effective end 2010):

- Existing 20% CCF for eligible liquidity commitment with maturity of less than 1 year to be increased to 50% CCF
- Existing special 0% CCF for liquidity commitment drawn only in event of general market disruption to be eliminated (so regular 50% CCF will apply)
- Bottom line: Regulators believe liquidity absorbs more than just liquidity risks, and thus want more capital held against liquidity commitments

Basel II – Securitisation Capital Charges

Securitisation – Standardised Banks

“Eligible Liquidity” (¶ 578)

- Documentation must identify and limit circumstances of draw, and amounts drawn must be limited to amount likely to be repaid from underlying assets and seller-provided credit enhancement
- No incurred losses should be covered and draw should not be automatic
- Asset quality test should not cover defaulted assets as defined in paragraphs 452-459 (including receivables more than 90 days past due unless extended up to 180 days by national regulators); if funding based on rating of underlying asset, it must be rated at least investment grade at time of draw
- Facility cannot be drawn after all applicable credit enhancement to which liquidity facility has access has been exhausted
- Repayment of draws must not be subordinated to interests of any conduit security holder

Basel II – Securitisation Capital Charges

Securitisation – Standardised Banks

Overlapping Exposures (¶ 581)

- Where, for example, conduit sponsor provides programme-wide liquidity and credit enhancement to ABCP conduit
- If funding one exposure precludes funding the other exposure, sponsor need not hold capital against both exposures
- Instead, for overlapping portion sponsor should hold capital against exposure with highest credit conversion factor

Application issues

- How to allocate partial credit enhancement
- How to allocate programme-wide credit enhancement

Eligible servicer advances (¶ 582)

- Servicers may contractually agree to advance cash to insure uninterrupted payments to investors if full reimbursement right is senior to other claims
- At national discretion, CCF of 0% for facility cancellable without prior notice

Basel II – Securitisation Capital Charges

Securitisation – IRB Banks

Options

- IRB bank must calculate capital on basis of:
 - external ratings pursuant to ratings based approach (RBA)
 - inputs into supervisory formula (SF) approach
 - internal assessments approach (IAA)
- Cap: If IRB would require more capital for securitisation exposure than had the position not been securitised, bank may use IRB capital requirement for underlying exposures (¶ 610)

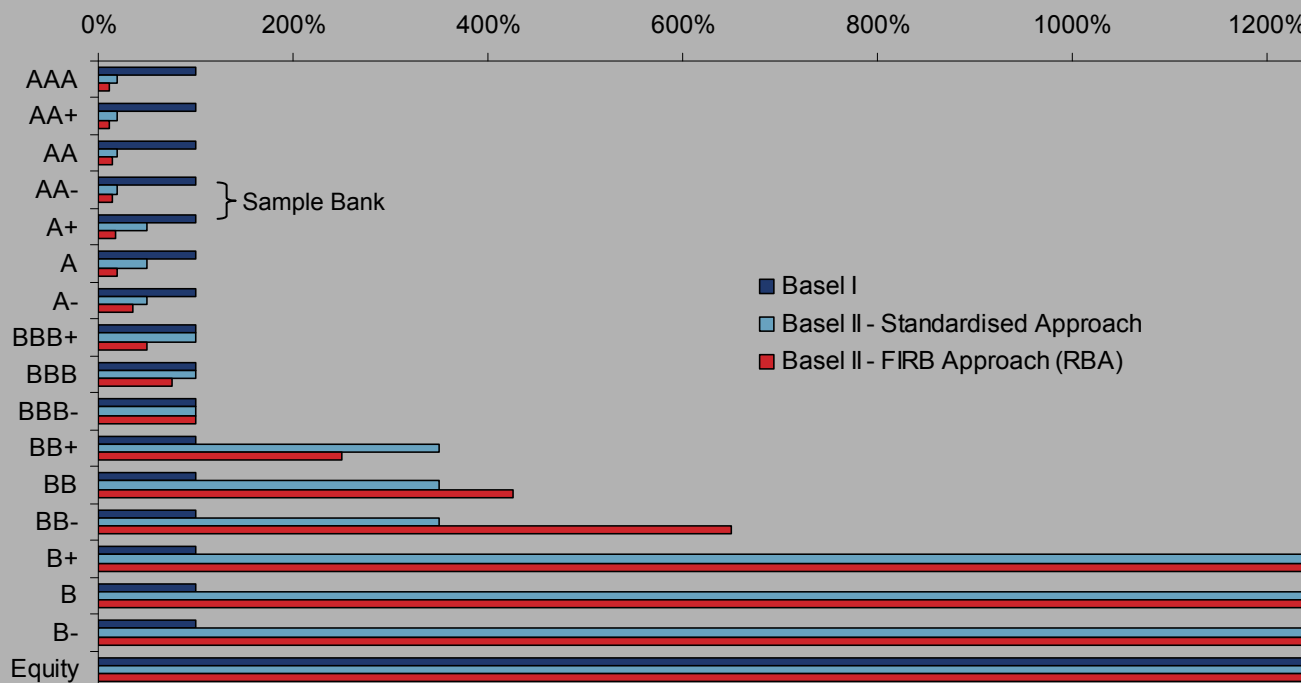
Hierarchy (¶ 609)

- IRB bank *must* use ratings based approach (RBA) to calculate capital if external rating or inferred rating available
- Where RBA not available, bank may use SF or IAA if available
- Where neither RBA nor SF or IAA are available, bank may use look-through approach (see below) in paragraph 639
- Otherwise, position must be deducted

Basel II – Securitisation Capital Charges

Securitisation - Comparison of Risk Weights

Risk Weight (%)



Assumptions:

- The standardised approach assumes Long-term Rating Category
- RBA Base Risk Weights assumed for the FIRB Approach

} Sample Bank

- Basel I
- Basel II - Standardised Approach
- Basel II - FIRB Approach (RBA)



- For securitisations Basel I only differentiated between 1250% for equity tranches and 100% for the rest. Basel II focuses on the risk of exposure using rating as a proxy for risk
- Under Basel II Risk Weights are determined to result in lower capital on high-rated exposures and higher capital on low-rated exposures

Basel II – Securitisation Capital Charges

Securitisation – IRB Banks

Internal Assessments Approach (¶¶ 619-622)

IRB bank may use IAA if conditions satisfied

- Only available for exposures to ABCP programmes
- Internal assessments mapped to equivalent external ratings and exposures assigned resulting risk weights
- Supervisor may suspend bank's use of IAA until deficiencies (if any) are corrected

Conditions

- ABCP issued by conduit must be externally rated
- Internal assessment must be based on ratings criteria for each asset type and be equivalent of investment grade when exposure is funded
- Bank's supervisors must be satisfied that internal ratings meet required criteria in paragraphs 90-108 and with relevant external ratings criteria
- Bank must show that internal criteria matches external criteria

Basel II – Securitisation Capital Charges

Securitisation – IRB Banks

IAA Conditions (cont'd)

- Supervisor may, if warranted, disallow any seller provided recourse, guarantees or excess spread or any other first loss enhancement
- Internal assessment must identify gradations of risk that can be mapped to external ratings gradations
- Internal assessment process, and particularly stress factors, must be at least as conservative as publicly available ratings criteria from rating agencies rating ABCP programme:
 - Bank must choose most conservative of two or more external criteria if two or more criteria apply
 - Bank must not choose only ratings agencies with less restrictive methodologies to rate ABCP programme and must keep up with methodology changes
 - Bank cannot use a non-public ratings methodology but may consider more conservative non-publicly available methodology
 - For new or unique transactions, bank may discuss applying IAA with supervisor
- Internal and external auditors, a rating agency, or bank's internal credit review or risk management function must perform regular reviews of internal assessment process; if internal reviews are used, they must be independent of ABCP business line

Basel II – Securitisation Capital Charges

Securitisation – IRB Banks

IAA Conditions (cont'd)

- Bank must track and adjust internal processes over time
- ABCP programme must have credit and investment guidelines (which should cover issues specified by supervisor)
- Credit analysis of seller's risk profile must be performed
- ABCP programme must have minimum asset eligibility criteria that exclude defaulted assets, limit concentrations, limit asset tenor, etc.
- ABCP programme should have collections processes established that consider operational capability and credit quality of servicer, lockbox arrangements, etc.
- All sources of risk must be considered (including credit and dilution)

Basel II – Securitisation Capital Charges

Securitisation – IRB Banks

Supervisory formula approach (¶¶ 623-636)

Capital charge determined under supervisory formula (see following page) on basis of five inputs (with 56 basis point floor):

- Regulatory capital of exposure if held on balance sheet (K_{IRB})
- Degree of credit enhancement supporting exposure (L)
- Exposure's thickness (T)
- Effective number of exposures in the securitised pool (N)
- Pool's exposure-weighted average loss given default (LGD)

Definition of K_{IRB}

- K_{IRB} is ratio (expressed as a decimal) of
 - the IRB capital requirement for the underlying exposures in the pool to
 - the notional amount of such exposures
- For structures involving SPE, all SPE assets must be included in pool, including residual interests (such as a cash collateral account)
- Reserves against assets in pool do not reduce notional amount of the pool in determining K_{IRB} , but can count as credit enhancement

Basel II – Securitisation Capital Charges

Securitisation – IRB Banks

Supervisory Formula (¶¶ 624-626):

- IRB Capital charge = greater of (a) 0.0056 and (b) $(S [L+T] - S [L])$
- $S[L] = L$ if $L \leq K_{IRB}$, else,
- $S[L] = K_{IRB} + K[L] - K[K_{IRB}] + (d \cdot K_{IRB} / \omega) (1 - \exp(-\omega * (K_{IRB} - L) / K_{IRB}))$

Where

- $h = (1 - K_{IRB} / LGD) N$
- $c = K_{IRB} / (1 - h)$
- $v = ((LGD - K_{IRB}) K_{IRB} + 0.25(1 - LGD) K_{IRB}) / N$

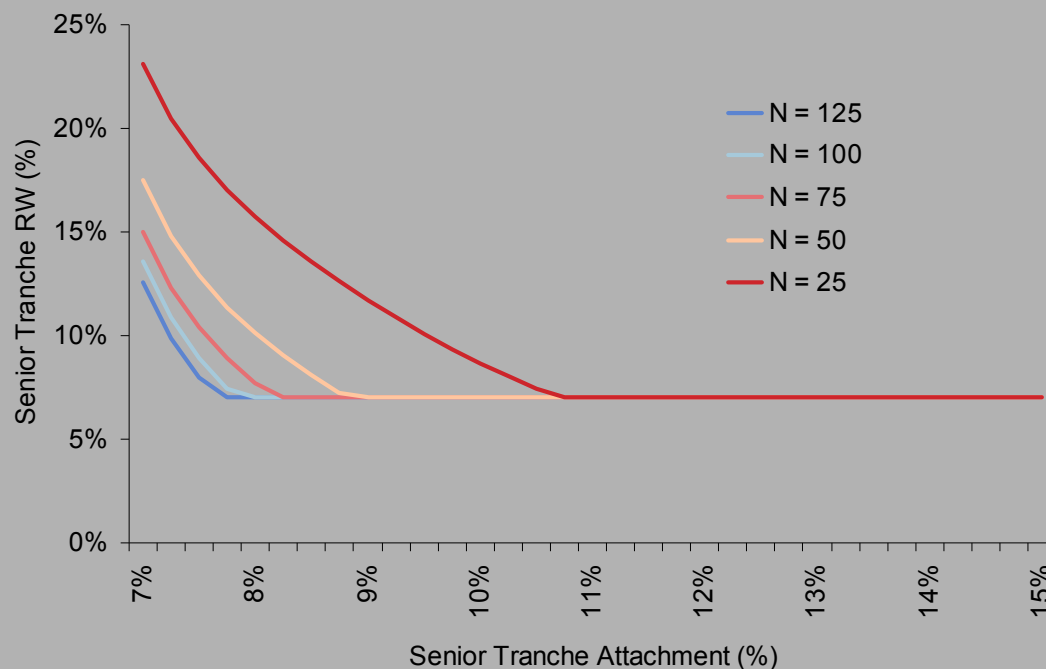
- $f = ((v + K_{IRB}^2) / (1 - h) - c^2) + (((1 - K_{IRB}) K_{IRB} - v) / (1 - h) \tau)$
- $g = ((1 - c)c) / f - 1$
- $a = gc$
- $b = g(1 - c)$
- $d = 1 - (1 - h)(1 - \text{Beta}[K_{IRB}, a, b])$
- $K[L] = (1 - h)((1 - \text{Beta}[L, a, b])L + \text{Beta}[L, a + 1, b]c)$
- Beta [L, a, b] refers to the cumulative beta distribution with
- parameters a and b evaluated at L,
- $\tau = 1000$ and $\omega = 20$

Basel II – Securitisation Capital Charges

Supervisory Formula - Senior Tranche Sensitivity to Granularity (N)

Assumptions:

- LGD = 45%
- $\omega = 20$
- $\Omega = 1000$
- $K_{IRB} = 7\%$



- The Risk Weight of a Senior Tranche is sensitive to the effective number of exposures (N)
- A senior tranche based on a non granular pool requires a significantly higher attachment point to attract the minimum Risk Weight of 7% than a granular pool. The efficiency inflection point is around $N \sim 50$
- The analysis assumes a detachment point of 100%

Basel II – Securitisation Capital Charges

Supervisory Formula - Mezzanine Tranche Sensitivity to Granularity (N)

Assumptions:

- LGD = 45%
- $\omega = 20$
- $\Omega = 1000$
- $K_{IRB} = 7\%$
- Green Colour: RW < 75%
- Orange Colour: RW < 150%
- Red Colour: RW > 150%

		Tranche Thickness								
		1.00%	2.00%	3.00%	4.00%	5.00%	6.00%	7.00%	8.00%	
+ Granularity	N = 200	5.50%	1250.0%	1153.7%	891.7%	703.9%	573.1%	480.1%	412.1%	360.7%
		6.50%	1057.4%	712.5%	521.8%	403.9%	326.2%	272.5%	233.7%	204.5%
		7.50%	367.6%	254.0%	186.0%	143.3%	115.5%	96.4%	82.6%	72.3%
		8.50%	140.5%	95.2%	68.6%	52.5%	42.2%	35.2%	30.1%	26.4%
		9.50%	50.0%	32.7%	23.1%	17.6%	14.1%	11.8%	10.1%	8.8%
		10.50%	15.3%	9.7%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
		11.50%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
- Granularity	N = 25	5.50%	1250.0%	1160.0%	935.2%	784.9%	677.9%	595.8%	530.1%	476.0%
		6.50%	1070.1%	777.8%	629.9%	534.9%	465.0%	410.1%	365.4%	328.4%
		7.50%	485.6%	409.8%	356.5%	313.7%	278.1%	248.0%	222.4%	200.7%
		8.50%	334.1%	292.0%	256.5%	226.2%	200.4%	178.6%	160.0%	144.2%
		9.50%	250.0%	217.7%	190.2%	167.0%	147.5%	131.0%	117.0%	105.3%
		10.50%	185.4%	160.4%	139.4%	121.8%	107.2%	94.9%	84.6%	76.0%
		11.50%	135.4%	116.4%	100.6%	87.6%	76.8%	67.8%	60.3%	54.1%



- The Risk Weight of a Mezzanine Tranche is sensitive to the effective number of exposures (N)
- A Mezzanine Tranche based on a non granular pool (N=25) needs significantly more tranche thickness and subordination compared to tranche based on a granular pool (N=200) to attract a similar Risk Weight
- Irrespective of granularity, a mezzanine tranche with an attachment point below K_{IRB} will not attract the Risk Weight floor of 7%

Basel II – Securitisation Capital Charges

Securitisation – IRB Banks

Liquidity facilities (¶¶ 637-639)

Generally

- “Eligible” liquidity facilities only drawn in event of general market disruption (as defined in ¶ 580) have a 20% CCF
- Otherwise, all liquidity facilities have 100% CCF; 100% CCF permits IRB banks to provide multi-year liquidity or “structured” liquidity without additional capital requirements

Determination of capital

- If facility is externally rated, bank may rely on rating provided it uses 100% CCF
- If facility is unrated, bank may use IAA if qualifying
- If facility is unrated and IAA unavailable, bank must determine K_{IRB} either using “bottom-up” approach or “top-down” approach and apply SF

“Look-through” procedure

- If not practical to use “bottom-up” or “top-down”, bank may, on an exceptional basis and subject to supervisory approval, temporarily apply highest risk weight of pool under standardised approach to individual exposures covered by eligible liquidity facility
- In such a case, the bank must use 50% CCF for commitments of one year or less and 100% for commitments in excess of a year, or 20% CCF for market disruption liquidity

Proposed changes to Accord and to CRD (effective end 2010):

- Existing special 20% CCF for liquidity commitment drawn only in event of general market disruption to be eliminated (so regular 100% CCF will apply)

Basel II – Securitisation Capital Charges

Securitisation – IRB Banks

Top-Down Approach (¶¶ 362-373)

- For use in determining K_{IRB} in SF
- Generally
 - Top-down approach available provided bank's programme complies with criteria for eligible receivables and minimum operational requirements
 - Intended mainly for asset-backed securitisation exposures, but may also be used for appropriate on-balance sheet exposures

Eligible Corporate Receivables (¶¶ 241-243)

- Eligible corporate receivables must satisfy following conditions for application of top-down approach
 - Bank has not directly or indirectly originated receivables (and has purchased them from unrelated third parties)
 - Receivables generated on arms length basis (and not subject to inter-company contra accounts)
 - Purchasing bank must have claim on all proceeds from pool or a ratable interest
 - National supervisors to develop concentration limits
- Recourse to seller does not automatically disqualify transaction as long as cash flows from assets are primary source of repayment (plus certain other requirements)

Basel II – Securitisation Capital Charges

Securitisation – IRB Banks

Rules for purchased corporate receivables (¶¶ 362-372)

Generally

- If Foundation IRB bank cannot determine K_{IRB} using “bottom-up” approach, “top-down” approach for purchased receivables may be used with supervisory permission
- Top-down rules calculate UL capital requirements for both default risk and dilution risk
- Banks should calculate capital based on each exposure type, or the capital for the highest exposure type if the bank cannot separate the assets

Default risk

- Bank will estimate one-year expected loss (EL) of pool on stand-alone basis (without recourse or guarantees to seller or other parties)
- Given EL estimate, risk weight is determined by normal IRB risk-weight formula for corporate exposures, including the SME adjustment if applicable
- Risk-weight function will require bank to decompose EL into its PD and LGD components in reliable manner
- Bank can utilise either external or internal data to decompose EL

Basel II – Securitisation Capital Charges

Securitisation – IRB Banks

Rules for purchased corporate receivables (¶¶ 362-372)

Default risk (cont'd)

- If bank cannot decompose EL, and if exposures are all senior claims to corporate borrowers
 - LGD will be 45%
 - PD will be EL divided by LGD
 - EAD will be outstanding amount of exposure minus capital charge for dilution prior to credit risk mitigation
- If exposures *not* all senior claims to corporate borrowers
 - LGD will be 100%
 - PD and EAD are calculated as above
- EAD for revolving purchase facility will be sum of current outstandings plus 75% of undrawn commitments
- Rules for advanced IRB banks are more flexible and permit internal estimates

Dilution risk

- Unless bank can demonstrate that dilution risk is immaterial, bank must estimate one-year EL for dilution risk, expressed as percentage of pool

Basel II – Securitisation Capital Charges

Securitisation – IRB Banks

Rules for purchased corporate receivables (¶¶ 362-372)

Dilution risk (cont'd)

- Estimate of EL for dilution risk can be at pool level or level of individual receivables at election of bank
- Bank can use either internal or external data for estimate
- Bank must estimate EL for dilution risk on stand-alone basis (without recourse or guarantees to seller or other parties)
- PD must be set at EL, and LGD must be set at 100%
- One-year maturity assumption may be used if bank can demonstrate that dilution can be monitored and managed on that basis

Purchase price discounts, collateral and guarantees

- Purchase price discount may count as first-loss protection under IRB securitisation rules if refundable to seller
- Collateral or guarantees may count as first-loss protection under IRB securitisation rules
- Where same mitigant covers both default and dilution risk, banks must calculate exposure-weighted LGD as defined in paragraph 634

Basel II – Securitisation Capital Charges

Securitisation – IRB Banks

Inferred Ratings (¶¶ 617-618)

- When following conditions are met, bank must attribute inferred rating to unrated exposure:
 - Reference rated exposure must be subordinate in all respects to unrated exposure
 - Credit enhancements must be taken into account in determining subordination (for example, if reference position benefits from third party guarantee but unrated position does not, then latter may not be assigned inferred rating)
 - Maturity of reference position must be equal to or longer than that of unrated position
 - Inferred rating must be updated continuously to reflect changes in external rating of reference position
 - External rating must satisfy general requirements for recognition of external ratings in securitisation transactions

Other proposed changes to CRD (effective end 2010) to improve “originate-to-distribute” model:

- Banks to apply same internal due diligence standards and underwriting approval processes to exposures it creates, whether it holds them or securitises them
- Banks acquiring and securitising exposures must satisfy themselves regarding credit quality of exposures being purchased by carrying out due-diligence process
- Banks to select randomly from eligible pool exposures to be securitised and to be retained

Basel II – Securitisation Capital Charges

CRD re-securitisation proposal

CRD generally follows BIS Committee proposal regarding re-securitisation definitions

BIS Committee re-securitisation proposals

Proposed rules

- Risk weights for “re-securitisation exposures” increased (actual size of increase depends on rating of exposure)
 - approximately 200% higher than comparably rated non-re-securitisation exposures for banks under standardised approach (SA)
 - approximately 300% higher than comparably rated non-re-securitisation exposures for banks subject to internal ratings-based (IRB) approach
- Definition
 - re-securitisation exposure is exposure where one or more underlying exposures is “securitisation exposure” as defined in Basel II Accord
 - securitisation exposure is one where cash flow from underlying pool of exposures is used to service at least two different stratified risk positions or tranches reflecting different degrees of credit risk
- Critically, exposure will be re-securitisation even only one securitisation exposure in underlying pool, irrespective of number and quantity of other exposures
 - Effect on risk-weight of ABCP issued by multi-seller or hybrid conduits unclear (are trade receivables deals “securitisations”?)
- Also, banks subject to additional capital requirements if re-securitisation exposure not most senior
 - definition of senior will prevent a bank from taking mezzanine re-securitisation exposure, creating two tranches (for instance, a junior tranche of 0.1% and a senior tranche of 99.9%) and claiming that senior tranche qualifies for senior column of re-securitisation risk weights

Basel II – Securitisation Capital Charges

BIS Committee re-securitisation proposals (cont'd)

Proposed re-securitisation risk weights – Standardised Banks

Long-term rating	Securitisation exposures	Re-securitisation exposures
AAA to AA-	20	40
A+ to A-	50	100
BBB+ to BBB-	100	225
BB+ to BB-	350	650
B- and below or unrated		Deduction

Short-term rating	Securitisation exposures	Re-securitisation exposures
A-1/P-1	20	40
A-2/P-2	50	100
A-3/P-3	100	225
All other ratings or unrated		Deduction

CRD re-securitisation proposal

CRD proposes 1250% risk weight for all re-securitisation exposures rather than risk weights proposed on left, on grounds that actual complexity of position cannot ever fully be understood

Basel II – Securitisation Capital Charges

BIS Committee re-securitisation proposals (cont'd)

Proposed re-securitisation risk weights – IRB Banks

Long-term rating	Securitisation exposures			Re-securitisation exposures	
	Senior, granular	Non-senior, granular	Non-granular	Senior	Non-senior
AAA	7	12	20	20	30
AA	8	15	25	25	40
A+	10	18	35	35	50
A	12	20	35	40	65
A-	20	35	35	60	100
BBB+	35	50	50	100	150
BBB	60	75	75	150	225
BBB-	100	100	100	200	350
BB+	250	250	250	300	500
BB	425	425	425	500	650
BB-	650	650	650	750	850
Below			Deduction		

Short-term rating	Securitisation exposures			Re-securitisation exposures	
	Senior, granular	Non-senior, granular	Non-granular	Senior	Non-senior
A1	7	12	20	20	30
A2	12	20	35	40	65
A3	60	75	75	150	225
Below			Deduction		

CRD re-securitisation proposal

CRD proposes 1250% risk weight for all re-securitisation exposures rather than risk weights proposed on left, on grounds that actual complexity of position cannot ever fully be understood

Basel II – Securitisation Capital Charges

CRD – New Retention Requirement (CRD ¶ 122a)

Rule

- EU bank acting as investor may not acquire exposure to securitisation position (whether in banking or trading book) unless originator, sponsor or original lender has explicitly stated it will retain, on on-going basis, “material net economic interest” in transaction

Definition of material net economic interest

- One of following
 - Not less than 5% of nominal value of each tranche sold to investors, or
 - In case of revolving securitisations, not less than 5% of nominal value of securitised exposures, or
 - Retention of randomly selected exposures equivalent to not less than 5% of nominal amount of securitised exposures (where exposures could have been securitised) provided that not less than 100 exposures securitised at origination, or
 - Retention of first loss tranche and, if necessary, other tranches having same or more severe risk profile and not maturing earlier than those transferred or sold to investors, in aggregate not less than 5% of nominal value of securitised exposures
- Net economic interest measured at origination and must be maintained on on-going basis (i.e. may not be hedged or sold)
- Net economic interest may not be subject to any credit risk mitigation or short position or any other hedge

Basel II – Securitisation Capital Charges

CRD – New Retention Requirement (cont'd)

Exceptions

- No retention requirement if exposures are claims on, or are claims guaranteed by
 - Central governments, central banks, regional governments, local authorities and public sector entities of EU Member States
 - Institutions to which 50% risk weight or less is assigned under rules for standardised banks
 - Multi-lateral development banks
- No retention requirement for
 - Transactions based on clear, transparent and accessible index, where underlying reference entities in transaction identical to those that make up widely-traded index, or are other tradable securities other than securitisation exposures
 - Syndicated loans, purchased receivables, or credit default swaps where instruments no used to package and/or hedge securitisation otherwise subject to retention requirement

Investor requirements

- Investor bank must demonstrate for each exposure comprehensive and thorough understanding of following items, and have implemented formal policies and procedures appropriate to trading and banking book for analysing:
 - Information regarding material interest retained by originator

Basel II – Securitisation Capital Charges

CRD – New Retention Requirement (cont'd)

Investor requirements (cont'd)

- Information (cont'd):
 - Risk characteristics of securitisation exposure
 - Risk characteristics of underlying exposures
 - Reputation and loss experience of originators and sponsors
 - Statements and disclosures made by originators, sponsors, agents and advisors about their due diligence on underlying exposures and, where relevant, quality of collateral securing such exposures
 - Valuation methodologies supporting underlying exposures
 - All material structural features that can impact performance of investor's exposure
- Ratings confirmations
 - Investor bank must regularly perform own stress tests on exposures appropriate to securitisation positions
 - Investor bank may use rating agency models, but must demonstrate due care prior to investing to validate and understand methodology, model, assumptions and results
 - Investor bank must have thorough understanding of all structural features of securitisation that would materially impact performance of exposure acquired, including waterfall, early amortisation triggers, credit enhancement, liquidity, market value triggers (if any) and transaction-specific definition of default

Basel II – Securitisation Capital Charges

CRD – New Retention Requirement (cont'd)

Investor requirements (cont'd)

- Monitoring
 - Investors monitor exposures on ongoing basis and in timely manner
 - Shall include exposure type, past due rates (30, 60 and 90 days), default rates, prepayment rates, loans in foreclosure, collateral type, frequency distribution of credit scores, industry and geographical diversification, frequency distribution of loan-to-value ratios with band widths to facility sensitivity analysis
 - Where underlying exposures are themselves securitisation positions, investor bank must also obtain and monitor issuer name, credit quality, asset characteristics and performance statistics of assets supporting those underlying securitisation positions
- Remedies
 - Capital surcharge: Where due diligence/monitoring or disclosure requirements not met in any material respect by reason of negligence or omission of investor bank, supervisors must impose additional risk weight of 250% of normal risk weight for exposure, capped at 1250%, to progressively increase with each subsequent infringement
- Review
 - EU Commission must review retention requirement by end-2009 to determine whether need to increase retention and whether methods to determine retention will achieve objective of aligning interests of sponsors/origintors with those of investors

Basel II – Securitisation Capital Charges

CRD – New Retention Requirement (cont'd)

Originator/sponsor requirements

- Credit Analysis
 - Sponsors and originators must apply same underwriting criteria to securitised exposures as to retained exposures
 - If above underwriting requirement not met, originator may not use securitisation risk weights (i.e., must treat as on balance sheet)
- Originator/sponsor obligations
 - Sponsors and originators must disclose to investors level of retention
 - Sponsors and originators must ensure that prospective investors must have ready access to materially relevant data, both at origination and thereafter

Timetable

- New securitisations: from 31 December 2010
- Existing securitisations: from 31 December 2014 where new underlying exposures added or substituted after that date
- Authorities may temporarily suspend application of retention requirements during periods of general market liquidity stress

Basel II – Securitisation Capital Charges

BIS Committee other proposals to modify securitisation rules in Basel II Accord

Use of ratings subject to self-guarantee

- Banks not permitted to recognise internal ratings based on any unfunded guarantees or similar support provided by bank itself
- In addition, bank's capital for such exposures held in the trading book must be at least the amount required under banking book treatment
- Accordingly, if bank ABCP conduit sponsor provides liquidity or credit enhancement, but buys ABCP instead of funding liquidity or CE, it must treat ABCP as unrated
 - Bank may use internal assessments approach (IAA) if authorised
 - Bank may also use supervisory formula approach (SFA) (but SFA does not work well with ABCP conduits for some technical reasons)
 - If unable to determine risk weight using either IAA or SFA, deduction is required

Basel II – Securitisation Capital Charges

BIS Committee other proposals to modify securitisation rules in Basel II Accord

Operating criteria for use of securitisation rules

- Banks must hold and use minimum information regarding securitisation exposures to use securitisation rules to determine risk weights of such exposures
- New requirements apply to both standardised and IRB banks, and are applicable equally to exposures in banking book and trading book
- If bank does not meet new requirements for any exposure, it must be deducted from capital
- In general, information required will permit a bank to achieve comprehensive understanding of risk characteristics of individual securitisation exposures, whether on or off-balance sheet, as well as risk characteristics of pools underlying those exposures (i.e., can determine own internal ratings if needed)
- Information includes:
 - on-going and timely underlying pool performance information such as exposure type; percentage of loans 30, 60 and 90 days past due; default rates; prepayment rates; loans in foreclosure; property type; occupancy; average credit score or other measures of creditworthiness; average loan-to-value ratio; and industry and geographic diversification
 - for re-securitisations, information regarding characteristics and performance of pools underlying securitisation tranches

Basel II – Credit Risk Mitigation

Credit Risk Mitigation (CRM) – In a Nutshell

Basel I		Basel II	
Type of Exposure	Risk Weight*	Standardised banks	IRB banks
OECD sovereign	0%	<p>Simple approach: Risk weight of CRM is substituted for risk weight of unsupported exposure</p> <p>Comprehensive approach: Adjust value of both amount of exposure and value of CRM with either supervisory or own-estimate “haircuts”; adjust for maturity and currency mismatches</p> <p>Recognition of double default: Where protection is eligible within the double default framework banks need not use the substitution approach. Rather an amended formula to take account of credit risk mitigation is employed</p>	<p>Generally: CRM reduces LGD inputs in formulas for determining r risk-weighted assets</p>
OECD bank	20%		
Non-OECD bank**	20%		

* Same as simple approach under Basel II for standardised banks (i.e., substitution)

** Maturity of < one year

Basel II – Credit Risk Mitigation

Credit Risk Mitigation – General principles – Standardised Banks

Types of credit risk mitigation (CRM) (¶¶ 119-144)

- Collateralised transactions: where exposure is hedged in whole or in part by collateral posted by counterparty, risk weight is calculated pursuant to simple or comprehensive approach (see below)
- On-balance sheet netting: where legally enforceable netting arrangements apply, risk weight is calculated on net exposure
- Guarantees and credit derivatives: where guarantee or credit derivative satisfies certain operational criteria and risk weight of guarantor or protection provider is lower than risk weight of exposure, risk weight of guarantor or protection provider applies (substitution)

Maturity mismatch (¶ 143)

- Where the residual maturity of the CRM is less than that of the underlying exposure (maturity mismatch) partial recognition of the CRM is permitted except as provided below
- Maturity mismatch not permitted under simple approach (see below)
- CRM not recognised for capital purposes if maturity mismatch *and* CRM has original maturity of less than one year

Pools of CRM techniques (¶ 206)

- Where bank holds multiple CRM techniques against exposure, bank must subdivide exposure into portions covered by each technique and calculate risk weight separately
- Credit protection provided by same provider with different maturities treated as separate CRM techniques

Basel II – Credit Risk Mitigation

Credit Risk Mitigation – Collateralised transactions– Standardised Banks

Recognition of collateral as CRM (¶¶ 121-138)

- CRM recognised under two approaches:
 - Simple approach: risk weight of the collateral is substituted for risk weight of original exposure
 - Comprehensive approach: fuller offset of collateral against exposure allowed by effectively reducing exposure value by value ascribed to collateral

Simple approach(¶ 129)

- Risk weight of CRM substituted for risk weight of unsupported exposure (¶ 129)
- Subject to floor of 20%, with exceptions, e.g., core market participant floor is 0%, subject to certain conditions (¶ 183)

Comprehensive approach(¶¶ 130-138)

- Standard supervisory haircuts or own-estimate haircuts adjust both amount of exposure and value of collateral received (¶¶ 130-135)
- Further haircuts and adjustments for currency mismatches (¶ 131; ¶ 200)
- Where adjusted exposure amount is greater than adjusted collateral amount (including adjustments for foreign exchange volatility and other risks), risk-weighted assets will equal difference multiplied by risk weight of counterparty ((¶¶ 132; 147-150)
- VaR models permitted as alternative to haircut approach subject to supervisory approval

Basel II – Credit Risk Mitigation

Credit Risk Mitigation – Collateralised transactions– Standardised Banks

Eligible financial collateral – Simple approach(¶ 145)

- Cash and gold
- Rated debt securities (sovereign BB- or higher; other BBB- or higher)
- Senior, unrated debt securities issued by bank if listed on recognised exchange and all other bank issues are BBB- or higher
- Equities (including convertible bonds) included in main index
- UCITS/mutual funds where price quoted daily and UCITS/fund only invests in above instruments

Eligible financial collateral – Comprehensive approach(¶ 146)

- Everything permitted under simple approach
- Equities not included in main index but listed on recognised exchange
- UCITS/mutual funds invested in above equities

Other conditions

- Collateral must not have material positive correlation with underlying exposure (¶ 124)
- Partial collateralisation recognised under both simple and comprehensive approaches
- All items recognised as collateral in banking book can also be recognised in trading book
 - Banking book: may use either simple approach or comprehensive approach, but must apply same approach across entire banking book
 - Trading book: must use comprehensive approach

Basel II – Credit Risk Mitigation

Credit Risk Mitigation – Guarantees and Derivatives – Standardised Banks

Common operational requirements (¶ 189)

- Must constitute direct, explicit, irrevocable (other than due to non-payment of protection fee) and unconditional claim on protection provider
- Bank must fulfil minimum operational conditions relating to risk management of position
- Protection must explicitly reference specific exposures or pool of exposures
- Documentation must be legally binding and may not contain any clause permitting protection provider unilaterally to increase effective cost of cover due to deteriorating credit quality of exposures

Additional operational requirements for guarantees (¶ 190)

- On qualifying default/non-payment by underlying obligor, bank may pursue guarantor for any monies outstanding without first needing to take legal action against obligor
- Guarantor may make one lump sum payment of all monies, or may assume future payment obligations
- Guarantee must cover all types of payments from underlying obligor (for example, principal, interest and fees), except that:
 - Guarantee may cover principal only
 - In which case, uncovered payments treated as unsecured and capital relief only afforded to secured portion

Basel II – Credit Risk Mitigation

Credit Risk Mitigation – Guarantees and Derivatives – Standardised Banks

Additional operational requirements for credit derivatives (¶ 191)

- Only credit default swaps and total return swaps that provide credit protection equivalent to guarantees are eligible for recognition
- Mandatory credit events, not determined solely by protection provider, must include: (a) failure to pay, (b) insolvency and (c) restructuring (recognition up to 60% of underlying if no restructuring)
- Credit derivative may not terminate prior to expiration of any grace period for payment default on underlying
- If asset mismatch, underlying/reference obligation must be *pari passu* and protection must contain cross-default/cross-acceleration (for both cash settlement value determination and credit event determination)
- Cash settlement permitted if robust valuation process
- If protection purchaser's right to transfer underlying subject to obligor consent, may not be unreasonably withheld

Eligible protection providers (¶ 195)

- Sovereigns, public sector entities, and banks and securities firms with lower risk weighting than underlying exposure (not SPEs)
- Protection providers treat position as exposure to underlying, subject to exceptions for first-to-default and second-to-default derivatives (see below)

Basel II – Credit Risk Mitigation

Credit Risk Mitigation – Guarantees and Derivatives – Standardised Banks

Risk Weights (¶ 196)

- Protection portion assigned risk weight of protection provider
- Unprotected portion assigned risk weight of underlying obligor
- Materiality thresholds below which no payment made to be deducted (as equivalent to first loss positions)

Types of cover (¶¶ 198-199)

- Proportional cover: where amount guaranteed is less than amount of exposure and bank and guarantor share losses on proportional basis, capital relief is also proportional (i.e., CRM is recognised for covered portion and uncovered portion is assigned risk weight of underlying obligor)
- Tranched cover: where amount guaranteed is less than amount of exposure and risks of bank and guarantor are of different seniority, CRM is recognised but under rules for securitisation exposures

Counterparty risk charges for OTC derivatives (¶¶ 186-187)

- Counterparty credit risk charge = $[(RC + \text{add-on}) - CA] \times r \times 8\%$ where: RC=replacement cost; add-on= as determined under Basel I; CA=volatility adjusted collateral amount; r=risk weight of counterparty
- Internal models method (also known as the expected positive exposure approach) or a standardised method is also available following the Basel/IOSCO review (Annex 4)

Basel II – Credit Risk Mitigation

Credit Risk Mitigation – Guarantees and Derivatives – Standardised Banks

First to default credit derivatives (¶¶ 207-208)

- Applicable where bank holds credit protection on pool of exposures, and first default triggers credit protection (and terminates contract)
- Bank may recognise capital relief for lowest risk-weight asset in pool if notional amount is less than or equal to credit protection
- Bank providing credit protection determines capital
 - for rated exposures, under the securitisation rules (¶ 567)
 - for unrated exposures, by aggregating risk weights up to 1250% and multiplying against notional amount of protection provided

Second to default credit derivatives (¶¶ 209-210)

- Applicable where bank holds credit protection on pool of exposures, and second default triggers credit protection (and terminates contract)
- Bank may recognise capital relief only if first-default protection acquired or one asset in pool already defaulted
- Bank providing credit protection determines capital
 - for rated exposures, under the securitisation rules (¶ 567)
 - for unrated exposures, by aggregating risk weights (other than for lowest risk weight exposure) up to 1250% and multiplying against notional amount of protection provided

Basel II – Credit Risk Mitigation

Credit Risk Mitigation – Master Netting Agreements – Standardised Banks

Recognition (¶ 188)

- Where:
 - bank has well-founded legal basis for concluding that netting or offsetting is enforceable in each relevant jurisdiction, irrespective of counterparty insolvency or bankruptcy, and
 - bank is able at any time to determine those assets and liabilities subject to netting agreement, bank may use net exposure as basis for capital calculation in accordance with formula under ¶ 147
- In that case, haircuts will be zero except for currency mismatches
- 10-business day holding period applies where daily mark-to-market conducted
- Requirements in ¶ 151, ¶ 169, ¶¶ 202-205 apply

Repo-style transactions under netting agreements (¶¶ 173-174)

- Netting agreement recognised if first condition above satisfied, and netting agreement:
 - provides non-defaulting party right to close out and terminate upon counterparty default
 - provides for netting of gains and losses on transactions so that single net amount is owing
 - Allows for prompt liquidation or set-off of collateral upon counterparty default
- Netting across positions in banking and trading book recognised only if:
 - all transactions marked-to-market daily
 - collateral instruments used recognised as eligible financial collateral in banking book

Basel II – Credit Risk Mitigation

Credit Risk Mitigation – Collateralised transactions– IRB Banks

Basic principles

- IRB banks may use same CRM techniques available to standardised banks (i.e., collateralised transactions, on-balance sheet netting and guarantees and credit derivatives)
- CRM rules for IRB banks very similar to comprehensive approach for standardised banks; simple approach not permitted for IRB banks

Recognition of collateral as CRM – Foundation Treatment (¶¶ 289-299)

- CRM techniques will, when eligible, reduce loss given default (LGD) input into formulas applicable to IRB banks to determine risk weighted exposure value of exposures pursuant to following formula:

$$\text{LGD}^* = \text{LGD} \times (\text{E}^* / \text{E})$$

Where:

LGD* is adjusted loss given default

LGD is that of senior exposure prior to recognition of CRM

E is current value of exposure

E* is exposure value after CRM

- Where LGD* used, exposure at default (EAD) must remain unchanged
- VaR models permitted as alternative to haircut approach subject to supervisory approval

Basel II – Credit Risk Mitigation

Credit Risk Mitigation – Collateralised transactions – IRB Banks

Recognition of collateral as CRM – Advanced Treatment (¶¶ 289-299)

- Subject to satisfaction of minimum requirements (¶¶ 468-473), banks may use own estimates of LGD for corporate, sovereign and bank exposures subject to supervisory approval
- Banks unable to satisfy minimum requirements must use foundation approach

Pools of CRM techniques (¶ 296)

- Where bank holds multiple forms of collateral against exposure, bank must subdivide exposure (after haircut for eligible financial collateral) into portions covered by each type of collateral and calculate risk weight separately
- Where ratio of sum of CRE/RRE collateral and other collateral is below minimum exposure requirement, LGD is equal to unsecured exposure value

Repo style transactions (¶ 293; ¶ 299)

- Banks may elect to ignore master netting arrangements for repo-style transactions
- If master netting is recognised, bank must calculate E* as provided in standardised approach (¶¶ 176-177 or ¶¶ 178-181(i)), and no adjustment to LGD is permitted
- For banks using advanced approach, permitted to use own LGD estimates for E* amount

Basel II – Credit Risk Mitigation

Credit Risk Mitigation – Collateralised transactions – IRB Banks

Eligible financial collateral (¶ 289)

- Everything permitted for Standardised Banks
- Plus: receivables, residential and commercial real estate and other collateral meeting certain minimum requirements (¶¶ 509-524)

Methodology for recognition (¶ 295)

- If minimum over-collateralisation threshold not met, exposure treated as unsecured
- Recognition table:

	Minimum LGD	Required minimum collateralisation level (C*)	Required minimum over-collateralisation level for full recognition (C**)
Financial Collateral	0%	0%	n.a.
Receivables	35%	0%	125%
CRE/RRE	35%	30%	140%
Other	40%	30%	140%

Basel II – Credit Risk Mitigation

Credit Risk Mitigation – Guarantees and Derivatives – IRB Banks

Generally (¶¶ 300-302)

- Approach for IRB banks follows approach for standardised banks with some variations (see below)
- Neither foundation approach nor advanced approach may include effect of double-default (see below)

Recognition under foundation approach (¶ 303)

- For protected portion of exposure
 - risk weight is derived from risk weight function of guarantor and probability of default (PD) appropriate to guarantor (or between guarantor and underlying obligor if bank determines full substitution not warranted)
 - Bank may replace LGD of underlying with LGD of guarantee taking into account seniority and collateral if any
- For unprotected portion, risk weight is that of underlying obligor
- Where partial coverage or currency mismatch exists, bank must split exposure into covered and uncovered amounts, and coverage follows (¶¶ 198-200) depending upon whether protection is tranching or proportional
- Range of eligible guarantors and protection providers generally same as for standardised banks, except that bank may elect to recognise guarantors/protection providers internally rated by IRB bank equivalent to A- or better

Basel II – Credit Risk Mitigation

Credit Risk Mitigation – Guarantees and Derivatives – IRB Banks

Recognition under advanced approach (¶¶ 306-307)

- Bank may reflect CRM effect of guarantee through adjusting either PD or LGD estimates
- Bank relying on own estimates of LGD may adopt foundation approach or make adjustment to own estimate of LGD
- No limits to range of eligible guarantors and protection providers, although certain minimum internal risk and data management criteria must be satisfied

Counterparty risk charges for OTC derivatives (¶ 317)

- Exposure values for SFTs and OTC derivatives that expose bank to counterparty credit risk calculated as per rules in Annex 4 of Accord

Basel II – Credit Risk Mitigation

Credit Risk Mitigation – Double default framework – IRB Banks

Eligible protection for double default framework (¶¶ 307(i))

- Single-name unfunded credit derivatives or single name guarantees
- First to default basket products
- Nth to default basket products
- Other portfolio credit derivatives *not* allowed

Eligible protection providers (¶ 307(ii))

- Protection seller is a bank, investment firm or insurance company that is
 - regulated in a manner broadly equivalent to Basel II
 - had an internal rating with a PD equivalent or lower than that associated with an external A- rating at the time protection was provided and
 - has an internal rating with a PD equivalent to or lower than an external investment grade rating
- Performance of the protection seller cannot be excessively correlated to the obligor
- The underlying obligor cannot be a financial firm
- Operational requirements also apply

Basel II – Credit Risk Mitigation

Credit Risk Mitigation – Double default framework – IRB Banks

Formula for risk-weighted assets under double-default framework (¶ 284(ii))

- The capital requirement for a hedged exposure subject to the double default treatment (K_{dd}) is calculated by multiplying K_0 as defined below by a multiplier depending on the PD of the protection provider (PD_g)

$$K_{dd} = K_0(0.15 + 160 * PD_g)$$

$$K_0 = LGD_g \left\{ \frac{N(G(PD_0) + (\text{Sqrt } Pos) * G(0.999)) - PD_0}{\text{Sqrt}(1 - Pos)} \right\} \frac{1 + (M - 2.5)b}{(1 - 1.5)b}$$

- PD_0 and PD_g are the probabilities of default of the obligor and guarantor respectively
- The correlation Pos is calculated according to the Basel IRB correlation formula with PD equal to PD_0
- LGD_g is the LGD of a comparable direct exposure to the guarantor.
- The maturity adjustment coefficient b is calculated as in the IRB formula

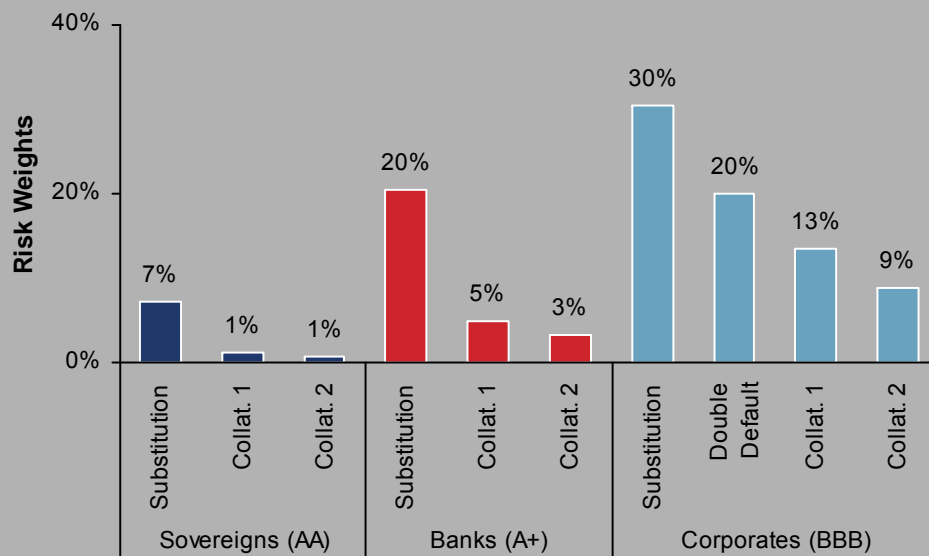
Basel II – Credit Risk Mitigation

Credit Risk Mitigation – Comparison of Techniques under IRB

Assumptions:

- Using inputs of average rating agency values for PD, LGD of 45%, supervisory value for EAD and M of 2.5.
- RW protection provider: 30% (equivalent to a A Rating)

Risk Weights after Credit Risk Mitigation (Sample Bank)



	Collateralised 1	Collateralised 2
Collateralisation	100%	100%
Collateral	A+ to BBB- Non-Sovereigns	AAA to AA- Sovereigns
Residual Maturity	>5 years	>5 years
Haircut	12%	4%

- Credit Risk Mitigation significantly reduces Risk Weights independent of technique applied and exposure class protected
- A high grade sovereign collateral is the most efficient credit risk mitigation tool
- For the Substitution Approach the minimum of the exposure RW and the counterpart RW (30%) is applied
- The double default framework is not applicable if the underlying obligor is a financial firm or a sovereign exposure (¶ 307(ii)).
- For each eligible exposure the bank can decide separately whether to apply the double default framework or the substitution approach

Basel II – Credit Risk Mitigation

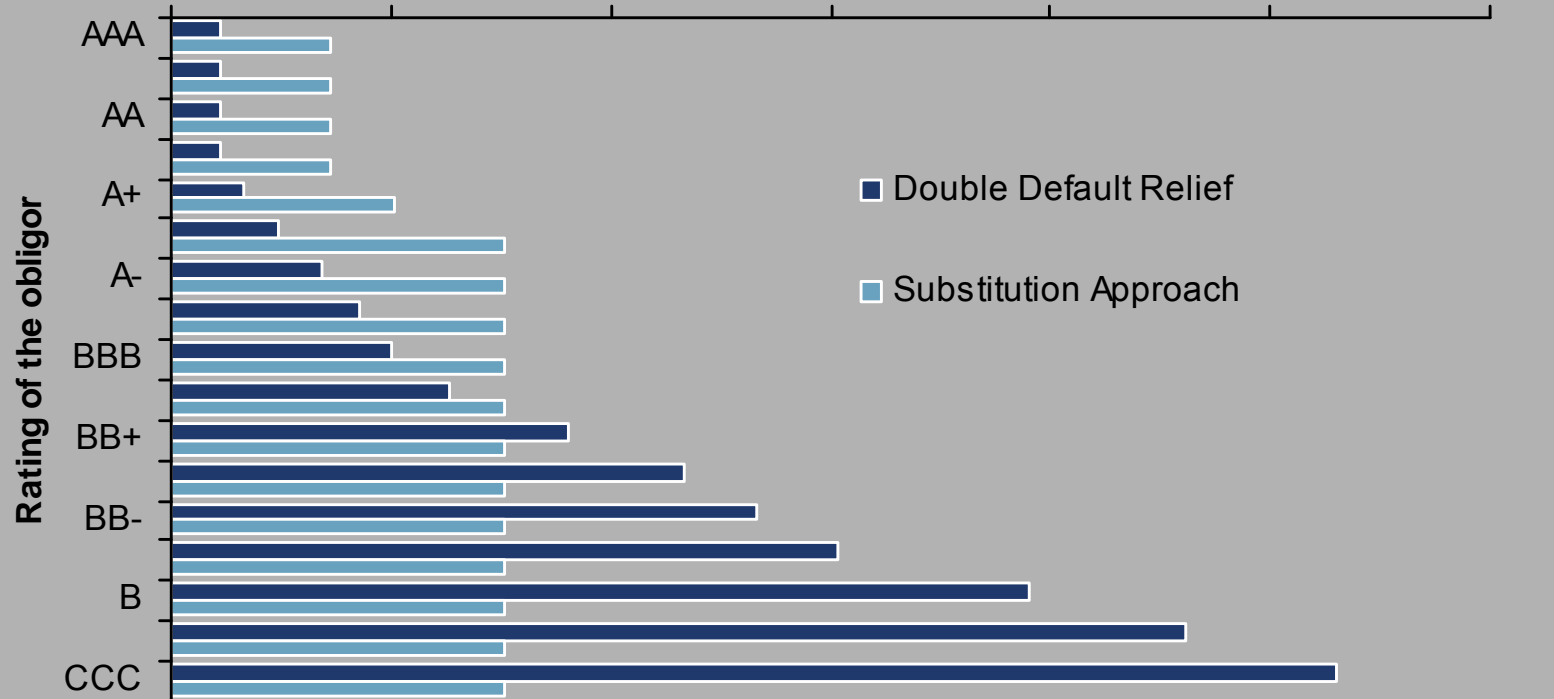
Credit Risk Mitigation – Effect for Different Ratings under IRB

Risk Weights for Corporate Exposure

0% 20% 40% 60% 80% 100% 120%

Assumptions:

- Using inputs of average rating agency values for PD, LGD of 45%, supervisory value for EAD and M of 2.5. $M = 2.5$
- RW protection provider: 30% (equivalent to a A Rating)



Basel II – Trading Book Capital Charges

*Trading Book – In a Nutshell**

Basel I (1996 Market Risk Amendment)

Minimum capital requirement:

- Credit risk requirements under regulatory capital rules, excluding debt and equity securities in trading book and all positions in commodities, but including credit counterparty risk in trading book or banking book, *plus*
- Capital charges for specific risk and general market risk under either standardised measurement method or internal models method (or combination thereof)

* Paragraph references in materials below on trading book are to 1996 Market Risk Amendment (MRA) unless otherwise noted

Basel II (MRA; Accord ¶¶ 684-718)

Essentially unchanged, except for revisions to:

- Definition of trading book: “positions in financial instruments and commodities held either with trading intent or in order to hedge other elements of the trading book”
- Basic requirements for trading book treatment: clearly documented trading strategy; positions actively monitored and managed on trading desk; position limits set and monitored; positions marked to market at least daily; positions reported to senior management
- Capital charges for specific risks in connection with interest rate risk (see below)
- Specific risk capital charge offsets for positions hedged by credit derivatives (see below)
- New counterparty credit risk charges for OTC derivatives, repo-style and other transactions booked in trading book, and adjusted add-on factors for single name credit derivatives (see below)

Basel II – Trading Book Capital Charges

Trading book review allows firms to use three different exposure measurement methods for derivatives and securities financing transactions (SFTs)

Current exposure method

- This method calculates exposure for a derivative as the mark to market of the trade plus a notional based add on to capture potential exposure. This is unchanged from current rules

Standardised method

- This method is not a full modelling approach but is more risk sensitive than the current exposure method. Firms use set parameters to determine the exposure of a derivative and simplifying assumptions are applied but the approach is more risk sensitive than the notional add-on based approach. The exposure amount is the product of
 - The larger of the net current market value or a “supervisory EPE” times
 - A scaling factor

Internal model method

- Subject to regulatory approval firms may use their own estimates of EAD calculated by an internal model. Effective expected positive exposure over a 1 year time horizon can be employed as an exposure measure for OTC derivatives and securities financing transactions

Basel II – Trading Book Capital Charges

Capital Requirement

Definition of Capital (MRA Intro., II.1 – I.2)

- At discretion of national regulators banks may employ third tier of capital for sole purpose of meeting proportion of capital requirements for market risks
- Tier 3 capital limited to 250% of bank's tier 1 capital required to support market risks; tier 2 capital may be substituted for tier 3 capital up to same 250% limit subject to overall limits for tier 2 capital in Basel II Accord
- For subordinated debt to be eligible as tier 3 capital it must be available to absorb losses in event if insolvency and must at minimum:
 - Be unsecured, subordinated and fully paid up
 - Have original maturity of at least two years
 - Not be repayable prior to maturity date unless bank's supervisor agrees
 - Be subject to lock-in clause stipulating that neither interest nor principal may be paid at maturity if payment would cause bank to fall below minimum capital requirements

Calculation of Capital (MRA Intro., II.3 – I.4)

- Bank must first calculate capital for credit risk, and only afterwards calculate market risk requirement

**Capital requirement must be met at close of each business day
(MRA Introduction, I.14)**

Basel II – Trading Book Capital Charges

Standardised Measurement Method – Interest rate risk

Specific risk (MRA Part A.1.I; Accord ¶ 710)

- Specific risk charge:
 - Government:

AAA to AA-	0.00%
A+ to BBB-	0.25% (residual term to final maturity 6 months or less)
	1.00% (residual term to final maturity between 6 and 24 months)
	1.60% (residual term to final maturity exceeding 6 months)
 - Other rating: 8.00%
 - Qualifying: 0.25% (residual term to final maturity 6 months or less)

	1.00% (residual term to final maturity between 6 and 24 months)
	1.60% (residual term to final maturity exceeding 6 months)
 - Other: 8.00%
- Offsetting restricted to matched positions in identical issue (including positions in derivatives); no offsetting if issuer same but not same issue
- “Government” category includes all forms of government paper
- “Qualifying” category includes securities rated investment grade by at least two recognised rating agencies or (subject to supervisory approval) unrated but either of comparable investment quality (standardised banks) or rated equivalent by bank’s internal systems and exchange listed (IRB banks)
- National regulatory may impose higher specific risk charge on “other” category and/or disallow offsetting

Basel II – Trading Book Capital Charges

Standardised Measurement Method – Interest rate risk (cont'd)

General market risk (MRA Part A.1.II)

Generally

- Two methods: maturity method and duration method
- Capital charge is sum of four components: net short or long position; small proportion of matched positions in each time band (vertical disallowance); larger proportion of matched positions across different time bands (horizontal disallowance); net charge for positions in options

Maturity method

- Opposite positions of same amount in same issue may be omitted from framework
- Positions weighted by prescribed price sensitivity factor
- Partial offset (10% capital charge) for weighted longs and shorts in each time band
- Two rounds of horizontal partial offsetting between time bands pursuant to prescribed scale

Duration method

- Calculate price sensitivity on basis of prescribed interest rate change depending on maturity
- Slot resulting sensitivity measures into duration-based ladder within time bands
- Subject long and short positions to 5% vertical disallowance
- Carry forward net positions for horizontal offsetting as above

Basel II – Trading Book Capital Charges

Standardised Measurement Method – Interest rate risk (cont'd)

Interest rate derivatives (MRA Part A.1.III)

- Convert derivatives into positions in relevant underlying subject to specific and general market risk charges as above
- Futures: treated as combination of long and short position in notional government security
- Swaps: treated as two notional positions in government securities with relevant maturities
- No specific risk charge for most interest rate derivatives
- General market risk charge generally same as for cash positions, subject to exemption for very closely matched positions in identical instruments

Counterparty credit risk charge add-on factors for single name credit derivative (Accord ¶ 707)

- If reference asset is qualifying: 5% for protection buyer and 5% for protection seller
- If reference asset is not qualifying: 10% for protection buyer and 10% for protection seller

Basel II – Trading Book Capital Charges

Standardised Measurement Method – Interest rate risk (cont'd)

Offsetting for interest rate derivatives (MRA Part A.1.III)

- Banks may exclude long and short positions (both actual and notional) in identical instruments with exactly the same issuer, coupon, currency and maturity, and may fully offset a matched position in a future or forward and its underlying
- If choice of underlying deliverable instruments (e.g., cheapest-to-deliver), offset only permitted if future or forward move in close alignment
- Offset may be allowed for opposite positions in same category of instruments if same underlying, same nominal value and same currency – e.g., futures (identical products maturing within 7 days of each other); swaps and forward rate agreements (identical reference rate and coupon within 15 basis points); limits on next interest fixing date
- No offsetting for positions in different currencies

But modified by Accord (see next page)

Basel II – Trading Book Capital Charges

Standardised Measurement Method – Interest rate risk (cont'd)

Specific risk capital charges for positions hedged by credit derivatives (Accord ¶¶ 713-718)

- No specific risk capital charge for either side of the position if values of full legs always move in the opposite direction and generally to the same extent (e.g., identical instruments; long cash position hedged by total rate of return swap with exact match between reference obligation and underlying)
- 80% specific offset recognised when value of two legs always moves in opposite direction but not broadly to same extent (e.g., long cash position hedged by credit default swap or credit-linked note with exact match between reference obligation and underlying); to extent that transaction transfers risk, 80% risk offset for side with higher capital charge and zero specific risk requirement on other side
- Partial allowance where value of two legs usually moves in opposite direction (e.g., asset mismatch between reference and underlying)
- Otherwise, specific risk capital charge for both sides of transaction

Basel II – Trading Book Capital Charges

Standardised Measurement Method – Equity position risk

Specific risk and general market risk (MRA Part A.2.I)

- Specific risk charge
 - Defined as bank's gross equity position, calculated on national market-by-market basis
 - 8% unless portfolio both liquidity and well-diversified, in which case 4%
- General market risk charge
 - Defined as difference between sum of longs and sum of shorts, also calculated on national market-by-market basis
 - 8%

Equity derivatives (MRA Part A.2.II)

- Convert derivatives into positions in relevant underlying
- Matched positions may be fully offset
- Index risk: Further capital charge of 2% against net long or short position in index contract comprising diversified portfolio of equities to cover factors such as execution risk
- Arbitrage: Additional 2% capital charge in qualifying futures-related arbitrage strategies may be applied only to one index with opposite position exempt from capital charge

Basel II – Trading Book Capital Charges

Standardised Measurement Method – Foreign exchange risk

Two processes (MRA Part A.3)

- Measure exposure in single currency position
- Measure risks inherent in mix of long and short positions in different currencies

Measuring positions in single currency (MRA Part A.3.I)

- Measured by summing: net spot position (including interest earned but not received, expenses accrued, and expenses not yet accrued but certain); net forward position; guaranties certain to be called and likely to be irrevocable; net future income/expenses not yet accrued but already fully hedged (at bank discretion); net delta-based equivalent of total book of foreign currency options
- Positions taken to hedge capital ratio may be excluded if “structural” (non-dealing) nature, applied consistency, does no more than protect bank capital ratio

Measuring foreign exchange risk (MRA Part A.3.II)

- Two alternatives:
 - “shorthand” method treating all currencies equally – capital charge is 8% times overall net open position determined by converting nominal amount (or net present value) of net position in each currency into reporting currency
 - internal models approach (see below)

Basel II – Trading Book Capital Charges

Standardised Measurement Method – Commodities risk

Generally (MRA Part A.4)

- Defined as physical product which is or can be traded on a secondary market
- More complex and volatile, and less liquid
- Variety of additional risks, including basis risk (risk that relationship between prices of similar commodities varies over time); interest rate risk (risk of cost of carry); forward gap risk (risk that forward price may change other than due to interest rate changes)
- Three options: models (see below); measurement system; simplified approach

Measurement system (maturity ladder) approach (MRA Part A.4.II)

- Express commodity position in standard unit of measurement (barrel, etc.)
- Convert net position at current spot rates into national currency
- Assess capital charge against matched long and short positions in specified time bands and specified spread rates
- Residual net positions in nearer time bands may be carried forward to offset exposures in later time bands, subject to surcharge equal to 0.6% of net position carried forward
- 15% capital charge against resulting long or short position

Simplified approach (MRA Part A.4.III)

- Same capital charge for directional risk as under measurement approach
- Additional capital charge of 3% of gross positions in each commodity for basis risk, interest rate risk and forward gap risk

Basel II – Trading Book Capital Charges

Standardised Measurement Method – Options

Generally (MRA Part A.5)

- Banks with purchased options only permitted to use simplified approach
- Otherwise, use either one of the intermediate approaches (see below) or internal model (see below)

Simplified approach (MRA Part A.5.I)

- Long cash and long put, or short cash and long call: Capital charge is market value of underlying multiplied by sum of specific and general market risk charges for underlying less amount option is in money (if any) bounded by zero
- Long call or long put: Capital charge is lesser of (a) market value of underlying multiplied by sum of specific and general market risk charges for underlying and (b) market value of option

Delta-plus (intermediate) approach (MRA Part A.5.II)

- Options reported as position equal to market value of underlying multiplied by delta
- Delta-weighted capital charge: Determined pursuant to Parts A.1 through A.4 depending on whether option underlying is debt security or interest rate instrument (Part A.1), equity (Part A.2), foreign exchange and gold (Part A.3) or commodities (Part A.4)
- Additional capital charges for gamma (measuring rate of change of delta) and vega (measuring sensitivity of value of option to change in volatility)

Scenario (intermediate) approach (MRA Part A.5.II) (for more sophisticated banks)

- Capital charge determined by calculating changes in option value at various points along “grid” of ranges of changes in option portfolio’s risk factors

Basel II – Trading Book Capital Charges

Internal models method (MRA Part B)

Generally (MRA Part B.1)

- Conditional upon explicit approval of supervisor

Conditions to use of internal model (MRA Parts B.2 – B.7)

- Qualitative standards: independent risk control unit; integration with day-to-day risk management of bank; trading limits; compliance function; stress-testing; back-testing; external validation; independent review
- Quantitative standards: value-at-risk calculated daily (to 99th percentile, one-tailed confidence interval; with instantaneous price shock equivalent to 10 day movement in prices); update data sets no less frequently than every three months; no particular type of model prescribed (but must accurately capture option risks); discretion to recognise empirical correlations within broad risk categories; daily calculation of capital requirement; multiplication factor based on supervisor judgment of quality of bank's risk management system
- Market risk factors: risk measurement system that models yield curve (interest rate risk), foreign exchange exposures (foreign exchange risk), market movements in equities (equity risk), convenience yield (commodities risk)
- Basel II requires that firms using an internal model method for market risk, capture default risks that are incremental to the risk captured in the VaR based calculation
- No specific approach is prescribed but all approaches will be subject to a soundness standard comparable to the IRB credit risk regime adjusted where appropriate to reflect the impact of liquidity, concentrations, hedging and optionality

Basel II – Trading Book Capital Charges

BIS Committee proposes changes to Internal Models Approach in trading book

- Risk measurement
 - Important part of a bank's internal market risk measurement system is specification of market risk factors – i.e., market rates and prices that affect value of bank's positions (existing)
 - Factors deemed relevant for pricing should be included as risk factors in value-at-risk model, or such omission must be justified to supervisor (new)
 - In addition, value-at-risk model must capture nonlinearities beyond those inherent in options, as well as correlation risk and basis risk (new)
 - Supervisor must be satisfied that proxies used show a good track record for actual position held (new)
 - Banks must update data sets no less frequency than every month, and must have in place processes to update data sets more frequently (new and modified)
 - Banks must reassess data sets whenever market prices subject to material change (existing)
 - A multiplication factor set by supervisory authorities on basis of assessment of quality of bank's risk management system, subject to absolute minimum of 3 (existing) plus factor directly related to ex-post performance of model ranging from 0 to 1 (existing)
- Stress testing
 - Two major goals are (a) evaluate capacity of bank's capital to absorb potential large losses, and (b) identify steps bank can take to reduce risk and conserve capital (existing)
 - Scenarios requiring simulation by banks include 1987 equity crash, ERM crises of 1992 and 1993, fall in bond markets in Q1 1994, 1998 Russian financial crisis, 2000 technology bubble burst, 2007/2008 sub-prime turbulence (last event new)

Basel II – Trading Book Capital Charges

BIS Committee proposes changes to Internal Models Approach in trading book (cont'd)

- Specific risk
 - Bank models must capture all material components of price risk (other than event risk captured in incremental risk charge referred to below) (modified)
 - Approach to capture incremental risks must be set at 99.9% confidence interval over one-year capital horizon (new)
 - If bank model does not capture incremental risks, bank must use specific risk capital charges under standardised measurement method (modified)
 - Under any approach used, all cash or synthetic exposures subject to deduction treatment under securitisation rules, and all securitisation exposures constituting unrated liquidity lines or letters of credit, subject to no lesser capital charge than is provided in the securitisation framework (existing)
 - Exception to the above rule may be available to banks acting as dealers in above exposures if can demonstrate, in addition to trading intent, liquid two-way market for securitisation exposures
- Illiquid positions
 - Actual market prices or observable inputs should be used even where market less liquid than volumes, unless those prices are result of forced liquidation or distress sale (new)
 - Banks must establish procedures for calculating valuation adjustments for less liquid positions, in addition to changes in value for financial reporting (new)

Basel II – Trading Book Capital Charges

BIS Committee proposes changes to trading book rules for securitisation exposures

- BIS Committee proposes additional strict requirements for securitisation exposures held in trading book:
 - Bank's capital requirement for securitisation exposures held in trading book may be no less than the amount required under banking book treatment
 - Bank not permitted to use external credit assessments for exposures held in trading book where assessment at least partly based on unfunded support provided by bank
 - Bank must deduct securitisation position in trading book if unable to comply with new operational criteria summarised in slide 86
 - Banks subject to enhanced disclosure requirements for securitisation exposures held in trading book, broadly in line with banking book rules but with separate disclosure tables
 - Banks treated as “sponsors” of off-balance sheet vehicles even if all positions held in trading book
- Enhanced requirements appear aimed at eliminating regulatory “arbitrage” by booking securitisation exposures in trading book rather than banking book

Basel II – Trading Book Capital Charges

EU also proposes changes to CRD trading book rules

- Banking book exposure hedged by internal hedge held in trading book not recognised for CRM unless third party hedge also in place
- Capital requirements for securitisation positions in the trading book based on capital requirements on the banking book
 - For banks without internal models, proposed capital surcharge for securitisation positions in banking book equal to 8% of applicable banking book risk weight lower than 1250% under standardised approach
 - For all other banks, proposed capital surcharge for securitisation positions in banking book equal to 8% of applicable banking book risk weight lower than 1250% under standardised approach or IRB approach, as applicable, but supervisory formula only available with supervisor consent
- Banks subject to enhanced disclosure requirements for securitisation exposures held in trading book, broadly in line with banking book rules but with separate disclosure tables
- Banks required to consider exposures in both banking book and trading book for purposes of managing concentration risks

Chapter 3

Basel II Operational Risk Charges



Basel II – Operational Risk Charges

Operational risk defined as risk of loss from inadequate or failed internal processes, people and systems, or from external events (¶ 644)

Examples of risks covered

- Internal and external fraud
- Legal risks
- Damages to customers
- Losses arising out of labour, health and safety, diversity, personal injury, etc.
- Damage to physical assets
- Business interruption

Examples of risks not covered

- Reputational risk
- Strategic errors

Basel II – Operational Risk Charges

Basic Indicator Approach (¶¶ 649-651)

- 15% of bank's average annual gross income over previous three years

Standardised Approach (¶¶ 652-654, ¶¶ 660-663)

- Capital charge for each of 8 business lines calculated against average annual gross income for business line times:
 - 18% for corporate finance (15% transitional charge within EU if major activity)
 - 18% for trading and sales (15% transitional charge within EU if major activity)
 - 12% for retail banking
 - 15% for commercial banking
 - 18% for payment and settlement
 - 15% for agency services
 - 12% for asset management
 - 12% for retail brokerage

Advanced Measurement Approach (¶¶ 655-659, ¶¶ 664-679)

- Calculated on basis of internal operational risk management system approved by national regulator

Chapter 4

Basel II Supervision (Pillar 2)



Basel II – Supervision

Introduction

- BIS Committee's proposed changes to Basel II Accord includes material changes to bank's internal management systems and operations
- BIS Committee criticised in unambiguous and harsh terms banks' recent internal credit risk management activities, particularly in connection with asset-backed commercial paper (ABCP) conduits, structured investments vehicles (SIVs) and other off-balance sheet vehicles sponsored by them
 - "The financial market crisis that began in mid-2007 has resulted in substantial financial losses. It is evident that many financial institutions did not fully understand the risks associated with the businesses and structured credit products in which they were involved. Moreover, it is now apparent these banks did not adhere to the fundamental tenets of sound financial judgment and prudent risk management."
 - ". . . While financial institutions have faced difficulties over the years for a multitude of reasons, the major causes of serious banking problems continue to be lax credit standards for borrowers and counterparties, poor portfolio risk management, and a lack of attention to changes in economic or other circumstances that can lead to a deterioration in the credit standing of a bank's counterparties. This experience is common in both G10 and non-G10 countries."
 - "Rapid growth in . . . any business activity can present banks with significant risk management challenges. This was the case with the expanded use of the "originate-to-distribute" business model, off-balance sheet vehicles, liquidity facilities and credit derivatives."

Basel II – Supervision

Introduction (cont'd)

- BIS Committee criticism (cont'd)
 - “Banks’ use of securitisation has grown dramatically over the last several years. It has been used as an alternative source of funding and as a mechanism to transfer risk to investors. While the risks associated with securitisation are not new to banks, the recent financial turmoil highlighted unexpected aspects of credit risk, concentration risk, market risk, liquidity risk, legal risk and reputational risk, which banks failed to adequately address. For instance, a number of banks that were not contractually obligated to support sponsored securitisation structures were unwilling to allow those structures to fail due to concerns about reputational risk and future access to capital markets. The support of these structures exposed the banks to additional and unexpected credit, market and liquidity risk as they brought assets onto their balance sheets, which put significant pressure on their financial profile and capital ratios.”
 - “. . . Weaknesses in banks’ risk management of securitisation and off-balance sheet exposures resulted in large unexpected losses during the financial crisis. To help mitigate these risks, a bank’s on- and off-balance sheet securitisation activities should be included in its risk management disciplines, such as product approval, risk concentration limits, and estimates of market, credit and operational risk . . .”
 - “. . . Banks either underestimated or did not anticipate that a market-wide disruption could prevent them from securitising warehoused or pipeline exposures and did not anticipate the effect this could have on liquidity, earnings and capital adequacy.”
- BIS Committee proposed changes to Basel II Accord to address these “notable weaknesses”, described in following pages, with objective of producing “thorough and comprehensive” internal capital adequacy assessment process

Basel II – Supervision

Reputational risk and implicit support

- BIS Committee concluded that banks' reputational risks influenced them to provide financial support exceeding their contractual obligations (implicit support), including:
 - banks' sponsorship of ABCP conduits and SIVs
 - banks' sale of assets to investment trusts
 - banks' sponsorship of collective investment activities such as money market funds, in-house hedge funds and real estate investment trusts (REITs)
 - redemption of hybrid/subordinated debt forming a component of regulatory capital
- BIS Committee encouraged banks' senior management to include in stress tests estimated amount of implicit support or losses under adverse market conditions or to avoid reputational damages and to maintain market confidence
- However, noting that implicit support is “a more subtle form of exposure”, BIS Committee recognised that risks arising from the provision of implicit support would never be fully recognised in Basel II Accord's Pillar 1 capital requirements
 - Unclear whether BIS Committee will be satisfied that reputational risks and implicit support can be handled solely through supervisory mechanisms, or whether incremental capital charge to address reputational risks is required
 - Adjustment to capital charge for operating risks is one possible such adjustment

Basel II – Supervision

Securitisation and off-balance sheet structures

- Banks should conduct analyses, at acquisition and on an on-going basis, of underlying risks when investing in structured products
- External ratings are useful starting point for credit analysis, but are no substitute for full and proper understanding
- Banks' own assessments of risk must be based on comprehensive understanding of structure of the securitisation transactions
- When assessing securitisation exposures, banks must fully understand credit quality and risk characteristics of underlying exposures in structured credit transactions, including any risk concentrations
- Banks should consider, and where appropriate mark-to-market, warehoused positions as well as those in pipeline, regardless of probability of securitising such exposures
- Banks should as part of stress-testing consider scenarios which may prevent securitising assets, identify potential effect of such exposures on liquidity, earnings and capital adequacy, and develop prudent contingency plans specifying how to respond to funding, capital and other pressures that arise when access to securitisation markets reduced

Basel II – Supervision

Liquidity risk management

- BIS Committee issued “Principles for Sound Liquidity Risk Management and Supervision” in September 2008, and made following additional observations and recommendations:
 - Key element in management of liquidity risk is strong governance by board
 - Banks should appropriately price the costs, benefits and risks of liquidity into internal pricing, performance measurement and new product approval process of all significant business activities
 - Banks must be able to identify, measure and control liquidity risks, especially with regard to complex products and contingent commitments, both contractual and non-contractual, and under both normal circumstances and stressed conditions

Risk concentrations

- BIS Committee identified unmanaged risk concentrations as an important source of “major problems” for banks
- BIS Committee noted that rapid growth of banks’ various capital markets activities increased possibility that different areas of bank are exposed to common risks, and emphasised that bank’s risk management processes and MIS must permit senior management of a bank to identify and aggregate similar risk exposures across the firm, including across legal entities, asset types (e.g., loans, derivatives and structured products), risk areas (e.g., the trading book) and geographic regions.

Basel II – Supervision

Valuation practices

- BIS Committee issued consultative document “Supervisory guidance for assessing banks’ financial instrument fair value practices” in November 2008, which applies to all positions measured at fair value at all times, not only during times of stress
- BIS Committee made several additional observations, including:
 - Characteristics of complex structured products, including securitisation transactions, make valuation inherently difficult due in part to absence of active and liquid markets, complexity and uniqueness of cash waterfalls, and links between valuations and underlying risk factors
 - Banks must establish clear and robust governance structures for production, assignment and verification of financial instrument valuations
 - Policies and procedures should address the range of acceptable practices for initial pricing, marking-to-market/marketing-to-model, valuation adjustments and periodic independent revaluation
 - Banks must consider all relevant market and other information likely to have material effect on instrument’s fair value
 - Banks should maximise use of observable inputs, where relevant, and minimise use of unobservable inputs when estimating fair value

Basel II – Supervision

Sound stress testing practices

- BIS Committee issued the consultative document “Principles for sound stress testing practices and supervision” in January 2009, and made following additional observations and recommendations:
 - Stress tests should be used to provide independent risk perspective complimentary to other risk management tools such as Value at Risk (VaR) and economic capital
 - Stress testing is particularly important in management of warehouse and pipeline risk, reputational risks and risk of providing implicit support, and commitments to off-balance sheet vehicles and third-party firms related to structured credit securities (including the possibility that assets will need to be taken on balance sheet for reputational reasons)

Chapter 5

Basel II Disclosure (Pillar 3)



Basel II – Disclosure (Securitisation)

Objective (¶¶ 809-810)

- Impose market discipline on banks by requiring disclosure of key information relevant to banks' risks and capital

Existing Qualitative Disclosures for Securitisation (¶ 820, Table 9)

- Bank's objectives for, and roles played by it in, securitisation process
- Bank's accounting objectives for securitisation
 - Whether treated as sales or financings
 - Whether bank recognises gain on sale
 - Key assumptions used by bank for valuing retained interests
 - Bank's treatment of synthetic securitisations
- Names of rating agencies used by bank and types of exposures rated by each agency

Existing Quantitative Disclosures for Securitisation (¶ 820, Table 9)

- Total outstanding exposures securitised by bank subject to securitisation framework
- For exposures securitised by bank subject to framework (in each case broken down by exposure type):
 - Amount of impaired/past due assets
 - Losses recognised by bank during current period

Basel II – Disclosure (Securitisation)

Existing Quantitative Disclosures for Securitisation (cont'd)

- Aggregate amount of securitisation exposures retained or purchased by bank, broken down by exposure type
- Aggregate amount of securitisation exposures retained or purchased by bank, broken down by “reasonable number” of risk bands (deducted exposures disclosed separately)
- Aggregate amount of securitised revolving exposures segregated by originator’s interest and investors’ interest
- Summary of current year’s securitisation activity, including aggregate amount of exposures securitised and gain or loss on sale, by asset type

BIS Committee proposals for additional disclosure

- General rule: each bank, in addition to specific required disclosures under the Accord, must disclose its “actual risk profile” to market participants and ensure that information disclosed will be adequate to fulfil that objective
- Specific rules: materially increased disclosures relating to securitisation activities, re-securitisation exposures, sponsored off-balance sheet vehicles, warehousing and pipeline risks and valuation methodologies, among others (see below)

Basel II – Disclosure (Securitisation)

Proposed disclosures regarding off-balance sheet vehicles (Revised Table 9)

- Regarding off-balance sheet vehicles, proposed changes to Table 9 will obligate banks to:
 - disclose nature of risks other than credit risk inherent in securitised assets
 - disclose all securitisation exposures to SPVs in which bank is involved as a “sponsor”, regardless of whether exposure is in banking or trading book, on- or off-balance sheet, and whether or not exposure is subject to securitisation framework
 - disclose and differentiate between exposures resulting from activities where bank is sponsor, and exposures resulting from all other bank securitisation activities subject to securitisation framework (i.e., making mandatory previously voluntary disclosure regarding sponsorship in Footnote 225 to Table 9)
 - disclose on- and off-balance sheet securitisation exposures separately
 - disclose entities managed by bank that invest in securitisation exposures bank has securitised or in vehicles that the bank sponsors
 - disclose securitisation exposures (including underlying exposures originally on bank's balance sheet and underlying exposures acquired by the bank from third-party entities) in which originating bank does not retain securitisation exposure shown separately
- “Exposures securitised by bank” defined to include underlying exposures originally on bank’s balance sheet or acquired from third-party entities and placed into securitisation programmes for which bank acts as sponsor

Basel II – Disclosure (Securitisation)

Proposed disclosures regarding re-securitisation exposures

- Regarding re-securitisation exposures, proposed changes to Table 9 will obligate banks to:
 - describe processes in place to monitor changes in credit and market risks of securitisation exposures
 - describe bank's policy governing use of hedging and financial guarantee insurance to mitigate risks retained through securitisation and re-securitisation exposures
 - describe type of risks assumed and retained with re-securitisation activities (Table 9a)
 - disclose key assumptions for valuing positions retained or purchased and their changes, where relevant, for re-securitisation exposures from securitisation exposures (Footnote 227)
 - disclose aggregate amount of re-securitisation exposures retained or purchased (Table 9m and 9v)

Proposed disclosures regarding pipeline and warehousing risks

- Regarding pipeline and warehousing risks, proposed changes to Table 9 will obligate banks to:
 - disclose accounting policies for pipeline and warehousing activities to help markets find assets to be securitised in future, including information about how such assets are measured (Table 9c); and
 - disclose aggregate amount of assets awaiting securitisation broken down by exposure type (Table 9j and 9r)

Basel II – Disclosure (Securitisation)

Proposed disclosures regarding IAA and ABCP liquidity facilities

- Regarding IAA and ABCP liquidity facilities, proposed changes to Table 9 will obligate banks to:
 - clarify which regulatory capital approach applies to which type of securitisation exposures (Table 9a)
 - require qualitative information on bank's IAA process such as structure, purposes and control mechanisms in line with general disclosure requirements for IRB system (Table 9e)
 - require breakdown of some quantitative information for banking book for each regulatory capital approach, such as IAA and SFA (Table 9k)
 - require breakdown of some quantitative information for trading book for each regulatory capital approach under Securitisation framework as well as for market risk approach (Table 9t)

Proposed disclosures regarding valuation with regard to securitisation exposures

- Regarding valuation relating to securitisation exposures, proposed changes to Table 9 will introduce qualitative disclosure requirements regarding how banks value securitisation positions by adding key assumptions for valuing positions (Table 9c)

Other proposed disclosures

- Regarding other risks relating to securitisation exposures, proposed changes to Table 9 will add qualitative requirement to explain significant changes to any of the quantitative information since last reporting period (Table 9f)

CRD – Disclosure (Securitisation)

Proposed general rule

- Each bank must disclose information necessary for educated reader to understand bank's risk profile

Proposed specific disclosures regarding securitisation positions

- Objectives: description of credit institution's objectives in relation to securitisation activity
- Risks: nature of other risks including liquidity risk inherent in securitised assets and type of risks in terms of seniority of underlying securitisation positions and in terms of assets underlying these latter securitisation positions assumed and retained with re-securitisation activity
- Roles: different roles played by credit institution in securitisation process and indication of extent of credit institution's involvement in each of them
- Monitoring: description of processes to monitor changes in credit and market risk of securitisation exposures including how behaviour of underlying assets impacts securitisation exposures and description of how processes differ for re-securitisation exposures
- description of credit institution's policy governing hedging and unfunded protection to mitigate risks of retained securitisation and re-securitisation exposures, including identification of material hedge counterparties by relevant type of risk exposure
- approaches to calculating risk weighted exposure amounts that credit institution follows for securitisation activities, including types of securitisation exposures to which each approach applies
- names of rating agencies used for securitisations and types of exposure for which each agency is used

CRD – Disclosure (Securitisation)

Proposed specific disclosures regarding securitisation positions (cont'd)

- types of special purpose entities that credit institution, as sponsor, uses to securitise third-party exposures, including whether and in what form and to what extent credit institution has exposure to SPEs (both on- or off-balance sheet)
- summary of credit institution's accounting policies for securitisation activities, including:
 - whether transactions are treated as sales or financings
 - recognition of gains on sales
 - methods and key assumptions and inputs for valuing securitisation positions retained interests
 - treatment of synthetic securitisations if not covered by other accounting policies
 - how assets awaiting securitisation are valued and whether recorded in credit institution's non-trading book or the trading book
 - policies for recognising liabilities on balance sheet for arrangements that could require credit institution to provide financial support for securitised assets
- description of IAA, including structure of internal assessment process and relation between internal assessment and external ratings, use of internal assessment other than for IAA capital purposes, control mechanisms for the internal assessment process including discussion of independence, accountability, and internal assessment process review, and exposure types to which IAA is applied and the stress factors used for determining credit enhancement levels by exposure type

CRD – Disclosure (Securitisation)

Proposed specific disclosures regarding securitisation positions (cont'd)

- Sample additional quantitative information:

Non-Trading Book	Trading Book
Total outstanding exposures securitised by credit institution, broken down by exposure type, separately for traditional and synthetic securitisations and securitisations for which credit institution acts only as sponsor	Total outstanding exposures securitised by credit institution, broken down by exposure type, separately for traditional and synthetic securitisations and securitisations for which credit institution acts only as sponsor
For securitised exposures, amount of impaired / past due assets securitised broken down by exposure type and losses recognised during current period broken down by exposure type	Total outstanding exposures securitised subject to capital requirement for market risk, broken down into traditional/synthetic and by exposure type
Aggregate amount of on-balance sheet securitisation exposures retained or purchased, and off-balance sheet securitisation exposures, each broken down by exposure type	Aggregate amount of on-balance sheet securitisation exposures retained or purchased, and off-balance sheet securitisation exposures, each broken down by exposure type

CRD – Disclosure (Securitisation)

Proposed specific disclosures regarding securitisation positions (cont'd)

- Sample additional quantitative information (cont'd):

Non-Trading Book	Trading Book
Aggregate amount of assets awaiting securitisation broken down by exposure type	Aggregate amount of assets awaiting securitisation broken down by exposure type
<p>For securitisations subject to early amortisation treatment, by exposure type:</p> <ul style="list-style-type: none"> aggregate drawn exposures attributed to seller's and investors' interests; aggregate capital requirements incurred by credit institution against retained (i.e. the seller's) shares of drawn balances and undrawn lines; and aggregate capital requirements incurred by credit institution against investor's shares of drawn balances and undrawn lines. 	<p>For securitisations subject to early amortisation treatment, by exposure type:</p> <ul style="list-style-type: none"> aggregate drawn exposures attributed to seller's and investors' interests; aggregate capital requirements incurred by credit institution against retained (i.e. the seller's) shares of drawn balances and undrawn lines; and aggregate capital requirements incurred by credit institution against investor's shares of drawn balances and undrawn lines.

CRD – Disclosure (Securitisation)

Proposed specific disclosures regarding securitisation positions (cont'd)

- Sample additional quantitative information (cont'd):

Non-Trading Book	Trading Book
Exposures deducted from Tier 1 capital, credit enhancing I/Os deducted from total capital, and other exposures deducted from total capital, separately by exposure type of underlying asset	Exposures deducted from Tier 1 capital, credit enhancing I/Os deducted from total capital, and other exposures deducted from total capital, separately by exposure type
Aggregate amount of re-securitisation exposures retained or purchased broken down according to exposure before and after hedging/insurance, and exposure to financial guarantors broken down according to guarantor credit worthiness categories or guarantor name	Aggregate amount of re-securitisation exposures retained or purchased broken down according to exposure before and after hedging/insurance, and exposure to financial guarantors broken down according to guarantor credit worthiness categories or guarantor name
Summary of current year's securitisation activity, including amount of exposures securitised (by exposure type), and recognised gain or loss on sale by asset type	Summary of current year's securitisation activity, including amount of exposures securitised (by exposure type), and recognised gain or loss on sale by asset type

Annex A

Hybrid Capital Instruments under CRD



CRD – Hybrid Capital Instruments

Instruments referred to in new Article 63a to be permitted as hybrid capital

New Article 63a:

- permits qualifying hybrid instruments to be dated – minimum 30 year maturity
- no redemption prior to five years following date of issue
 - Undated instruments: “moderate incentives” for redemption only permitted after 10 years following date of issue
 - Dated instruments: no incentives for redemption other than maturity date
- redemption only with the consent of the competent authorities, which may be granted provided the solvency or financial condition of the credit institution is not affected
- competent authorities shall require suspension of redemption if would cause non-compliance with capital requirements or for other financial or solvency reasons
- competent authorities may grant permission for an early redemption of dated or undated instruments if change in national tax treatment or regulatory classification of such instruments not foreseen on date of issue
- instrument shall allow credit institution to cancel payment of interest and dividends for unlimited period on a non-cumulative basis; cancellation shall be required if the credit institution does not comply with capital requirements
- instrument must provide that principal and unpaid interest and dividends absorb losses and do not hinder recapitalisation of credit institution
- in event of bankruptcy or liquidation of credit institution, instrument must rank after items referred to in Article 63(2)

CRD – Hybrid Capital Instruments (cont'd)

Article 66 revised to change percentage limits on certain instruments

- Rule 1
 - Total of credit institution's non-core capital (i.e., revaluation reserves; value adjustments; other Article 63 items; commitments of cooperative society members; fixed-term preference shares) must not exceed
 - amount of core capital (i.e., paid up capital and share premium, excluding cumulative preference shares; certain reserves and profits and losses; general risk funds; Article 63a items) *minus*
 - capital deductions (i.e., own shares; intangible assets; current year material losses; holdings in other credit institutions amounting to more than 10% of their capital; subordinated claims and instruments of credit institutions in which it has 10%+ holdings; certain other holdings in and subordinated claims and instruments of other credit institutions; participations in (and certain other instruments of) insurance companies, reinsurance companies and insurance holding companies; for IRB banks, negative amounts and expected loss amounts; exposure amount of securitisations with 1250% risk weight)
- Rule 2
 - Total of credit institution's commitments of cooperative society members and fixed-term preference shares must not exceed
 - 50% of the amount of core capital (as above) *minus*
 - capital deductions (as above)

CRD – Hybrid Capital Instruments (cont'd)

Percentage limits (cont'd)

- Rule 3
 - Total of a credit institution's Article 63a items that are convertible into shares during “emergency situations” at a pre-determined rate must not exceed
 - 50% of the amount of its core capital (as above) *minus*
 - capital deductions (as above)
- Rule 4
 - Total of all other Article 63a items of credit institution must not exceed
 - 35% of the amount of core capital (as above) *minus*
 - capital deductions (as above)
- Rule 5
 - Total of credit institution's dated instruments and all instruments with incentive to redeem must not exceed
 - 15% of the amount of core capital (as above) *minus*
 - capital deductions (as above)
- Emergency situations: Competent authorities may permit credit institutions to exceed Article 66 limits during “emergency situations” (changed from “exceptional circumstances”)

Annex B

Large Exposures under CRD



CRD – Large Exposures

Approved changes

- Adds “interconnected” “funding or repayment difficulties” to definition of “group of connected clients”
- Excludes from “exposures”
 - Exposures in connection with foreign exchange in ordinary course of settlement during two working days following payment
 - Exposures in connection with purchase or sale of securities in ordinary course of settlement during five working days following earlier of payment or delivery of securities
 - Exposures in connection with money transmission activities not lasting longer than following business day
 - Intra-day exposures in connection with execution of payment services, clearing and settlement, corresponding banking
- Requires banks to “look through” to underlying assets (where aware of them) to determine existence of “group of connected clients” in case of underlying
 - securitisation exposures
 - exposures to collective investment undertakings (CIUs)
 - “other items”
- Requires IRB banks to notify competent authorities of 20 largest exposures on consolidated basis, excluding exposures exempted from 25% limit, irrespective of whether “large exposures

CRD – Large Exposures

Approved changes (cont'd)

- Requires all banks to report “large exposures” (i.e., exposure equal to or exceeding 10% of own funds) to competent authorities, including exposures exempted from 25% limit
 - Identify each client or group of clients to which bank has large exposure
 - Identify exposure values prior to taking credit risk mitigation (CRM) into account
 - Identify CRM methods, where used
 - Identify exposure values after taking CRM into account
- Permits Member States to require credit institutions to analyse exposures to collateral issuers and providers of unfunded credit protection for possible concentrations
- Retains prohibition that exposures may not exceed 25% of own funds (but clarifies that such determination is after taking CRM into account)
 - where client is regulated financial institution, exposure after CRM may not exceed 25% of own funds or EUR 150 million, whichever is higher
 - however, if EUR 150 million is higher than 25% of own funds, value of exposure after taking CRM into account must not exceed “reasonable” limit in terms of credit institution’s own funds and may in no event exceed 100% of own funds
 - Member States may reduce EUR 150 limit

CRD – Large Exposures (cont'd)

Approved changes (cont'd)

- Exposures excluded from 25% limit (exclusions mandatory; Member State discretion eliminated):
 - Asset items constituting claims on, or claims carrying the explicit guarantee of, or attributable to, central governments, central banks, international organisations, multilateral development banks or regional or local authorities which, unsecured, have 0% risk weighting
 - Asset items constituting claims on, or claims guaranteed by, Member State regional governments and local authorities with 0% risk weight under standardised rules
 - Exposures to parent undertakings and affiliates complying with Article 80(7)
 - Exposures to members of same institutional protection scheme complying with Article 80(8)
 - Asset items or other exposures secured by cash deposited with, or by certificates of deposit issued by and deposited with, the lending credit institution or with a credit institution that is the parent undertaking or a subsidiary of the lending credit institution
 - Exposures arising from undrawn credit facilities classified as low risk off-balance sheet items in Annex II, if agreement that drawing will not exceed large exposure limit
- Exposures no longer automatically excluded from 25% limit (Member States must do so individually)
 - Covered bonds falling within terms of Annex VI, Part 1, paragraphs 68 to 70
 - Claims on regional and local authorities with 20% risk weight under standardised rules
 - Claims on parent and subsidiary undertakings if group regulated on consolidated basis
 - Claims on regional or central credit institutions in network providing cash-clearing operations within network

CRD – Large Exposures (cont'd)

Approved changes (cont'd)

- Exposures no longer automatically excluded from 25% limit (cont'd):
 - Claims on credit institutions provided under some form of government oversight
 - Exposures to other institutions not constituting other institutions' own funds due not later than following business day and not denominated in major trading currency
 - Claims on central banks in form of required minimum reserves held at, and in currency of, central banks
 - Claims on governments in form of statutory liquidity requirements held in government securities
 - 50% of medium/low risk off-balance sheet documentary credits and undrawn credit facilities referred to in Annex II; 80% of guarantees (other than loan guarantees) that have legal basis given as part of mutual guarantee schemes
 - Certain guarantees issued in anticipation of mortgage registrations
- Eliminates 20% limit on exposures to parent and subsidiary undertakings of credit institution
- Eliminates aggregate 800% limit on all large exposures
- Exposure value
 - Eliminates recognition of receivables, leased assets and other physical assets from CRM recognition other than for exposures to sovereigns and financial institutions
 - clarifies CRM rules for determining net exposures (without intending any substantive changes)

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