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The Regulation of Operational Risk in Investment Management Companies

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SUMMARY

Operational risk in financial organizations has become a focal point for regulation. The term itself refers to potential causes of loss arising from deficiencies in internal controls, human errors, physical systems failures, and other business execution risks as well as external events. Thus far, the regulatory response has largely favored minimum capital requirements as the means of controlling operational risk. In particular, the proposed New Basel Capital Accord would apply this approach to banks and banking organizations. In addition, the European Union is considering imposing the Basel operational risk capital requirements on investment management companies and other nonbank financial institutions operating in Europe.

This paper is principally concerned with the extension of capital standards for operational risk

to investment management companies. In particular, it argues that minimum capital requirements are not the appropriate method for regulating operational risk in investment management companies or, for that matter, banks. Private insurance and process regulation would be more effective than capital requirements for regulating operational risk. Private insurance offers several benefits: transference of operational risk to third parties, introduction of market monitoring and discipline, and risk-sensitive insurance costs. Process regulation reinforces private market incentives for risk control by requiring companies to have in place appropriate processes and procedures to identify, measure, monitor, and control operational risk. In contrast, capital requirements for operational risk in the Basel proposal are not as risk-sensitive as private insurance and process regulation.

Reliance on process and private insurance has the further benefit of avoiding the undesirable consequence of restricting competition that arises under the Basel proposal through the discriminatory treatment of low-risk firms. The anti-competitive effect of capital regulation is especially relevant to independent investment management companies. Such companies are unlikely to have the resources necessary to use the complex and sophisticated approach available in

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the Basel proposal for determining capital requirements that would either allow them to use private insurance to mitigate capital requirements or reward them with lower capital charges for maintaining lower operational risks. In contrast, the largest and most sophisticated universal banks and thus their investment management operations are likely to adopt the complex approach, gaining an advantage over their competitors through lower capital charges. In addition, under the proposed capital standards, independent investment management companies would likely have to hold higher levels of capital than currently, whereas universal banks on average would not, further disadvantaging independent investment management companies.

The use of capital requirements to control operational risk in investment management companies cannot be rationalized on other grounds, such as moral hazard and systemic risk, as in the case of banks. Unlike banks, investment management companies are not covered by government insurance nor do they fall under the government safety net. Consequently, there is no moral-hazard justification for capital regulation of investment companies. Furthermore, operational risk is highly idiosyncratic. Risk events are not likely to be correlated across institutions and spillovers from one institution to another are extremely unlikely. Thus, the prospect of systemic consequences from operational losses in investment management companies is negligible.

In sum, an alternative policy based upon private insurance and process regulation to regulate operational risk is superior to capital regulation. Not only does the alternative policy reward lower risk with lower costs of compliance, but also it allows efficient independent investment management companies to compete on a truly level playing field.

ORGANIZATION OF THE PAPER

The purpose of the paper is to evaluate proposals to impose minimum capital requirements to control and regulate operational risk in investment management companies. The European Union offers one example of such a proposal, as it considers extending the New Basel Capital Accord for banks to European securities firms, including independent investment management companies.

To assess the consequences of the use of capital requirements to regulate operational risk, we begin with an overview of the Basel and European Union proposals. We then review reasons for regulating bank

capital and consider the proposals' applicability to investment management companies. This portion of the paper identifies alternatives to capital requirements for regulating operational risk in banks and investment management companies, which are treated in greater detail in later sections of the paper.

Next, we highlight the practical difficulties in implementing capital-based standards for operational risk and assess the effectiveness of the Basel approach to regulating operational risk in contrast to an approach that incorporates private insurance and process regulation. This analysis is followed by a detailed consideration of a concern of the European Union that the extension of the Basel standards to nonbank financial institutions, including investment management companies, is necessary to maintain a level playing field in the European market for financial services. Conclusions are presented in the final section of the paper.

BASEL COMMITTEE AND EUROPEAN UNION PROPOSALS

The Basel Committee, in a second consultative document on a new capital adequacy framework published in January 2001, has proposed computing a capital requirement for operational risk as part of an overall risk-based capital framework for banks. The European Union plans to incorporate the Basel Committee's capital charge for operational risk in a revised Capital Adequacy Directive that will apply to nonbank financial services firms falling within the Investment Services Directive. The proposal would include investment management companies.²

The purpose of this paper is to critically examine the proposition that investment

²The European Union also intends to consider extending capital charges for operational risk to investment managers covered under the Directive on Undertakings for Collective Investment in Transferable Securities. Amendments to the UCITS Directive require the European Commission to review and report on this matter by February 2005.

management companies should be subject to a capital requirement for operational risk. The paper primarily addresses the economics of the proposition, showing that capital regulation is far from an ideal method for regulating operational risk.

RISK MANAGEMENT AND RISK REGULATION

Risk and Capital Budgeting

Risks of various kinds are inherent in all economic activities, but firms (including financial intermediaries) can pick and choose the types and extent of risk that they bear. A bank, or more generally, any firm faced with a given set of risks can respond to any risk appropriately in three possible ways: (1) “lay off” the risk, (2) adopt practices that reduce the risk, or (3) retain the risk and deal with it through appropriate capital budgeting (to absorb future shocks related to that risk). Which of these three approaches a firm uses to respond to any particular risk depends on both the nature of the risk and the comparative advantage of the firm in bearing particular risks.

With respect to comparative advantage in the banking sector, firms differ in the costs associated with measuring and managing different risks. Some financial intermediaries are adept at measuring and controlling default risk from certain classes of borrowers but may lack other skills—for example, forecasting interest rate changes. Those banks have a comparative advantage as lenders but lack a comparative advantage in bearing interest rate risk; therefore they should lay off interest rate risk or avoid transactions that entail such risk to the extent that transaction costs of doing so are not prohibitive.

Lending institutions that choose to bear a particular loan default risk because of their comparative advantage in doing so will often adopt practices to mitigate that risk. For example, lenders will require collateral and will design warrants and

covenants as parts of their loan agreements to reduce the probability of default, the exposure at default, or the loss given default. Those contractual features, in theory, are chosen because they are the most “efficient” way of allocating risk between borrowers and lenders; loan covenants provide appropriate incentives that discourage socially wasteful risk-taking.

Similarly, in the investment company industry, management firms differ in comparative advantage and the costs associated with measuring and managing different risks. For example, the confidence that a firm has in its ability to accurately compute daily net asset value for its mutual funds, and thus avoid the risk of pricing errors, can depend on the nature of the fund’s portfolio investments and the sophistication of its pricing procedures. To mitigate pricing error risk, firms may avoid certain types of portfolio transactions, make greater use of third-party pricing services, or lay off risk through insurance.

Once financial institutions have decided which types of risk to bear or lay off and have decided how much to invest in mitigating the degree of risk within their chosen areas of specialization, they will budget capital to absorb the risks that they have chosen to bear. Apart from questions of regulation, a financial institution’s choice of the amount of capital budgeted per unit of a particular category of risk should reflect three factors: (1) the fundamental exogenous riskiness of the activity (the volatility of returns), (2) the liquidity of the asset position that is generating that degree of riskiness, and (3) the targeted default premium in the debt market in which the intermediary plans to raise its own debt funding. All other things being equal, riskier activities and less liquid risks should result in more capital being budgeted. And, if the target market for the intermediary’s debt is one that is accessible only to those borrowers with very strong credit ratings (e.g., the markets for interbank deposits, commercial paper, or AA-rated bonds), then even greater amounts of capital will be budgeted, after taking into account the level of asset risk and liquidity.

Prudential Regulation of Risk

All firms face risk, including risks from default, market price fluctuations, operational losses, and other sources. But that does not mean that all firms should have their risks regulated, much less their capital ratios. For the most part, government relies on market discipline to determine the appropriate levels of asset risk and leverage in firms. Firms’ managers choose those levels of risk and leverage in response to pressures from stockholders and debtholders, which are expressed through market pricing of firms’ equity and debt.

In some circumstances, however, markets cannot be relied upon to ensure that financial institutions make appropriate risk management and capital budgeting choices. To correct those market failures, government intervention in the form of prudential regulation may be warranted. The purpose of prudential regulation of risk (including minimum capital requirements, like

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those embodied in the Basel Committee's capital standards) is to provide a regulatory mandate to reduce risk or increase capital to ensure that institutions hold capital commensurate with their risk-taking.

The economic justification for prudential capital regulation therefore relies on arguments about why intermediaries might fail to choose voluntarily the appropriate amounts of risk and capital in the absence of regulation. The three key economic arguments in this regard are (1) incentive problems associated with government protection (e.g., deposit insurance, anticipated bailouts of bank depositors, or subsidized bailout loans granted through central banks), (2) systemic risk, and (3) consumer protection.

The incentive problem of government protection (sometimes referred to as the moral-hazard problem) is the most common argument for regulation. Because taxpayers (or, in some cases, other financial institutions) bear much of the cost of one institution's failure to budget capital adequately, that institution may face incentives to take on higher default risks. Protected institutions can raise funds at default-free rates, then boost asset risk and leverage, and thereby enhance their expected profitability to stockholders. Prudential regulation, according to this argument, is a tool for aligning incentives to ensure that individual institutions do not abuse such protection.³

Systemic risk also can motivate prudential regulation. If there are risk externalities among firms—for example, if large shocks to one firm affect the market's perception of the health of other firms—then one firm's decision to increase its capital benefits other firms, even though individual institutions cannot internalize the benefits they create for each other by increasing capital. Under these circumstances, it may be socially optimal to require firms to budget higher amounts of capital than they would choose

to maintain. From this perspective, regulation can be seen as a coordinating device to overcome a free-rider problem among financial institutions.

Finally, prudential capital regulation can be used to protect consumers. Consumers of financial services—particularly unsophisticated consumers—find it very difficult to evaluate the quality of financial information and services provided to them. In part, this is because payment for many financial transactions must often be made in the current period in exchange for benefits that are promised far in the future. Then, even after the decision is made and the financial results are realized, it is difficult to determine whether an unfavorable outcome was the result of bad luck or the result of incompetence or dishonesty. Customers thus face a problem of asymmetric information in evaluating financial services. They are vulnerable to adverse selection, the possibility that a customer will choose an incompetent or dishonest firm for investment or agent for execution of a transaction. They are also vulnerable to moral hazard, the possibility that firms or agents will put their own interests or those of another customer above those of the customer or even engage in fraud. In short, unsophisticated consumers are vulnerable to incompetence, negligence, and fraud.

Of these three justifications for prudential regulation, only consumer protection is relevant to the regulation of operational risk in investment management companies. The two economic motivations for prudential capital requirements—protection against abuse of the bank safety net and systemic risk—do not apply to the operational risks faced by investment management

³ When banks are solvent and have good economic opportunities, they may choose to maintain more capital than they are required to maintain, and moral hazard incentives may be irrelevant. Indeed, many banks today in Europe and the United States maintain more capital than they are required to maintain according to minimum capital standards. But when banks become insolvent or nearly insolvent, they may gamble on "resurrection" by boosting their asset risk and leverage. Capital regulation is meant to impose binding constraints limiting bank risk-taking in those states of the world.

companies. Investment companies do not issue depository claims, much less depository claims guaranteed by the government. And losses due to operational risk are not likely to be correlated across institutions nor are they likely to spillover from one institution to another. Thus, operational risk at investment management companies does not raise concerns about systemic risk.

From the standpoint of consumer protection, capital regulation is a blunt and relatively ineffectual instrument. Capital does provide some protection against default risk, but this is primarily a central concern at depository institutions where consumers hold claims on the regulated institution. Default risk is less relevant for asset

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management companies, since clients' assets are generally rigorously segregated from the firms' own assets (Franks et al. 2001, p. 59) so that clients are protected from loss even if the investment management company should become insolvent.⁴ More generally, process regulation and a reliance on private risk sharing (e.g., through mandatory private insurance) are much more effective

ways to protect consumers against fraud, misleading advertising, and other operational risks than a

minimum capital requirement. The benefits of these alternatives to capital regulation for operational risk are discussed in detail later in the paper. The conclusion, however, is that consumer protection is not central to the economic case for capital requirements.

Capital Regulation to Promote a Level Playing Field

In addition to the economic arguments for prudential regulation, a political-economic argument is sometimes made for *international* regulatory standards: the need to maintain a "level playing field" among potential competitors. For example, it is argued that by establishing uniform minimum standards for capital through the Basel Accord, internationally active banks headquartered in different countries are forced to compete on an equal footing. Establishing competition on an equal footing reduces the chance of a "race to the bottom," the alleged tendency for regulators to promote risk-taking so that their banks might gain or retain international market share.

From the standpoint of consumer protection, capital regulation is a blunt and relatively ineffectual instrument.

It is desirable that international regulation of financial institution activities across borders be perceived as fair, but achieving fairness may not be possible in practice. In particular, the Basel capital standards have not succeeded in producing consistent rules across countries, as evidenced by the operation of Japanese banks with negative economic net worth for nearly a decade. In a careful study of how the Basel Accord affected the competitive position of Japanese banks relative to U.S. banks, Scott and Iwabara (1994) concluded that the Accord failed to level the competitive playing field between Japanese and U.S. banks because it did not address other, more important sources of competitive advantage and it failed to deal with differences in accounting rules, balance sheet regulations, legal

⁴ An exception may occur in the unusual case in which an investment company guarantees a rate of return for which it or its management company is responsible. An unfortunate example was provided in Eastern Europe by Ponzi schemes involving various investment companies that were part of the growing pains of early financial liberalization in some countries. Some unscrupulous investment companies promised astronomical returns on stock portfolios even though they had no means of guaranteeing such returns. Inexperienced investors were defrauded by unregulated investment companies that issued such guarantees to attract funds and then fraudulently sold their assets to offshore entities at below market prices. Prudential capital requirements presumably would have reduced the losses consumers would have borne from these fraudulent practices. Of course, the better regulatory solution is to prohibit such fraudulent practices.

regimes, capital markets, and the enforcement of capital requirements. The new Basel proposal does nothing to address these differences.

Of greater importance, however, is that the “level playing field” justification does not necessarily translate into equal capital ratios for institutions. Liquidity and asset risk differ across institutions in ways that require different levels of capital. Furthermore, there are ways to mitigate risk other than with higher capital such as derivative hedges, various forms of private insurance,

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outsourcing, or custodial arrangements, which may be more effective.

This is particularly true in the area of operational risk. Operational risk can be mitigated substantially by establishing appropriate internal processes that enhance management’s control over employees and reduce the probability of loss from fraud or slipshod practices. In addition, because operational losses tend to be idiosyncratic and not highly correlated across firms, they are often insurable. Operational

risks, most of the time, involve small losses that are the predictable consequence of engaging in particular business activities. Occasionally, however, institutions may suffer an unusually large, unpredictable loss associated with operational risk. Although such losses are unpredictable for an individual firm, the Law of Large Numbers often applies so that they are statistically predictable for a large group of firms. Under such circumstances, insurance companies will be able to help individual firms mitigate unpredictable risk exposure that comes from bearing the losses internally.

THE BASEL COMMITTEE PROPOSAL ON OPERATIONAL RISK

Inherent in the Basel Committee’s approach to regulating operational risks in banks and banking organizations are several problems that will make implementation of the proposal difficult. The discussion in this section highlights the problems that regulators and banks will encounter in satisfying the capital requirements. Although the discussion deals with banks, it is certainly the case that investment management companies would experience similar problems if the capital requirements were extended to their operations.

Definition of Operational Risk

One of the fundamental difficulties in crafting risk-sensitive regulation for operational risk is that the term lacks precision, much less a universally shared definition. In its second consultative document on a new capital adequacy framework, published in January 2001, the Basel Committee devoted an entire paper to “Operational Risk.” This included not only a description of three different approaches to computing a capital requirement for operational risk as part of the overall risk-based capital framework but also a new definition of operational risk that contrasted sharply with the definition used by most banks and the U.S. regulatory authorities in SR 99-18 on the supervision of economic capital. The Committee (January 2001, p. 2) decided to exclude strategic risk, reputational risk, and basic business risk but to include legal risk. Operational risk was defined as “the risk of direct or indirect loss resulting from inadequate or failed processes, people and systems or from external events.” The definition highlighted causes of operational risk and the Committee included an annex to describe how data could be collected and categorized by type of loss.

Comments from industry practitioners highlighted three problems with this definition. First, the Committee’s intention (January 2001, p. 2) to include both direct losses and certain indirect losses such as “the costs to fix an operational risk problem, payments to third parties and write downs generally” added to the uncertainty about what data should be collected and how they should be organized. Moreover, it heightened concerns about double counting of risks.

Second, the Committee's proposal (January 2001, p. 3) to calibrate the capital charge based on both expected and unexpected losses (with some allowance for provisions or loss deductions) raised concerns about statistical measurement. Would it be possible to extrapolate a robust distribution that would adequately take account of catastrophic events on the basis of historical data heavily dominated by frequent, but relatively unimportant events? This is a crucial issue because measurement of the probability of long-tail events is critical to establishing an appropriate capital charge for unexpected losses.

Third, the Committee's assumption (January 2001, p. 5) that capital for operational risk should be "20% of current minimum regulatory capital" raised questions about whether the approach would truly reflect each institution's exposure to operational risk or was merely an effort to prevent regulatory capital from declining under the new proposed capital standards by compensating for the anticipated decrease in required capital for credit risk with the new capital charge for operational risk. Walter Pompliano (McNee, 2002, p. 3), a director at Standard & Poor's in London observed, "[t]hey seem to have taken the view that there is a certain amount of capital that has to be allocated, and that setting the operational risk charge is a question of deciding how much of that overall figure to allocate to that type of risk. We think there is a great deal of variation from institution to institution, and during various periods in the life of an institution."⁵

The Basel Committee (September 2001) responded to the first of these concerns by dropping the reference to direct and indirect loss in its revised definition of operational risk: "the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events." The Committee, moreover, confirmed that it does not intend the definition to comprehend systemic risk.

The Committee asserted that this causal-based definition of operational risk is important for "managing operational risk within institutions" but conceded that ambiguity about the attribution of loss events to (potentially) multiple causes means that it will have to supplement this definition with a concept that is readily measurable and comparable across banks for purposes of quantifying operational risk. The Committee implicitly recognized that it is necessary to quantify and pool loss data across banks over a long interval of time in order to address the second concern about estimating a robust distribution that could distinguish expected from unexpected losses.

The Committee responded to the third concern by reducing the proposed capital charge for operational risk but at the same time confirmed suspicions that the charge for operational risk was being calibrated to maintain the overall level of regulatory capital for the banking industry. The Committee (September 2001, p. 4) conceded that the 20 percent figure had been an overestimate of the share of economic capital allocated for operational risk "... due to definitional differences" and that the 20 percent figure would "generate an increase in the general level of capital requirements contrary to the Committee's stated goal of keeping the overall level of capital constant for the industry as a whole."

Inherent in the Basel Committee's approach to regulating operational risks in banks and banking organizations are several problems that will make implementation of the proposal difficult.

⁵In addition, Kuritzkes and Scott (2002) noted that by excluding *operating* risk from the regulatory definition of operational risk, the Basel Committee was ignoring the most important reason that all firms hold capital. Business (or strategic) risk is volatility in earnings due to a contraction in margins or changes in volumes of business. All firms must hold capital to cover such losses that depend on the extent to which costs cannot be reduced as revenues decline.

The Committee's evident difficulty in specifying an objective, quantifiable definition of operational risk that is comprehensive and separate from credit risk and market risk casts doubt over whether it will be able to develop a coherent risk-based capital framework with separate capital charges for credit risk, market risk, and operational risk. The ambiguities and double counting that were already a problem when the framework encompassed only credit risk and market risk⁶ are compounded when operational risk is added to the mix.

FIGURE 1

Operational Losses by Type of Event

Event Type	Percent of Loss Events	Percent of Gross Loss Amounts
Internal Fraud	2.72	10.66
External Fraud	36.39	20.32
Employment Practices and Workplace Safety	2.71	2.92
Clients, Products, and Business Practices	6.39	27.51
Damage to Physical Assets	4.48	3.02
Business Disruption and System Failures	5.32	0.82
Execution, Delivery, and Process Management	41.99	34.76
Total*	100.00	100.00

*Components may not sum to total because of rounding.

Source: Based on Tables 3 and 4 in Basel Committee (January 2002).

FIGURE 2

Operational Losses by Line of Business

Line of Business	Percent of Loss Events	Percent of Gross Loss Amounts
Corporate Finance	0.29	7.43
Trading and Sales	4.87	19.11
Retail Banking	67.43	39.41
Commercial Banking	13.21	22.91
Payment and Settlement	6.96	4.79
Agency Services and Custody	1.75	2.16
Asset Management	1.57	2.09
Retail Brokerage	3.91	2.09
Total*	100.00	100.00

*Components may not sum to total because of rounding.

Source: Based on Tables 3 and 4 in Basel Committee (January 2002).

Quantification of Operational Risk

In order to make progress with quantifying operational risk and pooling such data across banks, the Basel Committee has asked banks to record losses categorized by seven specified event types across eight standardized business lines. The definitions of event types are intended to identify operational losses that may be embedded in current calculations of market or credit risk exposures so that the Committee can monitor double counting. The Committee (September 2001, p. 3), nevertheless, "expects banks to attribute operational risk-related credit and market loss events to those risk areas for the calculation of regulatory capital requirements."

The event types (Basel Committee, September 2001, pp. 21–23) include (1) internal fraud, (2) external fraud, (3) employment practices and workplace safety, (4) clients, products, and business practices, (5) damage to physical assets, (6) business disruption and system failures, and (7) execution, delivery, and process management. The business lines include (1) corporate finance, (2) trading and sales, (3) retail banking, (4) commercial banking, (5) payment and settlement, (6) agency services and custody, (7) asset management, and (8) retail brokerage. This classification scheme provided the structure for the quantitative impact study for operational risk (Basel Committee, Risk Management Group, January 2002). The survey involved 30 banks from 11 different countries and focused on individual loss events during 12 quarters from 1998 to 2000.

Even putting aside the Committee's careful caveats about the completeness, consistency, and representativeness of the data, the survey shows

⁶For example, when the price of a corporate bond declines because of a decline in the creditworthiness of the issuer or because of a change in the risk premium, should the loss be counted as market risk or credit risk?

how difficult it will be to advance from measures of operational losses to measures of operational risk. The survey captured 27,000 individual loss events amounting to €2.6 billion. (Unfortunately, comparable figures for net losses are not available.) Almost 80 percent of these loss events involved external fraud or problems in execution, delivery, or process management (Figure 1). But the average gross loss per event varied markedly across event types, with internal fraud and client, product, and workplace safety events accounting for a disproportionately larger share of gross loss amounts than of loss events.

Similarly, the distribution of loss events and gross losses varied considerably across lines of business. Retail banking and commercial banking accounted for 80 percent of the loss events but only a little over 60 percent of gross losses (Figure 2).

Nonetheless, these data do not warrant a conclusion that retail and commercial banking require higher operational risk capital requirements than other lines of business. Data on average losses do not reveal information about the variability of losses. Average losses tend to be expensed or reserved against. But the capital charge for operational risk is intended to reflect the additional variability of losses due to operational risk. Associating the capital charge with average losses confounds risk capital with the routine costs of doing business. It is possible that operational losses in retail banking and commercial banking are predictable, priced, and budgeted for, and so do not constitute a significant source of operational risk additionality.

The asset management line of business is most like the investment management and mutual fund business and so we have highlighted these results in Figure 3. Figure 2 shows that this line of

business did not make a significant contribution to operational losses for the 30 reporting banks, accounting for only 1.57 percent of the loss events reported, and 2.09 percent of gross losses. Figure 3 shows that more than 80 percent of these loss events were due to problems in the execution or

FIGURE 3

Asset Management Loss Events and Gross Loss Amounts for the 30 Reporting Banks

Event Type	Number of Loss Events	Gross Loss Amounts (exceeding €10,000)
Internal Fraud	4	8,566
External Fraud	4	603
Employment Practices and Workplace Safety	10	1,037
Clients, Products, and Business Practices	32	8,968
Damage to Physical Assets	0	0
Business Disruption and System Failures	2	644
Execution, Delivery, and Process Management	233	34,302
Total Across Event Types	285	54,120

Source: Based on Tables 7 and 8 in Basel Committee (January 2002).

FIGURE 4

Conditional Recovery Rates

Line of Business	Total Recovery Rate (percent)	Insurance Recovery Rate (percent)	Other Recovery Rate (percent)	Average Gross Loss Amount (€1000s)
Corporate Finance	96.3	95.4	97.1	2,426
Trading and Sales	67.5	83.5	65.4	374
Retail Banking	81.8	80.2	82.2	56
Commercial Banking	85.8	86.0	85.5	166
Payment and Settlement	60.5	100.0	58.8	66
Agency Services and Custody	73.5	86.5	38.1	120
Asset Management	60.9	78.0	48.6	127
Retail Brokerage	76.7	92.7	70.0	51
All Loss Events	81.6	82.2	81.4	

Note: Because of defects in the underlying survey, recoveries were almost certainly underreported. Consequently, the table reports recovery rates conditional on some recovery having been reported. For example, the "Total Recovery Rate for All Loss Events" was computed as the sum of insurance and other recoveries for each loss event for which recoveries were reported divided by the gross loss amount for those events. For most loss events in each of the eight lines of business, no recoveries were reported. It is unclear whether this is because recovery efforts were unsuccessful or because some loss amounts were treated as "pooled" losses under insurance contracts, making the assignment of recoveries to specific loss events difficult.

Source: Based on Table 12 in Basel Committee (January 2002).

delivery of transactions or in process management, although these events account for 60 percent of gross losses.⁷ Again it is important to note that these data do not enable us to draw reliable inferences about operational risk additionality in this line of business. Quite apart from the evident paucity of data for most loss event types, we do not know the extent to which these losses have been anticipated, priced, and reserved against. Moreover, we need additional information about recoveries to determine the extent to which gross losses resulted in net losses. (See Figure 4 for a summary of recovery rates conditional on a recovery having been reported.)

Further insights into operational losses in the investment management business are provided by a recent survey of 39 asset managers from six European countries conducted by Oxford Economic Research Associates (Franks et al., 2001, pp. 78–96).

Respondents were asked to rank the potential financial impact of 12 different forms of operational risk. Breach of client guidelines topped the list, followed by errors in issuing orders to brokers, risks arising in the process of taking over a new business, fraud, failure to meet guarantees provided on a particular product, information technology systems failure, failure to reconcile assets under custodianship and internal records, failure to obtain the best price for a client, failure of a counterparty, settlement problems, and failure to collect all income. The survey also revealed that all firms held capital in excess of regulatory requirements but that the motive for doing so was not related to the risks faced in the asset management business. A number of firms, for example, reported that their holdings of capital were related to strategic considerations such as merger and acquisition plans. All of the firms reported a significant number of internal and external employees involved in risk management to control operational risk in such areas as legal and regulatory compliance, internal audit, operational risk management, legal support, and product approval. Indemnity insurance was the most prevalent kind of insurance followed by employee fidelity and fraud insurance. In financial operational losses, the first line of defense was internal profits, followed in most cases by insurance, capital, and parent firm guarantees.

As the Oxford Economic Research Associates survey indicates, financial institutions routinely insure against many types of loss events⁸ and they make serious efforts to resolve failed transactions, recover losses, and correct

other errors. Thus, gross losses should be adjusted for recoveries from insurance or other efforts in order to gauge net losses. Unfortunately, the Basel Committee's attempts to calibrate this important offset to operational risk were marred by a flaw in its data collection effort. Because of the ambiguous way in which its question about operational risk was asked, it is not clear whether "no response" means that the bank failed to achieve a recovery or that it simply lacked data to tie the recovery to individual loss events. This latter possibility cannot be dismissed because small losses are often treated as pooled losses under insurance contracts and thus cannot be assigned easily to individual loss events. In addition, no recovery information was recorded for 26 percent of the loss events.

The problems that the Basel Committee has experienced in collecting data on net losses due to operational risk for even the short span of three years demonstrate how far we are from being able to quantify the official definition of operational risk. At best, the quantitative impact study provides data on frequent, relatively small losses. But the Committee (December 2001, p. 16) insists that unexpected losses should be "the primary focus of the supervisory and capital allocation processes for operational risk." Thus, it is the tail of the loss distribution that matters for the Committee's approach to regulation, not the mean, and this requires evidence on low-frequency, high-impact events that is simply not available for the broad definition of operational risk that the Committee has adopted. Nonetheless, the Basel Committee (September 2001 and July 2002) has reaffirmed its determination to plunge ahead with plans to establish a capital charge for operational risk.

⁷ Examples of such loss events include problems in the capture and execution of transactions such as miscommunication, data entry, maintenance or loading errors, missed deadlines, model or system malfunction, accounting or attribution errors, failures to deliver securities, or collateral management failures. They also include errors in dealing with customers such as unapproved access given to accounts or incorrect client records. Outsourcing problems and vendor disputes also fall within this category.

⁸ Examples include traditional products such as bankers blanket bonds that protect banks against operational losses from events such as fraud and employee theft as well as new forms of coverage intended to protect against new kinds of operational risk.

Basel Approach to Establishing a Capital Charge for Operational Risk

The Basel Committee's most recent statement about the regulatory treatment of operational risk (September 2001) has proposed three approaches to establishing minimum capital requirements for operational risk. The simplest is the "Basic Indicator Approach." The capital charge under the Basic Indicator Approach is equal to some fixed percentage, alpha—to be set by the Basel Committee but as yet unspecified—multiplied by the level of an exposure indicator. Provisionally, the Committee has identified gross income as the appropriate exposure indicator and has proposed to set alpha so that the product is 12 percent of current minimum regulatory capital. This approach to setting capital requirements is so crude as to seem almost arbitrary. Although the Basic Indicator Approach "is intended to be applicable to any bank regardless of its complexity or sophistication," the Committee (September 2001, p. 11) expects that internationally active banks with significant exposure to operational risk will be pressed to adopt one of the two more complex approaches. Moreover, the Committee intends to provide a financial incentive for banks to adopt a more complex approach by calibrating the capital requirement to be lower than the capital charge under the Basic Indicator Approach.

Banks that demonstrate effective risk management and control and establish appropriate risk reporting and management information systems may qualify for the "Standardized Approach." Banks that qualify for this approach must track operational risk data by eight lines of business listed in the quantitative impact survey described above. Within each business line, the capital charge will be the product of a fixed percentage, beta, to be assigned by the Basel Committee, multiplied by the level of exposure to operational risk for that line of business. In this case too, the Basel Committee proposes using gross income in each line of business as the proxy for the level of exposure to operational risk. The beta factors for each line of business will be set in line with industry-wide operational loss experience for the line of business and gross income in that line of business (Basel Committee, September 2001, p. 7).⁹ The relationship between this computation and the Committee's intent to relate the capital charge to "unexpected loss" is tenuous at best. Indeed, the Basic Indicator and Standardized Approaches will not even capture scale of a particular business reliably since they include net interest and net non-interest income (which may be negative) in their definition of gross income (Basel Committee, January 2001, p. 6).¹⁰

The Committee hopes that over time banks will strive to qualify for the "Advanced Measurement Approaches." The incentive for banks to qualify is that the capital charge will be lower (within limits) than the capital charge under the Standardized Approach. The national supervisor may approve a bank's use of Advanced Measurement Approaches (Basel Committee, September 2001, Annex 1) if the supervisor is satisfied that the bank meets certain standards of operation.¹¹

Banks that qualify for the Advanced Measurement Approaches will compute their capital charge as the maximum of the Advanced Measurement Approaches measure or the minimum percentage multiple of the Standardized capital charge.¹² Reflecting the unsettled state of current

⁹The Basel Committee (September 2001, pp. 30–31) addresses the problem of calibrating the beta factors from industry averages in Annex 3. They pose the important question of whether it is possible to distinguish different beta values across business lines and conclude that it might not be. "In fact, statistical tests for equality of the means and medians do not reject the hypothesis that these figures are the same across the eight business lines at conventional levels of confidence." If that turns out to be the conclusion then, apart from the preconditions and, perhaps, a penalty component in the alphas, there will be no operational difference between the Basic Indicator and Standardized Approaches.

¹⁰The Basel Committee is troubled by the implication that a trading unit that registers losses has less operational risk and has asked for suggestions about how to further refine the measure.

¹¹These standards include a sound risk management system implemented with integrity, sufficient staff resources in each line of business, control and audit areas, a rigorous analysis of internal and external data, persuasive scenario analyses, two pages of qualitative standards, and an additional two and one-half pages of quantitative standards including a demonstration that the calculated capital charge is sufficient to meet 99.9 percent of all operational losses over a one-year horizon.

¹²The rules governing capital requirement relief under the Advanced Measurement Approaches were revised in July 2002. Under the Advanced Measurement Approaches, the Basel Committee agreed not to mandate a floor capital requirement for operational risk. However, for the first year of the New Capital Accord, the reduction in the overall capital requirement for credit risk and operational risk is limited to 90 percent of the previous requirement. In the second year, the floor falls to 80 percent. In subsequent years, "[s]hould problems emerge during this period, the Committee will seek to take appropriate measures to address them and, in particular, will be prepared to keep the floor in place beyond 2008 if necessary" (Basel Committee, July 2002).

practice and the Committee's uncertainty about the best way forward, it is willing to consider three different measurement approaches: (1) internal measurement approaches that develop estimates of the probability that an operational loss event will occur over some future horizon, the average loss of the loss event, and the exposure at time of loss; (2) estimates of the loss distribution for each line of business; or (3) scorecard approaches based on indicators of risk types in each line of business, drawn from a rigorous analysis of internal and external loss data.¹³

The first Basel Committee proposal (January 2001) was heavily criticized for failing to take account of insurance contracts as a means of mitigating operational risk. In response, the revised proposal (September 2001) raises the possibility that some insurance coverage may be recognized in computing the capital charge for operational risk but only for banks qualifying for the Advanced Measurement Approaches and subject to an overall floor of a minimum percentage of the Standardized capital charge. Moreover, recognition of insurance coverage would be subject to a set of qualifying criteria as yet unspecified.

Shortcomings of the Basel Proposal for Operational Risk Standards

The capital charge for operational risk will, at best, do little to encourage the use of one of the most desirable ways to mitigate operational risk—private insurance. That is unfortunate because insurance is one of the most effective ways to transfer operational risk out of the banking industry. An emphasis on private insurance would enlist the monitoring and market discipline of private insurance companies in reducing the vulnerability of the banking system to operational risk. Insurance costs would thus reflect firm-specific risk, leading to the desirable property of equating the marginal cost and marginal benefit of risk mitigation by banks.

In the case of operational risk, insurance is a particularly beneficial approach to risk management because of the possibility of small-probability,

large losses associated with operational risk (e.g., the recent trading-related losses at Allied Irish Bank). Large insurance companies, which pool and reinsure the losses of many firms, would be in a better position to absorb such losses than a bank; thus, laying off the risk via insurance would be superior to absorbing the risk internally via capital.

The Basel Committee fails to make a convincing case of explaining why institutions that adopt the Basic Indicator or Standardized Approaches should be excluded from even this limited recognition of the risk-mitigating properties of insurance. If insurance contracts mitigate operational risk for institutions that adopt the Advanced Measurement Approaches, then why do the same products not work as effectively for institutions that adopt the other two approaches?¹⁴ The Basel Committee's approach of allowing only the largest, most sophisticated institutions to receive regulatory credit for employing insurance will distort competition. Also, to the extent that it discourages other firms from buying insurance, it may limit the supply of insurance products since, as Beglinger (2001, p. 13) has noted, "the premiums of the many pay for the losses of the few."

The Basel Committee approaches also fail to allow for process management in the setting of capital requirements. Indeed, if the objective of the regulators is to ensure that operational risk is prudently managed, then the most direct approach is to supervise the processes and procedures

¹³ At present no major internationally active bank is expected to be able to qualify for the Advanced Measurement Approaches although the Committee hopes that all major banks will strive to qualify.

¹⁴ The Basel Committee is concerned that indemnification from insurance companies is sometimes uncertain and subject to lags. Under such circumstances, it is not a perfect substitute for capital in absorbing losses. They are willing to take a more generous view of insurance under the Advanced Measurement Approaches because qualifying banks have demonstrated a much stronger capacity to measure and manage operational risk. A better, and less discriminatory, approach toward the role of private insurance would recognize that any reliance on insurance contracts, rather than capital requirements, to protect against operational risk relies on prompt and predictable coverage of operational losses. It is, therefore, appropriate for bank regulators and the Basel Committee to impose some basic standards on permissible insurance contracts for purposes of satisfying prudential regulation. Those basic standards would require that coverage be sufficiently broad and unconditional so that payments would be made reliably and expeditiously.

through which institutions identify, measure, monitor, and control operational risk. Further, a reliance on process regulation to regulate operational risk, combined with private insurance, not only would reward lower risk with lower costs of compliance, it would also ensure that competition is not distorted and that there is truly a “level playing field.”

Although Pillar 2 of the New Basel Capital Accord includes this approach, supervisors lack the flexibility to reward exceptionally strong controls with lower capital requirements. Establishing a capital charge that has only a tenuous relationship to risk—as is surely true of the Basic Indicator and Standardized Approaches—does nothing to reduce exposures to operational risk and contributes to safety only by raising the overall capital buffer against loss. But if that is the objective—and the Basel Committee’s concern for maintaining the overall level of regulatory capital in the banking system after the new risk-sensitive approach for capital charges against credit risk is introduced suggests that it is—then there is no point in pretending that the charge is related to operational risk. If the Committee deems that the overall level of capital is not sufficient, then surely it is simpler and less costly to impose a general leverage requirement.

In summary, the proposed Basic Indicator and Standardized Approaches, which most banks are expected to adopt, have at best a tenuous relationship to variations in operational risk across banks. The third proposed alternative, the Advanced Measurement Approaches, is intended to be more risk sensitive but is largely unspecified and requires such imposing preconditions for its use that only the largest, most sophisticated institutions are likely to qualify. Only this third approach, however, would recognize insurance,

one of the most effective ways to mitigate operational risk. While the Pillar 2 proposal places a welcome emphasis on policies, processes, and procedures to manage operational risk—probably the most important means of limiting operational risk—the outcome of the Pillar 2 examination can only *add* to the capital charge computed under Pillar 1. Supervisors will not be able to reduce the capital charge for firms that demonstrate exceptionally strong policies, procedures, and processes to limit operational risk.

THE EUROPEAN UNION’S PROPOSAL TO APPLY OPERATIONAL RISK CAPITAL CHARGES TO INVESTMENT MANAGEMENT COMPANIES

Shortcomings of the Proposal

The European Union intends to incorporate the Basel Committee’s operational risk capital charge, along with the other new proposals, in a revised Capital Adequacy Directive that will apply to any financial firm that falls within the Investment Services Directive or for which capital requirements are set by reference to the Capital Adequacy Directive. This latter category includes investment management firms irrespective of their size.

The European Union’s primary motive for extending the capital charge to investment management companies appears to be the achievement of a “level playing field.” But this is misguided and inappropriate. It is misguided because equalizing capital requirements may do nothing to level the playing field. Financial institutions differ across a number of dimensions, not just capital requirements. A true leveling of the playing field would make capital requirements commensurate with risk, or more generally, provide a regulatory framework that equates the marginal cost with the marginal benefit associated with taking greater risk. As demonstrated

If the objective of the regulators is to ensure that operational risk is prudently managed, then the most direct approach is to supervise the processes and procedures through which institutions identify, measure, monitor, and control operational risk.

above, the Basel capital standards have not resulted in a leveling of the playing field in the past and proposed changes will not do so either.

It is also inappropriate to try to level the playing field between banks and investment management companies since the rationale for imposing the capital charge on internationally active banks does not apply to invest-

The European Union's primary motive for extending the capital charge to investment management companies appears to be the achievement of a "level playing field."

ment management companies. If internationally active banks and investment management companies pose different systemic threats to the international financial system—and no expert has produced a convincing argument otherwise—then they need not be subject to the same rules. Consider an example from another sphere of government regulation. Suppose that a government has decided to impose a tax to control pollution and that it is considering how the tax should apply

to two electric power plants—one that generates electricity from coal and emits substantial amounts of sulphur dioxide and one that generates electricity from solar power. Undoubtedly, the owners of the coal-fired plants would argue that the same tax should apply to both producers in order to level the competitive playing field, but clearly that approach makes no sense if the objective is to control pollution.¹⁵

Regulation should be tailored to take into account differences in financial institutions. As noted by Franks et al. (2001, p. 113), capital requirements are unlikely to be cost efficient for protecting investors from the principal risks in asset management—poor management or fraud. Further, Franks et al. (2001, p. 16) have observed that “market failures that occur in asset management are different from those that occur in banks. They arise from information asymmetries and fraud, not in general from systemic risk. They should be corrected directly by a combination of

disclosure, auditing, enforcement, insurance, custody, and trustees, rather than indirectly through capital requirements.”¹⁶

For these reasons, investment management company affiliates of Financial Holding Companies (FHC) are exempt from the potential imposition of capital requirements under the recently enacted Gramm-Leach-Bliley statute. Gramm-Leach-Bliley prohibits the Federal Reserve Board from imposing capital adequacy rules on a nondepository subsidiary that is a registered investment adviser with respect to the subsidiary's functionally regulated activities or activities incidental thereto in recognition that the SEC is better situated to regulate such a subsidiary.¹⁷ The Senate Banking Committee report on the legislation explained this provision by stating “The [Federal Reserve] Board is not authorized to prescribe capital requirements for any functionally-regulated nondepository subsidiary of an FHC. In developing, establishing, and assessing holding company capital or capital adequacy rules, guidelines, standards, or requirements, the Board also has been prohibited from taking into account the activities, operations, or investments of an affiliated investment company ... Investment companies are regulated entities that must meet diversification, liquidity, and other requirements specifically suited to their role as investment vehicles. Consequently, the [Senate Banking] Committee believed that it was important to ensure that the Board did not indirectly regulate these entities through the imposition of

¹⁵ The argument appears in Herring and Litan (1995). Similar arguments may be found in Schaefer (1992) and Dimson and Marsh (1995).

¹⁶ This is, in fact, the approach taken under the U.S. securities laws, which do not impose capital requirements on investment advisers, including mutual fund managers. However, regulators in several European countries and some state regulatory authorities in the U.S. have imposed minimum capital requirements on investment company managers (Franks et al., 2001, p. 58). Recent amendments to the EU Directive on Undertakings in Collective Investment in Transferable Securities (UCITS) impose EU-wide minimum capital requirements on mutual fund managers with respect to operational risks. The Canadian Securities Administrators recently requested comment on proposals to impose capital requirements on investment company managers in Canada.

¹⁷ See House Commerce Committee Report to Accompany H.R. 106-74, Part 3 p. 143.

capital requirements at the holding company level, except in ... very limited circumstances ...”¹⁸

The consequence of imposing inappropriate capital regulations on investment companies will be to raise barriers to entry and make the structure of the asset management industry less competitive. Indeed, the capital standards approach to regulating operational risk may discriminate against independent investment management companies, particularly smaller niche providers of asset management services. It is possible that the operational risks of small niche providers are relatively low. Smaller size, a narrower scope, and a less complicated organizational structure should reduce some kinds of operational risk. Yet neither the Basic Indicator nor the Standardized Approach that most of these institutions would likely adopt would reward them with lower capital charges for operational risk.

Even if internationally active banks were as efficient as independent investment management companies, independent investment management companies still would be placed at a disadvantage to universal banks because they cannot allocate their capital across several lines of business. Universal banks are already subject to capital regulation and the Basel Committee has announced that it will calibrate the capital charge for operational risk so that regulatory capital does not increase. Thus the “average” bank should not

experience an increase in its capital requirement (although the allocation of that capital between credit risk and operational risk requirement will change). Most internationally active banks hold capital far above the regulatory minimum and so these banks are unlikely to find it necessary to raise additional capital to comply with the new operational risk requirement.

Even if a universal bank holds capital that just meets the regulatory minimum, the charge for operational risk is not likely to increase its required capital if its exposure to credit and operational risk is average.¹⁹

Independent investment management companies in the U.S. generally have not been required to hold capital and their European counterparts have not heretofore been required to hold capital at the level now being considered for investment managers in Europe. Thus, any extension of the Basel proposals to investment management companies will require many firms to raise additional capital. Independent investment management companies would not be able to make implicit capital transfers across activities and therefore are more likely to need to raise additional capital to meet the new charge for operational risk.²⁰

Presumably the authorities do not intend to increase concentration in the asset management sector of the financial services industry and render it less competitive. In an era when aging populations in all mature economies are increasingly reliant on the efficient investment of personal savings to fund post-retirement standards of living, that would be especially unwise public policy. Rather than extend ill-advised capital

The consequence of imposing inappropriate capital regulations on investment companies will be to raise barriers to entry and make the structure of the asset management industry less competitive.

¹⁸ “Senate Banking Committee Report to Accompany S. 900,” p. 130. Those limited circumstances in which capital regulations would still be possible are when the investment company is itself a bank holding company or a bank holding company owns more than 25 percent of the shares of the investment company. Under the new financial holding company structure (which offers an alternative to the bank holding company structure) investment companies could be affiliated with bank subsidiaries of financial holding companies and be confident that they would never face the imposition of capital requirements by the Federal Reserve Board directly or indirectly.

¹⁹ If its Basic Indicator is below average, this is also true. Only if its Basic Indicator is above average will an internationally active bank need to hold additional regulatory capital.

²⁰ Although the operational risk capital charge is designed to leave the overall level of regulatory capital for banks constant, it will have a major impact on noncredit institutions. Knight (2001, p. 38) reports that “early in 2001, the Financial Services Authority (FSA) carried out an exercise, using the basic indicator approach outlined in the Basel/EU documents for 950 firms covered by the Investment Services Directive regime. The average implied increase in regulatory capital was in excess of 50%—with the least risk firms (the investment managers) seeing the largest increase in regulatory capital, at more than 250%.”

charges from banks to investment company managers, it would be preferable to permit banks to form separately incorporated asset management subsidiaries, suitably insulated from the rest of the bank, that could compete under the same rules as investment companies.

Best Ways to Ensure a Level Playing Field

We recognize that part of the motivation for the proposed imposition of operational risk capital requirements by the European Union is a desire to avoid placing the asset management arms of universal banks at a disadvantage, since they will be subject to such requirements once the new Basel approach is approved. How can the European Union ensure that its regulations do not undermine fair competition between capital-regulated banks and investment management companies, such as those in the United States, that do not face capital charges for operational risk?

As we have argued, the answer to this question must begin by defining what constitutes fair competition. A fair system for regulating operational risk preserves competition while also ensuring comparable levels of consumer protection irrespective of the origin of the provider. If one intermediary can achieve the mandated level of consumer protection at a lower cost than another, regulation should not penalize that intermediary with additional unnecessary costs. By relying on process regulation and insurance, rather than capital requirements, regulators can ensure the equivalence of protection while also preserving competition among intermediaries to achieve that level of protection.

Ensuring this kind of fair competition requires more than abandoning the current European Union initiative to impose new capital requirements on investment management companies. It also requires a reform of the Basel approach to controlling operational risk. Reforming the Basel approach is desirable for many reasons. As we have shown, it is crude, lacks sufficient incentives to mitigate risk, and distorts competition. In its current form, it also runs the risk of disadvantaging European and U.S. banks that provide asset management services. To prevent the asset management activities of European universal banks from losing ground to competitors that provide these services outside of a universal banking

structure, two changes would be desirable. First, proposed Basel operational risk standards should be reformed to address the deficiencies we have discussed. Second, a change should be made to the structure and regulation of European universal banks.

The structural change we have in mind is to permit European universal banks that adopt a holding company structure to eliminate all capital regulations associated with the asset management activities of investment company subsidiaries of the holding company. The U.S. Shadow Financial Regulatory Committee²¹ (1999, 2000) has long argued, in the case of U.S. banks, that “non-banking” activities such as asset management can and should be placed in separate subsidiaries, which are prevented from creating risk in any affiliated banking entities (that is, the part of the universal bank that is involved in using government-protected deposits to finance loan creation), and that these segregated non-banking subsidiaries should not be subject to capital regulation. If, for example, asset management subsidiaries were not permitted to borrow any significant amount from the bank affiliate and if the terms for that borrowing were also limited (as they are under Sections 23A and 23B of the Federal Reserve Act), then there would be no reason to impose prudential capital requirements on these asset management affiliates. Of course, as we have argued, there would still be the need to impose other regulations motivated by consumer protection on both independent and affiliated asset management companies. Not only would our recommended reforms ensure that European

²¹ The U.S. Shadow Financial Regulatory Committee is a group of independent experts on the financial services industry and its regulatory structure. The purposes of the committee are: first, to identify and analyze developing trends and continuing events that promise to affect the efficiency and safe operation of sectors of the financial services industry; second, to explore the spectrum of short- and long-term implications of emerging problems and policy changes; third, to help develop private, regulatory, and legislative responses to such problems and promote efficiency and safety and further the public interest; and finally, to assess and respond to proposed and actual public policy initiatives with respect to their impact on the public interest. Members of the Shadow Financial Regulatory Committee are drawn from academic institutions and private organizations and reflect a wide range of views. The committee is independent of any of the members' affiliated institutions or of sponsoring organizations. The recommendations of the committee are its own.

universal banks could compete on an equal footing with independent investment management companies in Europe, it would also prevent European banks from losing ground in their asset management operations located in the United States. Some universal banks based in Europe (for example, Deutsche Bank) maintain a substantial asset management business within the United States. As we understand current regulatory practice, the authorities intend to implement the new capital requirements on a consolidated basis including all foreign offices of the bank. Thus, if Deutsche Bank is required by its home regulator to maintain capital against its asset management activities, that would also imply a capital requirement on its asset management activities in the United States. Such a requirement would place Deutsche Bank's U.S. operations under a competitive disadvantage.

CONCLUDING SUMMARY

In this paper, we evaluated the desirability and feasibility of establishing minimum capital requirements as a way to protect against operational risk, especially in investment management companies. We reviewed how financial institutions manage risk, considered possible justifications for the prudential regulation of risk (including capital requirements), and reviewed the Basel approach to regulating operational risk within internationally active banks. A key deficiency of the Basel approach is that it places too much emphasis on capital as the means of dealing with operational risk and provides little room for risk mitigating techniques, such as insurance or internal controls, as substitutes for capital.

In light of various problems associated with defining and measuring the "additionality" to overall risk coming from operational risk and with quantifying the amount of capital needed to absorb

operational risk losses, we argued that process regulation and mandatory private insurance are the best approaches to dealing with this category of risk in the context of internationally active banks.

With respect to the application of operational risk capital standards to firms engaged in investment management operations, as has been proposed in the European Union, the arguments against establishing a capital requirement to regulate operational risk are even stronger.

First, the primary economic motivations for regulating operational risk are simply absent in the case of investment management companies. There is no government safety net and therefore no moral hazard justification for capital regulation of investment management companies. Furthermore, operational risk is highly idiosyncratic. Risk events are not likely to be correlated across institutions and spillovers from one institution to another are extremely unlikely. Thus, the prospect of systemic consequences from operational losses in investment management company activities is negligible.

Second, as in the case of internationally active banks, capital requirements would not be the best way to regulate operational risk in investment management companies, even if it were desirable to protect their customers from operational risks. Not only would capital regulation be a blunt and ineffectual way to regulate operational risk, the application of the proposed Basel operational risk capital standard to investment managers could create substantial barriers to competition within the industry if capital regulation imposed larger costs on independent investment management companies than on the large universal banks that currently dominate European asset management.

This anti-competitive effect may occur for several reasons. As we have shown, the operational risks in investment management companies, or at least in certain types of investment management companies, may be relatively low. Under the Basel proposals, however, apart from the as yet unspecified Advanced Measurement Approaches, for which investment company managers are not likely to be able to qualify, the proposed capital charge for operational risk would not reward institutions that maintained lower operational risk with lower capital charges. Thus, a reliance on capital as the means of protecting against operational risk could discriminate against low-operational risk providers of asset management services. This is ironic, given that "leveling the playing field" is one of the primary

justifications offered for extending the operational risk capital charge to investment company managers.

Even if internationally active banks were as efficient as independent investment management companies, capital standards still will place independent investment management companies at a competitive disadvantage because, unlike universal banks, they cannot allocate capital across a variety of businesses. The Basel Committee has calibrated the new requirement for operational risk so that the “average” bank should not experience an increase in required capital. Independent investment management companies, on the other hand, would not be able to make such implicit

An alternative regulatory policy based upon process regulation and private insurance to regulate operational risk not only would reward lower risk with lower costs of compliance, but it also would ensure free entry of efficient investment management companies in Europe on a truly “level playing field.”

capital transfers across activities and therefore are more likely to need to raise additional capital to meet the charge for operational risk.

Furthermore, the Basel approach to setting capital standards for operational risk discriminates against all but the largest universal banks, since it makes it virtually impossible for any but the largest firms to qualify for the most sophisticated approach to measuring (and maintaining capital against) operational risk and the recognition of insurance as a mitigator of operational risk. An alternative regulatory policy based upon

process regulation and private insurance to regulate operational risk not only would reward lower risk with lower costs of compliance, but it also would ensure free entry of efficient investment management companies in Europe on a truly “level playing field.”

Finally, the establishment of a minimum capital requirement to deal with operational risk in asset management also may have adverse unintended consequences for the competitive position of European universal banks operating in the U.S. as compared to U.S. banking organizations. U.S. financial holding companies that engage in investment management through affiliates of U.S. banks (subsidiaries of the financial holding company) are protected against the imposition of capital standards by

specific carve-out provisions in the Gramm-Leach-Bliley Act of 1999. The Federal Reserve Board cannot impose capital requirements on an investment management subsidiary that is registered as an investment adviser and cannot take into account the activities or assets of affiliated investment companies in setting holding company capital requirements. But the U.S. affiliates of European-based banks are not similarly protected and may be significantly disadvantaged by the new EU initiative.

In the end, an ideal regulatory standard would find a means to require all regulated institutions to equate the marginal cost of taking greater risk with the marginal benefit of that risk. Such a framework need not rely on capital requirements as the only, or even primary, means of regulating risk. Capital regulation is not costless, particularly if regulatory requirements do not capture underlying differences in risk. Higher capital ratios limit the extent of an intermediary’s return on equity. To the extent that regulation imposes a uniform cost, irrespective of risk, it fails to reward lower risks and better managerial practices with lower costs. Thus, capital regulation that is not sufficiently risk-sensitive tends to work at cross-purposes to efficient market competition. Ultimately, consumers pay the cost in some combination of higher fees, less interest received on deposits, more interest paid on loans, lower returns on investments, or greater instability in the financial system. Risk-sensitive capital regulation should reward and thereby encourage effective risk management with lower regulatory costs.

For these reasons, a policy based upon private insurance and process regulation is superior to capital regulation in regulating operational risk in investment management companies. It will reward lower risk with lower costs of compliance and ensure that investment management companies can compete on a truly “level playing field.”

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