

**OPERATIONAL RISK**

**The Viability of an Insurance/Capital Market Solution**

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**1. INTRODUCTION**

1.1 In June 1999, the Basle Committee on Banking Supervision published its consultation paper "A New Capital Adequacy Framework" in which it proposed to introduce a new capital adequacy framework to replace the 1998 Accord and which included proposals to extend the Accord's application to capture "other risks" (including operational risk") e.g. other than market risk and credit risk. In effect, it proposed to introduce a separate capital charge which would reward/penalise banks according to their ability to manage and control that form of risk and which could be based on the scale of an institution's business activities, such as revenues, costs or total assets or on a valuation of its business. While the new framework is based on three pillars namely, minimum capital requirements, the supervisory review and market discipline, it is particularly "green" in addressing operational risk insofar as it puts forward no detailed proposals on how operational risk might be defined or measured nor does it put forward any suggested ratios for capital charges.

In November 1999, the European Commission published its own consultation document on a new capital adequacy framework for banks and investment firms entitled "A Review of Regulatory Capital Requirements for EU Credit Institutions and Investment Firms" in which it also proposed a separate capital charge for operational risk.

1.2 The principle objective of both proposals is to create a level playing field in the application of capital rules through:

- (a) the adoption of a more focused, comprehensive and risk-based approach to credit risk;  
and
- (b) the introduction of a capital charge for "other risks", including operational risk.

So far as (b) is concerned, the preferred approach is to apply capital charges to reward/penalise banks/investment firms based on the scale of an institution's business activities, such as revenues, costs or total assets, or on a general valuation of its business. In other respects, the paper is very "green" and puts forward no detailed proposals on how operational risk might be defined or measured.

1.3 The FOA believes that if there has to be a capital requirement for operational risk, it should be in Pillar 2 rather than in Pillar 1. This could allow local regulators to reduce the capital charge for those firms who they felt had risk mitigation procedures which were above average. If the

charge was in Pillar 2, then it is possible that a multiplier would be involved. The reduction in the capital charge could take the form of a reduction in the multiplier required. This would be a conceptually similar approach to that used currently in other capital calculations.

1.4 Both papers, to varying degrees, recognised that:

- operational risk is extraordinarily difficult to define, measure and manage and is therefore volatile and ever-changing, depending, as it does, on external, random and unpredictable events;
- the regulatory approach should allow for recently introduced (and yet to be introduced) improvements in risk management and control and be capable of reflecting accurately the “other risks” to which institutions are exposed;
- the capital which supervisors require institutions to hold should be appropriate to the risks to which they are exposed;
- the new framework must be sufficiently flexible to take account of new developments in the financial sector for risk mitigation and control;
- any new regulatory requirements must encourage/incentivise institutions to develop and use better risk management techniques in monitoring and managing risk.

1.5 All firms manage operational risk to a greater or lesser degree - some through line and product managers, others through “operational risk management” departments, which complement other functions such as internal audit. Moreover, many firms have taken active steps to seek to mitigate their operational risk. However, the approach to operational risk and the degree of coverage may vary as between regulator and regulated insofar as the former have stated that the purpose of regulation is not to prevent institutions from failing, whereas the commercial focus of the latter will make that a prime objective in managing operational risk. This presupposes that the regulatory authorities recognise that it would be inappropriate to try to cover all areas of operational risk i.e. certain forms of business risk may properly be left to be taken by shareholders/investors.

- 1.6 The volatility and unpredictability of operational risk (as to both occurrence and scale) means that it cannot be measured accurately through the use of historical data and mathematical modelling. This, in turn, makes it difficult to apply capital ratios accurately, bearing in mind not only the nature of the risk, but also the fact that they will be applied to a very diverse group of financial institutions of different size and carrying on very different activities.
- 1.7 **In the case of unexpected loss, where an institution is able to effectively transfer the risk of that loss to a credible independent third party, it is not unreasonable to expect the relevant regulatory authority to take account of the reduced impact on that institution of that unexpected potential loss by reducing the amount of regulatory capital required of that institution by a commensurate amount.** To ignore that transfer/mitigation of risk would run directly contrary to the importance placed by both the Basel Committee and the European Commission on ensuring that capital ratios designed to cover operational risk should be an accurate measure of the risk to the institution and its customers and meet the other objectives set out in para 1.4.
- 1.8 The concept of insurance or contingent capital is a well-known and accepted methodology for addressing all areas of business and personal risk. For example, many regulators, particularly of the professions, require some form of operational risk insurance (generally professional indemnity), which acts as a capital substitute; individuals are required by law to have a capital substitute to cover the risk of driving a car, i.e. minimum third party insurance cover; employers are also required to have employers' liability cover so that employees can be sure that there is sufficient capital available to recompense an employee in the event of a successful liability claim against an employer.
- 1.9 In view of the foregoing and the need for the regulatory approach to be able to incentivise firms to manage and control operational risk, the FOA carried out an informal survey of leading insurance companies, banks and regulatory authorities to ascertain the extent to which an insurance/capital market solution might provide a viable solution, not as a methodology for replacing capital ratios, but rather as a means of mitigating the impact/size of those ratios. The survey did not address the extent to which any one product may be commercially attractive or the commercial "add-ons" by which any one product may prove more sellable than another product. The three areas reviewed by the survey and addressed in this paper are:
- (a) a summary of key regulatory concerns that arise in connection with the use of insurance/capital market products and how those concerns are being or might be addressed (Section 2);
  - (b) the advantages of using insurance to transfer risk (Section 3);

- (c) the kinds of solutions that are available or could be developed to address operational risk (Section 4).

In compiling this survey, the FOA consulted informally with some 12 core institutions and insurance providers as well as 2 regulatory organisations.

The intention behind the survey and this paper, which is based on the findings of that survey, is to establish a case for further work to develop the argument that insurance is a viable risk mitigant in the area of operational risk (see 5.1).

## 2. REGULATORY CONCERNS

- 2.1 Regulatory authorities have expressed a number of concerns over the feasibility/acceptability of insurance as a substitute for capital ratios or even as a risk mitigant capable of reducing those capital ratios. These concerns are set out and addressed in the succeeding paragraphs of this section of the paper. **As a general point, it should be borne in mind that insurance is recognised as a valid risk mitigant across a wide range of business areas and activities (see para 1.8), and there are a number of policies already in place which cover an increasing number of areas of operational risk.**

### (a) *Speed of payment of claim*

- 2.2 The speed at which an insurance provider pays out under a policy covering operational risk is a key regulatory concern and, even though, in many cases, there may not be an immediate liquidity risk (e.g. in the case of larger firms) a significant operational loss will still have an adverse impact on all institutions, particularly on small or medium-size firms. Immediate payment of a claim addresses the need for continued and immediate liquidity and, at the same time, allows regulators, the institution concerned and other interested parties to review the circumstances and address any adverse implications in a measured and orderly fashion.
- 2.3 *Insurers are increasingly recognising the value of policies including a clear stipulation that payment of 100% of the claim (or a significant percentage, e.g. 80% of the claim) will be made within 7 days of the claim notification, so that, irrespective of whether or not the claim is ultimately upheld, the immediate liquidity needs of a firm experiencing a large operational loss will have been satisfied.*

**(b) Evidence of Loss**

- 2.4 Evidence of the cause and size of a loss which leads to a claim could present difficulties in view of the breadth of risk to be covered under a policy for operational risk. Although the size may be identifiable from the management accounts, reliance on such evidence would conflict with the need for speed in meeting claims as most companies prepare management accounts monthly.
- 2.5 *One means of addressing this problem would be to rely on a certificate from an insured's Head of Internal Audit (or some other pre-agreed mechanism). Such evidence is usually readily available and is already in use and accepted by the insurance industry. It is conceptually similar to the current Internal Audit sign-off required by some regulators (including the FSA) for the inclusion of intra-year profits in regulatory capital.*

**(c) Conditionality**

- 2.6 Traditionally - and understandably - regulatory authorities have always been concerned by the fact that claims are usually met only when an insurer is satisfied that they meet all the conditions of determining whether or not a claim is valid.
- 2.7 *The use of a deductible excess, together with the fact that some insurers will opt for an event-based claim mechanism would simplify the whole question of proof of claim (e.g. the Tokyo Disney earthquake bond pays automatically on the occurrence of an earthquake of an agreed magnitude within an agreed radius). Such an approach will also ease questions over the boundaries between operational risk, market risk and credit risk. In addition, it is understood that it would be possible to develop the equivalent of a "guaranteed" means of cover for operational risk.*
- 2.8 *Additionally, concerns over conditionality can be addressed through the use of a draw-down policy (i.e. the right to access capital on an as-needed basis on payment of an option premium).*

**(d) Moral Hazard**

- 2.9 Although it can be argued that operational risk insurance could create a moral hazard by encouraging poor management, there are a number of factors that resist that argument, namely:
- *in recent years, shareholders have been more willing to call management to account and seek satisfaction as to incorporation and implementation of good and effective controls;*
  - *professional indemnity insurance has not itself led to any lowering of standards;*

- *key principles in good management (as set out, for example, in the UK's Cadbury and Turnbull reports) focus on the importance of controls with directors' sign-off now a standard part of the process;*
- *deductibles on operational risk insurance are likely to be high enough to keep management incentivised to maintain good controls;*
- *despite the existence of insurance, companies nearly always continue to practice good controls over any area of risk management which is covered by insurance e.g. buildings' contents are often protected by security personnel, sign-in procedures and swipe cards;*
- *the cover will be conditional on meeting internal control standards.*

**(e) *Withdrawal of Cover***

- 2.10 In order to be considered as part of a firm's risk mitigation framework, operational risk insurance will need to be multi-year, cancellable only on a long period of notice and then only under very limited circumstances.
- 2.11 *Nowadays, the insurance industry regularly writes 3-5 year insurance and one of the more recent features of multi-year insurance is that the policy can only be cancelled in very limited circumstances.*

**(f) *Risk Transfer within a Group***

- 2.12 The use of one affiliate within a diversified group to write operational risk insurance for banks or investment firms within the same group will raise regulatory questions as to the effectiveness of the risk transfer; the potential for contagion; and the true value of premiums.
- 2.13 *In such circumstances, the pricing of the insurance would have to be transparent i.e. clearly at market; claims would have to be equally transparent in their administration e.g. the use of a third party claims agent; minimum ratings may be required if the investment firm sought to use the operational risk insurance as part of its risk mitigation framework for regulatory purposes. The integrity of the insurer's balance sheet should not be a concern as it will be independently audited. Moreover, the insurer would itself be the subject of regulation and capital requirements imposed by its own insurance regulatory authority.*

**(g) *Complexity of Operational risk***

- 2.14 Concern was expressed about the ability of underwriters to measure operational risk exposure correctly given the complexity of the subject and the scarcity of underwriters who are able to

assess properly the risks of and to banks and investment firms. This is a reflection of the fact that there is currently no methodology for measuring operational risk and the underwriters' assessment is likely to depend as much on their perception of the firm and its management as on their review of the firm's controls. This problem applies, however, in equal measure in trying to determine whether or not the level of capital ratios designed to cover operational risk are themselves a proper reflection of real risk.

- 2.15 *One mechanism might be internal audit reports, although there was concern that their use by underwriters' may compromise the independence of internal audit and cause practical problems due to the length of the internal audit review cycle. Underwriters could, however, review the internal audit approach and annual plan i.e. the umbrella controls used by firms. The sharing with underwriters of the points made by internal audit and management's tracking and clearing of those points would need care unless the points were carefully classified by severity of risk.*
- 2.16 *A minimum number of controls on which management could be required to comment could be helpful to underwriters, although to cover a single business line would probably require in excess of 100 controls. Validation of the management's comments might not be necessary if the comments formed part of the conditions under which the insurance policy was written.*
- 2.17 *Additionally, underwriters could be assisted by a review of the firm's operational risk policies and procedures (e.g. through the use of a controls questionnaire) and/or by utilising, where possible, external auditors' existing knowledge of the firm. This may also assist in removing claims payment avoidance through a non-disclosure of material facts clause (see para 2.6).*

#### **(h) Creditworthiness of Insurance Company**

- 2.18 When a firm buys an insurance policy, it is exchanging specified risks for a credit risk on the insurance company. This risk can be diversified by using mechanisms such as Lloyds, where the broker will transfer and spread the risk directly with and across a number of underwriters. Additionally, it is possible for a major re-insurer to stand behind a small insurance company, such as a "captive", and raise thereby substantially the credit rating of the smaller entity. A number of factors combine to give an insurer's strength and these are all taken into account in the rating. The regulator could rely on an external insurance industry rating agency, say BEST, to assess the ability of an insurer to pay a claim, rather than develop its own in-house expertise, mirroring, to some extent, the revised regulatory approach towards credit risk. Reliance on ratings is already used in other areas by regulators. A minimum acceptable level could then be set which would be wide enough to give choice and encourage market discipline, but narrow enough to ensure that "approved" insurance companies were capable of meeting claims.

### **3. ADVANTAGES OF USING INSURANCE TO TRANSFER RISK**

3.1 In addition to the points made in Section 2 which address regulatory concerns over the use of insurance, the FOA believes that there are a number of positive and additional advantages in using insurance to transfer risk.

**(a) *Contingent Capital Held by a Third Party***

3.2 Insurance of operational risk effectively provides the insured with capital which can be called upon in the event of an operational loss occurring. Although this capital is contingent, it involves a "contingent shareholder" (i.e. the insurer) who is likely to be much less passive than an ordinary shareholder with regard to the firm's controls and risk procedures. Additionally, and as the capital is "held" by a third party, the contingent capital is not available to the management under normal circumstances and therefore does not count in calculations such as RAROC and cannot be misused in any way by the management. The availability of contingent capital reduces the overall risk profile of the firm and therefore also of the industry whilst increasing the efficient use of capital.

**(b) *Insurance as an Out-of-Money Put Option***

3.3 As insurance is always out-of-money (by the amount of the deductible), the management remain involved and the firm is fully exposed to the first layer of risk. There is no mitigation outside the firm for this layer of risk and, even if insured, the personal reputational risk to the management of using the self-insured layer is considerable. This will encourage the management to practice good risk management and control. In addition, the knowledge that a third party will from time-to-time examine risk controls in detail (and, if found satisfactory, reduce the cost of the risk transfer) is a further inducement to management.

**(c) Benchmarking**

- 3.4 The information gathered by insurers relating to the controls and procedures operated by the investment industry will enable composite (i.e. non-attributable) industry standards to be published, which will enable better risk profiling of investment firms to be undertaken by both the firms and their regulators. This will help to improve standards and benefit the industry, particularly new entrants, who will be able to better measure their operational risk.
- 3.5 The increased use of insurance to address elements of operational risk is part of the general trend towards better corporate governance which, in the view of the FOA, should be actively encouraged by regulatory authorities, firstly, because of the protection afforded by insurance and, secondly, because the incentive for lowering insurance premiums will encourage management to continually improve controls; should improve communication between the various risk control departments of a firm; and lead to a holistic approach towards risk management and mitigation.

**(d) Risk Diversification**

- 3.6 The transfer of risk from one investment firm to many insurance and reinsurance firms, together with an increased focus on controls, will benefit the financial services industry through the reduction of its overall risk profile. The spreading of risk brings the classic benefits of insurance i.e. the losses of the few are paid by the premiums of the many.

**(e) Risk Management is the Business of Insurers**

- 3.7 The insurance industry has a vested interest in improving operational risk identification, measurement and mitigation. This will assist both the investment industry and the regulators. Underwriters are interested in better controls in investment firms (for whom they have written insurance policies) for commercial reasons and Pillar 3 "Market Discipline" should influence the underwriters to require better controls from the investment firms.
- 3.8 Not only does the insurance industry itself have a vested interest in improving operational risk identification, but that closeness of measurement, particularly in the area of volatile or unpredictable events, lies at the heart of the insurance industry and can establish a valued pool of data for regulatory authorities determining for themselves levels of risk they may attach to particular institutions.

**4. PRODUCTS AND SOLUTIONS**

- 4.1 Over the last few years, the insurance industry has created new products and services and broadened pre-existing coverage to include aspects of operational risk that were traditionally considered uninsurable e.g. unauthorised trading. Previously, many operational risks such as bankers blanket bond, computer fraud and public liability were covered, although there was little analysis from an economic capital perspective.

The capital markets have also been used for the successful transfer of operational risk, primarily for external events such as storms or earthquakes. Financial institutions are familiar with securitisation techniques and it is logical to extend this trend to address further elements of operational risk.

**(a) Insurance Solutions**

- 4.2 **Comprehensive approach (one policy, wide cover).** This involves an analysis of the risk controls and procedures used by the investment firm. A considerable number of possible losses, 3000 - 4000, are then identified and the insurance contract is written on these losses together with a commitment from the firm's management that the analysed controls and procedures will be maintained. A single policy with a single high deductible and a single high limit is written. Any losses that have not been mapped will not be covered.
- 4.3 **Specified Approach (several policies, wide cover).** This also involves an analysis of the risk controls and procedures, but can be extended to include a full operational risk assessment of the firm. Subsequent to this exercise, a number of specified policies are identified (each with its own relevant deductible and limit, as determined by the risk analysis). Any losses outside the individual policies will not be covered.
- 4.4 **Finite Risk Approach (one policy, specific claim).** This is essentially a cash exchange policy which pays out against a specified claim mechanism. A premium is paid over a number of years, the NPV of which is equal to the value of the claim. The benefit to the insured is that the cost of the loss is smoothed over the number of years of the policy.

**NB:** All approaches can be written in a multi-year policy with a non-cancellable clause; and can include a clause specifying immediate payment following a claim with any investigation into the validity of the claim being deferred until after payment.

**(b) Capital Market Solutions**

- 4.5 Although a number of securitisations of operational risk elements have been issued (e.g. Tokyo Disney earthquake bond, Japanese earthquake warrants), no participant was aware of a wide-cover bond. Concern was also expressed that the coupon on such a bond would be attractive to trading rooms of investment houses and would therefore not result in the risk being transferred outside the investment industry, but rather being spread within it.

**(c) Hybrid Solutions**

- 4.6 No existing hybrid solutions were found although one was proposed (see 4.7 below).

**(d) Possible Future Solutions**

- 4.7 **Comprehensive (or Specified Approach) plus Finite Risk Approach.** A combination of either the Comprehensive Approach or the Specified Approach with the Finite Risk Approach (to cover losses that would not otherwise be included) would provide an enhancement to existing insurance solutions. This combination would extend the cover provided by either 4.2 or 4.3 whilst enabling the underwriter to continue to have the same exposure as before. It could also provide a sufficiently wide cover to be considered as part of a firm's risk mitigation framework.
- 4.8 **Size of Deductibles and Limits.** The comprehensive approach is currently more suitable for large firms as it has a high deductible and high limit. The Specified Approach is suitable for all sizes of firms, although the amount of initial consulting required may make it expensive for smaller firms. There is a market for a policy which adjusts the deductible and limit to the size of the firm carrying the insurance. The adjustment could be based upon balance sheet or revenue criteria or upon deal or process flows. Different deductibles and limits for different causative factors could also be used.
- 4.9 **Standardisation.** In order for the regulators to accurately measure the transfer of risk the RATE process (or conceptually similar methodology) will have to include an assessment of the insurance product used as a more standard product will need to be developed. The advantage of a standard insurance product is that it will only need assessing once by the regulator and that underwriters will rapidly accumulate experience in it. The obvious disadvantage is that it may not be able to be tailored to meet the individual needs of some firms.

4.10 **Rolling 3 Year Contract.** Although the insurance industry regularly writes 3-5 year non-cancellable policies, a rolling 3 year policy would give considerable certainty to investment firms. Such a policy would be cancellable at each anniversary (after a review of controls and procedures), but only on a 3 years' notice. A long notice period would allow the firm to take effective and measured action to improve its controls and rearrange its insurance cover before the end of the notice period.

## 5. CONCLUSION

5.1 The FOA believes that on the basis of these findings:

- the use of insurance as a risk mitigant for operational risk is viable and accords with the general approach adopted by both the European Commission and the Basel Committee for Banking Supervision and, particularly, the need for a more focused, comprehensive and properly measured risk-based approach which is capable also of incentivising management to improve risk controls and procedures;
- it should be possible to address regulatory concerns arising from the use of insurance as a risk mitigant;

5.2 In view of the foregoing, the FOA would urge the European Commission (and the Basel Committee for Banking Supervision) therefore, either to itself commission more detailed work into the viability of insurance/capital market solutions to cover operational risk, or support that work being undertaken/commissioned by the FOA and other relevant pan-European trade associations in the financial services sector.