

MERCATUS CENTER
GEORGE MASON UNIVERSITY

REGULATORY STUDIES PROGRAM

**Public Interest Comment on
The Basel Committee on Banking Supervision's
Second Consultative Package on the New Basel Capital Accord¹**

The Regulatory Studies Program (RSP) of the Mercatus Center at George Mason University is dedicated to advancing knowledge of the impact of regulation on society. As part of its mission, RSP conducts careful and independent analyses employing contemporary economic scholarship to assess rulemaking proposals from the perspective of the public interest. Thus, this comment on the Basel Committee on Banking Supervision's Second Consultative Package on the New Basel Capital Accord does not represent the views of any particular affected party or special interest group, but is designed to evaluate the effect of the Agency's proposals on overall consumer welfare.

I. Introduction

The Basel Committee on Banking Supervision issued for comment its second consultative package on the new Basel Capital Accord on January 16, 2001. A key goal of the Committee in making revisions to the 1988 Capital Accord is to better align regulatory capital requirements with underlying risks, and in so doing, decrease the opportunities for banks to engage in regulatory arbitrage, where banks exploit the rules to reduce their regulatory capital requirements without commensurately lowering risk. Banks have been arguing strongly that the current minimum capital requirements are too high because they only narrowly recognize credit risk mitigation techniques. There is general consensus that the current framework fails to account sufficiently for differences in credit risk among individual commercial and sovereign credits.

The Committee is proposing to make substantial changes to the 1988 Accord, and these changes will make the risk based capital framework much more complex. The new Accord rests on three pillars that together comprise the framework for assessing a bank's capital adequacy: the minimum regulatory capital charge, supervisory review, and market discipline. Much of the attention in the second consultative package is on the first pillar—estimating the minimum capital charge. The more than 500 pages of supporting documents go into considerable detail regarding the data and calculations that individual

¹ This comment is one in a series of comments from Mercatus Center's Regulatory Studies Program and does not represent an official position of George Mason University.

banks would need to provide as inputs to quantitatively-based, supervisor-approved models.

Although most of the consultative package is directed towards the proposed changes regarding regulatory capital for credit risk, the focus of these comments is on the proposed capital charges for operational risk. For the first time, the Committee is proposing to levy a capital charge for operational risk, which will be some 20 percent of the total minimum capital requirement. The framework the Committee outlines in its proposal, by requiring banks to choose among models it specifies, raises fundamental policy questions about the extent to which bank supervisors should lead the development of risk management models. It would be more prudent for it to provide general direction about performance characteristics that internal models must satisfy and place greater reliance on market based risk mitigation and risk transfer techniques.

II. Background

The Basel Committee was established by the central bank Governors of the Group of 10, in late 1974. Its mission is to formulate broad supervisory standards and guidelines and recommend best practices in the expectation that authorities in each country will adopt them.

The Committee issued the risk based capital standards 1988, which established a scheme for establishing minimum regulatory capital requirements for credit risk. They were implemented in each member country by the end of 1992. In the decade that has passed since risk based capital standards were adopted, supervisors have faced increasing pressure to update the 1988 Accord. Thus, in June 1999, the Committee proposed for comment a new Capital Adequacy Framework to replace the existing Accord; and in January of this year, it issued a second consultative document, which reflects significant further development of the June 1999 proposal. In the coming months, the Committee plans to release some additional technical support papers and issue a final new Accord by year end.

The second consultative document proposes to establish minimum regulatory capital requirements for two kinds of risk: credit risk and operational risk. However, the Basel Committee has identified eight major types of risks, which it expects banks to measure and manage.

Credit risk: the risk that borrowers or a counterparty will fail to perform.

Country and transfer risk: the risk arising from the economic, social, and political environment in the borrowers home country (country risk), and the risk present in loans that are not denominated in the borrower's local currency (transfers risk).

Market risk: the risk from movements in market prices. This includes foreign exchange risk.

Interest rate risk: the risk from exposure to unfavorable changes in interest rates.

Liquidity risk: the risk a bank is unable to convert assets quickly or to fund market positions.

Operational risk: the risk associated with operational failures. This definition is discussed more fully below.

Legal risk: the risk that a bank's contracts or claims will be unenforceable or that courts will impose judgments against them. It also covers the risk of legal uncertainty due to the lack of clarity of laws in localities in which the bank does business.

Reputational risk: the risk that problems in a bank cause customers, creditors, counterparties, or markets to lose confidence.

III. The Operational Risk Proposal

Operational risk is a growing area of concern for supervisors. New technologies have created different ways of doing business and different financial products. The speed and volume at which the financial services business runs creates many opportunities for operational error. Banks are outsourcing more of their operations to others, which gives them less day-to-day control over the way in which they assume risk. As well, banks are entering with regularity into joint operating arrangements with other kinds of businesses, which often increases operational complexity.

In order for banks to manage operational risk well, they must be able to measure it accurately. Yet, the development of quantitative models of operational risk lags behind modeling of financial risks. One reason is that operational risk is defined in many different ways. The Committee defines it as:

The risk of direct or indirect loss resulting from inadequate or failed internal processes, people and systems or from external events.

This definition includes legal risks, but not strategic or reputational risks. The inclusion of legal risk makes this a somewhat broad definition of operational risk. It is perhaps more common to define operational risk to focus more narrowly on product or service delivery problems that put earnings or capital at risk.

The Committee's definition is a reasonable formulation, although it will be very difficult to distinguish the direct financial consequences of operational failures from any associated reputational effects. One advantage of a broad definition is that it reduces the

number of separate risks for which regulatory capital requirements potentially would be established. Ultimately, this could help limit the increases in total administrative burden and transactions costs associated with revisions to risk based capital.

The proposed operational risk framework offers a spectrum of approaches for calculating operational risk capital. Each approach is more complex than the other, and the assumption is that with increased complexity will come greater accuracy and lower capital charges for the bank. In essence, the proposal would give banks lower regulatory capital requirements as an inducement to measure and monitor their operational risk more accurately and to manage it well. For the framework to function as the Committee intends, supervisors must set the coefficients correctly. Otherwise, they could create a disincentive for banks to measure their operational risk accurately. The approaches the Committee proposes include:

Basic Indicator Approach: The crudest method the Committee offers is the Basic Indicator Approach, in which it would use a simple measure to serve as a proxy for the bank's overall operational risk exposure. It is suggesting that gross income be that indicator, although it does not offer any evidence why that would be a relevant measure of potential operational risk exposure.

Standardized Approach: The Committee expects larger banks will use the Standardized Approach until they can develop more sophisticated measures. Supervisors would divide banks into standard business lines and set different capital requirements for each based on standardized loss factors (betas). The approach gives a nod to the notion that the capital charges should be tailored to the activities of the bank. The challenges are (1) properly identifying the business lines and (2) properly setting the betas.

Internal Measurement Approach: Banks would have more direct input into their capital charge if they use this method. It is for the relative handful of banks with the most sophisticated risk management programs. They would provide supervisors with expected loss estimates for each business line from internal bank data. Supervisors would calculate the capital charge by multiplying the expected loss value by a gamma scaling factor.

The Committee describes a fourth approach in the Consultative paper—the Loss Distribution Approach. Using internal data, banks would compute cumulative loss distribution functions. Banks would not be permitted to use this method for now because the Committee believes banks and supervisors need to do more work before it is possible to evaluate the robustness of this technique and to know how to validate the results. It offers no sense for how long that would take. Ironically, it may be the one that sophisticated financial institutions would most likely pursue if left to their own devices.

IV. Rationale for a Regulatory Capital Charge for Operational Risk

While there is a need for supervisors and banks to pay increased attention to operational risks, the question for policy makers is whether risk based capital is the best tool available for addressing supervisory concerns in this area.

In order to evaluate the options for mitigating and managing operational risks, it is important to start at the beginning: what is the policy problem that supervisors are trying to solve, and what key principles should guide their choice of regulatory alternatives?

Supervisors are concerned that banks are under investing in operational risk controls and that some banks taking an excessive amount of operational risk. A common belief is that the presence of the regulatory safety net—e.g., short-term lending by central banks, deposit insurance, and supervisory forbearance—dulls market incentives for banks to reduce risk. Some see cut backs in internal audit in order to meet earnings expectations as supporting evidence for this view. Another argument is that banks will not internalize the social costs (externalities) associated with operational failures, so supervisors must step in to make sure the systemic consequences from operational failures are given sufficient weight in deciding how much banks should spend to mitigate operational risks and how much risk they should take.

It is unclear whether the regulatory safety net makes banks more prone to operational failures than other kinds of financial services providers of similar size and complexity. What is clear is that many different types of financial services institutions besides banks have experienced catastrophic operational failure that posed risk of contagion. Drexel Burnham Lambert is a good example. But it is not necessary to resolve this question about the effect of the safety net to justify some supervisory action to reduce operational risks. The need to make sure banks give due consideration to the externalities that arise from key risk management decisions is sufficient.

Supervisors should primarily be concerned with maintaining stability and confidence in the banking system. Regulatory capital requirements are one, but not the only, tool they have available to prevent excessive risk taking and to cover the external social costs associated with individual bank decisions. Supervisors should not attempt to determine economic capital levels for individual institutions. Rather, regulatory capital should provide a financial cushion that serves as a backstop and gives supervisors sufficient time to act to resolve serious problems.

The consultative paper argues that regulatory capital charges are necessary to ensure banks are able to cover both expected and unexpected losses. It acknowledges that expected losses might be covered by reserves, but the Committee does not believe accounting rules in many countries are sufficiently robust to assure provisions would be sufficient, especially to cover future loss exposures.

Even if banks presently hold no reserves for operational risk, the amount of capital most banks would need to deal with routine, expected, operational losses is apt to be small in the sense that such losses are unlikely to threaten the solvency of banks or the stability of

the banking systems as a whole. This suggests that the focus of any regulatory capital charges should be on unexpected losses. These are the events that have resulted in substantial financial loss or failure, and include such well-known disasters as BCCI, Sumitomo Corporation, Daiwa Bank, and Barings Bank, among others.

In addition, new technologies are changing bank exposure to unexpected losses. The greater reliance by banks on large outside data processors means that any operational failures at vendors are likely to affect many banks at one time, increasing the potential for single events to have serious systemic consequences. In addition, because of consolidation among service providers, a single firm handles the processing for a greater number of banks, causing risk in the system to become more concentrated. On the other hand, new technologies can reduce error rates and can reduce open exposures by making it possible to settle transactions more quickly.

One challenge in measuring the absolute magnitude and any shifts in the direction of operational risk is that unexpected losses are a much larger portion of the distribution than they are for market, interest rate, and credit risks. Those are the areas in which much of the efforts to develop quantitative techniques for measuring banking risks have been targeted. Thus, it will take time to overcome methodological hurdles. Another limitation is that data are not as readily available as they are for many financial risks. More data are becoming available, although, as we discuss later, important data limitations regarding certain kinds of unexpected losses will remain.

So the practical question before the Committee is whether regulatory capital determined by supervisory models is a more efficient and more effective scheme for assessing and covering unexpected losses than other approaches. Up to now, banks have relied on effective systems and controls, such as trading limits, separation of duties, security measures, and anti-fraud procedures to limit unexpected operational losses. They cover some of their remaining exposure with insurance.

V. The Problem with the Proposed Approach

Three principles should guide supervisors in deciding how best to protect against unexpected operational risks.

- Government should not act unless there is clear evidence that private markets cannot work properly to solve the problem.
- The total costs of achieving reductions in operational risks, including the costs for supervisors to administer and maintain the system, must be worth the benefits.
- Supervisors should choose the least costly alternative for achieving supervisory goals.

As discussed below, the approach the Committee has proposed fails to satisfy these principles.

A. The weak case for direct government intervention to specify models

These are early days in the development of quantitative models for operational risk. Because of their responsibility to maintain the stability of financial markets, supervisors to have a legitimate interest in encouraging banks to improve their internal models and gather better data on their loss experience. However, there is no reason to believe that in this case government action to specify models is required to spur the private sector into doing that. Currently, there is no lack of investment in this area. Large banks are developing models, and there are burgeoning international consulting practices that are aimed precisely at improving the measurement and management of operational risk.

Nevertheless, the Committee is proposing specific measurement techniques and in so doing is jumping to conclusions about where best industry practice in modeling operational risk is headed. This stands in marked contrast to the more deliberate approach the Committee has taken in the past. For credit risk models, it established broad direction and goals by setting out general expectations, for example, by requiring that models be validated. It observed the experimentation at banks in risk modeling. But it did not attempt to drive the development of particular modeling techniques.

The more aggressive approach the Committee is taking for operational risk raises substantial dangers. Banks have strong incentive to manage to the regulatory models. By prematurely specifying models, the proposal may lock in certain untested approaches and discourage innovation into more accurate and informative models. To make a finer point, by creating incentives for banks to invest in the Standardized and Internal Measurement approaches, it unavoidably discourages investment in the Loss Distribution Approach—the approach that is most similar to Value at Risk (VaR), which many feel is the best way to measure market risk.

Also, to the extent the coefficients are inaccurate, regulatory capital could stifle innovation in the financial services industry. For example, as the consultative document notes, technological change is causing more banks to outsource critical aspects of their operations. Outsourcing will be the best way for most banks to develop and implement new technologies. An accurate risk measure would charge individual banks for the aggregation of risk in vendors, since a problem at a vendor will likely affect many banks. Forcing each bank to set aside capital to cover the consequences of such events would create a disincentive for banks to outsource. That is because a bank could avoid any capital changes arising from risk aggregation in vendors by keeping everything in house. The result would be that banks would be less efficient and less able to adopt new technologies.

Of course, there is no reason to expect that government is better positioned than the private sector to judge which of the nascent modeling approaches will produce accurate results at reasonable cost or which specifications of betas and gammas are more accurate. Operational risk is unlike the financial risks with which supervisors are accustomed to dealing. Today, many operational risks are related to the adoption of new technologies

by banks. Government lacks experts in many of these technologies. Most of those who understand how to assess those risks are in banks or in technology-related development companies or consulting firms.

B. A costly and complex system

With each new round of proposals, the New Accord is becoming more and more complex. The proposed operational risk framework will be very costly to operate and maintain. Most of these costs will directly or indirectly be borne by banks, making them less competitive. This will make credit and other services more expensive for bank customers, such as small businesses, for whom substitute products and services from other kinds of financial services providers are less available.

Both supervisors and banks will need to develop and analyze much new data and build quantitative models for operational risk. The inevitable pressures to make the capital charges more accurate will lead to increased complexity in the models and further expand the amount of data required to support them. Rapid changes in technology mean that any quantitative estimates of operational risk will constantly need to be revised.

Making general supervisory models more complicated—by getting individual bank data and distinguishing business lines—will not necessarily improve their accuracy significantly, especially when applied to complex institutions. That is because there are too many variations in key factors such as operating arrangements and systems controls. Given the range of accuracy that anyone can achieve with a generalized model, significant opportunities for regulatory capital arbitrage will remain. Each inaccuracy in the beta and gamma coefficients creates a point around which it is possible to arbitrage.

Furthermore, in the foreseeable future, it is not possible to get accurate estimates of some kinds of unexpected losses that have caused bank failures. Many operational risk catastrophes are rare and idiosyncratic; they are low frequency/high consequence events. They typically involve fraud or excessive risk-taking in the trading portfolio. In addition, for some aspects of operational risk, it is not clear if historical data provide a good indicator of future risk exposure. For instance, legal risks can be greatly altered by surprising court decisions or administrative interpretations. Or for a given history of loss, changes in risk management systems and controls can alter greatly the likelihood of future loss.

Another significant problem is that supervisors will find themselves continually challenged by banks about betas and gammas, and this will further add to administrative costs. Because these estimates, at least in the near term, will rest more on qualitative judgment based on industry-wide loss data rather than on hard numbers relevant to individual institutions, there will be many legitimate grounds for banks to challenge the terms supervisors propose. Even after the coefficients are initially set, there will be numerous opportunities and reasons for banks to request changes in betas and gammas because of structural changes in operational risk brought about by new business arrangements, new technologies, or new ways of managing risk.

C. Market based approaches

A combination of (1) controls on the amount of operational risk exposure a bank assumes and (2) insurance that transfers, at least in part, the residual risk is likely to be at least as good an approach for mitigating unexpected losses arising from operational risks as risk based capital. Supervisors already have issued guidance for capital markets activities and for fraud prevention that describe these controls. And bank management could be required to disclose to the Board how many times management grants exceptions to these controls, so as to ensure greater information flow to the board.

In order to provide a cushion against unforeseeable events, banks should be permitted to substitute insurance, which meets minimum standards set by their supervisors, for regulatory capital requirements for operational risk. Insurance could provide the same buffer against loss as regulatory capital.

Insurance to cover certain types of operational losses, such as fraud and liability losses, is well developed. There is no reason not to let banks purchase insurance instead of setting aside capital, if they believe that is the most cost-effective way for them to manage those exposures.

However, insurance against losses in areas such as Internet banking or outsourcing arrangements is in a much earlier stage of development. Because loss experience in these areas is limited, insurers must guess at what the exposure might be and refine their estimates over time. Whether insurance is a better option than setting aside capital for banks greatly depends on whether insurers have an informational advantage, can more efficiently manage the risk, and/or have a greater tolerance for risk. There is some reason to think insurers might have an informational advantage since they would be in a better position than banks to compare risks across a number of banks. In addition, risk spreading techniques allow insurers to limit the maximum size of catastrophic unexpected losses for individual policy holders. For the bank, it is the equivalent of buying a call option. In these pooling arrangements, insurers handle risks they cannot predict by distributing losses over many policyholders and to re-insurers. Unlike banks, insurers have the institutional arrangements established to handle these kinds of risks.

Private insurance will not be sufficient to deal with truly catastrophic systemic losses. Only the government has the resources to cover them. However, this same limitation applies to regulatory capital as it would be too costly for individual banks to set enough capital aside to protect itself against such losses. Giving banks the option to buy insurance in lieu of setting aside regulatory capital for operational risk has certain advantages for supervisors over just relying on regulatory capital alone. The underwriting process could provide supervisors independent perspective on the quality of the bank's systems and controls and on its risk profile. Insurance companies typically require banks to undergo extensive checks (some of which are ongoing) before they are willing to issue a policy. Also, insurers would impart a measure of market discipline since the pricing of policies would reflect an independent assessment of the level of risk at

each institution, and competitive forces in the insurance markets would help determine how accurate and complex internal models should be.

VI. Conclusion

The Committee is appropriately drawing attention to the need for supervisors to look at operational risk. Nevertheless, the Committee's proposed framework for capital charges for operational risk is seriously flawed.

First, it may be useful to have a small capital charge for expected losses from operational risk, if reserves cannot be properly established. However, the core concern for supervisors in this area should be bank exposure to unexpected losses. In relying on capital charges to mitigate unexpected operational losses, the Committee is undermining the other two pillars of supervision: supervisory review and market discipline. A combination of well-designed systems and controls and insurance that satisfies minimum requirements is a reasonable substitute to regulatory capital for mitigating operational risk and is an approach that would be far less expensive for supervisors to implement. As important, this would also give supervisors market-based assessments of the level of risk at each institution.

Second, the Committee bears a heavy burden to demonstrate why it should specify the development of selected quantitative models. The private sector is making considerable investment in developing better ways to measure and mitigate operational risk. Supervisors should be concerned about doing anything that trumps these initiatives. The Committee should only provide general direction for the development of models by describing the performance characteristics supervisors expect.

Third, the purpose of the regulatory capital standards should be to provide a safety net that ensures banks have enough resources to allow supervisors the time to respond to a catastrophe before the institution fails. Supervisors should not be attempting to approximate economic capital requirements for individual banks. That is what markets are for. In the attempt to make regulatory capital better reflect underlying risk, each round of proposed revisions is making the Capital Accord more complex and more expensive to administer. There seems to be no natural end to this trend. The resources banks and supervisors are spending to implement the framework are already very large and growing continually. These costs are not fully justified.