

other risk mitigation tools can be used to offset operational risk exposure.

#### *B. Accounting for Dependence*

##### Supervisory Standards

S 29. Management must document how its chosen analytical framework accounts for dependence (*e.g.*, correlations) among operational losses across and within business lines. The institution must demonstrate that its explicit and embedded dependence assumptions are appropriate, and where dependence assumptions are uncertain, the institution must use conservative estimates.

Management must document how its chosen analytical framework accounts for dependence (*e.g.*, correlation) between operational losses across and within business lines. The issue of dependence is closely related to the choice between a bottom-up or a top-down modeling approach. Under a bottom-up approach, explicit assumptions regarding cross-event dependence are required to estimate operational risk exposure at the firm-wide level. Management must demonstrate that these assumptions are appropriate and reflect the institution's current environment. If the dependence assumptions are uncertain, the institution must choose conservative estimates. In so doing, the institution should consider the possibility that cross-event dependence may not be constant, and may increase during stress environments.

Under a top-down approach, an explicit assumption regarding dependence is not required. However, a parametric distribution for loss severity may be more difficult to specify under the top-down approach, as it is a statistical mixture of (potentially) heterogeneous business line and event type distributions. Institutions must carefully consider the conditions necessary for the validity of top-down approaches, and whether these conditions are met in their particular circumstances. Similar to bottom-up approaches, institutions using top-down approaches must ensure that implicit dependence assumptions are appropriate and reflect the institution's current environment. If historic dependence assumptions embedded in top-down approaches are uncertain, the institution must be conservative and implement a qualitative adjustment to the analysis.

#### **IX. Risk Mitigation**

##### Supervisory Standards

S 30. Institutions may reduce their operational risk exposure results by no

more than 20% to reflect the impact of risk mitigants. Institutions must demonstrate that mitigation products are sufficiently capital-like to warrant inclusion in the adjustment to the operational risk exposure.

There are many mechanisms to manage operational risk, including risk transfer through risk mitigation products. Because risk mitigation can be an important element in limiting or reducing operational risk exposure in an institution, an adjustment is being permitted that will directly impact the amount of regulatory capital that is held for operational risk. The adjustment is limited to 20% of the overall operational risk exposure result determined by the institution using its loss data, qualitative factors, and quantitative framework.

Currently, the primary risk mitigant used for operational risk is insurance. There has been discussion that some securities products may be developed to provide risk mitigation benefits; however, to date, no specific products have emerged that have characteristics sufficient to be considered capital-replacement for operational risk. As a result, securities products and other capital market instruments may not be factored in to the regulatory capital risk mitigation adjustment at this time.

For an institution that wishes to adjust its regulatory capital requirement as a result of the risk mitigating impact of insurance, management must demonstrate that the insurance policy is sufficiently capital-like to provide the cushion that is necessary. A product that would fall in this category must have the following characteristics:

- The policy is provided through a third party<sup>13</sup> that has a minimum claims paying ability rating of A;<sup>14</sup>
- The policy has an initial term of one year;<sup>15</sup>
- The policy has no exclusions or limitations based upon regulatory action or for the receiver or liquidator of a failed bank;

<sup>13</sup> Where operational risk is transferred to a captive or an affiliated insurer such that risk is retained within the group structure, recognition of such risk transfer will only be allowed for regulatory capital purposes where the risk has been transferred to a third party (*e.g.*, an unaffiliated reinsurer) that meets the standards set forth in this section.

<sup>14</sup> Rating agencies may use slightly different rating scales. For the purpose of this supervisory guidance, the insurer must have a rating that is at least the equivalent of A under Standard and Poor's Insurer Financial Strength Ratings or an A2 under Moody's Insurance Financial Strength Ratings.

<sup>15</sup> Institutions must decrease the amount of the adjustment if the remaining term is less than one year. The institution must have a clear policy in place that links the remaining term to the adjustment factor.

- The policy has clear cancellation and non-renewal notice periods; and
- The policy coverage has been explicitly mapped to actual operational risk exposure of the institution.

Insurance policies that meet these standards may be incorporated into an institution's adjustment for risk mitigation. An institution should be conservative in its recognition of such policies, for example, the institution must also demonstrate that insurance policies used as the basis for the adjustment have a history of timely payouts. If claims have not been paid on a timely basis, the institution must exclude that policy from the operational risk capital adjustment. In addition, the institution must be able to show that the policy would actually be used in the event of a loss situation; that is, the deductible may not be set so high that no loss would ever conceivably exceed the deductible threshold.

The Agencies will not specify how institutions should calculate the risk mitigation adjustment. Nevertheless, institutions are expected to use conservative assumptions when calculating adjustments. An institution should discount (*i.e.*, apply its own estimates of haircuts) the impact of insurance coverage to take into account factors, which may limit the likelihood or size of claims payouts. Among these factors are the remaining terms of a policy, especially when it is less than a year, the willingness and ability of the insurer to pay on a claim in a timely manner, the legal risk that a claim may be disputed, and the possibility that a policy can be cancelled before the contractual expiration.

#### **X. Data Maintenance**

##### Supervisory Standards

S 31. Institutions using the AMA approach for regulatory capital purposes must use advanced data management practices to produce credible and reliable operational risk estimates.

Data maintenance is a critical factor in an institution's operational risk framework. Institutions with advanced data management practices should be able to track operational risk loss events from initial discovery through final resolution. These institutions should also be able to make appropriate adjustments to the data and use the data to identify trends, track problem areas, and identify areas of future risk. Such data should include not only operational risk loss event information, but also information on risk assessments, which are factored into the operational risk exposure calculation. In general, institutions using the AMA