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## **BASEL II: THE ROAR THAT MOUSED**

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In 1999, the Basel Committee on Banking Supervision issued a consultative paper describing proposed modifications to the capital standards for commercial banks, which had first been introduced by the Committee in 1988 and implemented in many industrial countries starting in 1991 (Basel Committee, 2003a). The new proposal became known as Basel II to differentiate it from the earlier Basel I. To a large extent, the proposed Basel II was in response to widespread criticism of Basel I. But it also reflected additional thought and analysis of the role of bank capital regulation. In particular, Basel II added two new “pillars” – supervisory review (pillar 2) and market discipline (pillar 3) -- to the single pillar of minimum capital requirement of Basel I. In response to public comments, the Committee revised its proposal twice and issued a third consultative paper (CP3) in early 2003. If approved, the proposed standards are scheduled for implementation in most countries at the beginning of 2007. In preparation, in August 2003, U.S. regulators circulated an Advance Notice of Proposed Rulemaking (ANPR) for the application of Basel II to U.S. banks for public comment by November and the major features have been incorporated by the European Union in a proposed revision of its Capital Adequacy

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Directive (CAD) for financial institutions, which must, however, be approved by the European Parliament and the member national parliaments before adoption.

This paper focuses on the proposed two new pillars, which have received far less attention than the capital standards pillar. The paper concludes that both pillars have major design flaws that make achievement of the capital requirements determined by pillar 1, regardless of their desirability, questionable. These flaws help to explain both the recent decision of the U.S. bank regulators to limit the mandatory application of Basel II to only the ten or so largest internationally active U.S. banks and why these requirements may be ineffective even for these banks. Thus, although Basel II roared loudly when proposed, it is likely to have only a relatively minor lasting effect on the capital of, at least, most U.S. banks.

## **II. Overview of Basel and Pillar 1**

The Basel Committee on Banking Supervision was established in 1974 by a number of western industrial countries (G-10), primarily in response to the failure of the Herstatt Bank in Germany that had significant adverse implications for both foreign exchange markets and banks in other countries.<sup>1</sup> The Committee focused on facilitating and enhancing information sharing and cooperation among bank regulators in major countries and developing principles for the supervision of internationally active large banks (Herring and Litan, 1995). As losses at some large international banks from loans to less-developed countries (LDCs) mounted in the late-1970s, the Committee became increasingly concerned that the potential failures of one or more of these banks could have serious adverse effects not only for the other banks in their own countries, but also

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<sup>1</sup> Current members countries are Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

for counterparty banks in other countries, i.e., cross-border contagion. The Committee feared that large banks lacked sufficient capital in relation to the risks they were assuming and that the inadequacy in large part reflected the reluctance of national governments to require higher capital ratios for fear of putting their own banks at a competitive disadvantage relative to banks in other countries.

In the 1980s, this concern was particularly directed at Japanese banks, which were rapidly expanding globally based on valuations of capital that included large amounts of unrealized capital gains from rapid increases in the values of Japanese stocks that they owned. Such gains were not included in the capital valuations permitted banks in most other countries, where equity ownership by banks was more restrictive. Partially as a result, the Committee began to focus more on developing international regulation that centered on higher and more uniform bank capital standards across countries. The capital standards developed and introduced in 1988 became known as Basel I.

Perhaps the most revolutionary aspect of the capital requirements developed in Basel I was relating a bank's capital to the perceived credit risk of the bank's portfolio. Before that, most regulators focused on simple leverage ratios that used only total assets as the base. Basel I also incorporated off-balance sheet assets in the base as well as on-balance sheet assets and weighted individual assets by a risk factor. However, the formula constructed was a relatively simple one that treated all banks equally -- one size fits all. Individual assets were divided into four basic credit risk categories or buckets according to the identity of their counterparty and assigned weights ranging from 0 to 100 percent. The weighted values of the individual on- and off- balance sheet assets were then summed and classified as "risk-weighted assets." Banks were required to maintain

capital of not less than 8 percent of their risk-weighted assets. This capital ratio is referred to as risk-based capital (RBC).

But the arbitrary nature of both the risk classes and risk weights led to widespread criticism that the resulting risk-based capital requirements were neither realistic nor useful and to “gaming” by the banks as they exploited differences in returns computed on different assets on the basis of the regulator assigned capital requirements -- regulatory capital -- vis-à-vis that perceived to be required by market forces -- economic capital. Such arbitrage likely results in misallocation of resources and reduced economic and social welfare. In addition, total bank credit risk was measured as the sum of the credit risks of the individual asset components, giving no weight to any gains from diversification across less than perfectly correlated assets. Nevertheless, the capital requirements established by Basel 1 were implemented by an increasing number of countries, including the United States, starting in 1991 and became the effective capital standards for banks worldwide.

Shortly thereafter, in response to the criticisms of its formula and the avoidance activities of banks, the Basel Committee began to work on improving the capital requirements. The structure of the credit risk weights was modified and their values were determined by three alternative methods, depending on the size and financial sophistication of the bank. In addition, explicit weights were assigned to operational risk and the Basel I weights maintained for market and trading risk.

With respect to credit risk exposure, the most important risk component in the Basel structure, potential losses from default are effectively divided into two components

-- 1) the probability of default (PD) and 2) the loss given default (LGD).<sup>2</sup> The values for these measures are to be stipulated by the regulators for the smaller, least sophisticated banks and progressively shifted to the banks as their sophistication increases. The smallest, least sophisticated banks are permitted to apply the “standardized approach” to compute their risk weighted assets. Weights are assigned by the regulators for individual assets, based to a large extent on credit ratings that the bank’s counterparties have received from private credit rating agencies on their outstanding marketable debt that implicitly reflect both PD and LGD.<sup>3</sup> The standardized approach resembles Basel I, but is somewhat more complex. Bank assets are divided into five rather than four basic groupings and the risk-weights for each group are both based more on market evidence and stretch over a wider range. But otherwise, the same criticisms that were directed at Basel I may also be directed at this approach in Basel II. On the other hand, the standardized approach has the virtue of simplicity and, as it applies only to small banks, its failings may not be very costly in terms of any lasting damage to the domestic or international financial markets as a whole.

Larger banks are to rely more on internally generated information -- the internal ratings approach (IRB) -- in which PD and LGD are explicit. Most would compute their own PD for individual loans, but use values for LGD provided by the regulators. This is referred to as the “foundation IRB approach.” The largest and most sophisticated banks may use the “advanced IRB approach” (A-IRB), which permits them to determine their

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<sup>2</sup> It appears ironic that the credit risk exposure of banks, who are widely assumed to be beneficiaries of private information on their loan customers, is measured by the ratings assigned to their public debt traded on the capital market, which is widely assumed to have little if any private information.

<sup>3</sup> In addition, assets are assigned values for maturity and exposure at default.

own values for both PD and LGD. The models used by the banks to obtain their values need to be evaluated and preapproved by the regulators.

Although the IRB approaches overcome some of the criticism of the Basel I bucket approach, they are not devoid of criticism. In particular, the loss rates determined by the regulators are subject to large errors so that gaming is still likely and the models used by the banks to generate their internal values are likely to be too complex and opaque for supervisors (and even many bankers themselves) to understand thoroughly, so that the resulting capital amounts will be difficult to evaluate for adequacy and compliance with the requirements. The description of the proposed regulations for the application of A-IRB to large U.S. banks in the ANPR takes more than 30 small type, three column pages in the Federal Register (Federal Register, 2003). As has been frequently noted, although the real world is complex, complexity per se does not necessarily achieve reality.

The discussion of pillar 1 also bypasses a number of important issues concerning the definition and measurement of capital, in particular, what is capital; is dividing capital into tiers appropriate and, if so, what should be the criteria; role of “subdebt;” what is the relationship between capital and loan loss reserves; and how should loss reserves be determined over the business cycle (Shadow Financial Regulatory Committee, 2000; Laeven and Majnoni, 2003; and Borio, Furfine, and Lowe, 2001). Failure to consider these issues greatly weakens the usefulness of the recommendations.

Many of the above criticisms of pillar 1 and, in particular, of regulator- rather than market-determined RBC have been made by many parties. The remainder of this paper will focus on pillars 2 and 3, which are intended both to effectively enforce and to

supplement the capital requirements determined in pillar 1 and have received far less attention.

### **III. Supervisory Review (Pillar 2)**

Supervisory review “is intended... to ensure that banks have adequate capital to support all the risks in their business” (Basel, 2003, p. 138) determined both by pillar 1 and by supervisory evaluation of risks not explicitly captured in pillar 1, e.g., interest rate risk and credit concentration. “Supervisors are expected to evaluate how well banks are assessing their capital needs relative to their risks and to intervene, where appropriate. This interaction is intended to foster an active dialogue between banks and supervisors such that when deficiencies are identified, prompt and decisive action can be taken to reduce risk or restore capital” (Basel, 2003, p. 138). This supervisory responsibility is spelled out further in three of four key principles developed for supervisory review.

Principle 2 of pillar 2 states that “supervisors should take appropriate supervisory action if they are not satisfied with” (Basel, 2003, p. 142) their review and evaluation of the adequacy of the banks’ internal models. Moreover, principle 3 states that “supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum” (Basel, 2003, p. 144). Principle 4 states that “supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels... and should require rapid remedial action if capital is not maintained or restored” (Basel, 2003, p. 144). But nowhere in CP3 are supervisors granted the tools and authority to perform these functions. This makes it less likely that countries not currently granting regulators such powers will introduce them when adopting Basel II.

In contrast, in the U.S., the FDIC Improvement Act (FDICIA) enacted at yearend 1991, the same year as Basel I was implemented in the U.S., not only explicitly granted supervisors the authority to impose such sanctions on banks that failed to maintain minimum capital requirements but required the regulators to impose such sanctions when the capital ratios of banks declined below given threshold levels or the banks displayed other indications of financial troubles. The system of first discretionary and then mandatory regulatory sanctions in FDICIA is referred to as prompt corrective action (PCA). FDICIA specifies that both RBC and simple capital leverage ratios need to be considered and the bank regulators defined RBC in accord with Basel I. Banks have to satisfy all three capital measures specified. The mandatory sanctions were included to supplement the discretionary sanctions because the U.S. experience with the banking and thrift crises of the 1980s suggested that for a number of reasons regulators may not always intervene in troubled institutions in a forceful and timely fashion and instead delay or forbear (Benston and Kaufman, 1994 and Kaufman, 1995).

The structure of discretionary and mandatory sanctions included in PCA is summarized in Table 1. Both sets of sanctions are designed to become progressively harsher and the mandatory sanctions progressively more important as the financial condition of a bank deteriorates and its capital ratios decline below the thresholds of each of the five capital tranches or tripwires. The mandatory sanctions are to protect against undue delay and forbearance by regulators in imposing discretionary sanctions (Benston and Kaufman, 1994). The sanctions mimic those that the market typically imposes on unregulated firms facing similar financial difficulties. Shortly after a bank becomes “critically undercapitalized,” which is currently defined as a 2 percent equity to asset



ratio, the regulators are required to place the institution in receivership or conservatorship (legal closure) and to resolve it at least cost to the FDIC.

The purpose of the sanctions is not to punish the bank per se, but to provide incentives for owners and managers to turn the bank around and return it to greater profitability and a stronger capital position. Without similar PCA type authority, it is unlikely that bank regulators in other countries can achieve the control over a bank's capital that pillar 2 envisions. Indeed, the early experience with PCA in the U.S. suggests that some regulators may not be using their authority as vigorously as intended in the legislation and that supervisory review needs to be supplemented by other forces including market discipline, which is pillar 3 in the Basel II proposal (Kaufman, 2003b).

### **III. Market Discipline (Pillar 3)**

Market discipline may be defined as actions by stakeholders to both monitor and influence the behavior of entities to improve their performance (Bliss and Flannery, 2002). Pillar 3 in Basel II is intended "to complement the minimum capital requirements (Pillar 1) and the supervisory review process (Pillar 2) ... [and] to encourage market discipline by developing a set of disclosure requirements which will allow market participants to assess... the capital adequacy of the institution" (Basel, 2003, p. 154). Unfortunately, the requirements for effective market discipline are not discussed in the section on market discipline in CP3. Rather, the section discusses in great detail what information on a bank's financial and risk positions need be disclosed to the public (Lopez, 2003).

But disclosure and transparency is a necessary but not sufficient condition for effective market discipline. What is required is, at least, some at-risk bank stakeholders.

Stakeholders not at-risk would have little or no incentive to monitor and influence their banks and thus have little if any use for the information disclosed about the financial performance of the banks. While market discipline is likely to encourage disclosure, disclosure per se is less likely to encourage market discipline in the absence of a significant number of at-risk stakeholders. Because of the fear of substantial economic harm caused by the failure of large banks, governments and bank regulators in almost all countries have tended to avoid failing such institutions and, where they have, protected all depositors and other creditors in a de-facto policy termed “too-big-to-fail” (TBTF), (Kaufman, 2003a). Thus, few de-facto at-risk stakeholders have existed in even privately owned banks, no less state owned banks. However, the U.S. has taken steps in recent years to enhance market discipline by reversing the policy of blanket protection of debt stakeholders and converting the largest stakeholders -- depositors, creditors, and shareholders -- to at-risk status. FDICIA prohibits the FDIC from protecting any uninsured stakeholder at failed banks in which doing so is not a least-cost resolution to it. But there is an exception.

If there is evidence that not protecting uninsured depositors and/or other creditors at a failed bank “would have serious adverse effects on economic conditions or financial stability; and ... any action or assistance... would avoid or mitigate such adverse effects” the regulators can petition the Secretary of the Treasury to permit such protection. This provision is called the Systemic Risk Exception (SRE) and replaces TBTF. But obtaining permission to do so is not easy. There are a number of significant before and after hurdles that need to be cleared. To invoke SRE, a recommendation must be made in writing to the Secretary of the Treasury by two-thirds of both the Board of Directors of

the FDIC and the Board of Governors of the Federal Reserve System that protection of at least some uninsured stakeholders is necessary to avoid the serious adverse effects cited in the FDICIA legislation. The Secretary must consult with the President before agreeing with the recommendation, must retain written documentation for review, and must, again in writing, notify the Banking Committees of both the House of Representatives and the Senate (Kaufman, 2003a).

After any protection is provided, a review of the need for the action taken and the consequences must be completed by the General Accounting Office (GAO) and any losses suffered by the FDIC in providing the assistance must be paid “expeditiously” through a special assessment on all insured banks based on their asset size. These barriers appear sufficiently high and difficult to clear to make the SRE exception an exception rather than the rule as was the case with TBTF before FDICIA and thereby increase the number of large and assumably sophisticated at-risk stakeholders. Since 1992, no SREs have been requested or granted and uninsured depositors and creditors have experienced losses in all failures with resolution losses except in a few small bank resolutions where protecting the uninsured depositors did not increase the loss to the FDIC. In some resolutions, losses to unprotected depositors exceeded 40 percent and other creditors even more (Kaufman, 2003b). On the other hand, since 1992, no large money center bank has encountered insolvency, so that the SRE has not really been tested.

Another way to increase the importance or at-risk claimants is to require banks to issue a minimum amount of subordinated debt (subdebt), (Shadow Financial Regulatory Committee, 2000; Evanoff and Wall, 2002, Basel Committee, 2003b, Benston et al,

1986).<sup>4</sup> Such debt would be both de-jure as well as credibly de-facto unprotected and therefore at-risk. Thus, the interest yield spreads at which it is either sold initially in the primary market or traded later in the secondary market would reflect investors' perceptions of the financial strength of the issuing institution (Jagtiani et al., 2002). These market determined yield spreads are likely both to affect investors' attitudes toward the institution and management's actions, and to serve as a signal to regulators of market perceptions. Such signals would supplement the information regulators obtain from their own examinations and other sources and in some proposals would automatically feed into PCA and possibly trigger sanctions on the institution when the yield spreads become sufficiently large. Unfortunately, to date, regulators in neither the U.S. nor the other Basel countries have viewed these proposals favorably and implemented them.

## **V. Conclusions**

The coming of Basel II was announced with great fanfare and has already been incorporated in a notice of proposed rulemaking in the U.S. and a proposed revised CAD in the EU countries. But, particularly in the U.S., praise by the industry, regulators, and scholars have been much more muted and have become progressively even more muted through time as the details are examined more closely.<sup>5</sup> Indeed, U.S. bank regulators have recently effectively rejected Basel II as a requirement for all but the largest 10 or so internationally active banks, which would be required to use the advanced IRB approach.

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<sup>4</sup> Since the Depositor Preference Act of 1993 in the U.S., all bank debt is subordinated to deposits at domestic offices and the FDIC. Thus, for this proposal, the term "subdebt" is no longer necessary in the U.S., except at the bank holding company level.

<sup>5</sup> Increasing criticism has also been voiced by the European Central Bank and the Institute of International Finance, the major trade association representing large banks in major countries.

All other banks may compute their RBC on the basis of the current Basel I, although they can adopt the advanced IRB approach if they wish and their supervisors concur.

The rejection in the U.S. centers primarily on the complexity of computations and doubts about the adequacy of the RBC requirement, the inadequacies of pillars 2 and 3 analyzed in this paper, and the existence of PCA in the U.S. to which all banks are subject. For example, Federal Reserve Vice-Chairman, Roger Ferguson has stated that “for the United States banking authorities, pillar II of Basel II requires nothing new... [and] considerable information is publicly disseminated -- for example, through our Call Reports -- and is available for counterparties” (Ferguson, June 10, 2003, p. 3). Similar views have been expressed by the Comptroller of the Currency (Hawke, 2003a and b). That is, despite its well-recognized shortcomings, the U.S. already has a more effective system in place.

Moreover, to the extent the advanced IRB approach may compute lower capital requirements for the largest banks that will use it, even after addition of operational risk, as it appears likely to do and appears to be its major appeal, these banks are still subject to the minimum leverage ratio constraint, which is unaffected by Basel II. Indeed, the ANPR specifically states that “ the Agencies are not proposing to introduce specific requirements or guidelines to implement Pillar 2. Instead, existing guidance, rules, and regulations would continue to be enforced” (Federal Register, 2003, p. 45905).

This paper supports much of the criticism of proposed Basel II, particularly with respect to pillar 1. However, regardless of the complexity or desirability of RBC computed according to pillar 1, the provisions of pillars 2 and 3 are inadequate to enforce them. Although pillar 2 discusses the need for supervisors to intervene promptly if either

a bank's capital or the model used to compute capital are perceived inadequate and impose remedial action, no powers are explicitly recommended for supervisors to effectively enforce this mandate. What appears necessary in countries that do not currently provide for such powers is the introduction of a system of PCA similar to that required in the U.S. since the enactment of FDICIA in 1991. Pillar 3 proposes to enhance market discipline by increasing financial disclosure requirements for banks. But disclosure is most effective if there are substantial bank stakeholders at-risk. Presently, few stakeholders, particularly de-jure uninsured depositors, view themselves at-risk as regulators have tended to protect them in nearly all large bank failures in almost all countries. What is necessary to enhance market discipline further is to increase the number and importance of stakeholders who perceive themselves at-risk de-facto as well as de-jure. This requires scaling back TBTF, as has been attempted in the U.S. with the introduction of SRE. Adoption of a subdebt requirement would expedite this process.

Thus, on the other hand, until the Committee proposes more substantial pillars for enhancing supervisory review and market discipline, Basel II will encounter difficulties in fulfilling many of the grand promises made at its introduction, particularly outside the United States. On the other hand, however, regardless of its shortcomings, Basel II has both increased our knowledge of the nature and measurement of risk in banking and increased the sensitivity of bankers, regulators, analysts, and the public to risk management. This is no small feat in itself and may represent Basel II's major lasting contribution. Indeed, the Basel proposals may make their greatest lasting contribution by continuing to be an ongoing process that is never implemented.

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**Table 1**

**SUMMARY OF PROMPT CORRECTIVE ACTION PROVISIONS OF THE  
FEDERAL DEPOSIT INSURANCE CORPORATION IMPROVEMENT ACT OF 1991**

Zone	Mandatory Provisions	Discretionary Provisions	Capital Ratios (percent)		
			Total	Tier 1	Tier 1
1. Well Capitalized			>10	>6	>5
2. Adequately Capitalized	1. No brokered deposits except with FDIC approval		>8	>4	>4
3. Undercapitalized	1. Suspend dividends and management fees 2. Require capital restoration plan 3. Restrict asset growth 4. Approval required for acquisitions, branching, and new activities 5. No brokered deposits	1. Order recapitalization 2. Restrict inter-affiliate transactions 3. Restrict deposit interest rates 4. Restrict certain other activities 5. Any other action that would better carry out prompt corrective action	<8	<4	<4
4. Significantly Undercapitalized	1. Same as for Zone 3 2. Order recapitalization* 3. Restrict inter-affiliate transactions* 4. restrict deposit interest rates* 5. Pay of officers restricted	1. Any zone 3 discretionary actions 2. Conservatorship or receivership if fails to submit or implement plan or recapitalize pursuant to order 3. Any other Zone 5 provision, if such action is necessary to carry out prompt corrective action	<6	<3	<3
5. Critically undercapitalized	1. Same as for Zone 4 2. Receiver/conservator within 90 days 3. Receiver if still in Zone 5 four quarters after becoming critically under-capitalized 4. Suspend payments on subordinated debt 5. Restrict certain other activities				<2**

\*Not required if primary supervisor determines action would not serve purpose of prompt corrective action if certain conditions are met.

\*\* Tangible equity

Source: Board of Governors of the Federal Reserve System