Basel II: Reducing the Capital Charge in Banks with Insurance

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Basel II will in many ways change the way that capital allocation in credit institutions and investment firms is calculated. In the proposed regulatory framework, due to come into effect end 2006, fundamental changes have been made to how the capital charge for credit risk is decided. In addition, a new capital requirement to cover operational risk has been introduced. The term operational risk cover faults, mistakes, crime or accidents and include legal risk, basically insurable risks. Recent empirical evidence shows that the overall capital charge is adversely affected by this inclusion. The negative effect may however be significantly reduced by way of insurance. This paper reviews the changes in regulatory framework and give recommendations to how firms affected by Basel II should best prepare and manage these changes.

The 1988 Basel Capital Accord

The current capital adequacy rules are based on the Basel Capital Accord finalized in 1988 (the 1988-Accord). In this agreement, looking to secure stability in the international financial system, the G-10 countries adopted a common regulation for setting up reserves in banks covering unexpected losses in the industry. The current capital adequacy rules states that a bank should hold a capital of at least 8% of their total risk exposure to cover such unexpected losses.

Changes in the financial markets, the development of new instruments, together with experiences from financial crises, came to increase the awareness of the need for a new and updated version of the capital adequacy regulations. In December 1998, 10 years after the 1988-Accord, the Basel Committee commenced their work to provide a new and improved regulatory framework[1].

The New Basel Capital Accord (Basel II)

On 29 April 2003 the Basel Committee on Banking Supervision (the Basel Committee) issued its third and final consultative paper (CP3) for a New Basel Capital Accord (popularly known as Basel II). Basel II is to be implemented by the end of 2006 for internationally active Credit institutions and Investment firms[2]. For the European Union this will mean that the framework need to be incorpo-

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rated in European legislation first on a EU level and later on a national level.

Overall, the new Basel II regulations differ from the 1988-Accord in a number of respects. Specifically, in the calculation of risk weights, two major changes can be found: 1) change in methodology to calculate the risk weight for credit risk, and 2) the addition of a specific capital requirement for operational risks.

In what follows, the impact of the addition of the specific capital requirement for operational risk shall be studied. It will be shown that existing and new insurance policies will reduce the overall requirement for capital allocation to cover operational risk. We shall for now not consider the changes to methodology to calculate the risk weight for credit risk. How insurance techniques can be used to mitigate adverse changes to risk weights for credit risk will be covered in a later paper.

Operational risks

The Basel Committee defines operational risk as "the risk of direct of indirect loss resulting from inadequate or failed internal processes, people and systems or from external events, including legal risk"[3]. Operational risk would therefore, as defined, include risks from fault, mistake, crime or accidents where the bank is hit directly or indirectly, basically risks that can be insured.

The reasoning behind the inclusion of a specific capital charge for operational risk is that it has been shown by empirical evidence that banks allocate capital to cover for operational risk. The Basel Committee has judged it necessary to provide an explicit regulation that governs the level of capital covering such risks. Based on empirical evidence the Basel Committee has estimated that approximately 20% of the total capital requirement should be attributed to operational risks.[4]

In order to estimate the operational risk in a bank, the Basel Committee has provided three alternative methods; the Basic Indicator approach; the Standardised approach; and the Internal Measurement approach. The first two are less complex standardised measures, whereas the third more advanced Internal Measurement approach will require companies to comply with comprehensive demands from regulatory authorities e.g. show and explain the method leading up to the capital requirement.

The Basic Indicator approach

The Basic Indicator approach is as the term suggests a simple model where capital requirement is based on one single measure. The banks must hold a capital equal to 15% of average annual gross income from the immediately preceding three-year period[5].

The Standardised approach

Under the Standardised approach to deciding capital allocation for operational risk, the bank is divided into eight operational areas. The bank must hold, depending on area, 12% to 18% of average annual gross income from the immediately preceding three-year period.

The Internal Measurement approach

The Internal Measurement approach is an advanced method, where the bank may use own systems to measure the existence of operational risk and to allocate capital accordingly.

Operational risk and capital charge

In a recently published 3rd Quantitative Impact Study (QIS 3), the Basel Committee presents a survey of 350 banks under regulation, estimating how the new regulations would affect the capital requirements in these companies. As can be seen in Table 1 the overall change in capital charge fundamentally depends on what approach for evaluating credit risk is used, with an adverse change for the Standardised approach and a neutral or posi-

tive change under the two IRB approaches[6]. This is on the aggregated level, where the separate changes to risk weight for credit risk and operational risk has not been shown. We are here especially interested in learning how the introduction of a specific requirement for capital allocation to cover operational risk affects the overall change to risk weights.

Table 2 takes the average changes from Table 1, and split them per main contributors to change. We clearly see that the overall capital charge is very much dependent upon the operational risk element, that increases the overall charge for all groups, under all approaches.

Reducing capital charge by way of insurance

In Basel II there is however a possibility to reduce the capital charge to operational risk by way of Insurance. In CP3 the maximum allowed amount of insurance is suggested to be 20% and where the insurance protection is required to come from a third party insurer (thus reducing the possibility to include captive insurance companies as direct insurers).

In a joint letter dated 31 July 2003 to the Basel Committee, strong criticism to both the 20% cap of insurance and the requirement of third party insurers has been voiced by two leading international branch organisations[10]. They argue that a cap reduces the incentives to insure against operational risks, and note that it may in fact give banks incentives to self-insure certain specific operational risks, where by treating the risk as an expected loss (which may in principal be excluded from the capital requirement).

However, even with a maximum amount allowed amount of 20% insurance shows to provide a good mitigation effect against an increase in capital charge due from operational risk. Table 3 illustrates how the change in capital charge due from operational risk is affected by introducing the maximum allowed amount of insurance (20%).

As can be seen in the above, the overall capital charge in Basel II will change from the

Table 1. Estimated change in capital requirements in the New Accord [7]

	Standardised			*IRB Foundation*			*IRB Advanced*		
Entity	*Average*	*Max*	*Min*	*Average*	*Max*	*Min*	*Average*	*Max*	*Min*
G10 Group 1[8]	11%	84%	-15%	3%	55%	-32%	-2%	46%	-36%
G10 Group 2[9]	3%	81%	-23%	-19%	41%	-58%			

Source: Quantitative Impact Study – Overview of Global Results

Table 2. G10 countries – Main contributors to change, without insurance

	Standardised		*Foundation IRB*		*Advanced IRB*	
Change	*Group 1*	*Group 2*	*Group 1*	*Group 2*	*Group 1*	*Group 2*
Overall credit risk	0	-11%	-7%	-27%	-13%	n/a
Operational risk	10%	15%	10%	7%	11%	n/a
Overall charge	11%	3%	3%	-19%	-2%	n/a

Source: Quantitative Impact Study – Overview of Global Results

Table 3. G10 countries – Main contributors to change, with insurance

	Standardised		*Foundation IRB*		*Advanced IRB*	
Change	*Group 1*	*Group 2*	*Group 1*	*Group 2*	*Group 1*	*Group 2*
Overall credit risk	0	-11%	-7%	-27%	-13%	n/a
Operational risk	8%	12%	8%	6%	9%	n/a
Overall charge	8%	1%	1%	-21%	-4%	n/a
Reduction with insurance	-27%	-67%	-67%	-10%	-50%	n/a

1988-Accord, a change ranging from an 11% increase to a 21% decrease. With insurance these changes will reduce significantly, at its best a 67% reduction to the change in capital charge (going from 3% to 1%).

Conclusion

Remember the definition of operational risk set out by the Basel Committee that would include risks from fault, mistake, crime or accidents where the bank is hit directly or indirectly. These risks would under normal situations already be addressed in insurance programmes in a bank or other regulated company.

For companies where insurance exist, a review of insurance programmes in the light of Basel II should be launched. The question of self-insurance (and excluding certain risk from the capital requirement by expected loss treatment) should be considered. Also, the insurance policies in captive insurance companies must be reviewed. If the Basel Committee does not change the third party insurer requirement, insurances of operational risk written by direct insurance captives, would not be allowed as a risk-mitigating factor. Furthermore, a cost benefit study should be considered where it is possible to adjust programmes in order to maximise the use of insurance to reduce the capital charge for operational risk.

Any regulated companies currently uninsured for risks mentioned above, should look at insuring these risks to take advantage of the mitigating effects of insurance.

Following from what is stated above, it must be considered important to review insurance policies and programs. Using insurance, banks will be able to optimize their overall capital charge. This will be a paramount element in upholding a banks competitiveness and international success.

Notes

1 The Basel Committee for Banking Supervision includes: Belgium, France, Italy, Japan, Canada, Luxembourg, the Netherlands, Switzerland, Sweden, Great Britain, Germany and the United States.

2 The meaning of ‘Credit institutions’ is defined in Article 1(5) of Directive 2000/12/EC, and the meaning of ‘Investment firms’ is defined in Article 1(2) of Directive 92/22/EEC – with some specific exclusions.

3 Overview of the New Basel Capital Accord, §607, page 120.

4 Critics to the inclusion of operational risk argue that this risk is idiosyncratic in nature, and could as such never pose a systematic threat to the system. They say that these risks are issues of management and that eventual bad management should be eliminated from the systems by other means, e.g. bankruptcy or take-overs.

5 The New Basel Capital Accord, Appendix IV, page 216.

6 The difference between Group 1 and Group 2 is mainly contributable to a larger proportion of retail exposure in the smaller Group 2 banks that, under Basel II, work favorably to reduce the capital requirement.

7 It should be noted that the data in QIS 3 show rather large standard deviation. The impact from the new regulation vary a lot from bank to bank as can be seen in the big gap between the minimums and maximums.

8 Generally large, diversified and internationally active banks with capital in excess of EUR 3 billion.

9 Generally smaller in size and activity than Group 1 banks. In many cases more specialized.

10 International Swaps and Derivatives Association (ISDA) and The Bond Market Association (TBMA).