Finalising Basel II: The Way from the Third Consultative Document to Basel II Implementation

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Structure of the New Capital Accord

measurement of relative riskiness of all on and off balance sheet items of a bank (**Risk Weights RW**)

8% capital

credit risk | market risk | operational risk

supervisory risk weights

customer type, external rating, collateral

Revised Standardised Approach

bank internal measurement of credit risk

PD, LGD, EAD, M; supervisory risk weight functions

IRB Approach

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supervisory review process (qualitative banking supervision)

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transparency / market discipline

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Foundation and Advanced IRB Approach

foundation IRB approach

- bank internal rating systems
- bank internal PD estimates
- supervisory LGD and EAD estimates

→ limited recognition of collateral

- no explicit maturity estimates

→ implicit average maturity assumption of 2.5 years

Advanced IRB approach

- bank internal rating systems
- bank internal PD estimates
- bank internal LGD and EAD estimates

→ unlimited collateral recognition

- explicit maturity adjustments

→ SME exemption up to 500 Mio. € sales as well as balance sheet

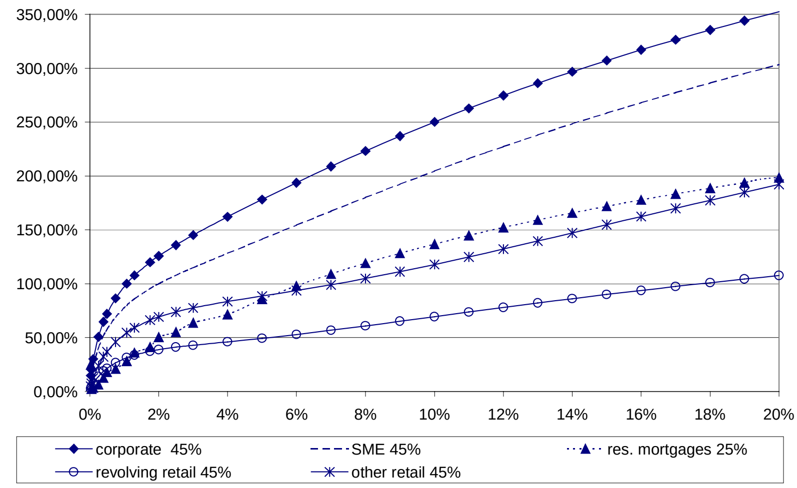
Minimum Requirements for the IRB Approaches

- Rating system design (# grades, assessment horizon ...)
- Rating process (completeness, independence, ...)
- Corporate governance (board approval, regular audits, ...)
- Bank internal use of rating results (risk management, limit systems, pricing, provisioning ...)

→ **Rating systems designed for supervisory purposes only are not acceptable !**

- Risk quantification (time horizon, data, default definition ...)
- Validation of rating systems and risk quantification
- Collateral management
- Transparency

IRB Risk Weight Functions



Risk Weight Functions
Generic Form

Generic form of the Basel II risk weight functions

$$RW(PD,LGD) = 12.5 \cdot LGD \cdot N\left(\frac{G(PD) + \sqrt{R(PD)} \cdot G(0.999)}{\sqrt{1 - R(PD)}}\right)$$

N: **Standard Normal Distribution**

G: **Inverse of the Standard Normal Function (N^{-1})**

R: **Asset Correlation**

specification of the different risk weight functions via R

Risk Weight Functions
Specific Forms (I)

corporates, banks and sovereigns

$$R(PD) = 0.12 \cdot \frac{1 - e^{-k \cdot PD}}{1 - e^{-k}} + 0.24 \cdot \left(1 - \frac{1 - e^{-k \cdot PD}}{1 - e^{-k}}\right) \quad \text{and } k = 50$$

small and medium sized enterprises (Sales S < 50 Mio. €)

$$R(PD) = R_{corporates}(PD) - 0{,}04 \cdot (1 - (S - 5)/45)$$

residential mortgages

$$R(PD) = 0.15$$

other retail

$$R(PD) = 0.02 \cdot \frac{1 - e^{-k \cdot PD}}{1 - e^{-k}} + 0.17 \cdot \left(1 - \frac{1 - e^{-k \cdot PD}}{1 - e^{-k}}\right) \quad \text{and } k = 35$$

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Risk Weight Functions Specific Forms (II)

qualifying revolving retail loans

<u>additional term in risk weight function:</u> recognition of future margin income (FMI) as EL coverage

$$RW(PD,LGD) = 12.5 \cdot LGD \cdot N\left(\frac{G(PD) + \sqrt{R(PD)} \cdot G(0.999)}{\sqrt{1-R(PD)}}\right)$$
$$- 12.5 \cdot 0.75 \cdot PD \cdot LGD$$

$$R(PD) = 0.02 \cdot \frac{1-e^{-k \cdot PD}}{1-e^{-k}} + 0.11 \cdot \left(1 - \frac{1-e^{-k \cdot PD}}{1-e^{-k}}\right) \quad \text{and } k = 50$$

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Quantitative Impact Study 3: International Results

	% increase of risk weighted assets compared to Basel I: G10		
	RSA	FIRB	AIRB
large international banks			
mean	11%	3%	-2%
small and regional banks			
mean	3%	-19%	
Max	81%	41 %	
Min	-23	-58%	

Calibration confirmed

- overall capital level approximately constant
- moderate incentives for advanced approaches

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Quantitative Impact Study 3: National Results

	% increase of risk weighted assets compared to Basel I: Germany		
	RSA	FIRB	AIRB
large intl' banks			
mean	12 %	16 %	5 %
Small and regional banks			
mean	0 %	-10 %	-8 %
Max	28 %	41 %	34 %
Min	-17 %	-47 %	-44 %

Capital requirements slightly over current ratios

Wide spread of results

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Quantitative Impact Study 3: Main Risk Drivers

downside potential for capital:

- overall portfolio creditworthiness
- SME term in corporate risk weight function
- low retail risk weights (both RSA and IRB)

upside potential for capital:

- overall portfolio creditworthiness
- capital requirements for short term committed credit lines
- rating dependent bank an sovereign risk weights
- potentially: definition of default
  - although consistent with supervisory LGD values
- operational risk charge

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Procyclicality: The Issue

credit risk is cyclical

↓

capital requirements become more cyclical the more risk sensitive the chosen framework

Issues:

How much procyclicality can banks bear ?

judgement needed

What is the real impact on the economy, if any ?

empirical studies needed (over and above theoretical considerations)

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Procyclicality: Potential Solutions

Through-the-cycle ratings / stress based ratings ⇨ Banks do apply point-in-time ratings

Varying confidence levels over business cycle ⇨ Which benchmark ?

Bank internal credit risk models ⇨ Cyclical as well

... ...

Supervisors take procyclicality seriously and will continue to monitor the Basel II effects. However, ideal solution still to be found.

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Schedule

- 29 April 2003: Publication of the 3. Consultative Paper
- 31 July 2003: End of Consultation Period
  - comment summaries / issues identification
  - necessary adjustments to current proposal
- End of 2003: Finalisation of the New Capital Accord
  - approval by central bank governors / heads of banking supervision
- 2004 / 2005: additional Quantitative Impact Studies ???
- 2006 parallel run of Basel I / Basel II (only for IRB banks)
- 2007: implementation on the New Capital Accord

parallel:

- EU consultation / EU capital directive (presumably 2005)

US Implementation

Basel II mandatory for 10 large international banks only

Another ≈ 10 banks expected to move voluntarily to Basel II

Implementation of AIRB and AMA (op risk) only

National rules proposal to be issued early July (3m consultation)

Issues

Schedule of Accord finalisation

Cross border banking supervision

- US subsidiaries in Germany
- German subsidiaries in US

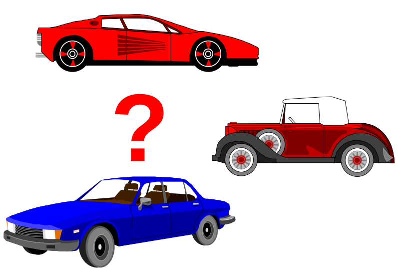
German Implementation

- All banks under Basel II framework
  (as desired by German banking industry)
- Exercise of national discretion
  - partial use of IRB and advanced op. risk approaches
  - retail definition
  - consequences for other regulatory frameworks
  - ...
- Schedule for national discretion
  - start now (3rd quarter)
  - close consultation and discussion with industry (“working groups”)
  - national rules proposal expected to start early / mid 2004
  - final legal rules setting only after EU directive

Conclusion: A New Approach for Banks and Supervisors

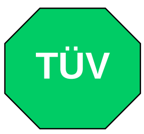
Banks (IRB)

- few regulatory definitions / fixed risk weights
- strong focus on bank internal processes
- “one size no longer fits all”



Supervisors

- minimum requirements on bank internal processes
- focus on adequate / consistent implementation of internally developed systems and processes
- from qualitative to quantitative, from off-site to on-site supervision



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Thank you for your attention !

Questions ?

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